BOOK PUBLISHING IN AUSTRALIA:
THE POTENTIAL IMPACT OF DIGITAL TECHNOLOGIES
ON BUSINESS MODELS

A Thesis Submitted to RMIT University
for the Degree of Doctor of Philosophy

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Declaration

I certify that this thesis contains no material, which has been accepted for the award of any other academic award in any institution, college or university, and that, to the best of my knowledge and belief, it contains no material previously published or written by another person, in whole or in part, except where due reference is made in the text of the thesis. The content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program, and, any editorial work, carried out by a third party is acknowledged.

Xuemei Tian ______________________           ______________________
                     Sign                      Date
Acknowledgement

The person who coined the phrase “no pain, no gain” was obviously in the midst of a PhD research project when he made the observation. Although the pursuit of a PhD is based on an individuals’ performance, the demands of the project ensure that there will always be a support team providing essential support and encouragement. During my time there have been many who fell into this category, giving both tangible and intangible assistance.

Special thanks to my senior supervisor Professor Bill Martin. It is hard to find the words that can adequately describe the level of support, guidance and encouragement that he has provided. His enthusiasm to see me succeed has been a constant source of inspiration. He provided the academic impetus which enabled my research to reach its conclusion. Amidst the challenges of supervising numerous students and semi-retirement status, he never failed to ensure that a constant stream of advice and guidance was never far away. Thanks are due also to my second supervisor, Associate Professor Hepu Deng for his support and input.

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Finally, I believe that above all else, you must have faith in your God as it is He that controls your destiny. I know that in the difficult times God never left my side and when necessary, carried me. Psalms 121:1-2 says:

I lift up my eyes to the hills

Where does my help come from

My help comes from the Lord

The maker of heaven and earth.
Abstract

This research presents findings from an Australian government-funded research project looking at the implications of digitisation for the book publishing industry in Australia. Although digitisation is to some extent synonymous with digital technologies and in fact, the impact of current and emerging digital technologies is clearly central to any such study, the major focus was on business and organisational dimensions, with particular emphasis on current and emerging stakeholders, competition, value propositions and business models, both current and potential.

The publishing industry has always been linked inexorably to the dissemination of knowledge. Publishing and associated printing activities relied on long-standing and proven old technologies to provide a definitive linear progression for the creation of content in print form, providing clear implications for business processes and relationships for the various stakeholders. The emergence and development of digital technology has the potential to provide significant opportunities for publishing in both print and electronic formats, and with advances in electronic commerce, offers the prospect of new value propositions and business models. New digital publishing formats encapsulate a range of characteristics including multiple option infrastructures, various content formats and viewing modes designed to suit customer requirements, editing processes and information updates on the server. These innovations all contribute to reductions in processing time with the speedy, efficient transmission of content resulting in economic benefits to relevant stakeholders. However, it must be remembered that even the latest digital tools and applications can only be viewed as enabling mechanisms whose acceptance and implementation must align directly with the business strategy and objectives of organisations.
This thesis employed both an interpretive research paradigm, using a mixed methodology design, and elements of the design science paradigm. The aim was not to develop theories, but to build business models. The reporting and analysis of results is based on data gathered from two online surveys, one of publishers and one of end users, and from 14 case studies of Australian book publishers.

The results indicate that Australian book publishers continue to take a pragmatic approach to technology adoption, governed by both current market conditions and the failure of earlier technologies to deliver the anticipated results. Although content management and CRM technologies are by now ubiquitous, the most influential technologies currently in use in publishing continue to be the Internet and the World Wide Web. Little explicit interest is currently being shown in such potentially disruptive technologies as for example, the Semantic Web, although evidence for its influence can already be detected, however, there is widespread appreciation of the wider dimension to digitisation and of its potential impacts on organisational structures and strategies. This includes renewed attention to issues of value, and of the potential benefits of providing enhanced customer value through digital content and delivery channels, their consequent implications for changes to value chains, and the emergence of new and transitional business models.

As regards the case studies, it is important to emphasise that what has been reported here are five detailed examples drawn from different categories of publishers. Although the resultant business models depicted can hardly be described as being representative of the Australian book publishing sector as a whole, the five categories covered represent a significant portion of the book publishing sector. Furthermore, whatever the category of publishing, or the target
markets, products and services concerned, it is clear that all book publishers must adhere to similar stages and processes in building supply and value chains, and in the design of business models. Moreover, as the influence of customers continues to gain momentum, this will undoubtedly impact upon choices in all these areas – from partnerships and delivery channels to formats and value propositions. As an analysis of the case study data has shown, all 14 companies participating in this research project recognised the potential as well as the inevitability of digitisation, and had embraced the need for new value and supply chains.

This research contributes to the literature both by reinforcing many of the arguments for trends in book publishing emerging from around the world, and by its uncovering of specific data on trends in book publishing in Australia and of the implications for value chains and business models.
# Table of Contents

DECLARATION .......................................................................................................................... i

ACKNOWLEDGEMENTS .......................................................................................................... ii

ABSTRACT ............................................................................................................................... iv

TABLE OF CONTENTS .............................................................................................................. vii

LIST OF FIGURES ................................................................................................................... xiv

LIST OF TABLES ...................................................................................................................... xvi

LIST OF ABBREVIATIONS ........................................................................................................ xviii

LIST OF PUBLICATIONS – BASED ON THIS THESIS .......................................................... xx

## Chapter 1: Introduction

1.1 Overview .......................................................................................................................... 1

1.2 Research rationale ......................................................................................................... 3

1.3 Research objectives ....................................................................................................... 4

1.4 Research questions ....................................................................................................... 5

1.5 Research outcomes ....................................................................................................... 6

1.6 Limitations of the study ............................................................................................... 7

1.7 Structure of the thesis ................................................................................................. 7

## Chapter 2: Development of the Publishing Industry

2.1 Introduction .................................................................................................................... 10

2.2 An overview of the publishing industry ..................................................................... 11

2.3 A brief history of book publishing ............................................................................. 14

2.4 The book publishing industry ..................................................................................... 16

2.4.1 Structure ................................................................................................................. 17

2.4.2 Key stakeholders in the book publishing industry ............................................. 19

2.5 Emerging changes in the book publishing industry ................................................. 21

2.5.1 External Forces .................................................................................................... 23

2.5.1.1 The globalisation of markets and publishing firms ..................................... 23

2.5.1.2 Mergers and acquisitions ............................................................................. 25

2.5.1.3 Technological Changes ............................................................................. 26

2.5.1.4 Consumer-demand shifts .......................................................................... 35

2.5.1.5 Competition ................................................................................................. 37
CHAPTER 3 BUSINESS MODELS

3.1 Introduction ...................................................................................... 80
3.2 Overview of business models and e-Business models ..................... 81
  3.2.1 Business Model ........................................................................ 82
  3.2.2 E-Business models ................................................................. 84
  3.2.3 Key components of business models ...................................... 86
    3.2.3.1 Product-Actor and Network-Centric business model
             frameworks ........................................................................ 86
    3.2.3.2 Marketing-specific business model frameworks ................. 89
  3.2.4 Business models, business modelling and strategy ..................... 91
3.3 The importance of business models ................................................. 93
  3.3.1 Use of business models ........................................................... 95
  3.3.2 Business models and change .................................................. 98
  3.3.3 Testing and evaluating business models ................................... 99
3.4 Business models in the publishing industry .................................... 100
3.5 Business model in digital publishing ............................................ 104
3.6 Conclusion ....................................................................................... 112

CHAPTER 4 RESEARCH METHODOLOGY

4.1 Introduction ..................................................................................... 114
4.2 Overview of methodology and its selection processes .................... 114
4.3 The philosophical perspectives of the research .............................. 117
  4.3.1 Nature of the research ......................................................... 117
4.3.2 Philosophical Orientations ................................................. 118
  4.3.2.1 The positivist paradigm ........................................ 119
  4.3.2.2 The interpretive paradigm ...................................... 120
  4.3.2.3 The critical realism paradigm ..................................122
  4.3.2.4 The design science paradigm ................................... 123
4.4 Rationale for selecting the research methodology ............... 127
  4.4.1 The core research methodologies ..................................127
  4.4.1.1 Quantitative methods .......................................... 128
  4.4.1.2 Qualitative methods ............................................ 128
  4.4.1.3 Mixed methods .................................................. 129
4.5 The methodological approach of this thesis ....................... 135
  4.5.1 Purpose of research – descriptive and exploratory .............135
  4.5.2 Philosophical orientation – interpretive and design science 136
  4.5.3 Methodology – A mixed approach ..................................137
  4.5.4 Research strategy model – Concurrent nested strategy ....... 141
4.6 Conclusion ................................................................. 142

CHAPTER 5 RESEARCH DESIGN

5.1 Introduction .................................................................... 143
5.2 Overview of data collection methods ................................ 143
  5.2.1 Literature review ...................................................... 144
  5.2.2 Data collection methods for quantitative research .......... 144
  5.2.3 Data collection methods for qualitative research .......... 145
    5.2.3.1 Case Studies ....................................................... 145
    5.2.3.2 Ethnographic and phenomenological studies .......... 148
5.3 Data collection, management and analysis methods in this thesis 149
  5.3.1 Sampling .............................................................. 149
  5.3.2 Literature review ...................................................... 150
  5.3.3 Data collection methods – Surveys ................................ 150
    5.3.3.1 Survey design and data collection ......................... 151
    5.3.3.2 Target populations ............................................. 152
    5.3.3.3 Data encoding for the results of both surveys ........... 153
    5.3.3.4 Descriptive analysis of responses to the end user survey 153
    5.3.3.5 Statistical analysis for the end user survey ............. 154
  5.3.4 Data collection methods – Case study .......................... 155
    5.3.4.1 Case study design .............................................. 156
5.4 Procedures .................................................................... 160
  5.4.1 Interview guide ....................................................... 160
  5.4.2 Selection and description of cases and participants ......... 161
  5.4.3 Selection and description of survey populations ............. 161
  5.4.4 Ethical issues .......................................................... 162
  5.4.5 Reliability and validity ............................................. 163
    5.4.5.1 Reliability ......................................................... 163
    5.4.5.2 Validity .......................................................... 165
CHAPTER 6  KEY FINDINGS FROM TWO ONLINE SURVEYS

6.1 Introduction .............................................................. 169
6.2 Surveys responses, reliability and validity .......................... 169
   6.2.1 Responses from the survey of publishers ...................... 169
   6.2.2 Responses from the survey of end users ......................... 170
   6.2.3 Survey Reliability and Validity .................................. 170
6.3 General book publishing trends ...................................... 171
   6.3.1 Revenue growth ...................................................... 171
   6.3.2 Media channels ...................................................... 172
   6.3.3 Outsourcing practices .............................................. 172
6.4 Markets, supply chains and value chains .......................... 174
   6.4.1 Competition ........................................................... 174
6.5 Digitisation and business models ...................................... 177
   6.5.1 Anticipated benefits of digitisation ............................. 177
   6.5.2 Critical success factors for digital business models .......... 177
   6.5.3 Current business models ......................................... 178
6.6 Expectations of the Future .......................................... 179
   6.6.1 Areas where digitisation was expected to have most impact .. 179
   6.6.2 Organisational changes anticipated ............................. 180
6.7 End user behaviour ..................................................... 180
   6.7.1 Access to and use of digital technologies and electronic resources 181
6.8 Summary of the findings ............................................. 202
6.9 Conclusion ................................................................... 207

CHAPTER 7  CASE STUDIES: BOOK PUBLISHERS IN AUSTRALIA

7.1 Introduction .................................................................. 208
7.2 The case study companies and quality control in case studies .......... 209
7.3 Background, general position and trends ............................ 211
   7.3.1 Current position of the Australian book publishing sector ...... 212
   7.3.2 Key trends in the Australian book publishing sector ........... 218
7.4 Position of general trade publishers .................................. 221
   7.4.1 Company backgrounds ............................................... 221
   7.4.2 Products, services and value propositions ...................... 222
   7.4.3 Customer base ......................................................... 225
   7.4.4 Corporate information technology management ............... 225
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.4.5</td>
<td>Relationship management</td>
<td>228</td>
</tr>
<tr>
<td>7.4.6</td>
<td>Distribution channels</td>
<td>230</td>
</tr>
<tr>
<td>7.4.7</td>
<td>Financial aspects</td>
<td>231</td>
</tr>
<tr>
<td>7.4.8</td>
<td>Value chains and business models</td>
<td>233</td>
</tr>
<tr>
<td>7.4.9</td>
<td>Risks, opportunities and the future</td>
<td>236</td>
</tr>
<tr>
<td>7.5</td>
<td>Position of educational publishers</td>
<td>238</td>
</tr>
<tr>
<td>7.5.1</td>
<td>Company backgrounds</td>
<td>239</td>
</tr>
<tr>
<td>7.5.2</td>
<td>Products, services and value propositions</td>
<td>240</td>
</tr>
<tr>
<td>7.5.3</td>
<td>Customer base</td>
<td>242</td>
</tr>
<tr>
<td>7.5.4</td>
<td>Corporate information technology management</td>
<td>242</td>
</tr>
<tr>
<td>7.5.5</td>
<td>Relationship management</td>
<td>246</td>
</tr>
<tr>
<td>7.5.6</td>
<td>Distribution channels</td>
<td>248</td>
</tr>
<tr>
<td>7.5.7</td>
<td>Financial aspects</td>
<td>249</td>
</tr>
<tr>
<td>7.5.8</td>
<td>Value chains and business models</td>
<td>250</td>
</tr>
<tr>
<td>7.5.9</td>
<td>Risks, opportunities and the future</td>
<td>252</td>
</tr>
<tr>
<td>7.6</td>
<td>Position of professional publishers</td>
<td>253</td>
</tr>
<tr>
<td>7.6.1</td>
<td>Company backgrounds</td>
<td>253</td>
</tr>
<tr>
<td>7.6.2</td>
<td>Products, services and value propositions</td>
<td>254</td>
</tr>
<tr>
<td>7.6.3</td>
<td>Customer base</td>
<td>257</td>
</tr>
<tr>
<td>7.6.4</td>
<td>Corporate information technology management</td>
<td>257</td>
</tr>
<tr>
<td>7.6.5</td>
<td>Relationship management</td>
<td>260</td>
</tr>
<tr>
<td>7.6.6</td>
<td>Distribution channels</td>
<td>262</td>
</tr>
<tr>
<td>7.6.7</td>
<td>Financial aspects</td>
<td>263</td>
</tr>
<tr>
<td>7.6.8</td>
<td>Value chains and business models</td>
<td>264</td>
</tr>
<tr>
<td>7.6.9</td>
<td>Risks, opportunities and the future</td>
<td>267</td>
</tr>
<tr>
<td>7.7</td>
<td>Position of specialist publishers</td>
<td>268</td>
</tr>
<tr>
<td>7.7.1</td>
<td>Company backgrounds</td>
<td>269</td>
</tr>
<tr>
<td>7.7.2</td>
<td>Products, services and value propositions</td>
<td>270</td>
</tr>
<tr>
<td>7.7.3</td>
<td>Customer base</td>
<td>273</td>
</tr>
<tr>
<td>7.7.4</td>
<td>Corporate information technology management</td>
<td>273</td>
</tr>
<tr>
<td>7.7.5</td>
<td>Relationship management</td>
<td>276</td>
</tr>
<tr>
<td>7.7.6</td>
<td>Distribution channels</td>
<td>278</td>
</tr>
<tr>
<td>7.7.7</td>
<td>Financial aspects</td>
<td>279</td>
</tr>
<tr>
<td>7.7.8</td>
<td>Value chains and business models</td>
<td>279</td>
</tr>
<tr>
<td>7.7.9</td>
<td>Risks, opportunities and the future</td>
<td>283</td>
</tr>
<tr>
<td>7.8</td>
<td>Position of university presses</td>
<td>286</td>
</tr>
<tr>
<td>7.8.1</td>
<td>Company backgrounds</td>
<td>286</td>
</tr>
<tr>
<td>7.8.2</td>
<td>Products, services and value propositions</td>
<td>287</td>
</tr>
<tr>
<td>7.8.3</td>
<td>Customer base</td>
<td>289</td>
</tr>
<tr>
<td>7.8.4</td>
<td>Corporate information technology management</td>
<td>290</td>
</tr>
<tr>
<td>7.8.5</td>
<td>Relationship management</td>
<td>292</td>
</tr>
<tr>
<td>7.8.6</td>
<td>Distribution channels</td>
<td>295</td>
</tr>
<tr>
<td>7.8.7</td>
<td>Financial aspects</td>
<td>296</td>
</tr>
<tr>
<td>7.8.8</td>
<td>Value chains and business models</td>
<td>297</td>
</tr>
<tr>
<td>7.8.9</td>
<td>Risks, opportunities and the future</td>
<td>300</td>
</tr>
<tr>
<td>7.9</td>
<td>Comparing the categories</td>
<td>302</td>
</tr>
<tr>
<td>7.10</td>
<td>Conclusion</td>
<td>305</td>
</tr>
</tbody>
</table>
CHAPTER 8 DEVELOPMENTS IN BOOK PUBLISHING IN AUSTRALIA

8.1 Introduction........................................................................................................306
8.2 External forces......................................................................................................306
  8.2.1 Globalisation, mergers and acquisitions.........................................................306
  8.2.2 Technological changes .....................................................................................307
    8.2.2.1 Disruptive technologies..............................................................................308
    8.2.2.2 Workflow, content and digital asset management.....................................310
    8.2.2.3 Blogging, podcasts and communities.......................................................311
  8.2.3 E-books...........................................................................................................312
  8.2.4 Shifts in customer demand..............................................................................314
  8.2.5 Competition....................................................................................................315
  8.2.6 Government polices.......................................................................................316
  8.2.7 New media.....................................................................................................316
8.3 Internal forces......................................................................................................317
8.4 Supply chains, value chains and value networks...............................................321
8.5 E-business issues emerging in the interviews....................................................324
8.6 Business models..................................................................................................324
8.7 Evaluation of business models...........................................................................329
8.8 Conclusion..........................................................................................................332

CHAPTER 9 CONCLUSION

9.1 Introduction........................................................................................................333
9.2 The key findings of the research........................................................................333
  9.2.1 Research question one: What are the major trends emerging within
       the Australian book publishing industry?.........................................................333
  9.2.2 Research question two: How do current and emerging business
       models compare with regard to scope, design and structure?.........................335
  9.2.3 Research question three: What technologies and applications offer
       the greatest potential for supporting value creation activities and
       business model development in the digital era?..............................................337
9.3 Contrasts between the research findings and the literature................................338
9.4 Summary of the findings....................................................................................338
9.5 Contribution of this research............................................................................340
9.6 Research limitations and directions for future research..................................341

REFERENCES ........................................................................................................343

APPENDIX A: Media consumer spending and their usage ........................................360
APPENDIX B: Digital technologies.............................................................................361
APPENDIX C: Survey questionnaire to publishers....................................................362
APPENDIX D: Survey questionnaire to end users.....................................................370
APPENDIX E: Statistic analysis variables used in SPSS ........................................375
APPENDIX F1: Different age groups with the use of information technologies ..........378
APPENDIX F2: Different groups in the university and use of electronic resources .......379
APPENDIX F3: Different age groups and degree usage of electronic resources ..........380
APPENDIX F4: Different groups in the university and their online activities ..........381
APPENDIX F5: Different age groups and their online activities ................................382
APPENDIX F6: Online activities and developments in multi-function devices ..............383
APPENDIX F7: Online activities and developments in content format conversion technology ..........................................................384
APPENDIX G1: Company P3 profit and loss model for adult trade paperbound book (Profitable) ..........................................................385
APPENDIX G2: Company P3 profit and loss model for adult trade hardbound (cloth) book (non-profitable) ..................................................387
APPENDIX H1: Company P1 Profit report ..............................................................389
APPENDIX H2: Company P4: Model for a textbook (Revised P&L for 3 years) .......391
APPENDIX H3: Company P4 profit report ..............................................................393
APPENDIX H4: Australian parent group (including Company P5) profit report .......395
APPENDIX H5: Australian parent group (including Company P8) profit report .......397
APPENDIX H6: Company P14’s traditional book profit and loss model in 2004 .......399
List of Figures

Figure 2.1: Framework of vertical relationships ................................................... 19
Figure 2.2: Major external and internal forces ....................................................... 22
Figure 2.3: Technologies and types of publishing .................................................. 35
Figure 2.4: The proportion of the market split by genre and changes ..................... 62
Figure 2.5: The growth of digital versus physical formats ....................................... 63
Figure 2.6: Trends in globalisation and digitisation ................................................. 63
Figure 2.7: A traditional supply chain for book publishing ..................................... 65
Figure 2.8: An initial view of ongoing changes on the publishing supply chain ........ 65
Figure 2.9: An optimum digital publishing supply chain model .............................. 66
Figure 2.10: An example of value chain model ..................................................... 68
Figure 2.11: A value chain model for a book publishing ......................................... 72
Figure 2.12: Value network ................................................................................. 76
Figure 2.13: A potential value network for book publishing ................................. 78
Figure 3.1: Business layers ................................................................................ 92
Figure 3.2: Environment, business models, strategy, process and information systems ... 93
Figure 3.3: Porter-style activity system map for a publishing company ................. 102
Figure 3.4: The Lonely Planet e-Business model schematic .................................. 102
Figure 3.5: Michael Porter’s five forces model ..................................................... 107
Figure 3.6: Six components of the new business model ........................................ 108
Figure 3.7: A scenario-based methodology for business model change ................ 109
Figure 4.1: The research framework of this thesis ................................................ 116
Figure 4.2: Design science research framework .................................................... 125
Figure 4.3: Design science research cycle ............................................................ 126
Figure 4.4: Research outline for this thesis .......................................................... 138
Figure 4.5: Method mix for the thesis ................................................................. 139
Figure 5.1: Types of case studies ........................................................................ 146
Figure 6.1: Outsourcing areas in book publishing in Australia .............................. 173
Figure 6.2: Competition experienced in the past five years 2001 to 2006 ............. 174
Figure 6.3: Potential benefits of digital publishing ............................................... 177
Figure 6.4: Business models in current use .......................................................... 179
Figure 7.1: A technology map of the book industry in Australia ........................................... 216
Figure 7.2: Real growth of industry revenue in 2002 – 2007 ................................................. 220
Figure 7.3: Content licensing model ..................................................................................... 233
Figure 7.4: Full service business model ................................................................................ 234
Figure 7.5: Aggregated model: E-book creation .................................................................. 234
Figure 7.6: A subscription, site license and licensing data models ........................................ 235
Figure 7.7: A subscription model and a cooperative model .................................................... 235
Figure 7.8: Content creation model ....................................................................................... 250
Figure 7.9: The cooperative model for outsourcing editing .................................................... 251
Figure 7.10: A full service model for printing ......................................................................... 251
Figure 7.11: A model of selling through company’s representatives ....................................... 251
Figure 7.12: The information collection and creation model .................................................. 264
Figure 7.13: Outsourcing and content processing/management model ................................... 265
Figure 7.14: Cooperative (outsourcing and distribution) model ............................................ 265
Figure 7.15: A syndication model .......................................................................................... 266
Figure 7.16: A subscription model and online promotion model ............................................ 266
Figure 7.17: The content licensing and the cooperative model ............................................. 280
Figure 7.18: E-book creation and cooperative model ............................................................. 280
Figure 7.19: A multi-printing and multi-delivery formats model ............................................ 281
Figure 7.20: Multi-online-distribution model and aggregation models ................................... 281
Figure 7.21: A self-publishing model ..................................................................................... 297
Figure 7.22: A content creation model ................................................................................... 297
Figure 7.23: A outsourcing model and a cooperative model ................................................... 298
Figure 7.24: Aggregation and cooperative models ................................................................. 298
Figure 7.25: POD and online-to-customer models ................................................................. 299
Figure 8.1: Digital book publishing supply chain model ....................................................... 321
Figure 8.2: Life cycles of value creation in digital publishing business models ..................... 323
Figure 8.3: A generic book publishing model ....................................................................... 327
Figure 8.4: A potential generic model for e-book publishing ................................................ 328
Figure 8.5: Application of the Design Science paradigm to the research .............................. 331
Table 2.1: Interactions among the various parties involved in book publishing .......... 20
Table 3.1: Business model authors list ................................................................. 81
Table 3.2: Categories of digital business models and examples ..................... 85
Table 4.1: Purpose of research ............................................................................. 118
Table 4.2: The basic assumptions of positivism and interpretivism ............. 121
Table 4.3: A summary of the differences between positivism and interpretivism ......... 121
Table 4.4: Decision choices for determining a mixed methods strategy of inquiry ........ 131
Table 4.5: Fundamental differences and distinctions between methodologies .......... 132
Table 5.1: Data collection methods ................................................................. 143
Table 5.2: Crosstabulation Statistical analysis employed in this Survey (SPSS) ........ 155
Table 5.3: Types of reliability and their characteristics ........................................ 163
Table 5.4: Types of validity and their characteristics and comments ............. 166
Table 6.1: Reliability and validity of the questions in the two surveys .............. 171
Table 6.2: Critical success factors currently possessed by companies ............ 173
Table 6.3: Supply chain issues that cause problems for companies ............. 175
Table 6.4: Players in book publishing value chains that are at risk of disintermediation .... 176
Table 6.5: Major stakeholders in the emerging value chains for digital publishing .... 176
Table 6.6: Success factors for digital business models ........................................ 178
Table 6.7: Areas to be most likely to be affected by the impact of digital publishing ...... 179
Table 6.8: Perceived changes in the book publishing industry in Australia ......... 180
Table 6.9: Frequency of use of electronic resources .......................................... 182
Table 6.10: Frequently of engagement in online activities ................................... 182
Table 6.11: Reasons why people use digital technology and electronic resources and purchase online ........................................................ 183
Table 6.12: Factors acting to discourage the use of electronic resources or online purchasing .................................................................................. 183
Table 6.13: Technologies expected to have most impact on digital publishing ........ 184
Table 6.14: Where technology development is impacting most on digital publishing .... 185
Table 6.15: Different roles in the university with differences in levels of use of information technologies .............................................................. 186
Table 6.16: Different roles in the university with different levels of use of digital devices .186
Table 6.17: Statistical test on the differences shown in table 6.16.................................187
Table 6.18: Different roles within the university and access to electronic resources ..........189
Table 6.19: Statistical test on the differences shown in table 6.18.................................189
Table 6.20: Statistical test of the differences between different groups in the university
and the use of electronic resources .............................................................................191
Table 6.21: Different age groups in the university and access to electronic resources .......192
Table 6.22: Statistical test on the differences shown in table 6.21.................................192
Table 6.23: Statistical test of the difference between age groups and the use of electronic
resources ......................................................................................................................194
Table 6.24: Statistical test of the difference between university groups and their
behaviour as regards online activities..............................................................................196
Table 6.25: Statistical test of the differences of age groups and their behaviour as
regards online activities ...............................................................................................198
Table 6.26: Statistical test of the relationship between developments in multi-function
devices and online activities .......................................................................................199
Table 6.27: Statistical test of the relationship between developments in content format
conversion technology and online activities .................................................................201
Table 6.28: Summary of relationship analysis ..................................................................205
Table 7.1: Quality control in cases: tests, tactics and actions ...........................................209
Table 7.2: Market share of publishing in 2003, 2005, 2006 and 2007 in Australia .............213
Table 8.1: Key elements of business model comparison ..................................................329
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>AAP</td>
<td>The Association of American Publishers</td>
</tr>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
</tr>
<tr>
<td>APA</td>
<td>Australian Publishing Associate</td>
</tr>
<tr>
<td>B2B</td>
<td>Business to Business</td>
</tr>
<tr>
<td>B2C</td>
<td>Business to Customer</td>
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<tr>
<td>D-books</td>
<td>Digital Books</td>
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<tr>
<td>DOI</td>
<td>Digital Object Identifier</td>
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<tr>
<td>DRM</td>
<td>Digital Rights Management</td>
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<td>CAL</td>
<td>The Copyright Agency</td>
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<td>CSFs</td>
<td>Critical Success Factors</td>
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<td>CSS</td>
<td>Cascading Style Sheets</td>
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<td>CTO</td>
<td>Chief Technical Officer</td>
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<td>E-books</td>
<td>Electronic Books</td>
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<tr>
<td>EDI</td>
<td>Electronic Data Interchange</td>
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<tr>
<td>EVDO</td>
<td>Evolution-Data Optimized</td>
</tr>
<tr>
<td>ICTs</td>
<td>Information and Communication Technologies</td>
</tr>
<tr>
<td>MIME</td>
<td>Multipurpose Internet Mail Extensions</td>
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<tr>
<td>MPEG</td>
<td>Moving Picture Experts Group</td>
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<tr>
<td>NAICS</td>
<td>The North American Industrial Classification System</td>
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<tr>
<td>OEBPS</td>
<td>Open eBook Publication Structure</td>
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<tr>
<td>ONIX</td>
<td>Online Information Exchange</td>
</tr>
<tr>
<td>PDA</td>
<td>Personal Digital Assistant</td>
</tr>
<tr>
<td>PDF</td>
<td>Portable Document Format</td>
</tr>
<tr>
<td>PC</td>
<td>Personal Computer</td>
</tr>
<tr>
<td>POD</td>
<td>Print-on-Demand</td>
</tr>
<tr>
<td>PSPs</td>
<td>Play Station Portables</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<td>--------------------------------------------------</td>
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<tr>
<td>P2P</td>
<td>Peer to Peer</td>
</tr>
<tr>
<td>RDF</td>
<td>Resource Description Framework</td>
</tr>
<tr>
<td>SGML</td>
<td>Standard Generalized Markup Language</td>
</tr>
<tr>
<td>STM</td>
<td>Science, technology and medicine</td>
</tr>
<tr>
<td>URI</td>
<td>Uniform Resource Identifier</td>
</tr>
<tr>
<td>UML</td>
<td>Unified Modeling Language</td>
</tr>
<tr>
<td>VOD</td>
<td>Video-on-Demand</td>
</tr>
<tr>
<td>W3C</td>
<td>World Wide Web Consortium</td>
</tr>
<tr>
<td>XHTML</td>
<td>The Extensible Hypertext Markup Language</td>
</tr>
<tr>
<td>XML</td>
<td>eXtensible Markup Language</td>
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List of Publications – Based on This Thesis

Refereed Journal Article:


Refereed Conference Papers:


1.1 Overview

Australia’s publishing industry represents a highly significant manufacturing and distribution component of the content industry, creating, transferring and storing knowledge. IBISWorld (2008) statistics show that the publishing industry’s value increased at an average annual rate of 3.1% for the five year period to 2007-08.

Over the past decade, the publishing industry has undergone tremendous changes including:

- Movement from traditional general publishing markets into more specialist areas such as those for professional, educational, and scholarly communities (Cope and Mason, 2001; Cheng, 2004). This move has catered to the requirements of specialist areas, and the production of a variety of publications in book and other formats (Ronte, 2001).

- Increased digital content formats producing dramatic increases in revenue from online business.

- Implementation of changes to distribution channels and supply chains. Most companies now have their own web pages and use them to communicate with authors and service end-users directly.

- Increased levels of outsourcing, and sub-contracting of various processes. This has encouraged the creation and development of new businesses, but also has resulted in a more competitive marketplace.

These changes have predominantly occurred owing to the rapid growth and development of technologies, a turbulent business environment, the growth of global concentrates, increased
competition, stakeholders’ demands for improved financial performance and more sophisticated customer requirements (Scupola, 1999; Davis and Walter, 2003; Lanza, 2004).

To cope with these changes, publishers have had to re-evaluate their resources and capabilities, to design new business strategies and to re-engineer their business processes. This has led to the development of new supply chains in the publishing industry, and to a search for new streamlined business models (IBISWorld, 2004; IBISWorld, 2006).

Developments in technology have included advances in applications and digital networks, including technologies for e-commerce and specific developments such as e-books, rights management technology and digital print-on-demand technologies. Although the publishing industry has adopted a conservative approach regarding take-up of these technologies, publishers have largely accepted the inevitability of digital technology on the basis that:

- Digital technology has no boundaries in geography and time and its advance is inexorable.
- Physical distribution channels have changed;
- Additional copies can be produced at marginal cost;
- New intermediaries are appearing (non-traditional);
- Unique content assumes a greater role, such as exclusive access, editorial enhancement and authority, exclusive distribution, timing and electronic security (Ronte, 2001).

The adoption of digital technology provides opportunities to re-engineer publishing value chains to ensure maximum benefits for both participants and customers. The implementation of digital technologies and processes, therefore, carries implications for existing business models. Consortia of learned societies, libraries and not-for-profit publishers have already
formulated or are in the process of formulating new *Open Access* business models, largely in the field of scholarly journals. This is in response to both spiralling subscription costs and unrelenting demand from academics for outlets for their research. The prime purpose of these models is to allow end-users to access or download articles and information without cost. Mainstream publishers need to be aware of these developments, and of any implications for competition or collaboration, as they review the potential of new generation business models for digital publishing. *Open Access* models did not feature in the plans of any of the case companies in this research.

This research aims to gain insights into the book publishing industry in Australia. It will endeavour to identify and examine book publishing trends, value chains, technologies and business models, as the book publishing industry contemplates the shift from traditional production and distribution processes to those facilitated by digital technologies. Additionally, the research will identify the importance of emerging issues in technology implementation, and the implications and consequences of the application of these technologies to digital publishing. By identifying the strengths and weaknesses of digitally-enabled processes, the research will be useful to companies, seeking both to embrace the new technology and to adapt existing procedures to the demands of digital publishing. Drawing on the literature and in particular, on the perceptions of key players and the industry at large, the research will provide clarification and explanation of the relationships between technology, value chains and business models.

### 1.2 Research rationale

Whilst acknowledging that digital publishing has attracted the interest of the book publishing industry, the literature review reveals a need for further research into the transitional phase from traditional to digital publishing as:
There is neither a dominant trend of digital publishing nor any detailed analysis of its limitations and challenges in the Australian book publishing industry.

Although significant new technologies are available to publishers, there are no clear guidelines regarding their selection and implementation.

Digital technologies such as semantic technology, print-on-demand and e-books are predicted to have a profound effect on publishing, but are yet to impact seriously on the industry.

With the emerging transition from traditional to digital-based processes, business models will need to be revised to encompass new value –adding processes as supply chains and value chains undergo change. However, there is still no general consensus on a business model or framework which can be proposed to commercial publishers.

1.3 Research objectives

Although there has been a sizeable body of research directed towards the study of electronic publishing, web publishing and digital publishing in general, it lacks a coherent focus and reflects no clear distinction between digital, web and electronic publishing. Furthermore, in reviewing the literature of digital publishing, it is apparent that there have been few comprehensive studies of this subject. This is also the case with the business model literature in general, and of digital business models in particular. This research seeks to add to the literature of publishing and digital publishing by reviewing current trends and developments in the book publishing in Australia, assessing aspects of its future as illustrated by emerging value propositions, value chains, technologies and business models and not least, by perceptions of the industry’s future. More specifically, the study’s objectives are as follows:

- Clarification of the field of digital publishing and its key characteristics.
• Identification and confirmation of book publishing trends in Australia, and an assessment of the current position with regards to digitisation.

• Clarification of existing relationships between business models, technology, value chains and business processes relating to digital publishing.

• Investigation of the attitudes of publishers and end users towards digital publishing, its products and services.

• Identification and documentation of linkages and potential co-operation that might emerge amongst various players in the publishing marketplace.

• Identification of those business models most appropriate to meet the future requirements of digital publishing.

1.4 Research questions

The objective of this thesis is to identify trends in the book publishing industry in Australia, and in particular, in the development of digital publishing. The research problem emerges from the challenges posed by the emergence of digital technology. In particular, in the transition from traditional publishing to digital publishing, what business models can be utilized by commercial book publishers to sustain a competitive position within the industry? In order to address these issues, three key research questions and three sub-questions have been developed following review of the literature.

The key research questions were:

• What are the major trends emerging within the Australian book publishing industry?

• How do current and emerging business models compare with regard to scope, design and structure?
• What technologies and applications offer the greatest potential for supporting value creation activities and business model development in the digital era?

In examining the key questions, a number of sub questions were proposed:

• What is the current status of digital publishing in Australia?

• What are the implications for business models in terms of the sources and recipients of value?

• What are the major challenges remaining with regard to digital technologies for book publishing?

1.5 Research outcomes

• The research will assist publishers to achieve a greater understanding of the future challenges likely to be faced as the industry enters the digital era.

• Within the context of the financial constraints and the difficulties arising from the uncertainty involved in changing from one system to another, the research will provide clear recommendations on the likely effects of technologies and will propose suggestions to support the selection and implementation of new technologies.

• The research will provide a detailed explanation of each step of the value adding process in digital publishing, and will identify potential new elements of value which can be added to value chains and potential value networks.

• This research will help book publishers to formulate frameworks for viable business models. It is proposed to build a series of models including a generic business model for book publishers.
• Provision of specific details of the research and its outcomes to case studies companies. This will include findings from surveys and case studies, as well as detailed explanation on the building and evaluation of business models.

1.6 Limitations of the study

This research concentrates on book publishing in Australia. The limitations of the research will be discussed in detail in Chapter 9.

1.7 Structure of the thesis

Chapter 1 - Introduction

Chapter 2 Development of the publishing industry – This chapter provides a general overview of the publishing industry in Australia, and focuses on the opportunities and challenges presented by digital publishing. It reviews the concept of digital publishing, its current impacts, and its potential importance to the future of the publishing industry. It examines the range and scope of digital technologies, and the advantages they might offer to the publishing industry. It also explains the nature of supply chains and value chains in the publishing industry, and their links to business models.

Chapter 3 Business models – This chapter reviews existing business models both in general and in the book publishing industry, options for future e-business models, and the importance of re-engineering existing business models in the transition from traditional to digital format.

Chapter 4 Research Methodology – This chapter outlines and justifies the choice of research paradigms and of a mixed method approach (quantitative and qualitative) in the thesis.
Chapter 5 Research Design – Based on the results of chapter 4, this chapter provides a justification for the adoption of the various methods, and explains the reasons for how and why these methods were used.

Chapter 6 Key findings from two online surveys – Two surveys addressing the different perspectives of publishers and end users will be undertaken. The resulting analysis will form a major element of the research findings.

Chapter 7 Case studies: book publishers in Australia – The aim is to identify book publishing trends in Australia, particularly in digital publishing, developments in technology, in supply and value chains, and current and emerging business models. Fourteen case studies in five categories will be reported on a comparative basis. Five individual cases will be selected from these five categories in order to allow a detailed focus on their products and services, customer base, corporate information technology management, partnerships and collaboration management, distribution channels, financial aspects, risks and opportunities, value chains and business models, and the future. The remaining nine cases will be discussed in more general comparative terms.

Chapter 8 Developments in book publishing in Australia – This chapter will seek to compare and assess the theoretical and empirical findings. The aim is to illustrate trends in book publishing in Australia, developments in and implications of digital technologies, and changes to book publishing supply and value chains. This chapter will also discuss how the two research paradigms employed have been used to design and evaluate business models.
Chapter 9 Conclusions - This chapter concludes with a review of the main findings, discussion of the research contribution and its limitations, and pointers to future research.
Chapter 2 Development of the publishing industry

2.1 Introduction

“Publishing is a business, and its business is the publication of content that entertains, educates, and informs” (Greco, 2005). The North American Industrial Classification System (NAICS5111, 2004) defines the publishing industry as an industry that produces a variety of publications, including magazines, books, newspapers, and directories. It also produces greeting cards, databases, calendars, and other publishing material, excluding software. The marketplace is now witnessing a gradual emergence of additional material in alternative formats, such as audio, CD-ROM, and other electronic media. However the production of printed material continues to dominate the industry. Greco (2005) describes the goal of the publishing business as satisfying the wants and needs of end-users, whilst generating profit.

Understanding today’s book publishing industry involves acknowledging the growing concentration of resources, the changing structure of markets and channels to the markets, the globalisation of markets and of publishing firms, and the potential impact of new technologies (Thompson, 2005). Armed with a more complete understanding of these areas, publishers could better identify their positions in the industry, and develop their own particular business models to achieve their goals.

This chapter provides a general view of the publishing industry, both globally and in an Australian context, focusing on book publishing. The key issues mentioned above are discussed, and a brief history of the publishing industry is included. Further discussion will seek to assess how these issues will affect book publishing supply chains and value chains.
Finally, the chapter will discuss a range of challenges and opportunities related to digital publishing. These issues will either directly or indirectly influence publishing business models.

2.2 An overview of the publishing industry

On a worldwide industry basis, publishing, while important in itself, does not occupy a particularly significant position, and ownership is dominated by large conglomerates (Encyclopedia of Global Industries, 2003). In Australia, the publishing industry accounts for 6.4% of the country’s industrial output (IBISWorld, 2007).

Based on statistics reported in the Encyclopaedia of Global Industries (2003), the major book publishing countries are the United States, Japan, Germany, the United Kingdom, the Netherlands and France. In the Asia-Pacific region, book publishing occurs predominantly in Australia, New Zealand, China, Japan, Taiwan, South Korea, India, and Singapore (Datamonitor, 2006). The statistics indicate that the dominant player in the region is Japan, generating 51% of regional revenues, followed by China with 19.7%, South Korea 8.3% and India 8%. With a combined total share of 12.9%, Australia, New Zealand, Taiwan and Singapore are relatively insignificant players. In Australia, however, these statistics verify that Australia’s book publishing position in a global sense is a modest one. Although in Australia, the industry also represents a small percentage of national industrial output, its presence is perceived as significant (IBISWorld, 2006).

Around the world, traditional publishing businesses continue to adapt to changes caused by advances in technology, changing marketplaces, concerns about the environment and emergence of more discerning end-users. Deutsch (1988) and Keneally (2005) argue that the landscape for publishing today is extremely dynamic and that to be a profitable publisher is becoming increasingly difficult. Turner (1998) argues that book publishing is unequalled with
respect to its multiplicity, and that it is dependent on a high degree of creativity and individual attention. It is totally different from other media sectors such as magazines, newspapers and journal publishing. Greco (2005) points out that books are uncertain products, with many failing to find an audience. Only a small percentage of titles experience a prolonged backlist life. Statistics recorded by the Association of American Publishers (AAP) indicate that the return rate for unsold books is extremely high. Monthly return rates in 2002 were 39.1% for adult trade hardcopies, 22% for adult trade paperbacks, and 51.4% for mass-market paperbacks (Greco, 2005). While American, these figures highlight a major risk area associated with the industry in general.

Book publishing is a complex business owing to a number of factors, including a diverse product range, competition, the number of players in the creation, production and distribution process, and a high degree of risk (Greco, 2005). Nevertheless a substantial portion of the public reads books regularly (DTI 2002a, Encyclopedia of Global Industries, 2003), and many people believe that based on such factors as continuing demand and socio-cultural impact, book publishing will survive in its current, print-oriented form for at least another 20 years (Keh, 1998; Greco et al., 2007). However, there is no room for complacency and the industry needs to formulate suitable responses to a series of looming challenges. One reflection of the nature of these challenges is that, both the level of consumer expenditure per head on books, and the hours per-person per-year devoted to reading books have stagnated. Also, hours per-person per-year devoted to the exploration of electronic formats, most notably, the Internet have increased dramatically (Greco, 2005). Appendix A lists three comparative tables highlighting these issues. Furthermore, these challenges also include the rapid development of technology, and the changing demographics of the book customer base. There is also a widespread perception that the book publishing industry has been relatively staid in its
acknowledgment of and response to change, and that this prevailing attitude has hindered the implementation of progressive procedures and practices associated with digital publishing (Encyclopaedia of Global industries, 2003).

Although uncertainty continues as to the potential impact of the so-called digital revolution on book publishing (Thompson, 2005), Kasdorf (2003) argues that the digital revolution in publishing has been both overestimated and underappreciated. Kasdorf believes that all current publishers have some level of engagement with digital processes, whether the content is hard print or electronic. There is however, no substantial uniformity in approach, as each individual publisher has their own digital traits. Publishers have different requirements, characteristics and target markets, so they will exhibit various levels of take-up of and involvement with digitisation. There are journal and reference publishers who have embraced electronic publishing to the point where they have abandoned or propose to abandon the print format. Others, who are involved in magazine and catalogue publishing, have focused more on the use of digital production technology, whilst newspaper publishers have concentrated on the integration of workflow for print and online publication (Kasdorf, 2003). Based on a review of available statistics, research papers and books (Euromonitor International: Country Market Insight, 2003; Encyclopedia of Global Industries, 2003; Kasdorf, 2003; Rao, 2004; Thompson, 2005; ABS Year Book Australia, 2006 and Greco et al., 2007), it would seem that while e-books present significant potential advantages, especially to publishers of educational textbooks and scholarly books, convincing the book publishing industry in general of these benefits is still a work in progress.

Kasdorf (2003) further predicted that successful publishers in a digital environment would need to have a thorough understanding of business practices, and would have to be bold in the implementation of strategic plans.

2.3 A brief history of book publishing

To fully understand today’s publishing industry, and to anticipate future developments, it is necessary to look back and briefly summarise the history of publishing.

Following the inception of publishing as a commercial entity during the late 1600’s, the roles of the publisher and printer were difficult to differentiate (Keh, 1998). Then as the demand for printed works increased rapidly, it became essential that publishers disengage themselves from the printer’s role, and adopt a more entrepreneurial role in the industry, with respect to selection of content and risk-taking (Thompson, 2005). With the emergence of a mass market for books in the USA during the latter half of the nineteenth century, publishing houses developed a more formal structure, the basis of which is still evident today (Keh, 1998). An important feature of the publishing industry that emerged during the 1800’s, was the development of Copyright which afforded protection to an author’s intellectual product. Over the years, changes in copyright legislation and practices to ensure that integrity was guaranteed across borders have occurred, although some problems remain and indeed, could increase as a result of digitisation (Encyclopedia of Global Industries, 2003). Today, publishers are essentially content-acquiring, risk-taking organisations, orientated towards the production of a particular kind of cultural commodity. Rights to content are acquired and materialised into a book, with sustainable financial backup secured to cover costs. The publisher relies heavily on various aspects of marketing to promote the product with, hopefully, resulting sales in excess of the initial expenditure (Thompson, 2005).
Australia’s publishing roots are directly linked to the origins of British publishing. In the early 1800’s the practice was to export raw material consisting of stories and other texts to Britain to be converted into book form. The end product was then shipped back to Australia to satisfy the prodigious appetites of Australian readers (Munro and Sheahan-Bright, 2006). With the eventual arrival of printing presses in Australia, the fledging industry began to make an impact. However, publications were predominantly restricted to newspapers and various types of journals. At the time of Federation, Australian writers were producing a prolific amount of material, but the bulk of the printing was still being completed in Britain, which was aware that Australia was a significant market for its industry. It was not until the period between World War 1 and World War 2, that the Australian book trade started to acquire an identity of its own (Borchardt and Kirsop, 1988).

In the early 1940’s, Australian published books began to proliferate, despite the difficulties associated with wartime rationing. At the end of the war, there were calls for the industry to be provided with some level of protection against imports. However, the calls for tariffs and tax relief failed to eventuate. In 1948, the Australian Book Publishers Association was founded. At that time, only 15% of books sold for local consumption were produced onshore. For the next few years, British interests continued to dominate the local market, proving a difficult barrier for Australian publishers to overcome. Evidence suggests that during this period, commercial collusion to protect British interests was commonplace (Munro and Sheahan-Bright, 2006).

The onset of the *baby boom* provided opportunities for the Australian publishing industry to make inroads into traditional marketplaces that were dominated by overseas interests. In 1961, the publisher Allen Lane noted that Australia was about to emerge from what he termed an
absorbent phase into a creative phase (Munro and Sheahan-Bright, 2006). Indeed, the publishing industry continued to experience growth and success for many years until the late 1970’s, when an economic downturn resulted in the marketplace again being overrun by overseas companies. It was not until the 1990’s, that Australian publishing experienced a resurgence and again become a player in its own right.

By the turn of the century, Australia experienced a proliferation of professional writers and by the year 2000, over 60% of book sales originated locally. The downside to this explosion of written work was that it became more difficult to have manuscripts published, as publishers became more selective. However, the growth of local writers effectively ended British domination, which had endured for over two hundred years (Thompson, 2005).

Owing to Australia’s geographic isolation, the publishing industry has traditionally experienced delays in adopting and implementing change. The onset of the digital era is producing similar patterns regarding the adoption of change (Euromonitor International, 2003). The publishing industry is now being challenged to accept a digital environment in which previous practices may no longer be appropriate, and where radical change will be required to ensure a viable, ongoing competitive future. Publishers have to accept the reality that end-users have acquired an increasing position of strength, leading to demands which will have to be satisfied by publishers. The digital era will place pressure on the industry to produce what the end-user wants rather than what the publisher can give them (Peek, 2002).

2.4 The book publishing industry

Book publishing is a complex and highly differentiated industry, but it is not without order. It is structured by the existence of a plurality of fields which have their own distinctive
properties and by the existence of networks relationships, supply chains, competition and consumers which operate in one or more of these fields (Thompson, 2005).

Publishers usually operate in one or more of these fields, depending on the kind of books in which they specialise and the markets they are targeting. There are instances however, when the boundaries of the fields become blurred, allowing specific books to enjoy a life in more than one field. An example of this is where a publication intended for use by scholars in one domain, turns out to have content that may be useful in another domain. Nor is it entirely unknown for a book publisher to operate in more than one field. Whilst in these cases publishers can take advantage of relationships to exploit overlap situations, they must act prudently in order to maintain focus on their core priorities (Thompson, 2005).

2.4.1 Structure

The structure of the book publishing industry can be perceived in various ways depending on the number and type of categories into which it is divided. In 1998, there were about 10,000 book publishers in 180 countries, constituting the international book publishing industry (Encyclopedia of Global Industries, 2003). The latter report further revealed that in recent years, the largest segment of the world book industry was that of publishers of college textbooks, followed by publishers of directories and reference books, children’s books, juvenile and young adult books, scholarly books, professional books and all other books.

The Encyclopedia of Global Industries report (2003) classifies books into five categories: (a) trade books, (b) textbooks, (c) scientific, technical and professional (STP) books, (d) mass-market paperback books, and (e) all others. Elsewhere, publishing industry expert James DePonte, observed that the global book publishing industry can be divided into three main parts: general interest books (consumer books, trade books), educational books and
professional books (Encyclopedia of Global Industries report, 2003). Cheng (2004) offered a further categorisation consisting of: consumer book publishing (or general book publishing), educational book publishing and professional book publishing. Consumer books cover an extensive range of general interest products, both fiction and non-fiction, which appeal to the general public. Educational publishing is related to study, education and training publications, whose focus is divided largely between the school and higher education areas. Professional publishing refers to material relevant to specific occupations and industries. Based on international standards, professional publishing can be further classified into five categories: financial, legal, science, technology and medicine. The latter three are commonly known as STM. In this thesis, the research will follow Cheng’s categorisation.

The North American Industrial Classification System report (2004) and the Association of American Publishers (Straubhaar and LaRose, 2006) indicated that in the USA, textbooks, and technical, scientific, and professional books provided nearly half of the revenue of the book publishing industry. The other half consisted of general adult books, which were typically found in bookstores, and juvenile, religious, and reference books. Greco (1997) observes that as in most industries, a number of conglomerates dominate publishing and are responsible for a significant proportion of industry sales. Hence in 1993, twenty publishing firms in America were responsible for 83.9% of industry revenues, while the top 7 publishers held 87% of the positions on the weekly top 30 bestseller list, compiled by Publisher’s Weekly in 1995 (Greco, 1997). Many of these larger publishing institutions have survived for decades by using consolidation to maintain their market position. These companies are particularly prevalent in the areas of educational and professional books (Straubhaar and La Rose, 2000). There are however, numerous smaller and independent publishers that have experienced ongoing profitability by focusing on niche markets (Adkinson, 1988; DTI,
An excellent example of this is the Lonely Planet Company in Australia, which is ranked as one of the world’s most successful travel guide publishers (Munro and Sheahan-Bright, 2006).

2.4.2 Key stakeholders in the book publishing industry

Book publishing is the process of commissioning, producing and distributing books for sale. The process of conveying the completed manuscript to the consumer is complicated, consequent on the interactions of several key players in the industry structure (Thompson, 2005). The key players in the production channel are authors, agents, publishers and printers. The key players in the distribution channel can be separated into distributors (sometimes the publisher itself), but mainly wholesalers, retail stores, book clubs, libraries and replinters (Keh, 1998). These parties interact with and provide services for each other as shown in Table 2.1. The relationships between these players are shown in Figure 2.1.
Table 2.1: Interactions among the various parties involved in book publishing

<table>
<thead>
<tr>
<th>Provider</th>
<th>Author</th>
<th>Agent</th>
<th>Publishing company</th>
<th>Printer</th>
<th>Book club</th>
<th>Wholesale retailer</th>
<th>Consumer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td></td>
<td>Gives commission as percentage of royalty</td>
<td>Accepts and publishes manuscript; Assigns publication rights;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agent</td>
<td></td>
<td>Contact with publisher; Knowledge of commercial value; Copyrights and libel; Negotiate on behalf;</td>
<td>Screens author; Screens manuscript; Saves publisher time;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publishing company</td>
<td></td>
<td>Advance royalty; Contract; Editorial staff and services; Opportunity to publish;</td>
<td>Pays money to the agent to encourage finding good authors or manuscripts</td>
<td></td>
<td></td>
<td></td>
<td>Promotional material</td>
</tr>
<tr>
<td>Printer</td>
<td></td>
<td></td>
<td>Printing facility; Composition and binding;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Book club</td>
<td></td>
<td>Royalty for reprints</td>
<td>Negotiate right to print under club’s imprint; Large print runs in assured markets</td>
<td></td>
<td></td>
<td></td>
<td>Population not served by bookstores; Bookstores; Impose conditions on membership; Lower prices</td>
</tr>
<tr>
<td>Wholesaler, retailer</td>
<td></td>
<td>Market knowledge; Provide shelf space; Wide distribution;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Browsing opportunity; Stocks; Special orders;</td>
</tr>
<tr>
<td>Consumer</td>
<td></td>
<td>Readership; Loyalty</td>
<td>Demand</td>
<td>Demand</td>
<td>Demand</td>
<td>Demand</td>
<td></td>
</tr>
</tbody>
</table>

Among these players, the publishing company serves as the centre of gravity and plays a pivotal role in moulding the process. Greco (2005) summarises the ten main functions of a publishing company as:

- **Content acquisition**: Acquiring a manuscript from an author.
- **Content development**: Developing and enhancing the manuscript via editorial processes.
- **Book design**: Creating the look of the book’s cover and pages.
• Management of the production cycle: Creating cost analysis documents and production cycle estimates.

• Prepress, printing, and binding: Preparing the finished product.

• Marketing: Determining the suggested retail price, crafting a campaign to market and promote the book.

• Sales: Selling the book through the distribution channels.

• Fulfilment: Managing the warehousing and distribution of books; supervising book returns.

• Customer service: Handling all customer enquiries before, during, and in the after-sale period for new and backlist titles.

• Other revenue streams: Supervising all sub-rights, foreign rights, foreign sales licensing activities, and special sales.

### 2.5 Emerging changes in the book publishing industry

As the book publishing industry evolved, several structural changes occurred as the result of both external and internal forces as shown in Figure 2.2. This research will discuss how these forces are currently impacting and will impact on the industry. The areas to be investigated are as follows:

• External forces

  There are many external forces which can impact on the book publishing industry. However, the following forces are considered to be the most important to this study.

  ♦ Globalisation of markets and publishing firms

  ♦ Mergers and acquisitions

  ♦ Technological change

  ♦ Consumer demand shifts
• Competition
• Government policy
• E-books
• New media

• Internal forces

Internal forces largely comprise the activities of management faced by the pressure of external forces, resulting in a series of strategic decisions with implications for markets, products and services and organisational strategies. The most notable outcome of these decisions has been in regard to the adoption of outsourcing strategies, a focus on niche markets and new structures (such as the creation of digital divisions), the adoption of enabling technologies to support (IT strategy), and efforts to achieve changes in organisational culture. The operation of these forces is now considered.

Figure 2.2: Major external and internal forces
2.5.1 External Forces

2.5.1.1 The globalisation of markets and publishing firms

There are many definitions of globalisation, often conflicting but frequently couched in a context of increasing connectivity of economies and ways of life around the world. The term produces strong emotions in different quarters. Its proponents claim that a mix of economic, social and cultural change is leading to increased prosperity, and a more efficient allocation of resources, including the abolition of regulatory trade barriers and capital controls, leading to a stronger globalised economy and the spread of liberty around the world (Sachs, 2005). Additionally, it can be perceived as providing a technological platform for progress, with wide ranging benefits to the global population. Opponents of globalisation point to a perceived damage to the planet, and to human costs in poverty, inequality, injustice and the erosion of traditional cultures (Wade, 2001; Capra, 2002). Globalisation is also viewed as a force for the erosion of national identities with the influx of foreign influences. One potential interpretation of the meaning of globalisation is as a combination of supra-territoriality (Thompson, 2005; Encyclopedia of Global Industries, 2003), which is to do with spatial and temporal configurations in the social space, and of transference and transcendence, denoting a dissolving of the differences operating inside and outside societies (Scholte, 2000; Bartelson, 2001). What seems to be widely accepted is that globally, there has been a rapid and sustained shift in the way that people learn and do things (Stromquist and Monkman, 2000) and that this is heavily dependent on the increasing spread of ICTs (Information and Communication Technologies), accelerating the movement of information and knowledge across borders (Kanwen, 2001). Access to and the promotion of ICTs has been deemed essential by the international development community, for instance in 2007 the United Nations Millenium
Declaration for enabling equal access to the supra-territorial space and the discourse and interactions it facilitates. The rise of globalisation can be measured by:

- Increasing production which crosses borders
- Flows of foreign investment
- International movement of humans
- Scale of migrations creating multicultural societies
- Rapid increase of global communication facilities
- Utilisation of media and publishing industries to deliver products, ideas and information across borders (Thompson, 2005; Encyclopedia of Global Industries, 2003)

These dimensions of globalisation combine the social and economic, the emotive and political (Cope and Gollings, 2001). As a highly emotive force, globalisation is difficult to measure. Although the effects are visible, the measurement of human thinking about globalisation presents a difficult scenario (Cope and Gollings, 2001; Thompson, 2005). From an economic perspective, globalisation is easier to understand, through such manifestations as international trade treaties and organisations, the globalisation of manufacturing and service industries, and the networking of the entire world (Sachs, 2005). With the advent of advanced technology, national borders, in many respects have disappeared and local industries, including publishing have been forced to embrace technology to compete with outside forces (Thompson, 2005).

Globalisation can significantly impact on a country’s cultural position. Cope and Gollings (2001) provide the example of the dominance of roman scripts and the English language through the American Standard Code for Information Interchange (ASCII) character framework, which is still the basis of most computing and text manufacturing technologies.
Countries such as Australia, with small populations, face the prospect of having to import technology to survive, thereby putting at risk their prospects for maintaining a competitive edge over foreign exporters. The majority of Australian publishing companies are now subsidiaries of global parent companies, who are predominantly interested in profit margins, arguably to the detriment of local creators. Multinational conglomerates such as Random House and Penguin currently dominate the Australian market with both imports and Australian titles (Munro and Sheahan-Bright, 2006).

2.5.1.2 Mergers and acquisitions

Mergers can be defined as a consolidation of two or more entities into a single unit, whilst acquisitions are the outright purchase of either the assets or the equity of the target company (Keh, 1998). McCann and Gilkey (1988) state that the main reasons for an entity to engage in merger or acquisition activities are as follows:

- Risk reduction and diversification
- Competitive reaction
- Perception of underutilised or undervalued assets
- Anticipated synergies in markets, finances, operations or human resources
- Legal and tax benefits
- Access to new technologies or processes
- Ego-emotional or psychological motivations

Book publishing has a long history of merger and acquisition activities. During the years 1990-2002, the book publishing industry in the USA was exposed to a frenzied period of activity in this area, resulting in a radically altered environment. The reasons for the
unprecedented increase in mergers and acquisitions were described by Greco (2005) as strategic marketing considerations and globalisation.

Merger and acquisition activity has significantly altered the structure of the book publishing industry globally. Two major concerns as a result of this restructuring are: that too much power resides in too few hands, and that large publishers will continue to engulf those small companies who have established an innovative approach through establishing specialist niche markets (Keh, 1998). Greco (2005) provides statistical data which shows that in the USA in 2001, 10 firms were responsible for about 80% of total publishers’ revenue. Nevertheless, in the face of intense pressure from conglomerates, Baker (1994) noted that many smaller book publishers had remained surprisingly profitable, forcing their larger competitors to rethink their strategies. Today’s book publishing industry in Australia is dominated by large international corporations who have previously been the subject of merger or acquisition. Examples include Random House, acquired by Germany’s Bertelsmann, Harper Collins acquired by News Corporation, Macmillan acquired by Holtzbrinck and CCH acquired by Wolters Kluwer (Thompson, 2005; Greco, 2005).

2.5.1.3 Technological Change

Since the 1980’s, the book publishing industry has engaged in a continuous debate about the impact of new technologies on its working practices, management systems and supply chains. All areas of the industry have been affected by digitisation and computerisation. The emergence of online selling and of e-books provides a visible demonstration of how such developments have impacted the book publishing industry at every level of the value chain (Thompson, 2005). The impacts of technology are discussed below in relation to disruptive technology, digital technology and the role of e-commerce in publishing.
Disruptive technologies

The IBIS Reports (2006, 2007 and 2008) recognised that changes were taking place in technology and systems within the Australian publishing industry. They highlighted as significant trends towards increased automation and computerisation, including the use of digital technologies for transferring information direct to the plate or printed page in formats that could be customised and personalised, and the ability to download books via the Internet for subsequent display in a variety of media. From a global perspective, considerable interest has been generated in so-called disruptive technologies. This term is used to describe those technologies that have the potential to introduce new combinations of media, to erode existing revenue models, and to force content companies to formulate new business models and overhaul their existing relationships with consumers. The Internet and the World Wide Web have been called the major disruptive technologies of the past decade (European Commission, 2003). By reducing distribution costs, establishing direct one-to-one relationships between content owners and consumers, and connecting users with an almost endless flow of content sources throughout the world, the Internet and its underlying protocols and associated languages have had a major impact on content production and supply chain distribution. A U.K. survey of publishers revealed that almost 80% of respondents had a website for content delivery rather than just for information purposes (DTI 2002a). Nevertheless, it is by no means the case that content can always be found quickly and efficiently. This is generating interest in the potential of the Semantic Web, which by integrating metadata as part of its underlying structure, can provide more rapid and effective retrieval.

The Semantic Web brings to the current version of the Web the possibility of having data defined and linked in a way that it can be used for more effective discovery, automation, integration and re-use across various applications (Nykanen, 2003). The Semantic Web means
two things, common formats for integration and the coordination of data drawn from diverse sources, and provision of a language for recording how the data relate to real world objects. Whereas the original Web mainly concentrates on the interchange of documents, the Semantic Web allows people or machines to start off in one database and then move through an endless set of databases which are connected not by wires but by commonality (W3C, 2007). Today, most of the content on Web is designed for humans to read, not for meaningful manipulation by computer programs. The Semantic Web will bring structure to the meaningful content of Web pages, processing the semantics to create an environment where software agents roaming from page to page can carry out sophisticated tasks for users (Berners-Lee et al, 2001).

Two important technologies for developing the Semantic Web are already in place: eXtensible Markup Language (XML) and Resource Description Framework (RDF). XML allows users to add arbitrary structure to their documents, but says nothing about what the structures mean. Meaning is expressed by RDF, which, using XML tags, encodes it in sets of *triples*, each triple being rather like the subject, verb and object of an elementary sentence. A third key component involves the use of ontologies, that is documents or files that formally define the relations among terms to define common terms for the same concept in different databases (Berners-Lee et al, 2001).

The real power of the Semantic Web will be realised when people create many programs that collect Web content from diverse sources, process the information and exchange the results with other programs. The effectiveness of such software agents will increase exponentially as more machine-readable Web content and automated services (including other agents) become available. The Semantic Web, in naming every concept simply by a URI, lets anyone express the new concepts that they invent with minimal effort. Its unifying logical language will
enable these concepts to be progressively linked into a universal Web (Berners-Lee et al., 2001).

In the specific context of publishing, much is being predicted for the potential of the Semantic Web (Davis and Walter, 2003; Neumann, 2005). It is expected to result in the emergence of a new species of content described as *semantic form declarative* knowledge, where basically all things can be represented in semantic form in a standard scientific representation of all knowledge that can be shared jointly by humans and machines (Davis and Walter, 2003; Neumann, 2005).

With semantics becoming more important than data or program code, or even natural language, this shift is predicted to lead to new categories of products and services that will open multi-billion dollar markets in the publishing, IT and manufacturing industries. To the traditional publishing content cycle of creation, acquisition, delivery and use, must be added the life cycle of declarative knowledge, which concerns knowing, learning and communicating (Davis and Walter, 2004b).

The role of semantics may become more apparent to businesses as they progressively gain experience with the utilisation of Web services, and as they develop capabilities in areas such as internal-process integration and customer-facing services. Indeed, some would argue that the real payoff for businesses lies in the potential cost savings in data integration and interface projects available through the implementation of semantic service-oriented architectures (McComb, 2008). In more general vein, Davis and Walter (2004b) report that publishing industry forecasts predict major and possibly revolutionary changes resulting from advances in semantic web technology. Semantic technologies are however, still in their infancy and...
could well be being *oversold* at this stage. It is important that their nature and potential are understood. The challenge for publishers is to decide if digitisation will become mainstream, and if so, when and how to implement associated technologies.

**Digital technology**

The impact of the digitisation of content is said to have been almost as profound as has been the introduction of the Internet. The ability to reproduce perfect copies of content assets, and to use compression technology for distribution, has opened new horizons for content distribution and exploitation. Specific digital technologies include:

- *Digital printing and publishing on demand*: Facilitating the creation of localised and tailored publications.
- *News aggregation and syndication technologies*: Increasing the effectiveness and reach of content assets by presenting them across a variety of platforms and bringing the point of aggregation to the user’s desktop.
- *Content management and cross-platform publishing technologies*: Databases holding various types of content (text, images, audio files) which allow users to access and combine the content for output to various platforms such as print pages or web sites. Their key feature is that they allow publishers to manage and output their content independent of the target platform.
- *Customer Relationship Management*: Technologies that capture data on customers’ relationships with the enterprise, and provide a single view of the customer while allowing content and offers to be customised to particular needs.
- *Digital Rights Management*: Technology that enables the exchange and licensing of content between partners and within complex services. One drawback is the failure of firms to devise an approach which adds to user enjoyment as well as delivering value, rather than laying all the emphasis on *locking up* content.
• **Digital Asset Management**: A set of coordinated content and document management technologies and processes that allows the storage, retrieval and reuse of digital files in all formats.

• **Broadband, mobile and wireless**: All potentially useful technologies in terms of media richness and the downloading of content, but still to demonstrate their worth in terms of book publishing applications. Third Generation mobile technology and WiFi (Wireless Ethernet technology) may enhance their potential. It is also important to take the potential value of *Blogs* into account.

• **New devices**: As well as 3G mobiles, this includes a second generation of tablet PCs and eBook readers to facilitate the publishing of e-books. Although technical issues still need to be resolved – such as the need for common standards for readers and rights management – the improvement in such devices paves the way for new services. They are not only being targeted by book and business-to-business publishers, but also by magazine and journal publishers (European Commission, 2003).

Many of these technologies have potential disadvantages with regard to the risks of piracy and content theft, for example peer-to-peer technology that facilitates file sharing and the exchange of digital copyright without regard to copyright protection or traceability (European Commission 2003).

Kasdorf (2003) separates digital technologies into three stages (*Appendix B*):

• ‘Givens’ – The technologies are well-established

• ‘Works in Progress’ – The technologies are developing and may experience failure

• ‘Future Progress’ – The technologies that will be available in the future
Kasdorf further observes that the future of digital technology in publishing is assured and is an area that will be subject to constant change. Although this aspect may initially be considered beyond our current perceptions, it will be both challenging and inspiring. Digital technology will provide opportunities to encompass a publishing era where content is radically embellished and delivery is possible with greater effectiveness and efficiency.

Thompson (2005) argues that despite widespread uncertainty as to how digitisation will affect the publishing industry, interest in digitisation has not been merely speculative: substantial funds have been invested in digitisation and computerisation by both publishing firms and a variety of other organisations with interests in publishing, including technology firms and private investment firms.

**The role of e-commerce in publishing**

E-commerce is a field of relevance to both general developments in the publishing industry and to the role of technologies in such developments. Recent evidence from the United Kingdom (DTI 2002b) suggests that as an industry, publishing is taking e-commerce seriously, and indeed, that a consensus of sorts has emerged as to its medium-term positive implications both for the optimisation of business processes and its potential for creating new products and services.

Publishing has also been an early participant in developments in electronic commerce, initially at some cost during the original dotcom boom and crash of the 1990s. In those days, publishers enthusiastically embraced the prospect of new markets in electronic publishing, largely on the basis of CD-ROM technology, only to fall victim to the combined perils of hype and over-expectation and a mismatch between available technology and what the market was willing to pay for. Currently, combined with the maturation of e-commerce technologies
for ordering, sales and delivery, the book publishing sector is in a position to take advantage of global, 24 X 7 networks, and of a range of hardware and software developments that promise (or threaten) to revolutionise advances in back and front end systems, in formats and markets, and in value chains and business models. Although the industry is still mindful of the lessons learned in the dotcom crash, it is also aware of the opportunities presented by digital technologies and reluctant to pass up on them should they materialise.

Much of the technology involved in e-commerce is familiar, with Intranets, Web-sites, XML and notably electronic data interchange (EDI) being employed by most of the players in the publishing supply chain. Within publishing in general, content management systems are popular for the re-use and repurposing of published materials, although less so in the book publishing segment. On the other hand, rights management technology, for recording rights and permissions and facilitating licensing and payments from clients, is important in book publishing, as is publishing-on-demand (DTI, 2002b). These technologies are expected to realise their value in a digital environment.

An important feature of current e-commerce is the longevity of an existing technology, namely EDI. This technology represents a set of standards for the transfer of business documents, such as purchase orders and invoices, between computers, with the goal of eliminating paperwork and improving response time. For EDI to be effective, users must agree on standards for formatting and exchanging information, such as the X400 protocol (DTI, 2002b). There are significant numbers of customers using EDI and indications are that it will continue to play an important role in an internet-based environment (DTI, 2002b). EDI is widely used across the publishing supply chain.
The refining of e-commerce technologies continues to have a significant impact on communication patterns in the supplier networks of the global industrial sector. E-commerce enables cost-minimisation by closely integrating buyers and suppliers, and by means of electronic networks that can help firms to attain an integration effect by tightly coupling processes at the interface between stages of the value chain (Malone et al., 1987 and Humphreys et al., 2006). In the case of book publishing, e-commerce is seen as having much to offer in terms of supply chain improvement, and the need to be able to hold and distribute content by means of various channels to different groups which are often customised.

The specific impacts of e-commerce on the book publishing industry will vary with the different players in the supply chain such as book publishers, distributors, wholesalers and retailers, and with both production and transaction processes. In general, however, e-commerce technologies can drive efficiencies and reduce costs, while facilitating the re-use of content and closer relationships with customers (DTI, 2002a).

As publishing technology evolves, sometimes dramatically, there are implications for changes in mindsets in relation to the creation of value (Ronte, 2001). Technology has frequently provided the trigger for changes in business processes, such as in marketing and customer services. The potential impact of technological change can vary from industry to industry. In the publishing industry, in different areas publishers will often work with alternative types of content, with the result that they will pursue different courses when engaging in the development and implementation of future technology. Thomson (2005) provides a preliminary overview of the responsiveness of various types of publisher in regard to the online dissemination of content. Reproduced in Figure 2.3, this points the way to the
development of more comprehensive depictions of the interplay between publishers and technology in the future.

<table>
<thead>
<tr>
<th>Types of publishing</th>
<th>Online dissemination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal</td>
<td>More amenable</td>
</tr>
<tr>
<td>Professional</td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>Less amenable</td>
</tr>
<tr>
<td>Educational</td>
<td></td>
</tr>
<tr>
<td>Scholarly</td>
<td></td>
</tr>
<tr>
<td>Trade</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2.3: Technologies and types of publishing

Figure 2.3 shows that those journal, professional and reference publishing included in Thomson’s research were highly amenable to online dissemination owing to certain characteristics of their content, such as the presence of short articles which were generally consulted and read on a one-off basis. Online access provides such features as ease of access, searchability, updatability, intertextuality and cross-referencing, which are highly valued by end users (Thomson, 2005). Thomson (2005) further states that educational, scholarly and trade publishing are less amenable to online publishing, partly because they deal with forms of content which lend themselves less readily to online environments, and also because of the nature of the institutions and social practices in which the uses of these forms of content were embedded. Despite only two years having passed since Thomson's findings, evidence emerged in the current research project for increasing involvement by educational, scholarly and trade publishers in online and electronic publishing.

2.5.1.4 Consumer-demand shifts

Today’s consumers are much more discerning than in years gone by, and the simple explanation for this situation has to do with the increased availability of choice. There are now multiple avenues available to readers as to how, when and where they can acquire publications. Lichtenberg (2000) notes that publishing involves customers acquiring content,
some of which will be in book form, in a new integration of function, utility and price. Lichtenberg (2000) also argues that publishing is no longer just about selling books. It is about selling consumer flexibility, answers, entertainment, enlightenment and learning. The consumer has now arguably become the key element in book publishing supply and value chains.

Consumers do not only want products, they seek personal attention from their publishers. Davis and Walter (2004a) indicate that the establishment of good relationships with customers is important to the creation of smoother business processes. There are several strategies which publishers can employ to meet their customers’ needs, while seeking to maximise their market share.

- **Follow, grow and adapt to customer needs as they evolve through business life cycles.** This involves profiling customers to ascertain what their individual needs are, based on age, current status and future potential. Scenarios can then be formulated with the intention of introducing and recommending suitable products and services to them.

- **Micro-segment.** Maximises the share of customers to the level of specific activities, tasks and decisions. Publishers strive to embed content products and services closer to the anticipated needs and wants of customers.

- **Personalise and customise.** Allows for the customisation of products and services that can be delivered on a group or individual basis, stimulating customer interest in the products and services.

- **Create ties to related products.** Identifies existing customer relationships, allowing publishers to understand what customers like or do not like. Based on this knowledge, new products and services can be introduced to them.
Today’s consumers now demand products and services that meet diverse and specific needs. From their exposure to computer technology, consumers have become more sophisticated. The product offering is no longer dictated solely by the publisher (Keh, 1998). The days when consumers were required to venture to libraries or bookshops to satisfy their literary needs are over, or at least shrinking in importance as the next generation moves forward in tandem with the advances of technology (Davis and Walter, 2004a). The publishing industry has to be something of a two-way street, with the publisher offering services, but being prepared to make changes and have a flexible approach towards meeting customer requirements (Daniels, 2006).

2.5.1.5 Competition

Publishers are faced with a blurring of boundaries, not only within the industry but also between publishing and other economic activities. This includes the publishing activities of for example, financial services and law firms, and competition from government-funded agencies such as broadcasters and government departments, as well as competition from a variety of Internet-based portals. To remain competitive, book publishers need to pay careful attention to both their internal operations and their marketplaces.

Porter (1985) argued that of all the things that could change the rules of competition, technological change was among the most prominent. Porter also said that technological change was one of the principal drivers of competition. Technology influences structural change in existing firms, as well as in the creation of new enterprises. Technology can have an equalising effect, by reducing the competitive edge of a successful player to a level more akin to that of their competitors. Sharif (1995 and 1999) stated that to maintain a competitive position, a company should master four main technology assets as follows:
• *Technoware*: The physical attributes of a firm which assist, acquire or create products or services

• *Humanware*: The capabilities and potential of employees in a productive sense

• *Infoware*: The embodied, or codified knowledge accessible to the firm

• *Orgaware*: The capabilities derived from the firm’s structure and the process that determines how it operates

Burgleman et al (2004) state that: “from a competitive strategy point of view, technology can be used defensively to sustain achieved advantage in product differentiation or cost, or offensively as an instrument to create new advantage in established lines of business, or to develop new products or markets.” To continue on a course of competitive advantage, a firm must maintain a vigorous policy of technology innovation.

### 2.5.1.6 Government policy

Governments have, and will continue to have a significant influence on the book publishing industry. As the supreme legislating power, their decisions are crucial to the survival of the domestic publishing industry. Despite the dominance of international conglomerates in Australia, the government has a responsibility to ensure that content produced by local players retains viability in the marketplace. Major forms of industry assistance that have been provided by the Australian government include import restrictions, Public Lending Right Payments (which provide compensation to authors and publishers for lost sales arising from the lending activities of libraries), and Literature Board Grants, which are important for publishers of creative writing, especially those in smaller to medium-sized companies (IBISWorld, 2007).
Greco (2005) and Thompson (2005) identified six areas where governments need to discharge their duties and obligations in regard to publishing.

- **The law**: Protection of copyright to enable authors and publishers to flourish. Small publishers also require protection against large conglomerates who engage in large scale acquisitions of smaller firms, thus creating a monopoly in the marketplace. Authors may well need protection against exploitation.

- **Freedom to publish**: Subject to cultural and social sensitivities.

- **Taxation**: Books as knowledge vehicles may need consideration for taxation relief.

- **Subsidies**: If considered necessary in the national interest, they should apply at the point of sale or distribution.

- **Libraries**: Public libraries are a constructive use of taxpayer funds, as are national libraries. Deposit copies should only be required to sustain national archives. University libraries should receive adequate funding.

- **Textbooks**: Governments should not monopolise textbook selection, as this procedure deprives students and teachers of choice.

### 2.5.1.7 E-books

In many ways the signature product of book publishing in the digital age is the e-book. Rao (2004) stated that an e-book could be defined variously as: a text in digital form; as a book converted into digital form; as digital reading material; as a book in a computer file format or electronic file of words, or as images with a unique identifier. Daniels (2006) identifies two different categories of e-book, which are differentiated by the technology used to store and present the text:
• “Page image” based: Primarily for use on larger screens so that the image remains large enough to be read as a page. An example of this is Adobe Acrobat e-books, based on PDF format.

• “Text stream” based: Better suited to smaller screens, where the text reflows to fit the screen. There are many stream-based formats, but are all mutually incompatible, resulting in only a few of these formats being commercially viable. Common examples are Microsoft Reader, Palm Reader, Mobipocket, and the less commonly used Rocketbook/Gemstar.

During the 1990s, the Rocket e-book, the SoftBook, and the Franklin eBook, and competing reader software, notably those of Microsoft and Adobe all gained ground. However, the competing formats and lack of a critical mass of publisher support confined them to small niche markets of enthusiasts.

Having lasted for almost 600 years, the printed book was faced with its first serious challenge with the emergence in the 1990’s of networked computers, the Internet and the electronic distribution of content. Indeed, by the later 1990’s, not only did electronic books and reading devices appear ready to confront and displace the printed book, but also e-books were being hailed as the potential saviour of a struggling book industry. Publishers were urged to convert to electronic products before convergence displaced them and their employees (Landow and George, 1992; Greco, 2005).

The hyperbole accompanying such pronouncements was so pervasive in the late 1990’s, that huge sums of money were poured into massive digitisation programs. However, those book publishers who experimented with making books available in e-book formats in the general
Chapter 2 Development of the publishing industry

retail market, suffered disappointment owing to a lack of take-up of the product. By early 2002, many of the new electronic publishing divisions and e-book programmes had been suspended or abandoned. The book publishing industry came to the realisation that the product was not going to live up to initial expectations, and was forced to implement austerity measures (Thompson, 2005). Daniels (2006) provides some examples of failed e-book initiatives and of the difficulties of promoting e-books to consumers:

- Barnes & Noble used to have an e-book store and even launched an electronic publishing imprint in 2001. Both are now closed.
- The Adobe Digital Media Store, launched in October 2003 to showcase the versatility of the PDF format, ceased operations on June 3, 2005.
- Sony’s Librie failed to take off in Japan when launched in 2004. The high price and draconian anti-piracy technology (users could only ‘rent’ books for 60 days) deterred consumers.
- Adobe surveys show that 46% of online consumers were not interested in reading any form of content in a digital format.

In Australia, e-books have experienced slow acceptance from readers and this may well be related to price competition from paperback formats. Much of the volatility in the marketplace, in terms of unit prices received, stems from the dominant position of paperback titles. These products are far more popular than the more expensive hardback titles, but are subject to price sensitivity (Euromonitor International: Country Market Insight, 2003). Greco (2005) argued that the poor performance of e-books has to be viewed in the context of the publishing industry’s infatuation with theories at the expense of economic analysis. Greco (2005) outlined several reasons why e-books had failed as a viable entity:
• Video cassette recorders took 21 years to achieve a high level of market penetration and probably they would have held wider market appeal than e-books, for example through their multi-media formats.

• Consumer reading is in decline and there is no evidence to suggest that a comeback is imminent.

• Market penetration may be difficult, as the availability of computers and kiosks for print-on-demand will have limited coverage, particularly in third world countries.

• Export income would drop dramatically if the printing of hard copy books dwindles.

• Despite their usefulness, e-readers present difficulties in the form of small screens, with the need for scrolling comprising a tedious imposition.

Even today moreover, a number of key technical issues still need to be resolved, including those in the areas of hardware, content and channel differences.

**Hardware, Content and Channel Differences**

There are issues of device dependence with e-books, involving not only formats, but also the inbuilt digital rights management (DRM) systems they employ, as with the Sony device. DRM systems are critical in terms of their potential to limit downloads and other restrictions. What is needed is a common DRM system that allows consumers to purchase content and to transfer it between different platforms as required. Other devices such as the Palm Pilot, are not tied to specific types of hardware, with the result that the e-book file can be read on multiple devices that support the same software and DRM, for example desktop PCs and PDAs. Screen and battery technologies remain major issues, and publishers still have to make choices between devices that combine e-books, telephones, music players, and organisers, and or multiple dedicated devices that perform better individually (Daniels, 2006). On a more positive note, significant advances have been made in the area of Standards for e-Books.
Electronic books and the Open e-Book Publication Structure

Financially sustainable high performance electronic publishing can only take place within a framework of standards for content and structure, based on sound principles of information processing. Hence, the creation of the *Open eBook Publication* Structure (OEBPS), an XML-based specification for the content, structure and presentation of handheld electronic books is a development of major significance. Conformance to the OEBPS specification is defined both for e-book content (OEBPS publications and documents) and for e-book processors (Reading systems).

OEBPS specifies a coordinated application of systems and existing electronic publishing standards, most importantly: XML, CSS, XHTML, Namespaces, MIME types, Dublin Core and Unicode. Additionally, it defines a packaging method (expressed in an XML Document Type Definition) to ensure the consistent and complete organisation of content and metadata, and a system to support alternative renderings when non-supported types of data are included (Renear and Salo, 2003).

For the book industry as a whole, the provision of a common format for e-books should improve the interoperability and functionality of both content and reading software (increasing customer confidence and satisfaction), resulting in lower overall development and processing costs, and support for innovation and competitive differentiation. For individual publishers, there are similar interoperability and functionality benefits. There are also opportunities for more efficient partner relationships, improved production processes, especially in the areas of integration with existing in-house workflows, and for supporting multiple products and multiple delivery mechanisms (Renear and Salo, 2003).
OEBPS is already widely used throughout the publishing industry, and may be considered to be the industry standard. This dominance is supported by the existence of conversion tools, both for transforming various content development formats into OEBPS, and for converting OEBPS into particular e-book device formats. Its development is overseen by the Open eBook Forum, a non-profit association of industry stakeholders, including major publishers, hardware and software manufacturers, distributors, service providers such as conversion and composition firms, key trade bodies and public sector organisations. Together they are seeking to establish common specifications for e-book systems, to catalyse the adoption of e-books, applications and products and increase awareness of the emerging electronic publishing industry (Renear and Salo, 2003).

On the basis of such advances and, with the advent of a range of new devices such as Mobipocket and the Panasonic reader, the Sony Portable Reader and Amazon.com’s Kindle, confidence has remained that at some point the market would eventually take off (Daniels, 2006), and that e-books would eventually challenge the traditional print format (Epstein, 2001). As Young (2007) pointed out more recently, the failure of e-books to date is not an indication that they will always fail.

As a basis for potential breakthroughs in the development of e-books, the introduction of E-Ink could be truly significant. Developed at the MIT Media Labs the technology works by forming letters based on the rearrangement of chemicals under the surface of the screen, making a page that looks a lot like a printed one. Current developments in e-book technology are clearly influenced by those in everyday convergent devices, including mobile telephones and PDAs. Although the delivery of e-books is not their primary purpose, the screen technology employed in these devices (offering sufficient space to make reading a reasonably
comfortable experience) points the way ahead for new generations of e-book readers (Young, 2007). As regards recent advances in e-book readers, two notable examples are those of the *Sony Portable Reader* and the *Amazon Kindle*. The Sony product is among the latest attempts to create a device akin to the iPod, but suitable for reading. The Sony device which was launched in 2006, marked the first major use of E-Ink. This led to major improvements in screen contrast and resolution, making the reading experience closer to that of ink on paper. A second generation model was introduced in 2007. The battery offers a reading life of approximately one week before the need for re-charging, and the device can hold between 75 and 100 books. Users also have access to content available from the *Sony Connect* store. Needless to say, the device has its drawbacks, notably its cost and the fact that the content available remains limited. Nor can users download their existing collections of e-books into the reader, in the way that can be done with music and iPods (Young, 2007).

Amazon.com’s Kindle Reader came on the market in November 2007. Like the Sony Reader it uses e-ink, although the screen is somewhat smaller than that of the Sony product. Initial reactions in the marketplace are that the interface is good and embodies a useful page-turning facility. However, like the Sony product the Kindle is expensive. This runs not just to the cost of the device itself, but to associated network access and content downloading costs, including those for access to Blogs, newspapers and RSS feeds many of which are already available free on the Web. Books can be downloaded, provided they are in a form compatible with Kindle. However, Kindle supports only two types of text files natively, *.TXT* or *plaintext* files and its own *.AZW* format, and perhaps critically, does not support PDF. There is a conversion process available from Amazon but again this does not extend to PDF and can be costly the Sprint network (Turner, 2008).
The Kindle's real breakthrough lies in its wireless connectivity, via a system called Whispernet. Based on the EVDO broadband service offered by cell-phone carriers, it works anywhere, not just in Wi-Fi hotspots. Hence not only is it a link to a bookseller for the purchase or reading of books, but more significantly it is a perpetually connected Internet device, described as the first always-on book, a potentially disruptive technology. This could make a reality of the widely touted vision that Readers would read in public. Writers would write in public, with connected reading devices enabling communities to form and meet, as it were inside the book (Levy, 2007). The selection of content available is limited at the moment, and Kindle has been compared to the first versions of the iPod, which showed promised but needed improvement. When these inevitably appear, the Kindle could indeed, turn out to be a very significant development. At the moment, however, neither Kindle itself nor access to the Whispernet service are available outside the United States.

Such advances notwithstanding, it is important to bear in mind the fact that new reading devices represent only a technical step forward. What is needed is a cultural change in the book publishing industry and this represents a much more significant challenge to all concerned (Young, 2007).

2.5.1.8 New media

The term new media as employed here refers to the emergence of new channels of communication, enabling the co-existence of traditional media forms with those of developing all-digital formats. The new media provide fresh capabilities to users, whereby they are able to exercise degrees of control regarding the choice of options and content. Straubhaar and LaRose (2006) listed the defining aspects of new media as being digital, interactive, audience generated, asynchronous, multimedia and narrowcasting. They offer the following descriptions:
• **Digital**: The key to combining text, image, and sound in two-way communication channels, providing a quality transmission less susceptible to interference and distortion.

• **Interactivity**: Based on an exchange of information, continually modified depending on responses received.

• **Audience generated**: The ability of audiences to generate content. The most influential example is the *Blog*, (short for web log). *Blogs* are personal home pages on the web that are filled with opinion and personal commentary, content that now often serves as sources for the old media. Other examples of user-generated content include social networking sites such as *Myspace, YouTube and Facebook*, which while providing similar facilities to *Blogs*, also offer the advantages of video technology.

• **Asynchronous Communication**: Provides communication facilities that are communicated across time, allowing participants the freedom from rigid guidelines.

• **Narrowcasting**: The practice of targeting a particular audience or market segment.

• **Multimedia**: Converging technologies that break down the conventional distinctions between channels of communication, allowing a choice between modes of presentation.

The current strategy for the new media is to focus on the integration of various channels of communication into all-purpose digital networks, aiming at providing accessibility to a wide ranging audience at their own convenience.

**2.5.2 Internal Forces - Actions of top management**

Prominent among areas for management decision makers are issues such as outsourcing, niche markets, organisational structure, IT strategy and organisational culture.
2.5.2.1 Outsourcing strategies

Outsourcing describes the practice of utilising a third party via formal contractual arrangements for non-core activities where the supplier uses outside expertise to minimise cost and time aspects (Kippenberger, 1997a and 1997b; Underdown and Talluri, 2002; Linder et al., 2002 and Franceschini et al., 2003). Gavin and Matherly (1997) argued that core areas of a business, representing those that enhance value to both customer service and product stream, should be maintained in-house. By availing themselves of an outsourcing service, companies can concentrate their resources on their core business activities (McCarthy, 1996; Lankford and Parsa, 1999). McIvor (2000) points out that the first and most important step in the outsourcing framework is to distinguish between core activities and non-core activities. Through an outsourcing contractual agreement, the supplier plays a role in the production process which could include various aspects such as people, processes, technology, intellectual property and assets. The organisational structure of the outsourcing organisation will automatically change when the client negotiates agrees to a contractual arrangement with an outsourcer (Overby, 2007).

Outsourcing has become an increasingly important feature of many industries. There are many advantages to outsourcing, such as reduced fixed costs and increased flexibility. However, at the same time it may affect coordination and control (Franceschini et al., 2003; Beaumont and Sohal, 2004; Leavy, 2004). Guimaraes and Igbaria (1992) point out that the basic idea behind outsourcing is that if someone outside the company can do the job better on a sound economic basis, then logic says to do it. Strictly speaking, outsourcing refers to the movement of assets from a user to a supplier, where the supplier takes responsibility for the activity (Tacak, 1994). Moving the work to wherever the labour rates are lower is not a new
approach, however what makes a difference is the extent to which a network-services infrastructure makes this practical (Davis and Walter, 2004a).

Outsourcing can provide book publishers with the opportunity to access a greater knowledge pool, including access to the most advanced technology available (Pinnington and Woolcock 1995; Kasdorf, 2003). According to Daniels (2006) the vast majority of digitisation and conversion activity is now being undertaken in India, with all the mainstream STM publishers having representation there. India as a locale offers low cost, high technical skills and strong English language writing skills.

As indicated above, while outsourcing can be advantageous to book publishers, there are some potentially negative aspects that need to be carefully considered prior to committing to the process. These include a loss of co-ordination and control, potential exploitation by opportunistic suppliers, and employee apprehension regarding job security (Kumar and Snavely, 2004; Thompson, 2005)

2.5.2.2 Niche markets

Kotler (2003) defines niche markets as a narrowly defined customer base seeking a distinct mix of benefits. Kotler further states that the key issue in niche marketing is that of specialisation. Dalgic and Leeuw (1994) describe niche markets as small markets consisting of an individual customer or a small group of customers with similar characteristics or needs. Michaelson (1988) observes that niche marketing involves finding small groups of customers that can be served within a segment. Niche marketing has been with us for some time. What is new, however, is the increased diversity of markets and advanced technologies, enabling new marketing approaches (Dalgic and Leeuw, 1994).
Many book publishers have embraced the concept of niche markets, not only as a means of diversification, but also a means of survival in the face of those large conglomerates that dominate mainstream book publishing (Straubhaar and LaRose, 2006). Smaller companies do not have a monopoly on niches, but they may be better focused and equipped to serve those specific markets than their larger competitors (Dalgic and Leeuw, 1994). To remain a competitive force in niche markets, book publishers need to recognise their key characteristics. Kotler (2003) describes these as:

- The customer has a distinct set of needs;
- The customer will pay a premium price to the company that best satisfies their needs;
- The niche is not likely to attract competition;
- The niche marketer gains certain economies through specialisation;
- The niche market has size, profit and growth potential.

As with most businesses, an integral part of the book publishing industry is the establishment of successful relationships between the publisher and other value chain participants (Kumar and Snavely, 2004; Parrish et. al., 2006; Straubhaar and LaRose, 2006). Kotler (1999) emphasises that key areas that have to be addressed are those of a strong dedication to their customer, incorporating responsive service, punctual delivery, and direct and regular consultation between customer and management. Paramount in this aspect is the need to offer the customer a clearly differentiated product that fills (or creates) a need (Michaelson, 1988; Raynor, 1992).

2.5.2.3 Structure

In today’s competitive environment, management decision processes require the support of a well-designed and flexible infrastructure including technology and organisational structure.
The complexities of current and emerging technologies represent a significant challenge for book publishing management with for example, computerisation and e-commerce resulting in quantum leaps in data processing and the way that companies do business (Rashid et al., 2004).

Accordingly, it is important for publishers to consider their internal structure whilst moving towards a digital publishing environment. Increasingly this has led to the creation of digital divisions within companies, frequently under the control of digital directors. Daniels (2006) argues that the emerging digital director's role is becoming more important, and it may transpire that this person will no longer be subservient to the editor or marketing director of the printed product. In the long term however, one organisational structure covering all publishing formats will take on more importance.

2.5.2.4 Organisational culture

Changes in an organisation can take place in response to business and economic events and to influences on managerial perceptions regarding change (Pettigrew, 1985). In responding with confidence to change, management may need to implement cultural change within the organisation. Dunham (1984) and Carnall (1990) agree that attitudes are difficult to change in an environment where people are comfortable. However, it is incumbent on senior management to initiate a transformation of culture within the book publishing industry as there are many instances where traditional culture is firmly entrenched to the detriment of progress (Thompson, 2005). Organisational culture is critical to the process of change (DeLisi, 1990; Schneider and Brief, 1996; Ahmed, 1998; Lorenzo, 1998; Silvester and Anderson, 1999 and Pool, 2000).
Daniels (2006) believes that in the current environment, many publishers are constrained by legacy practices and inappropriate cultures, and carry the burden of being reactive rather than proactive. There is a need to eliminate the fear of failure by *cannibalisation* or the disappointment of previous digital forays, and to promote and encourage innovation and experimentation.

### 2.5.2.5 IT strategies

Strategy comprises a projection or plan which enables a firm to achieve a specific set of goals. To enable an IT strategy to be successfully implemented, it is imperative that management has a clear and united understanding of the scope and direction that the strategy provides. Savin (2004) argues that a sound strategic plan for IT should incorporate the following six components:

- **Application systems**: Describes the business applications on which a business runs and represents the heart of an IT system, providing functionally.
- **Application development**: Describes the area of capital expenditure required to either purchase or develop the systems needed to implement an IT strategy
- **Infrastructure**: Encompasses the physical components of the IT assets.
- **Maintenance**: Describes a clearly defined maintenance and support strategy for the application software and infrastructure systems.
- **Operations**: Describes the area of human resources, security and quality control.
- **Security**: Describes an essential ingredient of an IT strategy, providing protection against internal and external intrusions.

Savin further argues that a sound IT strategy must be comprehensive, aligned with the firm’s objectives, easy to comprehend and forward looking. Hoplin (1995) states that successful planning, requires discipline, diligence and knowledge on the part of a company’s human
resources. The need for book publishers in Australia to implement a sound IT strategy is vitally important to their survival. Bower and Christensen (1995), in arguing that implementing an IT strategy is a complicated matter, point out that management needs to consider both current and future situations in order to preserve and develop customer bases. They then pose the question, “Why is it that these companies invest aggressively and successfully in the necessary technologies required to retain their current customers, but then fail to make provision for technologies that will impact on their future customers?” They believe that bureaucracy, arrogance, outdated executives, poor planning, and short-term investment horizons are all contributing factors. However, one reason is absolutely fundamental. The market leaders in any industry will all be found to subscribe to a popular and valuable management dogma. They stay close to their customers. Despite the likelihood of most managers thinking that they are in control, customers can wield extraordinary power in influencing the direction of a company’s investments. Prior to the taking of decisions regarding the launch of technologies, developing a product, building a plant, or establishing new channels of distribution, managers must consider their customers: Is there a customer demand? Is the market expansive? Will the investment return profits? Astute managers seek answers to these questions, which could improve the likelihood of their investments being aligned with the needs of their customers. To ignore their customer requirements is to invite disaster (Bower and Christensen, 1995). Thompson (2005) argues that because digitisation has the potential to transform the publishing industry, the planning phase is of paramount importance.

These forces, both external and internal, either individually or in combination, will affect the book publishing industry either directly or indirectly via supply chains, value chains and value networks. An additional outcome is likely to be a rejuvenation of business models.
2.6 Digital publishing

In a wider context, Daniels (2006) argues that the significant issues which face or will face publishers are as follows:

- Digitisation will lead to the management of more products, formats and fragmented content.
- Digitisation will introduce changes to production processes and workflows.
- Digital assets will need to be accessible for re-use.
- Digitisation creates the opportunities for new sales channels, intermediaries and requests from customers.
- The management and protection of Intellectual Property Rights is complex and difficult.
- There is a real threat in some sectors of digitisation or die, while in other areas digitisation is having little impact. Timing is the challenge.
- With many new options and vendors to choose from, risk increases.
- In such a rapidly evolving market, the unknown is always the greatest threat and risk.
- The threat that digital content might cannibalise print.

Reading habits are changing, and in many cases reading is in decline, owing to increased competition for peoples’ money and time, and a growing range of new media, games and interactive television. The reading habits of people are also changing due to the improved technology available within the publishing industry. These changes include the availability of electronic books or papers in libraries, the ability to buy electronic books via the internet, or through subscription from publishers’ web sites, and the downloading of books and articles to computers and PDAs (Liu and Rao, 2005). These changes are causing publishers to pay more attention to the potential of online business. However, although online is growing in
importance, the main trend appears to be one of diversification into alternatives, including digital formats, while retaining traditional lines of business.

Statistics reveal that major players in the publishing industry in Australia have increased their online business revenues by about 30% from 2001 to 2005 (IBISWorld, 2006). The major reasons for this increase can be attributed as follows:

- The Generation Y segment of the population has grown up during the computer age, and is therefore, more likely to accept the new online formats.
- Online transactions offer significant savings of time and can create greater growth opportunities for publishers.
- Online business reduces paper and storage costs, areas of major expense to publishers (Herther, 2005).

For all its acknowledged importance, the general level of understanding of digital publishing and its related technologies leaves considerable room for improvement. Terms such as web publishing, digital publishing and electronic publishing while linked, nevertheless embody quite distinct processes. For example, when it comes to publishing style, digital publishing offers a blended style, while areas such as desktop, web and electronic publishing have their own individual styles (Wang, 2003; Liu and Rao, 2005). Despite this, the terms are often used interchangeably.

Digital publishing is defined as publishing dependent upon the World Wide Web as its communication channel, producing digital content based on either domestic or global platforms, published and distributed online, with provision for the establishment of digital database facilities for future re-use (Wang, 2003; Liu and Rao, 2005). The process allows for
links to e-commerce, for example, by facilitating online payment, with all procedures in the process digitised. Based on customer requirements, the product (information) can be produced and provided in various formats, such as online, web, TV, CD-ROM and if necessary, paper (Liu and Rao, 2005). Additionally, Print-on-Demand (POD) and Video-on-Demand (VOD) are elements of digital publishing. The digital publishing production and supply chain incorporates authors, publishers, technology providers, databases, web distributors and end-users.

In summary, digital publishing incorporates several characteristics (Kleper, 2001; Liu and Rao, 2005):

- **All content is digitised**: Allows various formats to be consolidated into a single format.
- **Digital technology**: Allows publishers to create an infrastructure that gives multiple options for content format.
- **Digital publishing technology**: Allows accommodation of the viewing mode requirements of different customers.
- **Basic editing processing and updating of information take place on the server**: Allows reductions in processing time and leads to economic benefits.
- **Electronic transmission of content**: Allows rapidity and efficiency.
- **Technological support**: Allows for usage of integral parts of the digital publishing processes, for example for Content, Web, Media, Internet and Communication technologies. The development of new technology will obviously lead to increased efficiency.
- **Digital publishing technology**: Allows for increased effectiveness in market research.
The impact of digitisation on book publishing can be illustrated in terms of five main categories of technology: operating systems, content management, digital asset management, marketing/service provision and content delivery (Thompson, 2005).

**Operating systems**

In the late 1980s and early 1990s, digitisation began to transform various aspects of the book production process, leading to the emergence of workflows that were increasingly digitised. The arrival of word processing opened up possibilities for authors to deliver not a typescript, but keystrokes captured in a digital file. This meant that author output did not have to be re-keyed, and led in many cases to the outsourcing of author files to firms that, using *macros*, could ready it for copy-editing and production. Next, copy editing itself moved to the computer, and later it too began to be outsourced along with typesetting. Proof correction also moved to desktops, initially using *Postscript* and then PDF, which quickly became the *de facto* standard in publishing. Now typesetters create a PDF of the final corrected page proofs, and write it to a CD-ROM, printing directly from PDF files (Thomson, 2005).

Management systems in all major publishing houses are now computerised, and management information is conveyed in digital form. Back office systems store bibliographical and other data on each title, for access through networks. Financial production data is commonly held in IT systems; calculations of prices, print runs, and gross profit margins are automated, with royalties and other transactions computerised. A high proportion of in-house communication and communication with clients now occurs electronically. This has led to digitisation of the supply chain, with systems for the management and transfer of stock increasingly computerised, and the pervasive use of EDI and Electronic Point of Sale technologies, along with stock ordering from wholesalers and publishers operating through dedicated electronic ordering services such as *First Edition*. Also, as production workflow becomes increasingly...
file-based, managers have recognised the need to develop secure and reliable means of storing
digital files, not least because these might later form the basis of new revenue streams, for
example by licensing content to virtual libraries, e-book vendors or other third parties
(Thomson, 2005).

**Content management**

The susceptibility of both text and images to digitisation has led to the gradual application of
digitisation to the various stages of content transformation and to digital workflow. Content
management systems are tools that are implemented to support internal workflow processes
and collaborative authoring in publishing a Web site or application (Trippe and Walter, 2003).

Content management systems emerged in the late 1990s for document management and the
authoring of large web sites. Today they extend to digital asset management and collaboration
capabilities, and come in the form of systems designed specifically for the collaborative
publishing of web sites, of those designed for use with specific media such as newspapers,
and of XML based systems designed to support cross-media publishing.

Content management systems with sophisticated authoring tools and user interfaces, offer
numerous benefits from the organisation of files and the automation of mundane tasks, to the
separation of content (texts, graphics, and scripts) from design of the HTML pages in which
they are published, to repository review, version control, scheduling, personalization and
syndication features. However, workflow is a primary consideration in content management,
applying review and approval processes before content is published, and basing approval on
workflows comprised of specific users, tasks and roles (Trippe and Walter, 2003).
Digital asset management

Just as physical books need to be warehoused and distributed as per order fulfilment, digital assets need an equivalent. Some larger companies such as HarperCollins and Harlequin have or are developing their own digital asset warehousing and distribution solutions. A number of firms specialise in selling or licensing software solutions specifically for the book industry. The advantage of these sophisticated, comprehensive programs is that they give publishers the ability to manage and manipulate their assets themselves. However, they are relatively expensive, and require significant people resources to implement. Publishers also have the option of selling or licensing content under different arrangements to a variety of enterprises including:

- Enterprises that sell physical books, such as Amazon.com as well as other products
- Enterprises that sell downloadable books, such as e-Books.com, readable on a variety of platforms. Downloading to PCs, PDAs and mobile phones is required.
- Enterprises that sell or licence access to searchable, aggregated book content to target markets for the purposes of research or education, and generally offer a proprietary software platform serving specific market needs, such as NetLibrary.
- Enterprises that are search engine-based and offer free access to aggregated book content to anyone online. Revenue is generated by selling advertisements that are automatically positioned adjacent to content by keyword searches, for example Google and Microsoft (Davy, 2007).

Marketing and service provision

Traditionally, most publishers have not aggressively marketed directly to consumers, owing to reasons including: the difficulty of identifying their target market, the cost of direct mail marketing to broadly based consumer groups, and the fear of alienating retail accounts.
The digital revolution, coupled with eroding margins and reduced retail sales, has changed the marketing landscape. The online environment offers opportunities to vastly reduce the cost of accessing potential customers through so-called email *blasts*, e-newsletters and increasingly, the use of *Blogs* supported by a website. Penguin Books in the UK and Books 24X7 are noted innovators, Penguin, in its use of *Blogs*, offers readers, publishers and editors sneak previews of work-in-progress from top authors and Books 24X7, for its free *Podcast* series featuring business leaders (Daniels, 2006). Another emerging innovation by publishers is the development of reader communities and interest groups, aimed at the promotion of books and authors and of reading in general. These communities are as diverse as the subject concerned, and include consortia of publishers as well as individual houses, and utilise interviews, video clips, games and competitions. Many have sponsored links to Amazon.com. It seems clear that *Blogs* and *Podcasts* will be used by all stakeholders in the industry. As one commentator observed, how they will be used is interesting, but they are here to stay and their influence is not in doubt (Daniels, 2006).

Having a website presence can enhance relationships between publishers and their customers through the ability to provide a range of proactive support services to market books and conduct market research. Furthermore, in addition to selling through third party companies, publishers have the option of selling their own products (analogue or digital) online directly to consumers. However, it requires considerable expertise and significant marketing dollars to get people to visit a site and to collect and manage customer data.

A recent technological innovation in the marketing area is the development of *widgets*. *Widgets* offer functionality similar to that provided by Amazon’s *Search Inside the Book*, but unlike the Amazon system, which is restricted to the Amazon website, they are designed to be
used on almost any website, including social networking sites such as You Tube and MySpace. Both HarperCollins (Browse Inside) and Random House (Browse and Search) have launched their own book widget services. Both are designed to offer protection against piracy and unauthorised copying; to provide statistics on the number of sites displaying any particular book, and to allow access so that they can be modified or adjusted at any time (Davy, 2007).

**Content delivery**

This is the level at which the impact of digitisation is potentially the most profound, in that it could truly *disintermediate* the book publishing value chain, and drastically reduce the costs of producing, storing and distributing books. The potential here is for the publication of e-Books, which are here defined as book text converted into digital form for reading on a screen (Rao, 2004). The market could be transformed were the key issues of format and screen technology successfully addressed.

Daniels (2006) identifies different rates of transformation within the physical book market as moving different kinds of publication to digital formats. The hard copy book market continues to experience sustained growth, and is expected to continue growing at a rate of between 1.5% and 3% for the next 5 years. However, this overall growth trend is unlikely to be replicated across all genres, and while some will continue to grow, others will decline. Figure 2.4 shows the proportion of the market split by genre, and how this has changed over the last 3 years.
Figure 2.4: The proportion of the market split by genre and changes (Daniels, 2006)

Figure 2.4 shows that some genres are experiencing steady decline, including fiction, atlases, maps and travel, school textbooks, study guides, and the arts. With the exception of fiction, all these genres are moving quickly to digital formats (Daniels, 2006). Daniels further concluded that:

- Many trade publishers are in the process of digitising their books, and academic publishers have established business models for selling e-books direct to students.
- Predicting the speed of digital growth is very difficult. Learning from other markets can be useful, and can provide some insight into the types of consumers that may move to digital books first, and how quickly this might happen.
- The physical market for all entertainment formats has grown over the last decade. With the introduction of digital tracks, the music market reached its physical peak in 2004. DVD was forecasted to reach its physical peak in 2006. Up to 2006 there have been no firm estimates for games and books, but it is expected that the peak for games will come within 3 to 5 years, and for books within 5 to 10 years. Figure 2.5 shows how the growth of digital versus physical formats is expected to change between 2003 and 2009 (Daniels, 2006).
Globalisation and digitisation are two key trends in world economic development (Daniels, 2006), and the book publishing industry is directly affected by both. However, the experiences of the three main publishing areas of general, educational and professional have differed, as shown in Figure 2.6. In fact, in both the digitisation and globalisation areas, professional publishing is clearly more advanced than those of educational and general publications (Cheng, 2004). However, this may not necessarily be true in all cases, including that of Australia.

**Figure 2.5: The growth of digital versus physical formats**

The digital revolution is now having a global impact. However, Australia’s book publishing industry is yet to fully embrace the phenomenon. This research seeks answers to the following questions.
questions: What are the major trends emerging within the Australian book publishing industry? What is the current status of digital publishing in Australia?

2.7 Book publishing supply and value chains, and value networks

2.7.1 Supply chains

A supply chain describes the necessary steps a product takes from origin to consumer. Efficient supply chains emphasise utilisation, system costs, and inventory turnover rate (Rainbird, 2004). In essence, the notion of a supply chain emphasises distribution rather than product enhancement, with each stage representing a cost minimisation.

2.7.1.1 Book publishing supply chains

The publishing supply chain comprises a network of organisations and activities involved in the publication, sale and distribution of books. The supply chain encompasses a series of independent but interconnected organisations, situated at various points along the chain, which perform certain tasks or functions for which they are renumerated in some way. The supply chain includes such tasks as the creation and development of content, design, quality control, marketing, printing and sales (Thompson, 2005). The book industry supply chain is particularly complex, embodying a large number and wide variety of products, many different players, common processes and related information flows (buying, distribution, selling, customer service, returns). In general terms, the supply chain can be categorised into three stages: publishing, printing and retailing (Euromonitor International, 2003). Figure 2.7 reproduced from a United Kingdom study by KPMG and the Publishers Association (1998) shows a generic supply chain model for book publishing.
2.7.1.2 Supply chains in digital publishing

The characteristics of digital publishing will entail changes to production and supply chains, and distribution channels. Figure 2.8 illustrates both a traditional physical chain and changes anticipated by the uptake of digital technologies.

Digital publishing is ultimately about the availability of market ready digital content, and content is the core of publishing. Daniels (2006) indicates that the work can still have physical attributes, or it may be printed on demand, distributed via downloading, on CDROM/DVD, or online. Sales and marketing can operate through traditional or new online distribution channels, and in some instances, direct to the end-user. Having the digital content available is
essential to maximise delivery choices, and to provide the appropriate response to changing circumstances and opportunities arising in the marketplace. It is therefore, imperative that publishers adopt a flexible approach to enable them to employ the appropriate delivery mechanisms to suit individual scenarios. With the emergence of digitisation, many different opinions have surfaced as to the most suitable supply chain model. According to Daniels (2006), the optimum digital publishing supply chain model should resemble that in Figure 2.9.

![Figure 2.9: An optimum digital publishing supply chain model](image)

Changes to the supply chain will lead to different perspectives regarding value chains. Similarly, the activities for adding value will be altered. In the digital era, the major value element in supply chains will be that which focuses on the consumers.

### 2.7.2 Value chains

Porter (1985) describes a generic value chain as a sequence of activities through which a firm develops a competitive advantage and creates shareholder value. The value chain comprises two main activities, the primary and support functions. The primary activity comprises areas of inbound logistics, operations, outbound logistics, marketing and sales and service. The support activities comprise firm infrastructure, human resources management, technology
development and procurement. All these activities add value to the firm’s services and products, and are essential for a firm to gain competitive advantage. Where supply chains delineate the processes from creation to delivery of a product or service, value chains comprise a series of activities that create and build value, whether in regard to specific products or services, individual departments or the entire organisation.

Traditionally, firms have tried to position themselves in the appropriate place on the value chain, with the right products, market segments and value-added services. But owing to globalisation and the onset of rapidly changing markets and new technologies, things have become more complicated. Increasingly companies organise networks and offer bundles of products and services as a package. Today, the art of creating and co-producing value with others is the core of strategic planning (Normann and Ramirez 1993).

In the early days of publishing, the value chain basically comprised the author and the printer. As book publishing gradually evolved, the value chain took on a more complex nature (Demarest, 1996; Thompson, 2005). Companies aim to add value to services and products based on the premise that the process will result in beneficial outcomes for customers and satisfactory profit margins for the firm from a position of sustainable competitive advantage (Normann and Ramirez, 1993). On the basis of a conceptual framework proposed by Mark Bide, Daniels (2006) proposes a publishing industry value chain which incorporates eight generic value components commencing from the original Creator and finishing with the Reader as shown in Figure 2.10. Daniel’s research group believes that the importance of different value elements will differ for these parties based on their individual perspectives. Different perspectives logically lead to different opinions.
Figure 2.10: An example of value chain model

The movement of physical books into digital content format has resulted in a significant change in perspectives on value chains. Daniels (2006) indicates that the value chain elements that are pivotal to digital content are Aggregation, Search and Discovery, and Authority and Relevance. These elements present the greatest external threats from new entrants, and are where the Internet and global networks can operate to change the parameters. These strategic elements are where the book industry should be strongest, but are currently weakest. The focal aspect for added value is, and always will be, the consumer. Publishers need to recognise that value is a very changeable commodity, and that having the flexibility to change and adapt is essential (Daniels, 2006).

A major focus of this research is on the creation, transmission and realisation of value in book industry value chains, that is, the end-to-end processes, vendors, networks and other infrastructure necessary for producing and delivering a final product or service to the end user. There are clear overlaps in functions between supply chains and value chains, hence a recent observation that the value chain of the 21st Century business is the web services-enabled business, web-structured, P2P (peer to peer) driven supply chain (Rizzo 2001).

Developments in Information and Communication Technologies (ICTs) have opened up new possibilities for creating co-engineered information goods and services, new information-
based value added services or information rich physical goods. Akkermans (2001) indicated that e-business was the epicenter of where value creation and information technology amalgamate. The Internet and the World Wide Web in particular, have emerged as major driving forces in reinventing the publishing business. E-business implies that information technology must prove itself in an interactive and distributed context of economic value creation. Technology push and market pull both play roles in driving e-business forward (Akkermans, 2001). A major impact of ICT on product innovation has been the separation of the content and the carrier. Hence the content of a book (information) can be separated from the carrier (the binding and paper), and the content can be diffused through a variety of electronic or bricks and mortar channels. This unbundling can create new value propositions (Osterwalder, 2004).

Osterwalder (2004) pointed out that value propositions should be viewed in a life cycle context, such as: value creation (customisation); its purchase (Amazon’s one click shopping); its use (listening to music); its renewal (software updates); and its transfer (selling of used books). ICT enables customers to become an important part of the value creation process (Piller 2002) for instance, in mass customisation and agile manufacturing, where customers can be integrated through being allowed to personally configure their value package (Maskell 2001). The key phase of the value life cycle involves that value delivered from its use, with the actual consumption of goods and services.

Early predictions were that ICT by enabling lower transaction costs would remove intermediaries between producers and consumers (Osterwalder, 2004). However, this focus on disintermediation basically emphasises product and cost issues, and focuses less attention on other value-adding roles of intermediaries such as brand management and customer
Beyond disintermediation, ICT has opened up new markets and opportunities for new intermediaries, including cybermediaries (Sarkar and Butler, 1995) or channel extending intermediaries (Gallaugher, 2002) who insert themselves between existing elements of the chain, aggregating buyers and suppliers into new markets and leveraging opportunities to add value that addresses weakness in traditional systems.

Distribution channels lie between a firm’s value proposition and its target customers, allowing the delivery of value either directly, over a Website, or indirectly through intermediaries such as resellers, brokers or cybermediaries. ICT and particularly the Internet, offers great potential to complement rather than to cannabilise a business’s existing channels (Porter, 2001; Steinfield and Bouwman, 2002), although selling through different channels to the same set of customers will eventually cause channel conflict (Bucklin and Thomas-Graham, 1997). Channels are composed of links (parts of the channel) which can be exploited to leverage cross-channel synergies, for instance using corporate websites as order sources, for product and service information and online problem solving. Some of these Web-based channels have failed, as in online grocery shopping for example. Even though these outlets provided consumer-friendly shopping sites with home delivery, they failed largely because of their biased business models, which while creating value through reducing customer effort, neglected other business model elements such as infrastructure management and the resulting costs. However, if online channels are soundly integrated into a business model, they can have remarkable effects (Osterwalder, 2004).

A primary area in which to obtain business advantage is to develop a stronger value chain than those competing for the same market share. The value of a company’s product to customers is reflected in the revenue generated. When comparing a company’s position to that
of a competitor, the essential aspect to be considered is what is offered by way of value, and not necessarily the cost.

The components of Porter’s original value chain can easily be adapted to the needs of the book publishing market. Instead of the customary value chain activities of inbound logistics, operations, outbound logistics, marketing and sales and service (Porter, 1985), others more relevant to value creation in publishing can be substituted, for example those of selection, access, development, aggregation, navigation and authority. Book publishing infrastructure supports these processing activities. The dotted lines in Figure 2.11 reflect the fact that human resource management, technology development, and customer/supplier/partner relationship can be associated with specific publishing processing activities as well as supporting the entire chain.

These infrastructure components and activities are the building blocks by which a corporation creates a product or provides value service to its customers. Publishing performance can be measured in two ways. One is financial, assessed using standard performance indicators and the other outcome-based, through employing non-financial measures including operational outcomes, such as lead times and customer satisfaction. Although open to misinterpretation given the pace of organisational and technological change, and the variety of players in the publishing market, this approach nonetheless provides the opportunity to propose broad generic models of current value chains for the traditional book publishing industry. Figure 2.11 shows such a value chain model based on that of Porter (1985) but amended for direct relevance to book publishing. This is followed by an explanation of the major elements.
2.7.2.1 Support activities

Support activities assist with the processes that help organisations to achieve competitive advantage. Relationships between book publishers and their customers, suppliers and partners, cover aspects such as loyalty, service and products. Relationships between publishers and their suppliers are very important and can be regarded as an intangible and agile asset of the corporation (Lee and Yang, 2000). For example, sound relationships with authors can assist a publisher to acquire the authors’ future manuscripts. Understanding customer requirements for the punctual and efficient delivery of delivery of products and services can lead to increased sales.

Technology developments also help publishers to obtain a competitive advantage. Technology can be used to reduce production costs, thus adding value, or in research and development to develop new products. Porter (1985) indicated that technologies could be involved in every value creating activity, and that any changes in technology would require reconfiguration of the value chain if the company was to maintain competitive advantage.
Human resource management refers to the recruitment, training and development of suitable personnel to help the organisation to achieve its objectives. On this basis these human resources would be considered a value adding asset (Porter, 1985). To realise their value as human resources, and to mitigate the risks of high staff turnover, these resources need to be managed. However, management in this case goes beyond traditional notions of command and control to the nurturing and empowerment of staff, including their motivation by such means as recognition, trust and suitable remuneration.

Top management positions are emerging as coordinators of book publishing infrastructure components and processing activities. They are entrusted with the role of transforming intellectual property into a business asset (Lee and Yang, 2000). These decision markers have the ultimate corporate-wide responsibility for the control of all business issues within cross-departmental or cross-corporation processes.

Porter (1985) indicates that every organisation needs to ensure that their finances, legal structure and management structure operate efficiently, helping to drive the organisation forward. This is the role of publishing infrastructure. Osterwalder (2004) believes that the financial aspect is transversal because of its influence on all other structures. It is the realisation of the remainder of the business model’s configuration. It comprises the firm’s revenue model and its cost structure which, when combined, establish a profitability or loss-making logic and therefore determines its ability to be competitive in the marketplace. Thus the:

- **Revenue model**: Measures the firm’s ability to translate the value it offers to customers to income revenue streams. It can be represented by various revenue streams that can all have different pricing mechanisms (Osterwalder, 2004). The capture of these
revenue streams from the value creating activities is pivotal to a firm’s long-term survival. In most cases, ICT has enabled firms to diversify their revenue streams, and has facilitated the adoption of more accurate pricing mechanisms. The Internet in particular, has impacted on pricing, as it has created new mechanisms, making price comparisons easier (Klein and Loebbecke, 2000).

- **Cost structure**: Measures the costs a firm incurs in creating, marketing and delivering value to customers. It sets a financial figure on all the resources, assets, activities and partner network relationships and exchanges that incur a cost to the firm. As firms concentrate on their core competencies and activities, and rely on partner networks for non-core competencies and activities, there are opportunities for potential cost savings in the value creation process (Osterwalder, 2004).

### 2.7.2.2 Processing activities

As noted in Figure 2.10, book publishing processing activities combine selection, access, development, aggregation, navigation and authority.

- **Selection** refers to content acquisition, which means the process of acquiring a manuscript from an author.

- **Access** refers to content development and book design. This process involves editing and designing manuscripts for publication.

- **Development** refers to management of the production cycle, prepress, printing, and binding. The process creates cost analysis documents and production cycle estimates and prepares the finished product.

- **Aggregation** refers to marketing and sales. Marketing ensures that the product is targeted to the correct customer group. The marketing mix is used to establish an effective strategy. Any competitive advantage is clearly communicated to the target
group by use of a promotional mix (Porter, 1985). Sales ensure that the book is sold through the correct distribution channels.

- Navigation refers to order fulfilment and customer service. This task involves managing the warehouse, and the multi-channel distribution of books. Supervising all book returns is an important process for a publisher (Greco, 2005). After sales services must maximise customer satisfaction

- Authority refers to rights, foreign rights and licensing activities.

Each element of these value chain activities can create value, with the result that all the value flows to the endpoint to achieve an optimum publishing performance.

### 2.7.3 Value networks in the digital age

Discussions regarding the impact of disruptive technologies have been largely cast in terms of disintermediation leading to the removal of players from traditional value chains. This has been largely the result of a linear view of value creation, and of oversimplified notions of the functions played by value chain players. In a value network context, the new media model is characterised by the emergence of new intermediary roles, as opposed to the removal of intermediaries (Porter 2001; European Commission 2003). Porter (2001) showed that even the Internet need not necessarily have a disruptive effect (often in fact being complementary to existing technologies), and that value networks were more effective for addressing the complexity of commercial enterprises and their relationships than was value chain analysis.

Where hitherto, content industries have been characterised by linear value and supply chains, and by tight integration, the proliferation of user devices and high capacity open networks has paved the way for more sophisticated and effective exploitation of content. These are focused, not on opportunities for disintermediation, but rather on the creation of new intermediaries combining assets and importantly, knowledge and information from a variety of organisations,
to create new value propositions and to serve as the focal point for new relationships with consumers.

The *value network* creates value by linking clients who are, or wish to be, interdependent. The firm itself is not the network, but it provides a networking service. Afuah and Tucci (2001) see the value network as a direct development of brokering. For them, this is the value configuration that exists when a firm is an intermediary, such as a broker or market maker. Rather than focusing on logistics, such as the import and delivery of raw materials, and their transformation into physical goods, the intermediary must focus on network promotion and contract management, service provision and infrastructure operations. The value creation logic is one of linking customers. The main interactivity relationship logic is mediation (Osterwalder, 2004). Osterwalder (2004) further argues that the three primary activities of a value network are *Network promotion and contract management, Service provisioning and Network infrastructure operation*, shown in Figure 2.12.

![Figure 2.12: Value network](image)

The value creation of value networks lies not in transforming objects per se, but in their mediation. Value networks compete to capture rents from positive network effects. One new member of the network increases the value of the network for all (Fjeldstad and Haanaes 2001). Examples include stock exchanges, banks and telecom operators.

**Figure 2.12: Value network**

- *Network promotion and contract management*: Activities associated with identifying potential network customers, customer selection and the initiation, management, and termination of contracts governing service provisioning and charging.
- *Service provisioning*: Activities associated with establishment, maintenance, and termination of links between customers and charging for value received. The links can be synchronous, as in telephone usage or asynchronous, as in electronic mail service or
banking. Account calculations require the measurement of customers’ use of network capacity both in terms of volume and time.

- **Network infrastructure operation**: Activities associated with maintaining a physical and information infrastructure. These activities allow the network to be in a constant alert status to meet customer requests or demands.

Any attempt to illustrate the workings of value networks inevitably requires a degree of simplification and abstraction. However, in depicting the main flows of content, and the addition of value from creator to end-user, value networks represent a set of functions common to the content industries, notably content creation; content packaging and aggregation; and content distribution (European Commission, 2003).

- **Content creation**: The main component of value creation, where the creators may derive income in the form of licensing fees and usage payments derived from the use of digital rights management technologies. In parts of the publishing industry, the cost of production is low, but access to distribution channels and market visibility are the main deterrents to activities such as self-publishing.

- **Content packaging**: The Internet and related technologies provide ample opportunity for creative and sophisticated packaging and reuse of content by either content owners or aggregators. Service packages are marketed to end-users, along with content management functions controlling access to content and channels provided within the package. To date, however, the uptake of such opportunities has been limited by the reluctance of content owners to make material available to aggregators, often on grounds of security.

- **Content distribution**: This includes the sale of transmission and distribution rights into secondary markets, the reformatting or reproduction of content in packaged media
formats (DVD, audio CD etc), and the use of electronic distribution technologies such as syndication services and Internet content distribution networks to optimise the value of web-based distribution.

Just taking account of these three functions alone presents a challenge to would-be builders of business models and before that, of value chains or value networks. Apart from the complexity involved, there are the problems involved in showing where the value is created (or is being lost), and the difficulties that stem from the fact that much of this value is intangible in nature? Figure 2.13, which is reproduced from a European Commission Report published in 2003, presents another generic picture, this time of a potential value network for book publishing within the next 5 to 7 years.

Figure 2.13: A potential value network for book publishing
In situations of changing technologies, organisational structures, supply chains and business models, the quest for new sources of added value becomes increasingly urgent. This research will investigate such issues in an Australian context and poses the following questions: What are the major challenges remaining with regard to digital technologies for book publishing? What technologies and applications offer the greatest potential for supporting value creation activities and business model development in the digital era?

2.8 Conclusion

Through a wide and detailed review of the relevant literature, this chapter has provided an overview of the history of and trends in the book publishing industry from both a domestic and global perspective. The chapter has summarised those important internal and external forces which are impacting on the early stages of digitisation in the publishing industry. Research questions for this study were posed at the completion of each section.

Book publishing is undergoing a transformation, albeit slowly, from traditional processes to digitisation. This undertaking will necessitate significant change regarding the perspective of important elements in supply and value chains, and value networks, as exemplified in figures 2.9 and 2.13 in this chapter. The accompanying theories will be reviewed in the context of the findings presented in chapters eight and nine. These changes will, by necessity, impact on business models. The following chapter will provide specific definitions of business models and discuss the relevance of key elements of business models, applicable in a digital environment.
Chapter 3 Business Models

3.1 Introduction

Although originating in the 1950’s, it was not until the 1990’s that the term business model became widely accepted and utilised as an essential business practice (Lawrence et al., 2003). The business model concept has gained momentum over the last decade, partly through the growth of and interest in e-Business, the effects of globalisation and related strategic challenges (Cassidy, 2002). The term was promoted by journalists, business people and academics who in applying it to developments in e-commerce involving start-up and high technology companies, largely lacked a clear perspective on its nature or implications. With the transition from traditional to digital-based processes, business models will undergo a revision process, as supply chains, value chains and value networks all change. In all likelihood, business models in digital publishing will continue to exhibit various degrees of company and market specificity.

This thesis seeks to identify trends and patterns and the emergence of models which at least to some extent can be perceived as generic. The first step was a thorough review of the literature surrounding business models: how the concept has been defined, the classification of business models, their component elements and attempts at modelling them. The literature was also analysed in the context of business models as a business design tool, as a change methodology and as a means to evaluate and measure.

Whereas there is a substantial literature on the broad topic of business models, much less is in evidence when it comes to business models for book publishing. This chapter, reviews the literature on business models in general, on e-business models and on business models, both
traditional and digital, in the publishing industry. In reviewing categories and components, implications for strategic change and for the testing and evaluation of business models, this chapter defines the approach which will be taken in this research, in particular with regard to innovative digital business models for book publishing.

3.2 Overview of business models and e-Business models

A wide range of perspectives on the nature of business models is to be found in the literature, necessitating a certain arbitrariness of choice for subsequent researchers. A list of prominent business model authors and their core perspectives considered most relevant for the purposes of this research follows in Table 3.1. Despite the wide range of perspectives involved, a comparison of approaches across seven major dimensions described below indicates a broad commonality of approach as well as those specific to individual authors. Drawing on such diversity, the researcher did not favour the model building approach of any single author but found the work of Osterwalder (2004) to be particularly useful for its functional approach and its links to the Design Science research method.

Table 3.1: Business model authors list (partially based on Pateli, 2002)
• **Definition**: Shows if an author provides a short comprehensible interpretation of a business model.

• **Taxonomy**: Identifies authors who favour a classification of business models.

• **Components**: Identifies authors that are not satisfied with a simple definition and classification of business models, but who present a conceptual approach to business models, incorporating a set of business model components.

• **Representation tool**: Identifies authors that offer a set of tools or graphical representations to assist in design of the business models.

<table>
<thead>
<tr>
<th>Authors and year of publication</th>
<th>Definition</th>
<th>Taxonomy</th>
<th>Components</th>
<th>Representation Tool</th>
<th>Ontological Modelling</th>
<th>Change Methodology</th>
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• **Ontological modelling:** Identifies authors that use this rigorous modelling approach to business models.

• **Change methodology:** Identifies authors who include a time and change component in their business model concepts.

• **Evaluation measures:** Identifies authors that endeavour to define indicators that measure the success of business models.

### 3.2.1 Business Model

In simple terms, a business model is a representation of how a firm buys and sells goods and services to earn money (Cambridge Learner’s Dictionary, 2003), a concept confirmed by Rappa (2001), Weill and Vitale (2001) and Betz (2002). Osterwalder (2004) goes beyond the notion of buying and selling, to describe the business model as an abstract expression of the business logic of a company, that is, an abstract comprehension of the way a company makes money – what it offers, to whom it is offered and how this is accomplished.

Applegate (2001) argued that by definition, a business model represents a description of a complex business that enables the study of its structure, the relationship among structural elements, and how it will respond in the real world. Applegate listed the properties of business models as follows:

- Enables study of the structure of a complex system, relationships among structural elements, assumptions, and a description of the system in action.
- Can be built before the real system to help predict how the system might respond if we change the structure, relationships and assumptions.
- Provides a baseline for evaluating progress
Timmers (1998) defined a business model as architecture for product, service and information flows, including a description of the various business players. Timmers (1998) observed that a business model provides a description of the potential benefits for the various business actors, and a description of the revenue source. Osterwalder et al. (2005, p5) defined a business model as:

A conceptual tool that contains a set of elements and their relationships, that allows the expression of the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value and relationship capital, to generate profitable and sustainable revenue streams.

Similarly, Jansen et al. (2007, p8) defined a business model as: “A unique configuration of elements consisting of strategies, processes, technologies, and the governances of an organisation. This configuration is formed to create value for the customers and thus to compete successfully in a particular market.”

Currently, most business models are affected by technology, for example, those technologies employed in e-commerce (Kinder, 2002), allowing businesses access to a broader customer base with minimal costs. Entrepreneurs on the Internet have also created new models that depend entirely on existing or emergent technology. However, careful consideration of the nature and rule of this technology remains essential. Cassidy (2002) stated that over the last decade, interest in e-Business has evolved from optimistic scenarios with the explicit message in the popular press that: if you’re not an e-Business, you’re out of business. However, for all the expectations placed upon technology, the fundamental significance of business models was demonstrated all too clearly by the disastrous failings of those flawed e-Business models at the centre of the dot-com crash (Hagel, 2002).
3.2.2 E-Business models

Most business models, whether for traditional business or for e-Business, have common structures, although e-Business models tend to have a more extensive range of relationships. The challenges and changes imposed by the onset of digitisation mandates not only new approaches, but also new visions with regard to the interaction of value creating activities, technologies, e-Business, ideas and relationships. Nor is the extent or nature of the migration to e-Business entirely clear even today. Weill and Vitale (2001, p1) indicated that: “e-Business requires existing businesses to migrate from place to space, however, not all parts of the business will migrate – some will stay behind, continuing to make profits in the Old World and funding the New World initiatives”. In this situation, the key challenge for all businesses is to establish business models which are suitable for their own circumstances, and if necessary to marry new and old business formats. For Rappa (2001), a business model spells out how a firm makes money by specifying where it is positioned in the value chain. Rappa (2001) compiled a classification consisting of nine generic forms of e-business models: 

Brokerage, Advertising, Infomediary, Merchant, Manufacturer, Affiliate, Community, Subscription and Utility. These generic models essentially classify companies according to the nature of their value proposition or their mode of revenue generation.

Afuah and Tucci (2001) simplistically defined an e-Business model in terms of how a firm plans to make money in the long term using the Internet. Applegate (2001) stated that e-Business models aimed to explain how businesses used the Internet to interact, and how value was created for customers and other stakeholders. Applegate identified four categories of digital business models, examples of which are shown in Table 3.2.

Table 3.2: Categories of digital business models and examples
All definitions contain some common characteristics, and posit that a business model or e-business model incorporates the fundamentals of a company’s competitive strategy, and how its processes are formulated and delivered to achieve profitable results (Timmers, 1998; Afuah and Tucci, 2001; Applegate, 2001; Weill and Vitale, 2001; Chesbrough and Rosenbloom, 2002; Afuah and Tucci, 2003; Rappa, 2006). Some authors place stronger emphasis on some elements of business models and e-business models than others, examples include: methods (Rappa, 2006), architectures (Dubosson-Torbay et al., 2002), designs and strategies (Whiteley, 2000), descriptions and specifications (Weill and Vitale, 2001), relationship of the business with other entities in the value network (Timmers, 1999; Rappa, 2001; Weill and Vitale, 2001; Elliot, 2002; Turban et al., 2002; Hawkins, 2002, Rappa, 2006), value creation for customers (Timmers, 1999; Weill and Vitale, 2001; Jansen et al., 2007) and pathways (Krishnamurthy, 2003).

Porter (2001) observed that owing to the range of perspectives involved, specific definition of the business model is a murky activity at best. Porter believes that this often refers to a loose conception of how a company does business and generates revenue, and that no business model can be evaluated independently of industry structure. A management approach based solely on a business model is risky and even self-deluding (Porter, 2001). Weill et al. (2005) stated that we do not even know, for instance, how common the different kinds of business models are, and whether some business models will perform better financially than others. This in fact, is implicit in the approaches of Timmers (1999), Weill and Vitale (2001), Elliot
(2002), Osterwalder et al. (2005), and Jansen et al. (2007) all of whom argue that the essential focus of a business model or e-business model, is on the interaction of the firm with its marketplace.

### 3.2.3 Key components of business models

Authors are divided in their opinions as to the key components of business models, what they should represent and how they should function. The general consensus among authors is however, that there are two main frameworks.

#### 3.2.3.1 Product-Actor and Network-Centric business model frameworks

*Product-Actor* and *Network-Centric* business model frameworks (for example, Chesbrough and Rosenbloom, 2000; Mahadevan, 2000; Alt and Zimmermann, 2001; Papakiriakopoulos and Poulymenakou, 2001 and Afuah and Tucci, 2003), generally follow the concept of identifying value streams.

Mahadevan (2000) argues that a business model consists of a configuration of three streams that are critical to the business: (a) value stream, which identifies the value proposition for the business partners and customers, (b) revenue stream, which is a plan for assuring revenue generation, (c) and the logistical stream, which addresses various issues related to the design of the supply chain.

In contrast, Afuah and Tucci (2003) stated that a business model should include answers to a number of questions: What value to offer customers? Which customers to provide value to? How to provide that value? Who to charge for it? What strategies to undertake in providing the value? and How to sustain any advantage from providing that value? Their value-centred
business model approach takes into account the creation of value by several actors. They posed the following questions in relation to the components of business models:

- **Customer value**: Is the company satisfied that it offers its customers benefits?
- **Scope**: Has the company identified which customers it offers value to and what range of products and services embody this value?
- **Pricing**: Does the company offer value for price?
- **Revenue source**: Does the company identify the income stream, who will pay and when? Does it also define margins in each market?
- **Connected activities**: What set of activities does the firm have to perform to offer its value and when? How are these activities connected?

Papakiriakopoulos and Poulmenakou (2001) proposed a network-centric framework that focused on actors and relationships. Its four main components were:

- **Coordination issues**: Defines the management of dependencies among activities.
- **Collective competition**: Describes the relationship to other companies, which can be competitive, co-operator or concurrent.
- **Customer value**: Aligns the business model with market and customer needs.
- **Core competencies**: Defines how a firm exploits its resources in the marketplace.

Chesbrough and Rosenbloom (2000) listed the six main functions of the business model as:

*articulation of the value proposition, identification of the market segment, definition of the structure of the value chain within the firm, definition of the cost structure and profit potential, description of the position of the firm within the value network, including identification of complementors and competitors, and formulation of competitive strategy.*
Unlike most other authors, Alt and Zimmermann (2001) included a number of broader generic elements:

- **Mission**: Develops a high level understanding of the overall vision, strategic goals and the value proposition, including the basic product or service features. It is a critical part of the model.
- **Structure**: Determines the roles of different agents involved and the focus on industry, customers and products.
- **Processes**: Provide a more detailed view of the mission and structure of the business model. They show the elements of the value creation process.
- **Revenues**: Draw the *bottom line* of a business model.
- **Legal issues**: Influence all aspects of business models and general visions.
- **Technology**: An enabler and a constraint for IT-based business models, technological changes impact on the business model design.

### 3.2.3.2 Marketing-specific business model frameworks

*Marketing-specific* business model frameworks (for example, Hamel, 2000; Petrovic and Kittle, 2001; Weill and Vitale, 2001 and Osterwalder, 2004), although incorporating the aforementioned framework, place more emphasis on the customer perspective.

Hamel (2000) identified four main components to a business model ranging from core strategy and strategic resources to value network to customer interface. These components were related through three *bridges* and are decomposed into different sub-elements.
Weill and Vitale (2001) presented a series of atomic e-business models, each with its strategic objectives, value propositions, sources of revenue, critical success factors and core competencies.

- **Strategic objectives and value proposition:** Provides an overall view of the target customer, the product and service offering, and the unique position targeted by the firm. It defines what choices and tradeoffs the firm will make.

- **Sources of revenue:** A realistic view of the sources of revenue is fundamental to business models.

- **Critical success factors:** Essentials a firm must do well to flourish. There is a set of general CSFs for every atomic business model.

- **Core competencies:** The competencies that must be created, nurtured and developed in-house.

- **Customer segments:** Every business initiative starts with the customer. The firm needs to understand which customer segments to target and what the value proposition is for each segment.

- **Channels:** Conduits by which products or services are offered or distributed to customers. In e-business, the channel should be considered a feature of the product offer and thus part of the value proposition.

- **IT infrastructure:** Used to connect the different parts of the firm and link to suppliers, customers and allies.

Petrovic and Kittle (2001) argue that a business model has seven sub-models that describe in their interactions the logic of a business system for creating value that lies behind the actual processes:
• **Value model**: Describes the logic of what core products/services and experiences are delivered to the customer, and other value-added services derived from the core competence.

• **Resource model**: Describes the logic of how elements are necessary for the transformation process, and how to identify and procure the required quantities.

• **Production model**: Describes the logic of how elements are combined in the transformation process from the source to the output.

• **Customer relations model**: Describes the logic of how to reach, serve and maintain customers (includes sub-models for distribution and marketing).

• **Revenue model**: Describes the logic of what, when, why and how the company receives compensation in return for its products.

• **Capital model**: Describes the logic of how financial sourcing occurs to create a debt and equity structure, and how that money is utilised with respect to assets and liabilities over time.

• **Market model**: Describes the logic of choosing a relevant environment in which the business will operate.

Osterwalder (2004) identifies three types of business model:

• **The abstract business model concept**: A generic model of elements, components and relationships.

• **The operating business model**: Existing business models of different companies.

• **Scenario business model**: A virtual reality model. Serves different purposes such as fostering innovation, simulating opportunities or acting as a guide for change management.
Shipley (1995) concluded that despite what perspectives authors have of business models, there will always be many inherent dimensions and hence, each business model will possess different characteristics.

3.2.4 Business models, business modelling and strategy

Osterwalder (2004) points out that there is some confusion between business models and business modelling, and that it is important to clarify this aspect. The latter is process related. Gordijn and Akkermans (2000) believe that this confusion stems from research and industry, where the term business model is sometimes used for business process models. They indicate that: “In the domain of process models, a multitude of tools and concepts already exist, such as UML activity diagrams or Petri nets. In contrast, few concepts and tools exist that help companies and their managers specify their conceptual business model (i.e. their business logic) at a higher level of abstraction.” There is also a distinction to be made between business models and strategy (Stahler 2002; Seddon and Lewis 2003). By combining strategy, business models and process models, one can show that they address similar problems (for example, earning money in a sustainable way) on different business layers, shown in Figure 3.1 (Osterwalder, 2004).

![Figure 3.1: Business layers](image)

Weill and Vitale (2001), in drawing a distinction between business models and business strategies, stated that they must be compatible. Osterwalder does not debate the business
model and strategy issue, but simply sees a business model as the translation of a company’s strategy into a blueprint of the company’s logic for earning money. For him, the business model and strategy talk about similar issues, but on a different business layer. In other words, the vision of the firm and its strategy are translated into value propositions, customer relations and value networks (Osterwalder, 2004).

Magretta (2002) argues that a business model is not a strategy, even though the terms are used interchangeably. Business models describe, as a system, how the pieces of a business fit together. But they do not factor in one critical dimension of performance: competition. Dealing with the reality of competition is the job of strategy. A competitive strategy explains how one company will perform better than its rivals. By definition, doing better, means being different, and strategy is all about how one is going to do better by being different. Where all companies offer the same products and services to the same customers by performing the same kinds of activities, no company will prosper. This was precisely the kind of destructive competition that destroyed many Internet retailers. Too many fledgling companies rushed to the market with identical business models, and with no strategies to differentiate themselves in terms of which customers and markets to serve, what products and services to offer and what kinds of value to create (Magretta, 2002).

3.3 The importance of business models

Lawrence et al. (2003) noted that those businesses that had been successful had devised their own models, or had employed a combination of models to achieve their goals. A good business model is essential for every successful organisation, whether it is a new venture or an established player. It can serve as a conceptual link, forming a triangle between strategy, business organisation and ICT as shown in Figure 3.2.
Figure 3.2: Environment, business models, strategy, process and information systems

As there is often a substantial gap in understanding between these three worlds, the business model concept can serve as a kind of glue. The triangle and the business model are subject to continuous external forces. Managers must design or adapt the business model to respond to these external forces (Osterwalder, 2004). It also provides a potentially valuable unit of analysis, since it enables a deeper understanding of firm performance (Margrett, 2002; Wu, 2005). Business models depict the basic structure of a company’s functionality, as without an appropriate model in place, a company lacks the ability to follow a streamlined process.

During the economic difficulties of the early 1990’s in the USA, a number of large corporations owed their survival and profitability in part to their effective business models. These included Southwest Airlines, Microsoft, Wal-Mart and E-Bay (Afuah, 2004). Another successful example is that of the Australian travel book publisher Lonely Planet (Weill and Vitale, 2001).

The advantages to an organisation of implementing a sound business model are:

- A business model describes how an organisation functions, it is a general template of the business’s major activities (Weill and Vitale, 2001; KMLab Inc., 2000, in Chesbrough and Rosenbloom, 2002).
• A business model identifies the firm’s potential customer base, and the products and services it offers (Gordijun et al., 2000; Hamel, 2000; Hawkins, 2002; Milliot, 2004; Mitchell and Coles, 2004a, and Mitchell and Coles, 2004b).

• A business model provides a guide to how the business will generate revenue and profit (Hamel, 2000; Afuah and Tucci, 2001; Porter, 2001; Rappa, 2001; Betz, 2002; Elliot, 2002; Krishnamurthy, 2003; Rappa, 2006).

• A business model assists with strategic decision making processes (Porter, 1996; Betz, 2002; Afuah, 2004).

• A suitable business model may provide a sustainable competitive advantage when the business transfers from traditional format to digital format (Weill and Vitale, 2001; Pateli and Giaglis, 2004; Pohle and Chapman, 2006).

3.3.1 Use of business models

Business model research is still in its early stages, and has yet to prove its relevance (Osterwalder, 2004). As a consequence, there remain relatively few concepts and tools to help managers capture, understand, communicate, design, analyse and change the business logic of their firm. However, business models can fill some of these gaps. Osterwalder (2004) for example, identifies five categories of function: understanding and sharing, analysing, managing, prospects and patenting of business models.

• Understand and share: Models can assist by capturing, visualising, understanding, communicating and sharing aspects of the business logic.
  ♦ Capture: A generic framework provides a common understanding and is essential to provide a detailed description of business models. This framework can be seen as a common language among stakeholders.
♦ Visualise: An ontology to capture business models provides a means to present complex information graphically (Gordijn and Akkermans 2003).

♦ Understand: Owing to the increasingly complex nature of business models, relationships between critical success factors are not always obvious. The business modelling process can assist in defining relevant elements and their relationships.

♦ Communicate and share: Formalising, but simplifying business models helps managers to communicate their understanding of a business with other stakeholders.

• Analyse: Business models assist with improving measuring, observing and comparing business logic.

♦ Measure: Capture of the major components of the model provides easier identification of the relevant measures to improve management. In a balanced scorecard, a business model indicates areas to monitor.

♦ Observe: A structured approach to business models is needed to monitor internal and external changes, and to understand issues undergoing change.

♦ Compare: A structured approach allows a comparison of business models with those of competitors. Additionally, comparison with business models from different industries may provide new insights and foster innovation.

• Manage: Improvement in the management of business logic includes the design, planning, changing and implementation of business models. This can enhance alignment with strategy, with business organisation and technology.

♦ Design: Designing models to ensure that elements are mutually reinforcing or optimised is not easy. The use a business model ontology, describing the essential building blocks and their relationship improves opportunities to design sustainable business models.
Plan, change and implement: Detailed explanation of elements to be changed will allow a smooth pathway for business model changes. Linder and Cantrell (2000) describe model change as the core logic for firms to remain profitable in a dynamic environment.

React: The foundation for reaction to external pressures is established following the capture, mapping and understanding of the business model. The ability of model designers to easily modify elements is essential in an uncertain and rapidly changing landscape.

Align: The business model represents a conceptual bridge between business strategy, organisation and technology. Chesborough and Rosenbloom (2000) see business models as a mediating construct between technology and economic value.

Improve decision making: Models can provide a basis for appropriate decision making. As an analytical tool, they can help managers to observe and compare and assist in the definition of measures.

Prospect: What the future holds. Business models foster innovation and preparedness for the future through model portfolios and simulation.

Innovate: A conceptual and modular business model approach can foster innovation. Designers can manipulate various elements and building blocks to create new business models.

Business model portfolio: Allen (2001), in his law of excess of diversity in evolutionary theory, argues that a sustainable and successful evolutionary strategy requires an amount of internal diversity superior to that of the environment. Agents need to stockpile potential strategies in the face of unpredictability from environmental change.
♦ Simulate and test: Simulating and testing business models is the ideal scenario. Although simulation cannot predict the future, it provides a means of conducting risk free experiments without endangering an organisation, and allows preparedness for the future.

• Patenting: Firms are increasingly patenting entire aspects of their business model (for example e-processes). Hence, business modelling can potentially be involved in a legal domain. The patenting of business models has already led to a number of legal battles, as for example, when Amazon.com challenged Barnes and Noble over alleged misuse of Amazon’s patent for a one-click ordering system.

3.3.2 Business models and change

With constantly changing economic and environmental conditions, organisations must continuously revisit their business designs and goals. Business models are continuously subject to external pressures leading to adaptation in a changing environment. This can frequently require the re-design of business models (Mitchell and Coles; 2003, Mitchell and Coles, 2004a and 2004b; Osterwalder, 2004; Pohle and Chapman, 2006 and Rappa, 2006). Ultimately, the success or failure of a company depends on how well its business design matches its customers’ priorities.

Influenced by the Balanced Scorecard (Kaplan and Norton 1992), Osterwalder (2004) suggested a framework that emphasised the following four areas that a business model has to address:

• Product: What business the company is in, the products and the value proposition offered to the market.

• Customer interface: Who the company’s target customers are, how it delivers products and services, and how it builds strong relationships.
• **Infrastructure management**: How the company efficiently performs infrastructural or logistical issues, with whom and in what kind of network enterprise.

• **Financial aspects**: How the company identifies the revenue model, the cost structure and the business model’s sustainability.

Owing to the fact models are static by nature, presenting a snapshot of a current situation, several authors have added a time trajectory to business models, and introduced the concept of change. This has allowed them to move from a current state or business model to a desired state or new business model. According to Petrovic and Kittel (2001), people often talk about reducing time and costs by automating or redesigning processes, when actually they need to improve their business model. They argue for double loop learning to be applied to the mental models of managers, in order to provide a holistic, broad, long-term and dynamic view for the redesign of business models.

Papakiriakopoulos and Pollymenakou (2001) provided a four step transformation method as follows:

• **Identification of players**: Defining the context and scope of the business model, by identifying the list of stakeholders and their strategies.

• **Highlighting value flows**: Drawing the relationships and flows (two key ones are financial and communication flows) between actors, in order to capture the value chain characteristics.

• **Identifying key competitive drivers**: Identifying the nature of competition in the marketplace.
• "Constructing a feedback chain": Aiming to examine and collect all the information resources that could help and empower those processes that are placed in the value chain.

### 3.3.3 Testing and evaluating business models

Magretta (2002) argued that when business models do not work, it is because they fail either the narrative test (the story does not make sense) or the numbers test (the P & L does not add up). All new stories are variations on old ones, so all new business models are variations on the generic value chain underlying all businesses (Magretta, 2002). Broadly speaking, the value chain has two parts:

- **Part 1**: Includes all the activities associated with creation: designing, purchasing raw materials, and manufacturing.
- **Part 2**: Includes all the activities associated with selling: attracting customers, distributing a product, and transacting a sale.

The term *business model* first came into widespread use with the advent of the PC and the spreadsheet. The latter provided a much greater analytical capacity for business planners, giving them the ability to ask *what-if* questions and to change variables. Prior to this, most successful business models were created more by accident than design. The business model became clear only after the fact (Magretta, 2002). Magretta (2002) further observed that when managers operated consciously from a model of how the entire business works, every decision, every initiative and measurement provided valuable feedback.

March and Smith (1995) stated that in Design Science “Evaluation is complicated by the fact that performance is related to intended use, and the intended use of an artefact can cover a range of tasks”. They argued that the evaluation of constructs tends to involve completeness,
simplicity, elegance, understandability and ease of use. The evaluation of models requires consideration of their conformity to reality, their levels of detail, vigour, and internal consistency. Additionally, the new model must be aligned with respect to existing models, to enable researchers to fully appreciate the position. It can also be a common occurrence for existing models to be extended to capture more of the relevant aspects of the task.

3.4 Business models in the publishing industry

There is a wide range of categorisations and taxonomies of business models, most if not all of which are relevant to digital markets and to book publishing. However, while useful depictions of the range and variety of model are on offer, these taxonomies are largely descriptive in nature and as such, make only a limited contribution to an understanding of the implementation of business models. This proliferation of categories could also lead to confusion as how these various e-business models could fit within the publishing industry, including in the book publishing sector.

In the wider literature, there is relatively little in the way of detailed treatment of book publishing business models, and usage of the term business model is not consistent. Porter (1996) presented an activity system map which illustrated an imaginary online publishing company similar to Reed Elsevier’s online division. This is reproduced in Figure 3.3, where the use of solid and dotted line circles replaces the original dark and light purple circles employed by Porter. According to Porter (1996, p71):

Activity system maps … show how a company’s strategic position is contained in a set of tailored activities designed to deliver it. In companies with a clear strategic position, a number of higher-order strategic themes (6 solid bold circles) can be identified and implemented through clusters of tightly linked activities (dotted line circles).
With reference to Porter's activity map, Seddon et al (Currie, 2004, p18) comment that: “Activity system maps are so close to what many people call business models, that it is not clear how Porter’s conceptualisation of strategy differs from what others have called business models.” From the perspective of this thesis however, the diagram is interpreted as demonstrating activity rather than presenting a full picture of the components of a business model.

![Porter-style activity system map for a publishing company](image)

**Figure 3.3: Porter-style activity system map for a publishing company**

From an avowedly business model perspective, Weill and Vitale (2001, p285) constructed the following schematic, based on the e-business model of travel book publisher, Lonely Planet (Figure 3.4). This schematic was initiated to assist with an analysis of Lonely Planet’s transition to an e-business format.
Figure 3.4: The Lonely Planet e-Business model schematic

In the model shown above, the following components and relationships are depicted:

- **Participants**: Represented as:
  - Squares (firms of interest)
  - Left- and –right-facing pentagons (customers and suppliers)
  - Split squares (partners – organisations whose products or services help enhance demand for those of the firm of interest)

- **Relationships**: Solid lines between participants, indicate a primary relationship, and dotted lines an electronic relationship between parties.

- **Flows**: Arrows represent major flows between participants, and can either be money ($), a product or service, digital or physical (o) or information (i).

Owing to its relevance to a digital environment, and its relative ease of application to the circumstances of individual companies, this thesis has adopted the schema for representing electronic business models devised by Weill and Vitale.

Weill and Vitale (2001) and Timmers (1998), argue that for any organisation, the business model can be constructed from any two or three atomic models drawn from this categorisation.
An analysis of the business processes of the case study companies investigated in this thesis revealed that each contained at least two of the following atomic e-Business models:

- **Direct-To-Customer**: Involves a small but growing B2C model, operating as pay-per-view, with customer payment options.
- **Content provider**: Providing content (information, digital products and services) via intermediaries
- **Intermediary (Aggregator)**: Bringing together buyers and sellers by concentrating information
- **Shared infrastructure**: Bringing together a range of players (some of them competitors)

### 3.5 Business models in digital publishing

Publishers involved in digital publishing will have their own characteristics, necessitating their own particular business models. Thompson (2005) provides four categories of model for scholarly book publishing, namely of virtual library, digital warehouse, scholarly corpus and scholarly community. While of general interest, none of these models had a major influence on the research for this thesis. These models can be summarised as follows:

**Virtual Library Model**: The creation and storage of electronic books and content which can be accessed by end users without monetary outlay. This facility will often involve third party intermediaries, who obtain rights from publishers to use and in some cases, to convert content into appropriate electronic formats. Intermediaries may also comprise libraries or other academic institutions purchasing rights for members to access the content. In essence, the library is a third party licensed aggregator of content. The concept is of a third party that does not have ownership of the content, but operates as an aggregator of the content of others. Generally, these third parties do not have ownership of the content, but rather operate under a
licensing agreement with the publishers, who either own the content or have copyright protection. Historically, virtual libraries emerged as a commercial undertaking, with the aim of generating profits by selling licences to institutions to enable access to content in the library.

**Digital Warehouse Model:** In seeking an alternative avenue to revenue generation, academic publishers have created this option which basically operates in a similar manner to a traditional warehouse, except that the content is maintained in digital rather than in paper form. Similar to a virtual library, ownership of the content is retained by the publisher however, there are no licensing arrangements. The end user purchases online, and to protect ownership rights, the content may be delivered in encrypted mode to negate usage by others. A feature of the digital warehouse is the facility whereby the publisher can provide a range of micro-transactions, enabling the user to purchase sections of the e-book. The benefits of digital warehousing to the publisher include: control of content, and that payment to technology partners generally equates to fees paid to booksellers and distribution firms under the traditional print format. The main weakness of the digital warehouse is that it is consumer driven, and available data suggests that demand is low and consequently, future profitability is uncertain at best. Anecdotal evidence suggests that publishers that have entered this field on the basis of catering to individual consumers, rather than to institutional entities have struggled to maintain a significant presence.

**Scholarly Corpus Model:** This facility is based on the premise that publishers, acting either alone or in collaboration with other publishers, can create a corpus of scholarly book content, where access is a saleable commodity on a subscription basis. Scholarly Corpus is publisher-driven (unlike digital warehouse which is consumer driven) whereby control of content is
maintained. The facility requires the establishment of a repository for content, but not in the same manner as in a warehouse. The content is formed into a corpus, effectively an online searchable database, and subscriptions are sold to academic institutions or in rare cases, to individuals. The Scholarly Corpus model can be further categorised as:

- **Publisher-based**: A corpus of content is established using copyright material. The primary advantages of this system are the reduction of copyright problems, and the simplification of income streams. The major drawback is that publishers may have limited depth of content related to particular topics.

- **Cross-publisher**: Collaboration with other publishers can enable the creation of a significant database. The main obstacle appears to be that publishers are not always conducive to co-operation with rivals.

- **Publisher-linked, grant funded corpus**: A hybrid model initiated from philanthropic funding, usually channeled through university presses, with the object of investigating various methods of establishing scholarly book content. Sustainability following exhaustion of the funding is the major drawback.

**Scholarly Community Model**: A model involving the construction of an interactive community of scholars which can gain access to services including scholarly content. The benefits of community building include the capacity for the community to become self-supporting, membership can help to enhance the overall position of publishers in the field, and can provide substantially more visibility to book titles. The drawbacks include doubts over economic viability, and as to whether scholars will support online communities established and managed by publishers.
Whilst the prognosis for the impact of digitisation has been somewhat hazy, there nevertheless remains a perception that its ramifications will be profound and that business models would feature prominently in the changeover from traditional practices (Thomson, 2005). When businesses shift from traditional to digital practices, careful redesign of their business models is required. This is reflected in that considerable volume of literature which discusses the steps entailed in innovating business models, and the importance of identifying the potential value points in a new digital age. To understand these changes in perception, it can be helpful to revisit Porter’s five forces model.

Porter (1985) promoted his *Five Forces Model* as a sound basis for an initial business model. As shown in Figure 3.5, Porter’s model focuses on the company’s external competitive environment, something that has attracted criticism by adherents of the resource-based theory of the firm, who argue for the importance of internal resources (Barney, 1991 and Grant, 1991). Kotelnikov (2002) argues that businesses should consider both internal and external forces when innovating their business models. This is owing to the chaotic transition to a new age defined by global competition, rampant change, the faster flow of information and communication, and increasing business complexity. Kotelnikov further states that in a new age, old principles no longer apply. Businesses have exhausted the limits of the old model with respect to complexity and speed. Kotelnikov (www.kotelnikov.biz) argues that the real problem is one of "A ruinously dysfunctional mismatch between today's business environment and the classic business model. Quite simply, the wrong model may transform a company into the vehicle for its own death."
According to Kotelnikov, (2002), new business model innovation involves the following six components (shown in Figure 3.6):

- **Value Proposition** - A description of the customer problem, the solution that addresses the problem, and the value of this solution from the customer's perspective.

- **Market Segment** – The target group, recognising that different market segments have different needs. Sometimes the potential of an innovation is unlocked only when a different market segment is targeted.

- **Value Chain Structure** - The firm's position and activities in the value chain, and how the firm will capture part of the value that it creates in the chain.

- **Revenue Generation and Margins** - How revenue is generated (sales, leasing, subscription, support, etc.), the cost structure, and profit margin targets.

- **Position in the Value Network** - identification of competitors, complementors and any network effects that can be utilised to deliver more customers.

- **Competitive Strategy** - how the company will attempt to develop a sustainable competitive advantage, and use it to improve competitiveness in the marketplace.
Owens (2006) suggests that the implementation of a new business model involves several stages: process re-engineering, supply chain analysis, new partnering relationships and creating a customer focused attitude. Because every business has alternative strategies, which necessitate different models, there is no universal off-the-shelf business model available, and each entity needs to mould its own model to suit their circumstances. Owens goes on to propose six essential value points that should be incorporated into a model: logistics, relationships, channels, capital and cost structures, branding and value adding intermediation. Questions such as which business model would be most appropriate for digital publishing and how publishers might identify the most suitable model or models, remain moot. There is clear support in the literature (Petrovic and Kittle 2001, Auer and Follack, 2002, and Pateli and Giaglis, 2004) for the view that the transition from a current business model to that embracing a digital scenario will involve the completion of various phases as illustrated in Figure 3.7.

![Figure 3.6: Six components of the new business model](image-url)
Phase I: Understand

This involves an in-depth analysis of the current business model. It provides the opportunity to formulate benchmarks against which the impact of new technology can be analysed. Establishment of a sound platform is essential if business change efforts are to be based on carefully assessed models applicable to the current business climate (Davenport and Stoddard, 1994). The first step of this process involves identification of the business environment using a business model analysis framework (Hamel, 2000; Gordijn et al., 2001; Weill and Vitale, 2001; Osterwalder and Pigneur, 2002a, 2002b and Pateli and Giaglis, 2004).

Phase II: Identify the influence of technology

Figure 3.7: A scenario-based methodology for business model change

Phase I: Understand

This involves an in-depth analysis of the current business model. It provides the opportunity to formulate benchmarks against which the impact of new technology can be analysed. Establishment of a sound platform is essential if business change efforts are to be based on carefully assessed models applicable to the current business climate (Davenport and Stoddard, 1994). The first step of this process involves identification of the business environment using a business model analysis framework (Hamel, 2000; Gordijn et al., 2001; Weill and Vitale, 2001; Osterwalder and Pigneur, 2002a, 2002b and Pateli and Giaglis, 2004).
This phase deals with how technology innovation will affect the existing business model. The aim is to identify possible evolutionary trends or extensions of the current business model. The process is divided into two steps:

- Assess the influence of technology innovation: This recognises the advantages and effects that innovative technology will have on different areas of the business model. For example, the Internet creates new industries, reconfigures others, and directly impacts on businesses, their customers, suppliers, distributors and potential players (Aguila-Obra et al., 2007). This analysis will provide vital data to enable the new technology to be exploited to its full extent.

- Identify missing roles: Businesses cannot be expected to provide expertise for all areas of their business models, and third party assistance may be required. Analysis of this area enables deficiencies within the business model to be identified and rectified. For example, an important issue that must be considered when constructing business models, is the significance of intermediaries and disintermediaries. Bakos (1997) stated that intermediation provides opportunities for new players that connect buyers and suppliers.

Businesses however, need to use foresight when formulating models, in order to cater for any disruption that may occur in the future, causing reconfiguration of the proposed model. This approach provides a company with flexibility in adopting new technologies and changing its business model (Pateli and Giaglis, 2004).

**Phase III: Adopt**

The final phase embodies the design and description of potential business models, and incorporates three procedures which, at their conclusion, can result in a visualisation of the
proposed business model via the design of a transformed value network. The three procedures are categorised as follows:

- **Define scenarios** - Identifies various scenarios which have different sets of guidelines. This allows an organisation to consider alternative business model proposals, carefully considering options available to build a successful model.

- **Describe the new business models** – Involves revisiting the scenario aspect by further investigating the existing business model. It seeks as an outcome, a new model description based on interpreting player assessment of the values of the new model.

- **Evaluate the impact of changes** - Estimates the impact of the new model on the structure and climate of the markets involved.

When business faces the challenge of adopting a new model, publishers may initially need to identify potential new value elements that will provide the company with maximum benefits. The construction of business models best suited to digital publishing requirements will need careful consideration of several areas including:

- **Strategy** (Hamel, 2000; Weill and Vitale, 2001)
- **Organisational structures** (Timmers, 1998, Dubosson-Torbay et al., 2002)
- **Business processes** (Scupola, 1999; Dubosson-Torbay et al., 2002)
- **Value chains** (Scupola, 1999; Hamel, 2000)
- **Revenue streams** (Gallaugher et al., 2001; Weill and Vitale, 2001)
- **Competitive advantage** (Laudon and Traver, 2003)
- **Core competencies** (Afuah and Tucci, 2003).

Whichever of the above steps companies select in order to build their business models, the final models should incorporate the creation of value processes.
This research seeks to find answers to the following questions:

- How do current and emerging business models compare with regard to scope, design and structure?
- What are the implications for business models in terms of the sources and recipients of value?

### 3.6 Conclusion

This chapter has summarised understanding of the term *business model* in traditional and e-Business environments. It has provided a range of definitions of business models, and identified similarities and differences, while confirming that the definition and approach proposed by Weill and Vitale (2001) will be followed in this research.

Additionally, this chapter has offered an explanation of why business models are a prerequisite for conducting a successful business. In the book publishing industry, there are many models currently in use. However, there is a lack of definitive, detailed information describing the structure and operation of the models. Many authors have developed their own taxonomies of business models, both in general and in an e-Business context.

Finally, this chapter has analysed the phases whose adoption is necessary to assist with innovation of business models within a digital realm. As with other businesses, publishers should investigate these phases to fully understand their current business models, enabling a clinical analysis of the industry’s main influences and paving the way to implement changes.
Chapter 4 Research methodology

4.1 Introduction

As is abundantly clear from the literature, an integral part of any research project is the recognition that systematic observation and testing can be accomplished using a variety of methods. Choice of an appropriate methodology can directly affect the direction of research and its successful conclusion (Sekaran, 2000; Bryman and Bell, 2003 and Grix, 2004).

This chapter begins by providing a brief overview of the purpose of the research and of its philosophical perspectives. This is followed by discussion of the characteristics of various research paradigms: positivist, interpretivist, critical realist and design science. The chapter also discusses the appropriateness of which methodology – quantitative, qualitative or mixed to be adopted. Finally, the methodological approach of this thesis will be explained.

4.2 Overview of methodology and its selection processes

The selection of a suitable methodology for research is a complex business, with more than just philosophical assumptions being involved. Creswell (2003) identified three concepts as being pivotal to the selection process:

- Knowledge claims (which others term paradigms): It is essential for researchers to understand the theory of knowledge, which is hidden behind the theoretical perspective (philosophical stance). For example, this can be knowledge resident in epistemological perspectives such as positivism, interpretivism and critical realism.

- Strategies of inquiry: This involves the details of the various methodologies, strategies or plans of action governing the research, how they will impact on processes and link methods to outcomes. Creswell (2003) identifies three approaches: quantitative, qualitative and mixed.
• Data collection methods and analysis formats: Data collection techniques will vary according to the type of research method.

Creswell (2003) argues that a theoretical framework is essential to incorporate elements of philosophical ideas, strategies and methods into the three concepts. This philosophical aspect is subject to academic interpretation. Mertens (1998) and Lincoln and Guba (2000) interpreted these philosophies as paradigms, and Crotty (1998) and Grix (2004) as epistemologies and ontologies. Hirschheim (1992) observed that epistemology refers to assumptions about knowledge and its acquisition. Chua (1986) and Neuman (2007) argued that each methodology (quantitative, qualitative and mixed) underlay one of the epistemological categories, represented by positivism, interpretivist and critical. In this thesis the concept of paradigms is employed.

Gregor and Jones (2004) expressed concern regarding the attention paid in information systems research to research paradigms, compared with the issue of how theory should be formulated. They argued that the labelling of different research paradigms was neither clear nor consistent, and that numerous characteristics were often ascribed to a position, usually someone else's, for the sake of exposition. In Information Systems, there is a common trait of attributing research to one paradigm or another. Gregor and Jones (2004) emphasised the potential value of complementarity in the mix of theory and research methods.

Although authors espouse different terminologies when referring to philosophical perspectives, there is general agreement on the basic point that researchers initially commence an inquiry with assumptions regarding issues of how and why. Grix (2004) believes there are five stages in research: (a) What is there to know- is there a basis to justify the research?, (b)
What and how can we know about it - what methods are employable to increase the subject knowledge base (c) What method acquires that knowledge- what research options are available?, (d) Which precise procedures can we use?, and (e) What data can we collect? Here it is worth noting, Gregor’s (2001) observation about the importance not only of understanding the type of theory one is trying to build, but also the claims that it is appropriate to make in the context of this theory.

Various paradigms operate utilised in the context of information systems research. The most commonly used of these are the positivist, interpretivist and critical paradigms (Orlikowski and Baroudi, 1991; Walsham, 1993; Neuman, 2000; Myers and Avison, 2002; Grix, 2004; Jankowicz, 2005 and Pickard, 2007). However, the design science paradigm has become increasingly popular in information systems research (Ball, 2001; Hevner et al, 2004; Vom Brocke and Buddendick, 2006; Venable, 2006). All these paradigms facilitate the application, often in combination, of quantitative, qualitative and mixed methodologies. This research draws largely on the interpretive paradigm, but is also informed by elements of design science.

A general outline of the framework for research in this thesis is illustrated in Figure 4.1.

Figure 4.1: The research framework of this thesis
4.3 The philosophical perspectives of the research

4.3.1 Nature of the research

It is important to understand the advantages and disadvantages of the various approaches to research - descriptive, exploratory and explanatory, before committing to any particular one (Robson, 1993; Cooper and Emory, 1995; Neuman, 2000 and Saunders et al., 2007).

Descriptive research provides a detailed picture, focusing on how and who questions. It also seeks to obtain an itemised description of circumstances, events, phenomena, or relationships and is often referred to as thick description research. Holloway (1997) and Grix (2004) describe thick description as: “A detailed account of field experiences which contextualises and makes explicit the patterns of cultural and social relationships drawn from observations in the field. Thick description builds up a clear picture of the individuals and groups in the context of their culture and the setting in which they live.” This also involves an in-depth description of the entity being evaluated, the circumstances under which it is used, the characteristics of the people involved in it and the nature of the community’s location. This form of research can use both qualitative and quantitative formats, as descriptive researchers utilise various data collection methods, for example surveys, field research, content and historical analyses (Neuman, 2003).

Exploratory research deals with what questions. Researchers use relevant information to explore ideas. Qualitative approaches are also frequently used, as these tend to be more open to using a broad range of evidence, leading to the discovery of new issues (Sekaran, 2000; Neuman, 2000). Nevertheless, quantititative methods including survey and experiment can be employed (Babbie, 1990; Yin, 2002; Neuman, 2003 and Yin and Lewis, 2003). Descriptive
and exploratory research exhibit a number of similarities, and it is feasible for research to have a combination of both.

Explanatory research attempts to answer why questions. This methodology constructs and elaborates on exploratory and descriptive research, with the aim of discovering causes or reasons why something occurs. Explanatory studies can incorporate both qualitative and quantitative data collection methods (Patton and Johnstone, 2002; Neuman, 2003; Babbie, 2004). These three types of research and their key characteristics are shown in Table 4.1.

Table 4.1: Purpose of research

<table>
<thead>
<tr>
<th>Exploratory</th>
<th>Descriptive</th>
<th>Explanatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Become familiar with the basic facts, setting, and concerns.</td>
<td>• Provide a detailed, highly accurate picture.</td>
<td>• Test a theory’s predictions or principles.</td>
</tr>
<tr>
<td>• Create a general mental picture of conditions.</td>
<td>• Locate new data that contradict past data.</td>
<td>• Elaborate and enrich a theory’s explanation.</td>
</tr>
<tr>
<td>• Formulate and focus questions for future research.</td>
<td>• Create a set of categories or classify types.</td>
<td>• Extend a theory to include new issues or topics.</td>
</tr>
<tr>
<td>• Generate new ideas, conjectures, or hypotheses.</td>
<td>• Clarify a sequence of steps or stages.</td>
<td>• Support or refute an explanation or prediction.</td>
</tr>
<tr>
<td>• Determine the feasibility of conducting research.</td>
<td>• Document a causal process or mechanism.</td>
<td>• Link issues or topics with a general principle.</td>
</tr>
<tr>
<td>• Develop techniques for measuring and locating future data.</td>
<td>• Report on the background or context of a situation.</td>
<td>• Determine which of several explanations is best.</td>
</tr>
</tbody>
</table>

4.3.2 Philosophical orientations

Paradigms can be considered as the starting point of research (Kuhn, 1970; Bryman, 2001 and Grix, 2004). A paradigm refers to a pattern or example, especially one underlying a theory or methodology. Kuhn (1970) and Bryman (2001) referred to a paradigm as a cluster of beliefs which guide researchers participating in a particular discipline to what needs to be studied, the
research procedure and the manner in which the results should be analysed and interpreted. Kuhn (1996) and Babbie (2004) explained that paradigms could be construed as models or frames of reference, assisting academics to arrange their observations and analysis. Grix (2004) and drawing on Kuhn (1970), observed that the term paradigm could be categorised in three ways:

- As an institutionalisation of intellectual activity, having the effect of organising students into their respective scientific communities.
- As crude and broad groupings of approaches used by researchers to study a specific topic, for example, the top-up and bottom down paradigms employed in political science.
- As broad approaches to research drawn from similar epistemological and ontological roots, for example the positivist, interpretivist and critical realism paradigms.

4.3.2.1 The positivist paradigm

Generally, research is classified as positivist if there is evidence of formal propositions, quantifiable measures of variables, hypothesis testing, and assumptions of inferences regarding a phenomenon from a representative sample to a stated population (Orlikowski and Baroudi, 1991). Jankovic (2005) described positivism as being realistic, involving a search for truth and recognisable in only two ways: that assertions make sense and comply with consequent deductions, or by supporting empirical evidence. Myers and Avison (2002) quoted Chua (1986) to the effect that positivist studies were based on the existence of prior fixed relationships within phenomena, that were investigated with structured instrumentation. Positivist scholars focus on theory testing, leading to a more informed, predictive understanding of reality (Orlikowski & Baroudi, 1991). Their goal is to acquire accurate measures and an objective methodology, enabling a thorough test of hypotheses. The procedure involves quantitative data acquisition, and the employment of quantitative
techniques including experiments, surveys, and statistics (Neuman, 2003). Orlikowski and Baroudi (1991) emphasised the importance of researchers conducting positivist studies seeing themselves as impartial observers detached from the phenomena of interest, who could objectively evaluate or predict actions or processes, but who abstained from moral judgments or subjective opinions.

4.3.2.2 The interpretive paradigm

Research can be classified as interpretive if it assumes our knowledge of reality is gained only through social constructions such as a language, consciousness, shared meanings, documents, tools and other artefacts. Interpretive research attempts to understand phenomena through the meanings that people assign to them. In an Information Systems context, it attempts to produce an understanding of the context of the information system, and the process whereby the system influences and is influenced by that context (Walsham, 1993). Myers and Avison (2002) argued that interpretive studies assume that people create their own subjective meanings whilst interacting with their surroundings. Neuman (2000) described the interpretive approach as one involving the systematic analysis of socially meaningful action through the direct detailed observation of people in natural surroundings, in order to arrive at understandings and interpretations of how people create and maintain their social worlds.

The pivotal principle of interpretivism holds that there are basic differences between the natural and social sciences (Blaikie, 1993). The key difference lies in meaningful social action (Neuman, 2003). Hughes and Sharrock (1997) argue that reality is subjective rather than objective; as people have various perceptions of reality. Hence, reality is socially constructed, and internally experienced. Whereas positivism involves instrumentation, the focus of interpretivism is practical. Organisational scholars interested in interpretive research, question
how organisational participants make sense of their social worlds (Putnam and Pacanowsky, 1983; Jones, 1988 and Schultz and Hatch, 1996).

Interpretive researchers commonly use qualitative techniques, including those of participant observation, field study and interview. They normally study a small sample (Neuman, 2003). Philosophers summarise the differences between positivism and interpretivism from a variety of perspectives. Tables 4.2 (Jankowicz, 2005) and 4.3 (Neuman, 2000) illustrate the basic assumptions and differences between these two categories of epistemology.

**Table 4.2: The basic assumptions of positivism and interpretivism**

<table>
<thead>
<tr>
<th>Positivism</th>
<th>Interpretivism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phenomena can be analysed in terms of variables</td>
<td>Phenomena can be analysed in terms of issues</td>
</tr>
<tr>
<td>Data can be collected by a dispassionate outside observer</td>
<td>Data are collected by participants and by observers, all of whom have varying degrees of involvement and detachment</td>
</tr>
<tr>
<td>Given evidence, we are always capable of distinguishing what is true from what is untrue, and are therefore, enabled to agree on the real reasons for things if we wish to do so</td>
<td>Truth can’t be determined in any absolute way; we are capable of using evidence to work towards a consensus, but must sometimes agree to differ, and conclude that the truth is undecidable</td>
</tr>
<tr>
<td>The purpose of enquiry is to build theories; these are general statements which validly explain phenomena</td>
<td>The purpose of enquiry is to gain sufficient understanding to predict future outcomes</td>
</tr>
<tr>
<td>Once such theories have been developed sufficiently, we should seek to apply them for productive purposes</td>
<td>There is no need to seek to apply theories; understanding and prediction are already theory-in-action, being theories-from-action</td>
</tr>
</tbody>
</table>

**Table 4.3: A summary of the differences between positivism and interpretivism**
Critical realism defines social science as a critical process of inquiry that goes beyond surface illusions to uncover the real structures in the material world in order to help people change conditions and build a better world for themselves (Neuman, 2003). The aim of critical studies is to provide an analysis of the status quo, by exposing deep-seated, structural contradictions within social systems, to demonstrate to the populace how the world should be, the methods required to achieve social goals, and above all, how to implement changes to the world environment (Orlikowski and Baroudi, 1991 and Sarantakos, 1998). Its key perspective, as opposed to that of interpretivism, is the recognition of reality (structures), while applying critical processes to this reality.

Although recognising that research methodologies can be classified in various ways, Myers and Avison (2002) argued that the most common distinction occurs between qualitative and
quantitative methodologies. It is commonly believed that positivism predominantly employs quantitative methods, whilst interpretivism normally adopts qualitative methods (Bryman and Bell, 2003; Grix, 2004; Jankowicz, 2005 and Pickard, 2007). However, Myers and Avison (2002) pointed out that, although the core research paradigms (positivism and interpretism) were philosophically distinct, when it came to the issue of methods, these distinctions were not always clear-cut. The use of quantitative research is not confined to positivist approaches and similarly, qualitative research is not restricted to interpretive approaches. Hence, they argued, case study research can be both positivist and interpretivist in nature.

4.3.2.4 The design science paradigm

The choice of elements of the design science paradigm for use in this thesis is based on the experience of researchers in social and information sciences. Simon (1996), paved the way for the subsequent application of design science to both information systems and management disciplines by promoting acceptance of the sciences of the artifact (Vahidov, 2006). Simon likened managers to engineers and architects operating in areas of applied rather than natural science. Managers were concerned not with the necessary but with the contingent, with how things might be rather than how things are (Simon, 1996). Simon conceptualised the designed artifact, which could be an organisation, a policy or a work practice, as instantiated in the interface between an inner environment - the internal organisation of the artifact, and an outer environment – the requirements imposed on the artifact’s function. Successful designs are those that effectively and efficiently mould themselves to their environment (Boland 2002; Vom Brocke and Buddendick, 2006).

Given the pace of development and the problems faced in e-commerce, doubts remain as to the effectiveness of the design principles involved in the creation of systems and applications, something that might be improved through application of the principles of design science (Au,
2001). The potential benefits of applying these principles in an e-commerce environment include:

- The building of artifacts for implementation (or at least, of examples of types of applications that could be implemented);
- The building of artifacts that aid e-commerce research;
- The development of methods that guide how e-commerce applications should be built (Ball, 2001). Osterwalder (2004) employed elements of design science in the design and assessment of a specific type of e-commerce artifact, namely that of e-business models.

Design science consists of two basic activities: The construction of an artifact for a specific purpose (building), and the determination of how well the artifact performs (evaluation) (March and Smith, 1995). Although both aspects are challenging, evaluation can be particularly complicated, both in terms of matching the artifact to its operational environment and in the choice of appropriate criteria. In this thesis, both the build and evaluate stages were designed and implemented, including research outputs, artifacts, namely constructs, models, methods and instantiations with the cooperation of key stakeholders in the Australian book publishing sector. Research outputs, the artifacts, namely constructs, models, methods and instantiations (Shown in Figure 4.2). The research adheres broadly to March and Smith's (1995) design science framework, which embodies its two axis research activities, including design and build. These key elements were explained by March and Smith (1995) as:

- **Constructs** (or concepts from the vocabulary of a domain): Used to describe problems within the domain and to specify solutions. They form the specialised language and shared knowledge of a discipline or sub-discipline. Such concepts may be highly
formalised, as in semantic data modelling, or informal, as in cooperative work – consensus, participation, and satisfaction.

- **Models:** Presentations of a real-world situation. The design problem and its solution space using constructs. These can be viewed simply as higher order constructions providing a description, a representation, of how things are, as a set of propositions, or as statements expressing relationships among constructs.

- **Methods:** Sets of steps (an algorithm or a guideline) used to perform a task. They define processes and provide problem solving guidance. Methods are based on a set of underlying constructs (language), and a representation (model) of the solution space. Methods can be tied to particular models, as the steps take parts of the model as input. Methods are often used to translate from one model or representation to another in the course of solving a problem.

- **Instantiations:** The realisation of an artifact in its environment. Instantiations operationalise constructs, models and methods, and demonstrate their feasibility and effectiveness. They enable researchers to learn about the real world.

<table>
<thead>
<tr>
<th>RESEARCH OUTPUT</th>
<th>RESEARCH ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constructs</td>
<td>Build</td>
</tr>
<tr>
<td>Model</td>
<td></td>
</tr>
<tr>
<td>Method</td>
<td></td>
</tr>
<tr>
<td>Instantiation</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 4.2: Design science research framework**

March and Smith (1995) argued that build and evaluate characterised design science, and that the parallel activities of theorise and justify were the province of natural and by extension, behavioral science. Alternatively, Venables (2006) contends that theory and theorising play a central role in the advancement of design science research. In this thesis, the researcher has not attempted to construct theories, however, it is hoped that some contribution to theory will
eventually emerge in the building of the artifacts, that is, the business models for book publishing.

The existence of opposing views on the presence or otherwise of theory in design science attests to its evolving nature. There are also numerous depictions of the various stages of design science, as illustrated for example by March and Smith's four stage approach, and that preferred by Vom Brocke and Budenick (2006). This latter consists of six stages (shown in Figure 4.3): business needs identification, artifact construction, artifact representation and documentation, selection of evaluation criteria, evaluation and communication.

Differences also extend to whether or not the full range of design science activities needs to be implemented, and the fact that different researchers lend much greater emphasis to some aspects of the field than others (Ball, 2001). Osterwalder (2004) for example, pays minimal attention to methodologies as design science artifacts. There are also major variations in the sequence of the design science life cycle. A research project may develop and evaluate an artifact to ensure that it solves the intended problem. At this point, the artifact (or variants of it), could be implemented. The theory development and verification stages of the research cycle might not be conducted until years after the artifact has been utilised in practice. This is
justified by the fact that each of the component parts of the cycle can offer valuable contributions to practitioners, even though all the components are rarely delivered at the same time (March and Smith, 1995; Ball, 2001).

4.4 Rationale for selecting the research methodology

Creswell (2003) argued that it was essential to incorporate elements of philosophical ideas, strategies and methods when selecting appropriate methodologies. After completing an analysis of the philosophical perspectives, certain strategies of enquiry can be implemented (Walsham, 1993; Myers and Avison, 2002; Bryman and Bell, 2003 and Pickard, 2007). These strategies relate to a formulated plan of action, incorporating step-by-step instructions in order for the researcher to obtain a positive research outcome, and to identify relevant methods (Creswell, 2003). Creswell (2003) conducted an in depth probe into the three strategies of enquiry (quantitative, qualitative and mixed approach) to establish a clear line of approach for research design.

4.4.1 The core research methodologies

Researchers have traditionally employed either quantitative or qualitative methods (Tashakkori and Teddlie, 1998; Lincoln & Guba, 2000; Grix, 2004 and Pickard, 2007). There are however, situations where it is necessary to use both methods, resulting in a hybrid or mixed method approach (Creswell, 1994; Newman & Benz, 1998; Creswell, 2003; Leahey, 2005 and Modell, 2005).

Silverman (2005) argues that no research methodology, either quantitative or qualitative is fundamentally better than any other. Pickard (2007) points out that all methodologies have their limitations, and that methodology selection depends on the research problem and the philosophical perspectives (Myers and Avison, 2002). Leahey (2007) states that recently,
mixed method research has become increasingly popular, as this allows the use of multiple methods or data sources to identify a phenomenon. Believing that this approach enhances the research process, many researchers have embraced the mixed method approach.

4.4.1.1 Quantitative methods

Traditionally, quantitative researchers have applied specific data collection techniques to the testing and measurement of variables, or concepts developing variables, or concepts that measure and convert into specific data collection techniques (Grix, 2004). The identification of general trends and relationships among variables, and the testing of hypotheses and theories, can result in new or amended theories. The purpose of quantitative methods is to prove the truth of theories (Jankowicz, 2005) and they generally provide a more concentrated, measured analysis of casual relationships between variables (Skinner, Tagg and Holloway 2000). This reflects the strength of the historical relationship between quantitative methods and positivism (Phillips and Burbules 2000), where the use of quantitative methods reflects an assumption of objective reality, in contrast to the social constructionism associated with qualitative methods (Gorman and Clayton 2005). Developing over time, the most popular methods associated with quantitative research involve the collection of data and the conduct of structured observation based on social surveys, simulation and experiment.

4.4.1.2 Qualitative methods

Qualitative research fundamentally utilises language rather than scientific testing to develop a theory (Bryman and Bell, 2003). Grix (2004) and Ragin et al. (2004) argued that qualitative research was diametrically different from quantitative research and normally involved an in-depth investigation of knowledge, such as in observation, interviewing, archival or other documentary analyses (Grix, 2004 and Ragin et al., 2004). Lee (1999) and Cavana et al. (2000) observed that qualitative research offered powerful avenues to collect complex, in-
depth information from participants (describing, interpreting, and explaining a research problem) which it would be unlikely to obtain through a quantitative approach. The use of qualitative methods in research: social, behavioural, organisational and evaluative has grown significantly (Kaplan and Duchon, 1988). This is supported in a variety of sources (Mintzberg, 1973; Patton, 1978; Bredo and Feinberg, 1982a and 1982b; Van Maaner, 1983a and 1983b; Miles and Huberman, 1984; Argyris, 1985; Lincoln and Guba, 1985a and 1985b).

During the last twenty years, qualitative research methods and strategies have expanded to include Narrative Research (Clandinin and Connelly, 2000), Phenomenological (Moustakas, 1994), Grounded theory (Strauss and Corbin 1990, 1998), Ethnographic (Wolcott, 1995) and Case study research (Stake, 1995).

4.4.1.3 Mixed methods

A mixed method approach allows data to be derived from both numeric (quantitative) and text (qualitative) sources, either simultaneously or sequentially (Cresswell, 2003). Modell (2005) assigns the earliest use of multiple quantitative methods for assessing convergent and divergent validity in the social sciences to the work of Campbell and Fiske (1959). However, Campbell and Fiske (1959) argued that the effect would be more powerful where a combination of quantitative and qualitative methods was employed. Bonoma (1985) stated that the use of both quantitative and qualitative methodologies in a study could lend both testability and context to the research. Researchers collecting data, from alternative methods and sources could provide a fuller understanding of the study. However, Denzin (1978) and Jick (1979) both observed that the use of mixed methods entailed recourse to a more complex and challenging form of methodology.
Mixed method approaches seek to avoid the limitations of any one quantitative or qualitative method, including the use of sequential procedures, concurrent procedures and transformation procedures. According to Creswell (2003), these three procedures illustrate how researchers seek convergence, integration and combinations of points across qualitative and quantitative methods.

- **Sequential procedures**: Implement one method before another, such as a study beginning with the use of a quantitative method in which theories or concepts are tested. This is then followed by a qualitative method involving detailed exploration with a number cases or individuals.

- **Concurrent procedures**: Arranges the collection of both quantitative and qualitative data simultaneously, with integration of the information in the interpretation of the overall results.

- **Transformative procedures**: These procedures provide a framework for topics of interest, methods for collecting data, and outcomes or changes anticipated within the study. This data collection method could involve a combination of both sequential and concurrent approaches.

The literature provides ample guidance for the criteria to be considered when selecting mixed method strategies (Greene and Caracelli, 1997; Morgan, 1998; Tashakkori and Teddlie, 1998). The matrix in Table 4.4 illustrates the four key decisions which have to be made, namely: *implementation* – the sequence of quantitative and qualitative data collection in the proposed study; *priority* – the order of priority of quantitative and qualitative data collection and analysis; *integration* – the stage in the research project where both sets of data and findings are integrated, and *the theoretical perspective* – explicit or implicit (Creswell, 2003). As this
thesis adheres to the mainstream tenets of design science, it does not seek to create or test theory as such, although the knowledge acquired may later serve as a contribution to theory.

Table 4.4: Decision choices for determining a mixed methods strategy of inquiry

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Priority</th>
<th>Integration</th>
<th>Theoretical Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Sequence Concurrent</td>
<td>Equal</td>
<td>Data Collection</td>
<td></td>
</tr>
<tr>
<td>Sequential – Qualitative First</td>
<td>Qualitative</td>
<td>Data Analysis</td>
<td>Explicit</td>
</tr>
<tr>
<td>Sequential – Quantitative First</td>
<td>Quantitative</td>
<td>Data Interpretation</td>
<td>Implicit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>With some combination</td>
<td></td>
</tr>
</tbody>
</table>

Based on the four factors, researchers can select their most suitable research strategy. Six alternative strategy models, namely sequential explanatory, sequential exploratory, sequential transformative, concurrent triangulation, concurrent nested and concurrent transformative discussed by Creswell (2003) provide guidelines regarding the process of strategy selection.

- **Sequential explanatory strategy**: The collection and analysis of quantitative data, followed by the collection and analysis of qualitative data. The priority leans towards quantitative data, with the two methods being integrated during the interpretation phase of the study.

- **Sequential exploratory strategy**: As opposed to in the sequential explanatory strategy, priority is given to the qualitative data.

- **Sequential transformative strategy**: Encompasses two distinct data collection phases. Priority is optional to either the quantitative or the qualitative phase.
• **Concurrent triangulation strategy**: Simultaneous data collection. Priority is divided equally between the two methods, but in practical applications the priority may be given to either. This strategy integrates the results of the two methods during the interpretation phase.

• **Concurrent nested strategy**: Uses both approaches, with one nested in the other. The main research design employs either a quantitative or qualitative method. The data collection methods employed are taken from both approaches. The data collected from both methods are mixed during the analysis phase of the project.

• **Concurrent transformative strategy**: A combination of both concurrent triangulation and nested strategy, which is guided by a specific theoretical perspective.

All research, quantitative or qualitative is based on underlying assumptions of what constitutes *valid* research and which research methods are appropriate (Myers and Avison, 2002). The differences between the three methodologies (Bryman and Bell 2003, Creswell 2003) are summarised in Table 4.5.

**Table 4.5:** **Fundamental differences and distinctions between methodologies**
<table>
<thead>
<tr>
<th>Principal orientation to the role of theory in relation to research</th>
<th>Qualitative Approaches</th>
<th>Quantitative Approaches</th>
<th>Mixed Methods Approaches</th>
</tr>
</thead>
</table>
| • Deductive  
• Testing of theory | • Inductive  
• Generation of theory | Both |
| Use these philosophical assumptions | • Interpretive Epistemology | • Positivism Epistemology | • Positivism and Interpretive Epistemologies |
| Employ these strategies of Inquiry | • Phenomenology, grounded theory, ethnography, case study and narrative | • Surveys and experiments | • Sequential, concurrent and transformative |
| Employ these methods | • Emerging approaches  
• Open-ended questions  
• Interview data  
• Observation data  
• Document data  
• Audiovisual data  
• Text and image analysis  
• Case study method | • Closed-ended questions  
• Predetermined approaches  
• Instrument based questions  
• Numeric data  
• Statistical analysis  
• Survey method | • Both open- and closed-ended questions  
• both emerging and predetermined approaches  
• Multiple forms of data drawing on all possibilities  
• Statistical and text analysis |
| How researchers control these practices in the research? | • Position themselves,  
• Collects participant meanings  
• Focus on a single concept or phenomenon  
• Bring personal values into the study  
• Study the context or setting of participants  
• Validate the accuracy of findings  
• Make interpretations of the data  
• Create an agenda for change of reform  
• Collaborate with the participants | • Test or verifies theories or explanations  
• Identify variables to study  
• Relate variables in questions or hypotheses  
• Use standards of validity and reliability  
• Observe and measure information numerically  
• Use unbiased approaches  
• Employ statistical procedures | • Collect both quantitative and qualitative data  
• Develop a rationale for mixing  
• Integrate the data at different stages of inquiry  
• Present visual pictures of the procedures in the study  
• Employ the practices of both qualitative and quantitative research |
4.4.2 The use of quantitative and qualitative methodologies in interpretive research

Interpretivism commonly seeks assumptions on the basis of action, events and consequences rather than on consideration of proceeding circumstances (Patton, 1990). The interpretivist will have as a focus, the problem, not the problem-solving method. Researchers adopt various approaches to understand the problem (Rossman & Wilson 1985). Interpretivism does not commit itself to a specific philosophy or form of existence. For example, research being completed via a mixed methods procedure, allows the researcher to indulge in both qualitative and quantitative assumptions. Because of differences between positivism and interpretivism, the reasons for adopting quantitative and qualitative methodologies also differ. Kaplan and Duchon (1988) provided examples of methodology selection for an interpretive research field study, and Walsham (1993) for a case study. Kaplan and Duchon (1988) observed that context-dependent research must incorporate field research methods. They stated that field experimentation should always include qualitative research, in order to describe and illuminate the context and conditions under which research is conducted. Kaplan and Duchon (1988) added that interpretive researchers try to understand the way others construe, conceptualise and understand events, concepts and behaviours, partly because these are assumed to influence individual behaviours. They further state that researchers glean information via elicitation and observation of what is significant and important to the subjects on the basis of normal behaviour. Consequently, qualitative methods are characterised by detailed observation of, and involvement of, the researcher in the natural study settings, and attempts to avoid prior commitment to theoretical constructs or to hypotheses formulated before the gathering of data (Yin, 1984)
Arguments for combining quantitative and qualitative methodologies in either interpretivist or positivist research are ongoing (Lee, 1991; Orlikowski and Baroudi, 1991 and Gable, 1994). Walsham (1993) provided a contribution to this debate with contrasting accounts of some important elements of the interpretivist and positivist approaches in case study research. They are summarised here as follows:

- Walsham (1993) stated that for interpretive researchers, the Yin (1984) and Benbasat et al. (1987) studies on the use of case study methods to answer how and why questions would also be acceptable.

- Benbasat et al. (1987) argued that although they approached case study issues from a positivist stance, interpretivist approaches were also relevant for research goals and methods.

- Yin (1984) concluded that for data collection methods, there were options including documents, archival records, interviews, direct observation, participant observation and physical artifacts. However Walsham (1993) argued that interviews were the primary data source for interpretive research, as they access the interpretations of participants regarding the actions and events which have taken place or are taking place.

- A case study conducted by Kaplan and Duchon (1988) showed that quantitative and qualitative data could be used interactively. Based on an interpretive paradigm perspective, their study design incorporated a qualitative method including the use of open-ended interviews, observation, participant observation, and an analysis of responses to open-ended items based on a survey questionnaire. Quantitative methods were employed to collect and analyse data from the survey questionnaires.
• Interpretism provides a link between the quantitative and qualitative approaches. The basis of interpretive research is to identify the research problems, and to use available approaches to understand these problems.

4.5 The methodological approach of this thesis

4.5.1 Purpose of research – descriptive and exploratory

As discussed in the literature review and in the previous section, this research seeks to combine description and exploration because:

• Today’s book publishing environment is both complex and dynamic, and is permeated by uncertainty. One potent presence is that of ICTs (Information and Communication Technologies) and in particularly, digitisation with specific implications for business models. As a research domain, business models are complex and evolving, with particular challenges emerging regarding the evolution of business models for book publishing.

• Controversy continues regarding the nature of business models per se, and their relevance to strategy. The tools necessary to capture the business logic and for mapping flows of digital content and other transactions are still evolving.

• In book publishing, research is needed to assist the transition from traditional print-based practices and markets towards business models for a digital environment. As a result, all areas of book publishing have to be scrutinised to optimise efficiency, on the basis that a properly constituted business model is pivotal to a successful and profitable organisation.
4.5.2 Philosophical orientation – interpretive and design science

Neuman (2000) and Pickard (2007) noted that descriptive and exploratory researches were more likely to adopt an interpretive approach. In view of the fact that the research environment, that of the book publishing industry is extremely complex, this thesis employs an interpretive paradigm. The data collection phase of this research involves a variety of stakeholders who undertake various and related roles within the industry. As much of what emerges from this data collection process will be subjective and based upon individual perceptions, the choice of the interpretive approach is appropriate.

Also with regard to those elements of the design science paradigm employed, this thesis does not attempt to test hypotheses or to construct or test theories. This approach can be defended, owing both to a lack of consensus among decision science researchers on its viability in the matter of theory construction, and owing to doubts raised over the credentials of business model research as a contributor to theory building (Ball, 2001). However, it may well transpire that knowledge amassed in the process of artifact construction will later contribute to broader understandings at the theoretical level. The reasoning behind business model research is not the understanding of a phenomenon, rather it is a problem-solution approach. It involves recognising the concepts and relationships that allow expression of the business logic of a firm in order to be able to formally seize this logic. The design of useful artifacts is recognised as being complex, owing to the need for creative advances in areas where existing theory is often insufficient (which arguably is the case in the domain of business models). In information systems, IT artifacts have been described as concrete prescriptions that enable IT researchers and practitioners to understand and address the problems inherent in developing and successfully implementing information systems within organisations (Nunamaker and Chen, 1991; March and Smith, 1995; Hevner et al, 2004). The same can be said of artifact
design in the e-business field, both as regards the process of construction, and its evaluation as a source of deeper understanding, either for problem-solving or theory development (Klein and Meyers, 1999; Hevner et al, 2004).

The process of artifact construction has been the subject of criticism for being mere consultancy work (finding a solution to a problem) rather than research (Ball, 2001). Researchers, including March and Smith (1995), Markus et al (2002), Hevner et al (2004), Walls et al (2004), Vom Brocke and Buddenick (2006), and Peffers et al (2006) have set out guidelines for the conduct of design science research. This thesis draws upon such guidelines and also on research involving the application of design science to the development of business models, conducted by Osterwalder and his colleagues at the University of Lausanne, Switzerland (Osterwalder and Pigneur 2003a and 2003b; Osterwalder, 2004). Figure 4.4 shows the research outline for this thesis.

In this thesis, although both sets of stages identified by March and Smith (1995) and Vom Brocke and Buddenick (2006) are acknowledged, more emphasis is placed upon building the business models, and to a lesser extent on evaluation and instantiation. The constructs are literature based, but will be tested both in case studies and surveys, while methods will evolve naturally from the research design and the model building process. The methods employed are embedded in the research design model building and evaluation processes. Evaluation and instantiation are intended to occur on an iterative basis, involving consultation with and feedback from publishers. Communication will occur through the usual channels of journal publications and conference presentations. The research also takes account of the likelihood that any individual researcher is unlikely to develop an artifact that would have immediate
application in a business situation. Rather, the intention is to create a series of business model prototypes which may add to practical understanding and perhaps even later to theory.

![Table of research activities]

<table>
<thead>
<tr>
<th>RESEARCH ACTIVITIES</th>
<th>Build</th>
<th>Evaluate</th>
<th>Theorize</th>
<th>Justify</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Constructs</strong></td>
<td>Find basic concepts for business models (i.e. building blocks)</td>
<td>Investigate completeness and clarity (chapter 3, 6 &amp; 7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Definition of Business Models (chapter 2 &amp; 3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Model</strong></td>
<td>Define elements that express the business logic of a firm and publishers Define core forces of business model (chapter 2 &amp; 3)</td>
<td>Investigate applicability to real world phenomena. (chapter 6 &amp; 7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>Define research paradigms and methods (chapter 4)</td>
<td>Provides a justification for the adoption of the various methods, and explains the reasons for how and why these methods were used (chapter 5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Instantiation</strong></td>
<td>IS &amp; Strategy alignment. Management &amp; digital strategy alignment. (chapter 2 &amp; 3)</td>
<td>Apply Prototype to cases Apply alignment proposition to case (chapter 8 &amp; 9)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 4.4:** Research outline for this thesis

According to March and Smith (1995), Palvia et al (2003) and Osterwalder (2004), every cell and research objective in a design science matrix may call for a different method. It is essential to identify an adequate method for each research area, resulting in an overall method mix. Figure 4.5 illustrates the method mix in this thesis. A detailed analysis of these methods is discussed in Chapter 5.
4.5.3 Methodology – A mixed approach

To gain a clear understanding of the publishing industry, its markets, players, products and business models, the researcher needs to view aspects from a wide range of perspectives, including end users and the business environment. This research therefore adopts a mixed methods approach in order to provide a rich and contextual basis for interpreting and validating results (Cook and Reichardt, 1979; Meyers, 1981; Light and Pillemmer, 1982; Van Maanen, et al., 1982; Maxwell et. al., 1986; Kaplan and Duchon, 1988; Creswell 2003; Tashakkori and Teddlie, 2003a and 2003b).

The reasons for adopting a mixed method approach in this research study are as follows:

- As both quantitative and qualitative methods have strengths and weaknesses (Leathey, 2007), a mixed method approach can combine the advantages of both methods to achieve high quality results.

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**Figure 4.5:** Method mix for the thesis
• A mixed method approach allows the use of the available methods to conduct the research investigation and to produce enriched explanations. It provides the opportunity to consider problems from different angles, and to obtain opinions from various perspectives.

• The use of mixed method research helps obtain a greater understanding of the study and produces greater confidence in results.

• The end user is commonly considered to be the most important node in a publishing supply chain. There is a need to collect significant amounts of data from this source for analysis via the quantitative method. This includes data involving perceptions of digital publishing, potential purchasing patterns and any foreseeable areas of difficulty, ranging from preferences and attitudes to technology, to issues of trust and confidence in electronic business practices. The quantitative approach is employed to collect and analyse data from the survey questionnaires.

• Some questions cannot be answered simply by the application of quantitative methods, as both the asking and answering of questions can involve the presence of tacit knowledge which can only be accessed via qualitative methods. Cavana, Delahaye and Sekaran (2000), indicate that a qualitative approach is the most effective means of uncovering the hidden tacit knowledge of respondents. This of course is where the interpretive paradigm can be most useful, underpinned by the use of methods including open-ended interviews, observation, and analysis of responses to open-ended items on survey questionnaires.

In this thesis, every stage of the process involves integration. During data collection, identical open-ended and closed questions are used in both surveys. At the data analysis and interpretation stages, integration represents a transformation of quantitative data into
qualitative themes for comparison with qualitative results in the *interpretation* section of the study.

### 4.5.4 Research strategy model – Concurrent nested strategy

This thesis design follows the *Concurrent Nested strategy*, for the following reasons:

- Morse (1991) stated that some quantitative data could be embedded into qualitative design. Although the primary design of this thesis is qualitative, a quantitative data collection method – a survey of end users is employed, to support the case study data on how and when publishers should develop their digital technology and products to satisfy their customers and to maximise profit. Additionally, results from a survey of publishers are used to support the case study findings on publishing trends, value chains, supply chains, digital technology and business models.

- These two methods can produce data perspectives from different levels within the study. The perspectives of various publishers on the subject of the digital revolution provide alternative data and viewpoints on digital technologies, and on the comfort levels of respondents with their existing business models. Customer perspectives on digital products and online resources, also provide sources of data, providing publishers with relevant market information on their customer base, which can assist with decision making.

Both data sources are important, as they support each other. However, in this thesis, the qualitative approach is emphasised, with support from quantitative data. The primary source of data collection is case studies of fourteen publishing companies. Data collection techniques will incorporate the use of surveys, interviews, focus groups, secondary documentation, performance and company goals.
4.6  Conclusion

The philosophical perspective adopted in this thesis is that of an interpretive paradigm with the use of a mixed methodology design to implement the research. Rather than developing theories, this thesis has adopted a design science paradigm to develop business models. The following chapter—Chapter 5 (Research Design), will discuss, with an underlying interpretive paradigm perspective, the various data collection methods that are available.
Chapter 5 Research design

5.1 Introduction

Jankowicz (2005) defines a method as a system which includes procedures for the collection and analysis of data to obtain final, useful information to support research ideas. The main methods used in business and management research are the explicatory, case-study, survey and experimental methods (Jankowicz, 2005). Depending on the nature and scope of the topic, the method selection will differ. This thesis uses both quantitative and qualitative research methods grounded in an interpretivist epistemology.

This chapter addresses research design issues and explains the approach to answering the why and how research questions. Primary data collection and analysis activities were based on the completion of two web-based surveys – of publishers and of end users, of 14 case studies and of 25 in-depth, semi-structured interviews.

5.2 Overview of data collection methods

There are many data collection methods available for research approaches as listed in Table 5.1. It is generally accepted that it is important to employ as diverse a range of data collection methods as possible (Creswell, 2003).

Table 5.1: Data collection methods

<table>
<thead>
<tr>
<th>Research approaches</th>
<th>Data collection methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative</td>
<td>Predetermined, instrument based questions, performance data, attitude data, observational and census data, statistical analysis</td>
</tr>
<tr>
<td>Qualitative</td>
<td>Emerging methods, open-ended questions, interview data, observation, document and audiovisual data, text and image analysis</td>
</tr>
<tr>
<td>Mixed</td>
<td>Both predetermined and emerging methods, both open – and closed-ended questions, multiple forms of data drawing on all possibilities, statistical and text analysis</td>
</tr>
</tbody>
</table>
5.2.1 Literature review

Prior to the choice of data collection methods, a comprehensive literature review was conducted. Consonant with the view that the aim of a literature review is to show “That the writer has studied existing work in the field with insight” (Haywood and Wragg, 1982), the study initially involved an extensive reading program covering a diverse range of material including journals, books, conference papers, web site content, statistical reports, and direct sources within the book publishing industry.

5.2.2 Data collection methods for quantitative research

Creswell (2003), Neuman (2007) and Pickard (2007) suggest that the most commonly used quantitative data collection methods include experiments, quasi-experiments and surveys.

- **Experiments**: True experiments are characterised by the random assignment of subjects to experimental conditions and the use of experimental controls. Pickard (2007) argues that a true experiment is an attempt to empirically verify or corroborate the hypothesis of a casual relationship between variables, and is designed to measure the degree to which a relationship exists between the identified variables.

- **Quasi-Experiments**: These studies share all the features of experimental designs except that they involve the non-randomised assignment of subjects to experimental conditions. Bryman and Bell (2003) and Pickard (2007) state that quasi-experiments possess only some of the components of true research. Pickard (2007) also believes that quasi-experiments differ from true experiments in purpose and process. Where true experiments aim towards covariance, quasi-experiments aim to establish levels of correlation between observed variables.

- **Surveys**: A survey provides an efficient data collection mechanism for large groups, either in face-to-face mode, or remotely via surface mail or the Internet (Sekaran,
The acquisition of the data provides a general overview of the subject matter from a wide cross-section of the community (Babbie, 1990). The questionnaire is designed to enable respondents to drive and describe the content within the boundaries of meta-level questions (Oliver and Kondal 2006).

5.2.3 Data collection methods for qualitative research

The most commonly used qualitative data collection methods include case studies, ethnographic studies and phenomenological studies (Creswell, 1998; Yin, 2003 and Pickard, 2007)

5.2.3.1 Case Studies

In case studies, the researcher explores a single entity or phenomenon (the case) bounded by time and activity (e.g., a program, event, institution, or social group), and collects detailed information through a variety of data collection procedures over a sustained period of time. The case study is a descriptive record of an individual’s experiences and/or behaviours compiled by an outside observer (Creswell, 1998 and Yin, 2003). Robson (2002) defines a case study as: “A strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence.” Researchers do not focus on the discovery of a universal, generalisable truth, nor do they typically look for cause-and-effect relationships. Instead, emphasis is placed on exploration and description (Yin, 1994). Saunders et. al. (2007), described case studies as a very worthwhile way of exploring existing theory.

According to Yin (1994), a case study can be summarized into three categories: descriptive, exploratory and explanatory (Shown in Figure 5.1).
• Descriptive case study: Describes a domain. Typically utilises one or two instances of an event, or interventions or processes to show the reality of a situation. Illustrative case studies serve primarily to make the unfamiliar familiar and to give readers a common language about the topic in question.

• Exploratory case study: Whether based on single or multiple cases, is aimed at defining questions, constructs, propositions or hypotheses to be the object of a subsequent empirical study.

• Explanatory case study: Explains casual relationships.

**Case study methodology**
- *How* and *why* research questions
- Intense focus on a single phenomenon
- Number of variables far outstrips the number of data points

<table>
<thead>
<tr>
<th>Descriptive</th>
<th>Explorative</th>
<th>Explanatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case studies that describe interventions or processes</td>
<td>Case studies that explore situations where there is no single outcome</td>
<td>Case studies that explain causal relationships</td>
</tr>
</tbody>
</table>

**Figure 5.1: Types of case studies**

Unlike quantitative research methods which focus on the questions of *who, what, where, how much*, and *how many*, and archival analysis which often situates the participant in some form of historical context, case studies are the preferred strategy when how or why questions are asked (Yin, 1994). Likewise, they are the preferred method when the researcher has little control over the events, and when there is a contemporary focus within a real life context. Additionally, unlike more specifically directed experiments, case studies require a problem that seeks a holistic understanding of the event or situation in question using inductive logic – reasoning from specific to more general terms.

Multiple data collection methods are a common feature in most case study research projects. The goal of data collection when using multiple methods is to obtain a rich set of data.
Walsham (1993) argued that a rich set of data is important for interpretive research. Yin (1984) indicated five sources of evidence that can be used in a case study.

- **Documentation**: Any relevant written material derived from both formal and informal sources, annual reports, trade and general press.

- **Archival records**: Organisation charts, service, personnel or financial records.

- **Interviews**: Provide important face-to-face information. The process involves open-ended, focused or structured interviews.

- **Direct observation**: Absorbing and noting details, actions, or subtleties of the field environment.

- **Physical artefacts**: Devices, outputs, tools

The value of this range of data collection methods has been widely acknowledged (Benbasat et al., 2002; Merriam, 2002a, Merriam, 2002b, and Cresswell, 2003). With respect to interpretive case studies, Walsham (1993) argued that interviews are the primary data source. Walsham indicated that:

“Through this method the researcher can best access the interpretations that participants have regarding the actions and events which have or are taking place, and the views and aspirations of themselves and other participants.”

Interpretive case studies assume that people create and associate their own subjective and intersubjective meanings as they interact with the world around them. Interpretive researchers thus attempt to understand phenomena through accessing the meanings that participants assign to them (Boland, 1985; Orlikowski and Baroudi, 1991). An overview of interpretative case studies would be as follows:
• Investigate a contemporary phenomenon within its real-life context, where the boundaries between phenomenon and context are not clearly evident.
• Copes with the technically distinctive situation in which there will be many more variables of interest than data points.
• Relies on multiple sources of evidence, with data converging in a triangular fashion.
• Benefits from prior development of theoretical propositions to guide data collection and analysis.

5.2.3.2 Ethnographic and phenomenological studies

In ethnographic research, the researcher studies an intact cultural group in a natural setting over a specific period of time. A cultural group can be any group of individuals who share a common social experience, location, or other social characteristic of interest (Creswell, 1998; Yin, 2003 and Pickard, 2007). The ethnographic approach to qualitative research comes largely from the field of anthropology. The emphasis in ethnography is on studying an entire culture. Originally, the idea of culture was tied to the notion of ethnicity and geographic location, but its horizons have been broadened to include virtually any group or organisation. Creswell (1998), Yin (2003) and Pickard (2007) explained that ethnography was an extremely broad area with a wide variety of practitioners and methods. However, the most common ethnographic approach is that of participant observation as a part of field research. The ethnographer becomes immersed in the culture as an active participant and records extensive field notes. As in grounded theory, there is no preset limitation of what will be observed, and no real end point in an ethnographic study.

In a phenomenological study, human experiences are examined through the detailed description of the people being studied – the goal is to understand the lived experience of the individuals being studied. This approach involves intensively researching a small group of
people over a long period (Creswell, 1998; Yin, 2003 and Pickard, 2007). Creswell (1998), Yin (2003) and Pickard (2007) further explain that phenomenology is sometimes considered to be philosophical perspective as well as an approach to qualitative methodology. It has a long history in social research disciplines including psychology, sociology and social work. Phenomenology is a school of thought that emphasises a focus on peoples’ subjective experiences and interpretations of the world. That is, the phenomenologist wants to understand how the world appears to others.

5.3 Data collection, management and analysis methods in this thesis

The key data collection methods discussed in this section are literature reviews, surveys and case studies. However, prior to formally discussing these methods, it is important to understand the issue of sampling. Bryman and Bell (2003), Jankowicz (2005), Neuman (2007) and Pickard (2007) emphasise that sampling is a major process in any research investigation, either quantitative, qualitative or mixed, and enables selection of “a few from the many” in order to carry out empirical research.

5.3.1 Sampling

Neuman (2007) says that the purpose of sampling for the qualitative approach is to collect cases, events, or actions that clarify and deepen understanding. Sampling processes are different in qualitative and quantitative approaches. Qualitative sampling by researchers focuses on how the sample highlights the main areas of social life. Researchers aim to find cases that will enhance what they learn about the processes of social life in a specific context (Neuman, 2007). Neuman also points out that as opposed to qualitative sampling, quantitative researchers aim to obtain a small sample from a large group and study the sample, leading to an accurate generalisation of the larger group.
This thesis employs both quantitative and qualitative sampling:

- Random sampling to obtain quantitative data from end user surveys. Individuals had an equal probability of being selected and the sample can be generalised to a larger population. A detailed explanation for its selection is provided in Sections 5.3.3.2 and 5.4.3.2.

- Purposive sampling to obtain qualitative data. Individuals selected had experienced the central phenomenon. This included including (a) interviewees from different categories of book publishers who were involved in or were considering involvement in digital publishing and (b) interviewees whose executive positions enabled them to understand their companies’ response to digital publishing and strategies for developing digital publishing. The detailed strategies for selection are explained in Sections 5.3.4.1 and 5.4.3.1.

5.3.2 Literature review

This study initially involved an extensive reading program covering a diverse range of primary and secondary material including journals, books, conference papers, web site content, statistical compilations, annual reports, and direct sources from within the publishing industry.

5.3.3 Data collection methods - Surveys

For this research, both qualitative and quantitative methods were employed to collect and analyse data from survey questionnaires. Based on different purposes, two online surveys were conducted aimed at publishers and end-users. Both questionnaires employed open and closed questions and invited respondents to add additional comments.
5.3.3.1 Survey Design and data collection

The survey of publishers (Appendix C) sought to obtain an understanding of publishing trends, and of changes in value and supply chains and business models. In designing the survey of book publishers the choice of variables was dictated largely by the need to answer the research question and sub-questions. Initially potential variables emerged from a search of the literature and particularly the work of Daniel (2005), Greco (2006), Shatzkin (2007) and Thomson (2005). The choice of variables was confirmed in the pilot survey of industry experts. The set of survey questions was organised into four sections.

- **Section A**: Related to operational overview, and sought an understanding of the company’s current situation.
- **Section B**: Investigated the general business environment, and segmentation in book publishing markets.
- **Section C**: Sought opinions on digitisation, value chains and business models.
- **Section D**: Addressed the future expectations of book publishers.

The end user questionnaire (Appendix D) sought to gain insights into digital publishing from a customer’s perspective. The survey sought information regarding their current use of IT and their future expectations. In this regard the set of survey questions was again divided into four parts.

- **Part A**: Dealt with the background, occupation, education level and age group of users.
- **Part B**: Enquired as to participants’ current usage of digital technologies and electronic resources.
- **Part C**: Identified current trends in the utilisation of existing technologies, thereby gaining understanding of what the users thoughts were about digital publishing.
• *Part D*: Gathered information regarding end user expectations of future technology developments and the impact of technology developments on digital publishing.

### 5.3.3.2 Target populations

The survey of publishers was aimed at a diverse population, including traditional book publishers already engaged in or planning to engage in digital publishing, and new *pure play* digital publishers from inside and outside the book publishing industry.

After several unsuccessful attempts to obtain access to relevant membership listings, reference was made to a commercial listing service. They provided a list of 65 publishing companies throughout Australia. This exercise proved disappointing and of limited value, in that the majority of addresses obtained were those of newspaper and magazine publishers, most of whom had no interest in participating in the project. However, given that the most obvious route, that which lay through access to the membership database of the Australian Publishers Association turned out not to be an option, the researcher searched for details of publishers in the *Business Who’s Who* database and worked with the contacts available. Consequently, one would be reluctant to place too much importance on the significance of this data. The most one would claim is that all those completing the survey were in fact, book publishers and that their responses, limited in number as they were, tended to support the major assumptions underlying the survey.

The aim of the end user survey was to poll a wide cross-section of the community. However, owing to time constraints, coverage of the survey was restricted to higher education academics, TAFE and university students. The student groups that participated in the survey were randomly selected from RMIT university, and were current research students, post-
graduates, and under-graduates. The survey of end users was distributed in online mode. The reasons for selection of these particular respondents are described in Section 5.4.3.2.

5.3.3.3 Data encoding for the results of both surveys

The publishers survey was analysed qualitatively with all the data entered into excel to generalise the results. The survey of end users was analysed quantitatively, with the results entered into SPSS to produce both descriptive and statistical summaries of the information. The answers to the end user survey were encoded as a series of variables. The variables were grouped into categories according to the relevant sections of the survey instrument. The variables employed in the survey of end users are listed in Appendix E. To assist in the grouping of variables, each variable was prefixed with its survey instrument category.

5.3.3.4 Descriptive analysis of responses to the end user survey

For each question, the main descriptive summary produced was in the form of frequency distributions. There were two types of responses in this survey: categorical, and ordinal.

- Nominal choices have no numerical or preferential values. The answers to each question consist of nominal data (age groups, university roles, gender, different kinds of digital devices and technology, and online activities).

- Ordinal choices refer to situations where respondents are asked to rate or scale choices, say, from very important to not important. In the survey there were several questions requiring this kind of response, such as “Which of the following activities have you been or are you engaged in?” (Answers used the scale of 1 to 5 (where 1=never and 5=frequently)). Ordinal data consists of the number and percentage of people who select each point on a scale.
5.3.3.5 Statistical analysis for the end user survey

For nominal data, there is a limited range of possible statistical tests. The most appropriate application, and the one employed in this thesis, is that of a Contingency Table analysis which determines whether a relationship exists between two nominal variables.

Contingency Tables (called Crosstabulation Tables in SPSS), structure the data into a two-way table showing the groupings for each of two different variables. Once a Cross-tabulation Table has been constructed, it is possible to examine the values, to see which combinations of answers attract more (or less) observations than would be expected if the two variables were independent. The statistical test to use in this case is the chi-square test for independence.

The hypothesis of independence states that the likelihood of an observation falling into one group for one variable, is independent of the other group that the observation falls into. The null hypothesis occurs where two variables are totally independent of each other. If one calculates a low chi-square value for a particular combination of two variables, the null hypothesis would tend to be accepted. If the null hypothesis is rejected (on the basis of a large chi-square value) then a relationship between the two variables would be identified. The cross-tabulation table can then be examined in more detail, to identify particular combinations of variables where the expected number of observations is significantly different from that which was observed.

Depending on the different forms of data involved (Nominal, Ordinal or Nominal by Interval), SPSS can provide a variety of statistical tests. Table 5.2 details several crosstabulation statistical measurements for different data used in this survey analysis. Note that the chi-
Chi-square test is not valid when the minimum expected value in any cell is less than five. Observed values in a cell can be lower than five without creating problems.

Table 5.2: Crosstabulation Statistical analysis employed in this Survey (SPSS)

<table>
<thead>
<tr>
<th>Data Types</th>
<th>Crosstabs statistics</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal</td>
<td>Phi</td>
<td>The ratio of the chi-square statistic to the weighted total number of observations. This is the most ‘optimistic’ of the symmetric measures, and unlike most association measures, does not have a theoretical upper bound when either of the variables has more than two categories.</td>
</tr>
<tr>
<td></td>
<td>Cramer’s V</td>
<td>This is a rescaling of phi so that its maximum possible value is always 1. As the number of rows and columns increases, Cramer’s V becomes more conservative with respect to phi.</td>
</tr>
<tr>
<td>Ordinal</td>
<td>Gamma</td>
<td>A symmetric measure of association between two ordinal variables that ranges between -1 and 1. Values close to an absolute value of 1 indicate a strong relationship between the two variables. Values close to 0 indicate little or no relationship.</td>
</tr>
<tr>
<td></td>
<td>Somers’ d</td>
<td>A measure of association between two ordinal variables that ranges from -1 to 1. Values close to an absolute value of 1 indicate a strong relationship between the two variables, and values close to 0 indicate little or no relationship between the variables. Somers’ d is an asymmetric extension of Gamma that differs only in the inclusion of the number of pairs not tied on the independent variable.</td>
</tr>
</tbody>
</table>

5.3.4 Data collection methods – Case study

In this thesis, case studies were used as the major qualitative data collection instrument. This included open-ended interviewing, and the analysis of responses to open-ended items via a survey questionnaire. Adams and Schvaneveldt (1985) indicate that in case study research, it is considered more appropriate to treat representativeness in terms of a qualitative logic for
the selection of cases for study. The interviews enabled the researcher to meet face-to-face with senior members of publishing companies to discuss the results of the survey analysis (Yin, 2002). Case study design includes units of analysis, site selection, and protocols for data collection and quality control. Data collection is divided into three parts: case study protocol, sources of evidence and case study database.

5.3.4.1 Case study design

Unit of analysis

A researcher should initially decide which particular unit of analysis is the most appropriate for the task ahead. This can involve decisions on whether to focus on an organisation, on individuals or a collection of individuals. Alternatively, the unit of analysis may relate to a specific project or decision (Benbasat, Goldstein and Mead, 1987). In all instances, it is vital to carefully consider the research questions to be posed. To complete this determination process, the researcher needs to contemplate what result is likely to be reached at the end of the project. As this thesis sought to identify potential business models for the publishing industry in a digital environment, the entire organisation was the object of scrutiny with an additional emphasis on the perceptions of senior decision makers.

An integral aspect of case research design is to decide whether a single case or a multiple case study will be required for the project (Yin, 2002). An advantage of multiple case methodologies is that the data collected can provide a basis for comparison. Multiple case designs allow for cross-case analysis and can produce more generalised research results (Benbasat, Goldstein and Mead, cited by Myers and Avison, 2002).

This thesis adopts a multiple case study design strategy. There were two reasons for this decision.
• Given the diverse nature of the book production sector of the Australian publishing industry, with respect to the range of markets, products and services, perceptions of the digital future within the industry are also likely to be equally diverse. Based on their core products and markets, company responses are likely to vary, leading to differences in technology uptake and business models.

• Book production can be divided into segments such as the publishing of textbooks, higher education reference books, professional books (for example in law, finance and taxation), fiction and other non-fiction books. Their customer bases are delineated by interest and behaviour, educational backgrounds and occupations. These factors can all influence their attitudes towards digital products, online resources and online purchasing. These end users and potential end users, are key influences in the way publishers structure their business and pace their implementation of digital technology; which will further impact on their supply chains, value chains and business models.

**Site selection**

Site selection is very important where multiple cases are to be employed (Benbasat, Goldstein and Mead, cited by Myers and Avison, 2002). The business of site selection should be the subject of a thorough decision-making process. The nature of the topic should be the researcher’s starting point when considering site selection. Yin (1984) suggests two criteria for site selection. On occasions where sites are predicted to reach similar results, this can be viewed as a source of *literal* replications. Alternatively, where conflicting results are likely to be forthcoming, the site may be chosen for its potential for producing *theoretical* replication.

In seeking to locate book publishing companies as potential case sites, the researcher employed a range of hard copy and electronic sources. These included: The IBISWorld
reports, ABS (Australian Bureau of Statistics) 1301.0 – Year Book Australia 2006/2007 and 1363.0 – Book Publishers, Australia, 2003-04, BWW (Business Who’s Who) publishing lists, publishers’ web sites, and the Australian Publishers Association member’s directory. In seeking to obtain an appropriate degree of balance among case companies, specific selection criteria included the nature and size of the firm, its value proposition, products, markets, structure and strategies.

Following completion of the background research, fourteen cases were amassed. Most of the candidates for case research completed the online survey, with the remainder being acquired by direct approach to principals. Case studies included publishers of general books, professional, educational, special list, and university presses which operate as subsidiaries of major publishing conglomerates, and as spinoffs from universities and related businesses. These cases are all exploratory and descriptive in nature, rendering them suitable for the kind of interpretive research undertaken in the thesis. According to Yin (1999), exploratory case studies are the preferred orientation: “When the available literature or existing knowledge base is poor, offering no clues for conceptual frameworks or notable propositions.”

While there is an extensive literature on electronic publishing, there is relatively little coverage of the field of digital publishing and in particular, of current and emerging business models. Accordingly, a case-based approach and specifically, the use of exploratory case studies, was deemed to be most appropriate for this thesis.

**Data collection process**

Utilising multiple data collection methods for each of the case studies helps to collect rich data. There were three main elements to this process: case study protocols, sources of evidence and a case study database to collect and manage data.
Case study protocol: The case studies proceeded on the basis of a standard set of protocols relating to research design, operating procedures and data analysis techniques. This was intended to guard against bias and ambiguity, and to ensure as far as possible, that a logical chain of evidence could be seen to operate from the initial research questions to the ultimate conclusions (Dube and Pare 2003). For example, this led to the use of how and why type questions for exploring operational links over time and what type questions for exploring new phenomena such as digital developments. In the case of research design, the protocol specified detailed procedures for data collection during the interview process. The researcher was mindful that an interview is a conversation between an interviewer and interviewee, focusing on the interviewee’s perceptions and expressed in his or her own words, and on issues that are important to him or her (Bouma and Ling, 2004; Kavle, 1996; Sommer and Sommer, 2002). It was deemed important therefore, that qualitative data should be derived from the interviewee’s perspective rather than from the researcher’s (Creswell, 2003; Lee, 1999; Marshall and Rossman, 1999). Consequently, every interview was recorded and transcribed, with the transcriptions being read and analysed and returned to interviewees for verification and where necessary correction. Finally with regard to data analysis, the strategy was designed to link findings and interpretations, not to generalise outcomes, but to contexts beyond the immediate, for extrapolation to other situations and environments (Walsham 2006).

Sources of evidence: The case study research relied on multiple sources of evidence. Dube and Pare (2003), quoting Patton (1999) and Yin (1999), state that the most important advantage of using multiple sources of evidence is the development of converging lines of inquiry. In addition to the interviews outlined above, the researcher in this thesis employed a range of documentary evidence for the purposes of corroboration and augmentation of
interview evidence. This involved the study and analysis of public documents such as annual reports, strategic plans, mission statements, publishers’ websites, other government statistical websites and newsletters.

Case study database: All information, comprising the full text of interview transcripts, URLs for publishers’ homepages and related documents, contact addresses, dates and times of interviews and follow-up contacts was organized into different categories and stored in MS Word and Excel files.

5.4 Procedures

5.4.1 Interview guide

The interview instrument contained 25 questions which were designed in a style and approach that allowed the participants to express their opinions freely. The instrument was divided into seven sections:

- General overview of the business: Identified publishers’ current situations, their customers, competitors, technology, value and supply chains.
- Digitisation: Sought publishers’ opinions on digital strategies and impacts.
- Business Models: Identified current business models, any associated problems and their strategies for future development. This included questions on the Open Access publishing movement and in particular, whether it might pose a competitive threat to mainstream publishers. (Although no such models actually featured in the cases).
- Technology: Identified their current technology and any provisions they might have for adopting new technologies in the future.
- Content Management: Sought to identify their responses in this area.
• *Trends:* Sufficed opinions on the industry’s future in a digital era.

### 5.4.2 Selection and description of cases and participants

There were 14 cases selected, with 25 participants taking part in the interviews. These people all held senior managerial roles in technology departments, digital strategy departments and product/services departments. All had extensive experience in the book publishing industry. They were identified from web pages, publishing lists and the APA (Australian Publishing Associate) member list. These potential informants were contacted via electronic mail, provided with details of the research process and invited to participate. These initial contacts were also asked to recommend other persons who might be able either to participate or contribute relevant information. The interviews were conducted between February and September 2007. For purposes of confidentiality, identification and contact details for both the companies and their representatives were omitted from the thesis.

### 5.4.3 Selection and description of survey populations

Selection of the publishing industry survey population was based on the following:

- *Direct involvement in the digital planning area:* These people were long term, experienced individuals, who possessed a detailed knowledge of the workings and potential of the book publishing industry.

- *Skill sets and experience:* These individuals were involved at different levels of management, and possessed various skills in areas of technology, customer relationships and editorial content.

- *Market profile:* Participation in this survey group was based on selection from various book publishers, including publishers of educational and professional books, women’s books and travel books.
Selection of the end user survey groups was based on the following criteria:

- Occupation and age group
- Academic status where both staff and students were deemed likely to be users of line resources, digital products and online purchase facilities. The academic staffs were randomly selected from Victorian universities. The students surveyed were from RMIT University and its associated TAFE, who were undertaking various courses of study.

5.4.4 Ethical issues

Creswell (2003) emphasises that ethical issues apply to any kind research approach and are a vital part of research. This research project was subject to the Ethics policy of RMIT University and administrated through the RMIT Business Portfolio Human Research Ethics Committee.

All survey and interview participants were provided with an Explanatory Statement and an Informed Consent Form. There were several reasons for the use of the explanatory statement:

- To provide key information, including the background to the research and the nature and objectives of the project.
- Acknowledgment that input from responses would play an essential and meaningful part of the research.
- To assure respondents that the research was subject to the official ethics process of RMIT, and that access to the relevant ethics committee was guaranteed. Additionally, to assure participants that their names and contact details would not appear anywhere in the thesis.
• To confirm that any data or information supplied would be treated in complete confidence, (although the findings might be written up in the project report or in relevant academic journals) with anonymity of both individuals and their organisation guaranteed.

5.4.5 Reliability and validity

Litwin (1995) points out that any set of data collected by means of surveys will inevitably contain errors. Minimising these errors to provide a more accurate reflection of the truth is essential for any research effort. Litwin (1995) further argues that before a survey instrument can be used to collect meaningful data, researchers must conduct tests to verify accuracy, irrespective of the quantity of data involved. Two useful test methods commonly used in regard to survey instruments are those conducted for reliability and validity. Reliability is a statistical measure of how reproducible the survey instrument’s data are, and validity provides the basis of how well a survey instrument’s data measure what they should (Litwin, 1995).

5.4.5.1 Reliability

According to Litwin (1995), reliability is commonly assessed in three forms: test-retest, alternate-form, and internal consistency. Intra-observer and inter-observer reliability are also important. Test-retest reliability and internal consistency reliability were employed separately in the two surveys. Table 5.3 summarises types of reliability and their characteristics, with comments on their use (Litwin, 1995).

Table 5.3: Types of reliability and their characteristics
**Test-retest reliability** is the most commonly used indicator of survey instrument reliability. It can be measured in two ways. One way entails having the same set of respondents complete a survey at two different points in time to compare how stable the responses are. This measurement will show how reproducible a set of results is. *Correlation coefficients or r values* are used to calculate and compare the two sets of responses. In general, *r values* are considered satisfactory if they equal or exceed 0.7 (Litwin, 1995). The second way of measuring test-retest reliability, which was used here in the survey of publishers, entails the collection of data, not from a group of subjects, but on the basis of one observer at a time. Each individual publisher surveyed was asked identical questions during an interview. The correlation between these two data sets from the same individual is commonly known as intra-observer reliability. The comparison will be discussed in detail in Chapter 8.

<table>
<thead>
<tr>
<th>Type of Reliability</th>
<th>Characteristics</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test-retest</td>
<td>Measures the stability of responses over time, typically in the same group of respondents</td>
<td>Requires administration of the survey to a sample at two different and appropriate points in time. Time points that are too far apart may produce diminished reliability estimates that reflect actual change over time in the variable of interest</td>
</tr>
<tr>
<td>Intra-observer</td>
<td>Measures the stability of responses over time in the same individual respondent</td>
<td>Requires completion of a survey by an individual at two different and appropriate points in time. Time points that are too far apart may produce diminished reliability estimates that reflect actual change over time in the variable of interest</td>
</tr>
<tr>
<td>Alternate-form</td>
<td>Uses differently worded stems or response sets to obtain the same information about a specific topic</td>
<td>Requires two items in which the wording is different but aimed at the same specific variable and at the same vocabulary level</td>
</tr>
<tr>
<td>Internal consistency</td>
<td>Measures how well several items in a scale vary together in a sample</td>
<td>Usually requires a computer to carry out calculations</td>
</tr>
<tr>
<td>Inter-observer</td>
<td>Measures how well two or more respondents rate the same phenomenon</td>
<td>May be used to demonstrate reliability of a survey or may itself be the variable of interest in a study</td>
</tr>
</tbody>
</table>
Internal consistency reliability is another commonly used psychometric measure in assessing survey instruments and scales (Litwin, 1995). It is applied not to single items, but to groups of items that are thought to measure different aspects of the same concept. Internal consistency reliability is an indicator of how well the different items measure the same issue. In this research, there were a total of 998 responses to the survey of end users, and these were divided into two random groups (the SPSS function is utilised to separate data into two random groups). A coefficient alpha was calculated for the scales, because greater reliability can be obtained with a higher internal consistency of coefficient alpha. The generally accepted scale is 0.65 or above (Litwin, 1995).

5.4.5.2 Validity

Besides determining a survey item’s or scale’s reliability, it is important and necessary to assess its validity (Litwin, 1995). There are four common types of validity that are typically measured when assessing the performance of a survey instrument: face, content, criterion, and construct.

- **Face validity** is based on a brief review of items by uninformed judges.

- **Content validity** is a subjective measure of how appropriate the items appear to a set of reviewers who have a basic knowledge of the subject. It can assess a survey’s content to ensure validity without the presence of superfluous material.

- **Criterion validity** is a measure of how well one instrument compares with another instrument or predictor. It provides abundant quantitative evidence on the accuracy of a survey instrument. It can be dissected into two components: concurrent and predictive. Concurrent validity requires the survey instrument in question being judged against some other method that is acknowledged as a benchmark for assessing
the same variable. Predictive validity is the ability of a survey instrument to forecast future events, behaviours, attitudes, or outcomes.

- Construct validity is the most valuable, yet the most difficult way of assessing a survey instrument. It comprises two distinct forms of validity: convergent and divergent. Convergent validity means that several different methods for obtaining the same information about a given trait or concept produce similar results. Divergent (discriminate) validity involves the use of another theoretically based way of thinking about the ability of a measure to estimate the underlying truth in a given area (Litwin, 1995). Table 5.4 summarises the types of validity and their characteristics along with comments on their use.

Table 5.4: Types of validity and their characteristics and comments

<table>
<thead>
<tr>
<th>Type of Validity</th>
<th>Characteristics</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face</td>
<td>Casual review of how good an item or group of items appear to be</td>
<td>Assessed by individuals with no formal training in the subject under study</td>
</tr>
<tr>
<td>Content</td>
<td>Formal expert review of how good an item or series of items appear to be</td>
<td>Usually assessed by individuals with expertise in some aspect of the subject under study</td>
</tr>
<tr>
<td>Criterion:</td>
<td>Measures how well the item or scale correlates with gold standard measures of</td>
<td>Requires the identification of an established, generally accepted gold standard</td>
</tr>
<tr>
<td>Concurrent</td>
<td>the same variable</td>
<td></td>
</tr>
<tr>
<td>Criterion:</td>
<td>Measures how well the item or scale predicts expected future observations</td>
<td>Used to predict outcomes or events of significance that the item or scale might subsequently</td>
</tr>
<tr>
<td>Predictive</td>
<td></td>
<td>be used to predict</td>
</tr>
<tr>
<td>Construct</td>
<td>Theoretical measure of how meaningful a survey instrument is</td>
<td>Determined usually after years of experience by numerous investigators</td>
</tr>
</tbody>
</table>

Validity is usually expressed as a correlation coefficient, or $r$ value, between two sets of data. Levels of 0.7 or more are generally accepted as representing satisfactory validity. However, in this research, owing to time limitations and the relatively small number of respondents to the publisher survey, rather than using statistical validity methods, the two sets of survey data
were validated respectively by content and face validity methods. These two validity methods are direct, and although not quantified by statistics, they represent an overall opinion of groups of experienced and inexperienced judges. Accordingly, they provide a foundation on which to build a methodologically rigorous assessment of a survey instrument’s validity (Litwin, 1995).

In seeking to test content validity, prior to its despatch to publishers, the survey questionnaires were forwarded to several people working in the industry, and who were capable of assessing broad content validity and of verifying that the survey included only relevant information. In the case of the survey of end users, a test of face validity was used. Before the survey was sent to the end users, 25 people in the candidate's university were selected at random in order to test face validity. The group included students, lecturers, professors, administrators and IT support staff. The final survey questions were adjusted and refined, based on their responses.

5.4.6 Case study quality control

Yin (1998) recommends that researchers continually judge the quality of their case study design. Four tests commonly used to assess case studies are those of construct validity, internal validity, external validity and reliability.

- **Construct validity**: Establishment of accurate operational measures for areas being studied. This aspect is traditionally covered during quality control in the data collection and case reporting processes.

- **Internal Validity**: Establishment of a relationship whereby some aspects are credited as leading to other aspects, as opposed to spurious relationships. This procedure does not apply to descriptive or explanatory studies, but rather to causal studies and is generally utilised in the quality control area in the stage of data analyses.
• **External validity**: Establishment of an area in which a study’s findings can be generalised. The quality control area in the stage of research design is where this is normally used.

• **Reliability**: The assertion that operations of a study, such as data collection can be replicated producing identical results.

Yin further argues that these tests should apply throughout the case study process: during design, data collection, data analysis and reporting. Following these recommendations is likely to “Increase the quality of your case study tremendously, and overcome traditional criticisms of the weakness of case study research” (Yin, 1998). How the conduct of these four tests in this thesis aligned to these recommendations is discussed in chapter 6.

### 5.5 Conclusion

This chapter has discussed the key design procedures for the mixed method approach employed in the thesis. From the six main alternative strategy models, the researcher adopted a Concurrent Nested strategy. In accordance with the Concurrent Nested strategy, the research design is integrative, with the concurrent collection and processing of both qualitative and quantitative data.

Additionally, this chapter summarised how the researcher executed data collection and data management and analysis in a mixed methods approach. It has included detailed explanations of survey design, case design and data collection procedures. For both the surveys and the case studies, a range of questionnaires, interviews and documentation techniques was used to collect both quantitative and qualitative data. Finally, the validity and reliability aspects for two online surveys, and quality control of case studies were discussed.
6.1 Introduction

This chapter reports on the two surveys and includes coverage of the reliability and validity dimensions. The publisher survey predominantly covered traditional book publishers already engaged in or planning to diversify into digital publishing. It sought to gain their insights and perspectives into publishing trends and in particular the prospects for digital publishing in Australia. The end user survey focused on academics and students at the RMIT University and its TAFE division. Its intention was to gain insights into digital publishing from a customer perspective, with respondents deemed to be current or potential users of a range of technologies covered in the survey. The survey results are summarised under key themes covered by the questions. These key themes include:

- General book publishing trends
- Markets, supply chains and value chains
- Digitisation and business models
- Publishers’ future expectations
- End user behaviour and perspectives

6.2 Survey responses, reliability and validity

6.2.1 Responses from the survey of publishers

Of the 65 surveys mailed, and subsequently re-mailed to publishers, only 18 were returned, a response rate of 28%. At face value, this response from a Web-based industry survey appears to compare well with the reported norm for such exercises of 4% to 6% (Rowlands and Nicolas 2005). However, the researcher makes no claims for significance other than that the body of responses conformed largely to what would be expected from an analysis of the
literature. Furthermore, the 28% response included most of the key players in the Australian publishing industry, representing areas of consumer, specialist, educational (primary, secondary and university press) and professional publishing. Some respondents were subsidiaries of international publishing conglomerates, whilst the remainder comprised either independent or small publishing houses.

6.2.2 Responses from the survey of end users

The survey was conducted totally online, being lodged on the RMIT library and university web sites for the duration of March 2007. Responses totalled 998, but as this was an online procedure, it was difficult to estimate how many surveys were despatched and therefore, difficult to calculate the percentage response rate. Respondents included academic staff randomly selected from different departments, post-graduate coursework students, post-graduate research students (both Masters and PhD students), and TAFE and Undergraduate students.

Of the 998 responses (all from different departments of RMIT university), 134 were from academic staff, 266 from Post-graduate coursework students, 64 from post-graduate research students and 526 from TAFE and undergraduate students, comprising a total of 510 females and 488 males. By age, 219 respondents were under 20, 488 were between 20 to 29, 169 were between 30 to 39, 76 were between 40 to 49, 38 were between 50 to 59 and 8 aged 60 or over. Of the total responses, the female and male percentages were 51% and 49% respectively.

6.2.3 Survey reliability and validity

Table 6.1 summarises the types of reliability and validity test research methods were implemented for the two surveys, and their subsequent results.
Table 6.1: Reliability and validity of the questions in the two surveys

<table>
<thead>
<tr>
<th>Surveys</th>
<th>Types of Reliability and Validity</th>
<th>Explanations and Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publishers</td>
<td>Intra-observer reliability</td>
<td>Individuals who answered survey questions were interviewed with similar questions. Their survey answers were correlated with their interview answers. Detailed comparisons are discussed in Chapter 8.</td>
</tr>
<tr>
<td></td>
<td>Content validity</td>
<td>The survey questionaries were sent to industry experts who reviewed the items for relevance paying particular attention to the variables of interest.</td>
</tr>
<tr>
<td>End Users</td>
<td>Internal consistency reliability</td>
<td>The coefficient alpha for the responses of the two random groups (50% response in each group) for survey questions which contained all ordinal survey questions. The two random groups obtained similar results for coefficient alpha for each question (all being over 0.7), with the exception of one question for the two groups where coefficient alpha of 0.67 and 0.69 was recorded. This demonstrated that the survey data had reasonably high reliability and internal consistency.</td>
</tr>
<tr>
<td></td>
<td>Face validity</td>
<td>25 people in the candidate's university were selected at random. The final survey questions were adjusted and refined based on their responses.</td>
</tr>
</tbody>
</table>

6.3 General book publishing trends

A number of key themes arose, including revenue growth, the media channels used for the delivery of products and services and outsourcing practices employed.

6.3.1 Revenue growth

67% of respondents reported increased revenue growth from core (that is, existing) products and services and almost 61% had experienced increased revenues from the sale of both new products and services and specifically, from digital products and services. 33% of respondents indicated that their revenue streams comprised a mix of returns from both old and new products and services. The only significant downside to these responses was that 28% of respondents confirmed changes in their revenue streams consequent upon the cannibalisation
of old sources of revenue by new sources. These figures show that the process of digitisation is well underway in the Australian book publishing sector. With the exception of the cannibalisation activities just mentioned, it is encouraging to note that to date, this uptake of digital technologies and the options they provide has happened without the often dire consequences anticipated in the literature. It is also interesting to see a clear manifestation of coexistence between hard copy and digital formats.

6.3.2 Media channels

94% of companies confirmed the use of print media channels, with 61% using the Web and other electronic channels for the delivery of goods and services. Communication and marketing channels employed included e-mail (95% of responding companies), and Blogs (17%). These results suggest that both web-based publishing and electronic publishing are catching up quickly with traditional publishing to become significant publishing media in their own right. They also indicate that these two publishing media are not in fact replacing the traditional formats, but are serving to supplement and add value to traditional print publishing. To some extent may this further validate perceptions of the supplementary and enhancement role that digital technology can perform in publishing that emerged in the focus groups conducted during the research.

6.3.3 Outsourcing practices

As shown in Figure 6.1, all respondent companies were engaged in outsourcing their printing operations, with 50% outsourcing their content distribution. Some 39% were outsourcing IT applications and services and a further 33%, their IT infrastructure. Only around 18% of respondents outsourced editorial and design functions. An interesting point here is that only one of the respondent companies outsourced their marketing requirements. This indicates
either that management on the whole has engaged appropriate marketing personnel, or
suggests that marketing is too strategically important a function to be outsourced.

![Figure 6.1: Outsourcing areas in book publishing in Australia](image)

### 6.3.4 Current possession of critical success factors

A number of critical success factors have been identified in order for companies to be well-
positioned in the publishing arena. Table 6.2 presents an overview of firms’ perceptions of the
extent to which they possessed these factors. No company was satisfied with its overall levels
of expertise, however a majority had confidence in their customer base and that they could
provide satisfactory content.

#### Table 6.2: Critical success factors currently possessed by companies

<table>
<thead>
<tr>
<th>Critical Success Factors</th>
<th>Degree of Possession</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of quality content</td>
<td>94.45%</td>
</tr>
<tr>
<td>Understand customers</td>
<td>72.23%</td>
</tr>
<tr>
<td>Strong brands</td>
<td>72.22%</td>
</tr>
<tr>
<td>Special expertise in publishing know-how</td>
<td>50.00%</td>
</tr>
<tr>
<td>An entrepreneurial environment</td>
<td>44.44%</td>
</tr>
<tr>
<td>Organisational agility</td>
<td>38.89%</td>
</tr>
<tr>
<td>A flexible organisational structure</td>
<td>27.78%</td>
</tr>
</tbody>
</table>
6.4 Markets, supply chains and value chains

The key themes that emerged from the survey included those of competition, supply chain issues, value chain changes and the risks associated with such changes, including those facing value chain players.

6.4.1 Competition

All companies reported that they had experienced substantial competition from both inside and outside the industry. It seems clear that the customer base has become quite demanding as regards what it wants from publishers, be they mainstream or emerging. Details are shown in Figure 6.2. Responses to the survey of publishers basically conformed to what would have been expected based on earlier reviews of the relevant literature. As is borne out in responses to subsequent questions to do with potential disintermediation, respondents on the whole were satisfied with their ability to cope with the challenges posed by increased competition and complexity. Whether this will turn out to be so in regard to growing competition for the leisure time of end users, and in face of an ever-increasing array of digital products and options remains to be seen.

![Figure 6.2: Competition experienced in the past five years 2001 to 2006](image-url)
6.4.2 Supply chain issues

The survey of publishers highlighted several areas of concern regarding supply chain issues (shown in Table 6.3). The primary concerns were those of inflexible printing costs, wastage/returns, creation of digital content, distribution costs and the efficiencies of current technology. Some of these are perennial problems for book publishing, whereas those to do with digital content creation and digital technology are clearly more recent. Allowing for the continuing suspicion of so-called silver bullet technologies in book publishing circles, dating back to the time of the first dot.com crash, at least some of the problems attributed to the efficiency (or otherwise) of current technologies have more to do with fears of loss of intellectual property or the restrictive demands of say, content management systems, than with technology per se.

<table>
<thead>
<tr>
<th>Supply Chain Issues</th>
<th>Degree to which a problem was perceived</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflexibility or cost of distribution</td>
<td>44.44%</td>
</tr>
<tr>
<td>Wastage/returns</td>
<td>33.34%</td>
</tr>
<tr>
<td>Distribution of digital content</td>
<td>33.34%</td>
</tr>
<tr>
<td>Efficiency of current technology</td>
<td>33.34%</td>
</tr>
<tr>
<td>Creation of digital content</td>
<td>27.78%</td>
</tr>
<tr>
<td>Inflexibility of cost of printing</td>
<td>22.23%</td>
</tr>
<tr>
<td>Lack of systems interoperability with suppliers/customers</td>
<td>22.22%</td>
</tr>
<tr>
<td>Inflexibility of Web service</td>
<td>16.67%</td>
</tr>
<tr>
<td>Disintermediation within the supply chain</td>
<td>11.11%</td>
</tr>
</tbody>
</table>

6.4.3 Value chain changes

Approximately half of the companies polled said that they could identify major changes that had occurred to value chains in the book publishing industry. These changes included those to their own value chain and evidence of disintermediation in value chains. 78% of companies were able to identify areas of impact owing to digital technology. A majority (67%) of the
companies confirmed that alliances between competitors with respect to value chains were increasing in number. The presence of these changes indicates that those players in the book publishing value chain that might be at risk of disintermediation, printers and booksellers could all face uncertain futures. However, the respondents did not appear to be overly concerned about any threat from disintermediation of the role of publishers. Detailed figures are shown in Table 6.4.

Table 6.4: Players in book publishing value chains that are at risk of disintermediation

<table>
<thead>
<tr>
<th>Book publishing value chain players</th>
<th>Perceived risk of disintermediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agents</td>
<td>50.00%</td>
</tr>
<tr>
<td>Booksellers</td>
<td>38.89%</td>
</tr>
<tr>
<td>Printers</td>
<td>27.78%</td>
</tr>
<tr>
<td>Publishers</td>
<td>16.67%</td>
</tr>
<tr>
<td>Distributors</td>
<td>16.67%</td>
</tr>
<tr>
<td>Authors</td>
<td>11.12%</td>
</tr>
<tr>
<td>Consumers</td>
<td>5.56%</td>
</tr>
</tbody>
</table>

The rapid development of digital technology undoubtedly has implications for the entire value chain in the publishing industry. This has led to reorganisation of business processes, and to the redefinition of roles of various stakeholders in publishing industry value chains. Table 6.5 shows the perceived relative importance of the stakeholders along the value chain. This demonstrates that content continues to be king and the consumers remain essential players in value chains.

Table 6.5: Major stakeholders in the emerging value chains for digital publishing

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Degree of Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content creators</td>
<td>88.89%</td>
</tr>
<tr>
<td>Content aggregators</td>
<td>77.78%</td>
</tr>
<tr>
<td>Consumers</td>
<td>72.22%</td>
</tr>
<tr>
<td>Content packagers</td>
<td>66.66%</td>
</tr>
<tr>
<td>Platform providers</td>
<td>50.00%</td>
</tr>
<tr>
<td>Advertisers</td>
<td>44.45%</td>
</tr>
<tr>
<td>Content distributors</td>
<td>38.89%</td>
</tr>
<tr>
<td>Device manufacturers</td>
<td>33.33%</td>
</tr>
<tr>
<td>Digital wholesalers</td>
<td>22.22%</td>
</tr>
</tbody>
</table>
6.5 Digitisation and business models

Key themes that emerged in relation to the implications of digitisation for business models included anticipated benefits from digitisation, the current possession of critical success factors for publishing, the importance of critical success factors for digital business models and current business models.

6.5.1 Anticipated benefits of digitisation

Responses to questions regarding the benefits expected from digitisation indicated that these were perceived by publishers to lie in the areas of new niche markets, the repackaging and repurposing of existing content, consumer-generated content and the enhancement of value chains. The details are shown in Figure 6.3.

![Bar chart showing potential benefits of digital publishing.](image)

- a. Advent of new niche markets
- b. Repackaging/repurposing of existing content
- c. Potential for consumer-generated content
- d. Potential for economies of scope via diversification
- e. Enhancement of the value chain
- f. Leveraging of brands for new sources of revenue
- g. Backlist title management
- h. No obvious benefits

Figure 6.3: Potential benefits of digital publishing

6.5.2 Critical success factors for digital business models

The three most commonly identified critical success factors for digital business models (shown in Table 6.6), received strong endorsed by respondents. The choice of these success...
factors for digital business models was influenced by previous research undertaken in Europe (European Commission, 2003; Lee-Amis et al., 2006) and also by feedback from the pilot survey of global book publishers. All three of the posited factors of technical robustness, consumer acceptance and financial logic were considered by respondents to be vital ingredients for digital business models. The relevant figures are shown in Table 6.6.

**Table 6.6: Success factors for digital business models**

<table>
<thead>
<tr>
<th>Success factors for digital business models</th>
<th>Degree of Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer acceptance</td>
<td>100.00%</td>
</tr>
<tr>
<td>Technical robustness</td>
<td>94.44%</td>
</tr>
<tr>
<td>Financial logic</td>
<td>88.89%</td>
</tr>
</tbody>
</table>

**6.5.3 Current business models**

When the research instruments for the project were being designed and tested, some thought was given to the inclusion of Open Access models as an option in that question which asked for specific information on the business model or models in operation. This idea was abandoned in light of the consequent adverse opinion among book publishing experts in respect of its inclusion. In subsequent responses the subscription-based model and the content creation model were highly ranked. However the niche marketing model is currently the most popular business model among Australian book publishers. With the involvement of numerous stakeholders in the publishing space, and with the rapid development of digital technology, various business models are emerging (Details are show in Figure 6.4).
6.6 Expectations of the future

The two most important themes emerging were those of the expected areas of impact of digitisation and of anticipated organisational changes.

6.6.1 Areas where digitisation was expected to have most impact

In an attempt to identify those areas of publishing where the impact of digital technology might be most profound, responses were sought with regard to the areas (Shown in Table 6.7) of impact as reflected in the literature. The general consensus is that digital publishing will have the most profound effect in the areas of specialist business, professional and academic publishing, followed by, government and web-based publishing.

Table 6.7: Areas to be most likely to be affected by the impact of digital publishing

<table>
<thead>
<tr>
<th>Area of Publishing</th>
<th>Degree of Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialist business/professional/academic publishing</td>
<td>94.45%</td>
</tr>
<tr>
<td>Web-based publishing</td>
<td>77.77%</td>
</tr>
<tr>
<td>Government</td>
<td>72.22%</td>
</tr>
<tr>
<td>Newspaper and magazine publishing</td>
<td>61.11%</td>
</tr>
<tr>
<td>New ‘pure play’ digital publishing</td>
<td>55.55%</td>
</tr>
<tr>
<td>Cross-media alliances</td>
<td>50.00%</td>
</tr>
<tr>
<td>Book publishing in general</td>
<td>44.44%</td>
</tr>
<tr>
<td>Public broadcasting</td>
<td>33.34%</td>
</tr>
<tr>
<td>Commercial broadcasting</td>
<td>27.78%</td>
</tr>
</tbody>
</table>
6.6.2 Organisational changes anticipated

The potential organisational changes anticipated in the Australian book publishing industry are summarised in Table 6.8.

Table 6.8: Perceived changes in the book publishing industry in Australia

<table>
<thead>
<tr>
<th>Potential Changes</th>
<th>Degree of Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation-wide promotion of cultural changes to accommodate a digital environment</td>
<td>83.33%</td>
</tr>
<tr>
<td>Introduction of new strategies for digital markets</td>
<td>77.78%</td>
</tr>
<tr>
<td>Changes in human resource practices (eg job descriptions, performance metrics and rewards) to embrace a digital environment</td>
<td>77.78%</td>
</tr>
<tr>
<td>Introduction of an integrated platform for all editorial operations, print and digital</td>
<td>72.22%</td>
</tr>
<tr>
<td>Introduction of digital media divisions</td>
<td>61.11%</td>
</tr>
<tr>
<td>Appointment of digital directors</td>
<td>38.89%</td>
</tr>
<tr>
<td>Separation of advertising platforms for print and digital media</td>
<td>16.67%</td>
</tr>
</tbody>
</table>

6.7 End user behaviour

In addition to its primary research purposes, the survey also sought to obtain a summation of data that might help publishers understand their customers’ perceptions (current and potential future) of digital technology and online resources. This was to be of assistance in their future planning for the implementation of digital technology or the creation of digital content. Key themes emerging included:

- Access to and use of digital technologies and electronic resources
- Factors influencing use of digital technologies and online resources
- Future expectations
- Relationship analysis
6.7.1. Access to and use of digital technologies and electronic resources

The survey indicated that a high percentage (87%) of participants accessed computers, CD-ROM drives or DVD drives either at home or their workplace. 67% of respondents had broadband and direct network connections to the Internet at either their workplace or home. The responses also indicated that 41% of respondents had access to video chat facilities, either at work or at home. The results confirmed the researcher’s expectation that relatively few people in the respondent population would still be using a dial-up internet connection. On the other hand, very few respondents to the survey reported having access to global satellite positioning systems.

The end user survey questions sought to obtain details regarding those digital devices currently being used by members of the academic community, including such digital devices as MP3 players, PDA (Windows mobiles), PDA (palm), mobile telephones, mobile videos (portable video players), PSPs (play station portables), XBoxes, and digital cameras. The results show that 70% of respondents were using MP3s, 89% had mobile telephones, and 73% were using digital cameras. Usage of all other facilities was lower than 10%.

The survey indicated that the most popular methods of accessing electronic resources were (a) Via the Internet (95%) (b) Via libraries (53%) (c) Via publishers’ web sites (34%) (d) Via CD-ROM from a publisher (22%), and (e) Via an online book shop (e.g. Amazon) (21%). The technologies or devices which most people reported using to access electronic resources included (a) Most respondents used personal computers to access electronic resources (95%) (b) PDA (55%) (c) Internet-connected TV (48%) (d) Internet-connected gaming devices (e.g. Xbox 360) (29%), and (e) mobile telephones (6%).
The frequency of use of electronic resources varied with the user’s occupation and purpose. The survey results showed that the most commonly used was the World Wide Web (64%), library catalogues (39%), and online examination papers, (29%). Detailed information is presented in Table 6.9.

**Table 6.9: Frequency of use of electronic resources**

<table>
<thead>
<tr>
<th>Electronic resources</th>
<th>Number of users</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free public domain information (open web)</td>
<td>643</td>
<td>64.00</td>
</tr>
<tr>
<td>Library catalogues</td>
<td>388</td>
<td>39.00</td>
</tr>
<tr>
<td>Exam papers</td>
<td>288</td>
<td>29.00</td>
</tr>
<tr>
<td>Online shopping &amp; services (e.g. Amazon…)</td>
<td>264</td>
<td>26.00</td>
</tr>
<tr>
<td>Subscription-based information</td>
<td>183</td>
<td>18.00</td>
</tr>
<tr>
<td>Online thesis</td>
<td>178</td>
<td>18.00</td>
</tr>
<tr>
<td>Other digital books (e.g. novel…)</td>
<td>98</td>
<td>10.00</td>
</tr>
<tr>
<td>Digital text books (e.g. SAFARI tech books…)</td>
<td>93</td>
<td>9.00</td>
</tr>
<tr>
<td>Did not answer question</td>
<td>12</td>
<td>1.00</td>
</tr>
</tbody>
</table>

With respect to people’s online activities, the survey results indicate that downloading was the most common activity, although the percentage varied according to the material required. More than half of the respondents confirmed the downloading of music, 40% the downloading of journal articles, 36% the downloading of publications other than journal articles, 41% the downloading of video, and 40% the downloading of computer software. Only 8% of the respondents purchased e-books frequently, suggesting that the purchasing of e-books is still an uncommon activity. The details are shown in Table 6.10.

**Table 6.10: Frequency of engagement in online activities**

<table>
<thead>
<tr>
<th>Online activities</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downloading music</td>
<td>54.00</td>
</tr>
<tr>
<td>Downloading video</td>
<td>41.00</td>
</tr>
<tr>
<td>Downloading software</td>
<td>40.00</td>
</tr>
<tr>
<td>Downloading Journal articles</td>
<td>40.00</td>
</tr>
<tr>
<td>Downloading other publications</td>
<td>36.00</td>
</tr>
<tr>
<td>Participation in digital forums (BBS, Net-news)</td>
<td>21.00</td>
</tr>
<tr>
<td>Publishing electronically</td>
<td>12.00</td>
</tr>
<tr>
<td>Purchasing subscriptions</td>
<td>9.00</td>
</tr>
<tr>
<td>Purchasing e-books</td>
<td>8.00</td>
</tr>
</tbody>
</table>
6.7.2 Factors influencing use of digital technologies and online resources

Almost 77% of respondents had used a digital publication online (for example e-books, subscriptions, articles, CDs). This is quite significant, as in a different sense is the indication that 23% of people had never utilised any digital publication online. However, all 998 responses reported having online experience, with 41% having less than 1 years experience, almost 31% having 1 to 3 years experience, 12% having 3 to 5 years, and 16% having over 5 years experience. For those inclined to use digital technology and electronic resources and engage in online purchasing, the significant factors in such use are shown in Table 6.11.

Table 6.11: Reasons why people use digital technology and electronic resources and purchase online

<table>
<thead>
<tr>
<th>Reasons for using or purchasing online</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience (accessing information)</td>
<td>82.00</td>
</tr>
<tr>
<td>Ease of searching (search tools)</td>
<td>82.00</td>
</tr>
<tr>
<td>Ability to access contents 24 hour in 7 days</td>
<td>74.00</td>
</tr>
<tr>
<td>Cost effectiveness</td>
<td>70.00</td>
</tr>
<tr>
<td>Easy payment systems</td>
<td>54.00</td>
</tr>
<tr>
<td>Speed of publication</td>
<td>50.00</td>
</tr>
<tr>
<td>Publishing contents in multimedia formats</td>
<td>43.00</td>
</tr>
</tbody>
</table>

With regard to non-use of electronic resources and non-involvement in online purchasing, respondents were asked to choose from a list of potentially significant influences. In the event, in only one instance (to do with the unattractive graphic design of websites) did less than 50% of respondents discount the importance of the potential factor. The relevant percentages are shown in Table 6.12.

Table 6.12: Factors acting to discourage the use of electronic resources or online purchasing

<table>
<thead>
<tr>
<th>Factors influencing non-use and non-purchasing activity</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complex procedures for opening and cancelling accounts</td>
<td>68.00</td>
</tr>
<tr>
<td>E-security issues</td>
<td>67.00</td>
</tr>
<tr>
<td>Lack of trust</td>
<td>65.00</td>
</tr>
<tr>
<td>Broken links or missing pictures on websites</td>
<td>63.00</td>
</tr>
<tr>
<td>Company reputation</td>
<td>56.00</td>
</tr>
<tr>
<td>Unattractive graphic design of websites</td>
<td>34.00</td>
</tr>
</tbody>
</table>
6.7.3 Expectations for the future

With regard to respondent perceptions of the future, the survey of end users had two specific objectives: (a) identify those technology developments most likely to enhance end user acceptance of digital publishing, and to what degree and effect, and (b) identify the degree to which end users considered that technology was actually impacting on digital publishing.

As regards the first purpose, the survey results indicated that developments in broadband technology were considered to be very important, attracting a 68% response. Developments in computer hardware, multi-function devices, device sizes, device interoperability, and in content format conversion technology were also deemed to be of reasonable importance, attracting a response rate of between 40% and 50% respectively. However, responses indicated that the semantic technology and language conversion options were currently not of significant interest. The details are shown in Table 6.13.

Table 6.13: Technologies expected to have most impact on digital publishing

<table>
<thead>
<tr>
<th>Technology developments</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developments in broadband technology</td>
<td>68.00</td>
</tr>
<tr>
<td>Developments in computer hardware</td>
<td>48.00</td>
</tr>
<tr>
<td>Developments in multi-function devices (PDA, Mobile)</td>
<td>44.00</td>
</tr>
<tr>
<td>Developments in content format conversion technology</td>
<td>42.00</td>
</tr>
<tr>
<td>The size of devices</td>
<td>40.00</td>
</tr>
<tr>
<td>Developments in device interoperability</td>
<td>40.00</td>
</tr>
<tr>
<td>Semantic technology (e.g. semantic web)</td>
<td>30.00</td>
</tr>
<tr>
<td>Language conversion options</td>
<td>29.00</td>
</tr>
</tbody>
</table>

As regards the second purpose, there were eight areas deemed likely to be affected by technology development in digital publishing. The degree of effect on these areas can differ. The areas identified were all drawn from the literature, and the details and response levels are shown in Table 6.14. Only three of these areas did not attract a response rate of over 50%, which suggests that for most respondents this issue of impact is a matter of concern.
6.7.4 Relationship analyses

This section employed *crosstabulation* and relevant statistics as discussed in chapter 5, to identify the relationships between the variables, and the significance and strength of these relationships. The aim was to shed light on the following:

- Were differences in age and role within the university likely to lead to differences in the use of digital technology and digital devices?
- Were differences in age and role within the university likely to lead to differences in the means of accessing electronic resources and usage of electronic resources?
- Were differences in age and role within the university likely to lead to different behaviour in regards to online activities?
- Were technical developments, such as those in multi-function devices (PDA, Mobile) and in content format conversion technology, likely to increase peoples’ engagement in online activities and therefore enhance their acceptance of digital publishing?

### 6.7.4.1 Relationship between different roles in the university and differences in the use of digital technology and digital devices

The use of crosstabulation tables from SPSS provided data on single technologies used at home or in the work place which were then combined. Table 6.15 displays the total

---

**Table 6.14: Where technology development is impacting most on digital publishing**

<table>
<thead>
<tr>
<th>Different categories of publishing</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web-based publishing</td>
<td>69.00</td>
</tr>
<tr>
<td>Specialist business/professional/ academic publishing</td>
<td>63.00</td>
</tr>
<tr>
<td>Newspaper and magazine publishing</td>
<td>59.00</td>
</tr>
<tr>
<td>Public broadcasting</td>
<td>55.00</td>
</tr>
<tr>
<td>Commercial broadcasting</td>
<td>54.00</td>
</tr>
<tr>
<td>Cross-media alliances</td>
<td>44.00</td>
</tr>
<tr>
<td>Government</td>
<td>43.00</td>
</tr>
<tr>
<td>Book publishing in general</td>
<td>41.00</td>
</tr>
</tbody>
</table>
percentages for technology usage. It can be noted that the differences between these four
groups of responses are very small. This suggests that in the responses to this survey the use
of information technologies was not dependent on the different roles played by respondents.

Table 6.15: Different roles in the university with differences in levels of use of
information technologies

<table>
<thead>
<tr>
<th>Roles in University</th>
<th>Use of information technologies (Percentage)</th>
<th>Total Respondents (Numbers)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PC</td>
<td>Broadband</td>
</tr>
<tr>
<td>Academic Staff</td>
<td>98.5</td>
<td>86.6</td>
</tr>
<tr>
<td>PG Coursework</td>
<td>100</td>
<td>90</td>
</tr>
<tr>
<td>PG Research</td>
<td>98.4</td>
<td>85.9</td>
</tr>
<tr>
<td>TAFE &amp; Undergraduate</td>
<td>99.4</td>
<td>85.9</td>
</tr>
<tr>
<td>Total (Numbers)</td>
<td>992</td>
<td>869</td>
</tr>
</tbody>
</table>

As discussed previously, there is a variety of digital devices available on the market. This
research thesis sought to identify differences in levels of use between various groups of
people in the university. Table 6.16 records the percentages related to this question. It can be
noted that Mp3s, Digital Recorders (Audio), Mobiles, Mobile Videos, PSPs and Digital
Cameras show little variation in usage levels between the four main groups. The highest usage
group for PDAs (Windows mobiles) is that among Academic Staff. PDAs (Palm) technology
is used mostly by Postgraduate research students, obviating the need to carry large numbers of
books and academic papers with them. Xbox technology is used mainly by TAFE and
Undergraduate students and for leisure activities.

Table 6.16: Different roles in the university with different levels of use of digital devices
From the crosstabulation table alone, it was difficult to establish whether these differences are real or in fact, the result of some chance variation. As discussed previously, the chi-square test can be used to test measurements of the discrepancy between the observed cell counts and what would be expected if the rows and columns were unrelated. Table 6.17 shows the statistics between digital devices and the university groups. The university groups are represented by variable A1.

**Table 6.17: Statistical test on the differences shown in table 6.16**

<table>
<thead>
<tr>
<th>A1 &amp; Digital devices</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Phi Value</th>
<th>Cramer’s V Value</th>
<th>Contingency Coefficient Value</th>
<th>Symmetric Measures Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 &amp; Mp3</td>
<td>0.000</td>
<td>0.160</td>
<td>0.113</td>
<td>0.158</td>
<td>0.000</td>
</tr>
<tr>
<td>A1 &amp; Digital Audio</td>
<td>0.007</td>
<td>0.134</td>
<td>0.094</td>
<td>0.132</td>
<td>0.007</td>
</tr>
<tr>
<td>A1 &amp; PDA (Windows mobiles)</td>
<td>0.001</td>
<td>0.156</td>
<td>0.110</td>
<td>0.154</td>
<td>0.001</td>
</tr>
<tr>
<td>A1 &amp; PDA (Palm)</td>
<td>0.041</td>
<td>0.115</td>
<td>0.082</td>
<td>0.115</td>
<td>0.041</td>
</tr>
<tr>
<td>A1 &amp; Mobile Phone</td>
<td><strong>0.137</strong></td>
<td><strong>0.099</strong></td>
<td><strong>0.070</strong></td>
<td><strong>0.099</strong></td>
<td><strong>0.137</strong></td>
</tr>
<tr>
<td>A1 &amp; Mobile Video</td>
<td>0.017</td>
<td>0.125</td>
<td>0.088</td>
<td>0.124</td>
<td>0.017</td>
</tr>
<tr>
<td>A1 &amp; PSP</td>
<td>0.006</td>
<td>0.135</td>
<td>0.095</td>
<td>0.133</td>
<td>0.006</td>
</tr>
<tr>
<td>A1 &amp; Xbox</td>
<td>0.000</td>
<td>0.159</td>
<td>0.113</td>
<td>0.157</td>
<td>0.000</td>
</tr>
<tr>
<td>A1 &amp; Digital Camera</td>
<td><strong>0.165</strong></td>
<td><strong>0.114</strong></td>
<td><strong>0.066</strong></td>
<td><strong>0.114</strong></td>
<td><strong>0.165</strong></td>
</tr>
</tbody>
</table>

Table 6.17 shows that the two-sided asymptotic significance of the chi-square statistics for groups of responses using Mobiles and Digital Cameras was greater than 0.10. It can therefore
be concluded that the differences are due to chance variation, which implies that there are no differences between users of Mobiles and Digital Cameras in each group of respondents. The residual of the two-sided asymptotic significance of the chi-square statistics shows different groups of responses using Mp3 and Xbox were less than 0.001, different groups of responses using Digital Record Audio, PSP (play station portable) and PDA (Windows mobiles) were less than 0.01, and the response groups using PDA (Palm) and Mobile Video (portable video player) were less than 0.05. This suggests, without being conclusive, there is evidence of a relationship between different groups in the university and the subsequent usage of these digital devices. It can also be concluded that the relationship observed in the crosstabulation is real, and not due to chance. However, this does not indicate the strength of the relationship.

Symmetric measures which include Phi, Cramer’s V and Contingency Coefficient can quantify this. As shown in Table 6.17, the Approximate Significance of Phi, Cramer’s V and Contingency Coefficient, except for the usage of mobiles and digital cameras is greater than 0.10, with others all being less than 0.05, indicating a statistically significant relationship. However, the values of all three measures are under 0.3, indicating that the relationships are also not very strong. These results can provide proof of whether the differences identified in Table 6.16 real or are due to chance variation and the significance and strengths of these relationships.

Based on crosstabulation tables from SPSS (See the detailed table in Appendix F1), regarding specific technologies, there is minimal difference between the age groups using PC and Broadband. For direct networks, only those people aged 60 plus achieved the maximum percentage (100%) for usage, although, it has to be emphasised that this relates to a user group of only 8 people. Other age groups using direct networks averaged between 60 to 70%. For video chat, three groups namely those of “under 20”, “20- 29” and “30 – 39” had a similar
percentage of usage, that is between 30 and 50%. The highest usage group for video chat technology was that for people aged 20 to 29. Other age groups “40 – 49”, “50 – 59” and “60 – and – Over” only had around 10% usage. Whereas personal computer and broadband are relatively mature technologies and are used equally by all age groups, video chat being quite recent in nature, is more popular with the younger generation.

6.7.4.2 Relationship between differences in role and age within the university and differences in the means of accessing and using electronic resources

In seeking to answer this question, an analysis of the relationships between different groups in the university and access to electronic resources revealed certain differences, as indicated in Table 6.18.

**Table 6.18: Different roles within the university and access to electronic resources**

<table>
<thead>
<tr>
<th>Groups in the university</th>
<th>CDROM</th>
<th>Internet</th>
<th>Publisher web sites</th>
<th>Online book shops</th>
<th>Libraries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Staff</td>
<td>32</td>
<td>133</td>
<td>47</td>
<td>38</td>
<td>71</td>
</tr>
<tr>
<td>PG Coursework</td>
<td>57</td>
<td>259</td>
<td>97</td>
<td>68</td>
<td>154</td>
</tr>
<tr>
<td>PG Research</td>
<td>12</td>
<td>57</td>
<td>30</td>
<td>22</td>
<td>48</td>
</tr>
<tr>
<td>TAFE &amp; Undergraduate</td>
<td>119</td>
<td>492</td>
<td>156</td>
<td>75</td>
<td>252</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>941</td>
<td>330</td>
<td>203</td>
<td>525</td>
</tr>
</tbody>
</table>

In checking the *chi-square* test and *symmetric measures* there is evidence of a link between each group and their method of accessing electronic resources, as well as the strength of these relationships (Shown in Table 6.19).

**Table 6.19: Statistical test on the differences shown in table 6.18**

<table>
<thead>
<tr>
<th>A1 &amp; the ways of accessing electronic resources</th>
<th>Asymp. Sig (2-sided)</th>
<th>Phi Value</th>
<th>Cramer's V Value</th>
<th>Contingency Coefficient Value</th>
<th>Symmetric Measures Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 &amp; CDROM</td>
<td>0.870</td>
<td>0.027</td>
<td>0.027</td>
<td>0.027</td>
<td>0.870</td>
</tr>
<tr>
<td>A1 &amp; Internet</td>
<td>0.001</td>
<td>0.130</td>
<td>0.130</td>
<td>0.129</td>
<td>0.001</td>
</tr>
<tr>
<td>A1 &amp; Publisher web site</td>
<td>0.021</td>
<td>0.100</td>
<td>0.100</td>
<td>0.099</td>
<td>0.021</td>
</tr>
<tr>
<td>A1 &amp; Online Book Shop</td>
<td>0.000</td>
<td>0.172</td>
<td>0.172</td>
<td>0.172</td>
<td>0.000</td>
</tr>
<tr>
<td>A1 &amp; Libraries</td>
<td>0.000</td>
<td>0.146</td>
<td>0.146</td>
<td>0.144</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Table 6.19 shows that the two-sided *symptotic significance* between different groups in the university accessing electronic resources via CDROM is greater than 0.10. This means that the differences are due to chance variation, and that there is no significant relationship between A1 (different groups in the university) and accessing electronic resources via CDROM. For others (between A1 and access via Internet, between A1 and access via publishers’ web sites, between A1 and access via online book shops (e.g. Amazon) and between A1 and access via libraries), the two-sided *symptotic significance* and *symmetric measures* for *Phi, Cramer’s V* and *Contingency* are all less than 0.05. This indicates that there are statistically significant relationships existing between these variables. The relationship observed in the *crosstabulation* is real and not due to chance. However, because the values of all three measures (*Phi, Cramer’s V and Contingency*) are under 0.3, the relationships are also not very strong.

In an analysis of relationships between different groups in the university and usage of different electronic resources (from ‘never’ to ‘frequently’), the *crosstabulation table* (in Appendix F2) indicates some differences and provides a definitive view of survey respondents’ exposure to digital formats in their own environment. The findings from the table can be summarised as follows:

- The student body utilises the Library catalogue facility to a greater extent than does academic staff at the university.
- There is minimal usage of digital text books by all parties.
- The usage of digital books has not yet gained general acceptance as a viable format.
- The free public domain information facility is proving to be a popular area of research for all parties.
- Online shopping is gaining popularity amongst all groups.
- There is minimal interest in the subscription-based facility, especially amongst TAFE and undergraduate students.

The *crosstabulation* table demonstrates differences between each group using different electronic resources. However, it will not indicate if these relationships are statistically significant or the strength of the relationships. The chi-square statistical analysis in Table 6.20 is important for further identification.

**Table 6.20: Statistical test of the differences between different groups in the university and the use of electronic resources**

<table>
<thead>
<tr>
<th>A1 &amp; the use of electronic resources</th>
<th>Asymp. Sig (2-sided)</th>
<th>Phi Value</th>
<th>Cramer's V Value</th>
<th>Contingency Coefficient Value</th>
<th>Symmetric Measures Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 &amp; Library catalogue</td>
<td>0.000</td>
<td>0.383</td>
<td>0.221</td>
<td>0.357</td>
<td>0.000</td>
</tr>
<tr>
<td>A1 &amp; Digital text books</td>
<td>0.000</td>
<td>0.218</td>
<td>0.126</td>
<td>0.213</td>
<td>0.000</td>
</tr>
<tr>
<td>A1 &amp; Other digital books</td>
<td>0.036</td>
<td>0.154</td>
<td>0.089</td>
<td>0.152</td>
<td>0.036</td>
</tr>
<tr>
<td>A1 &amp; Open web</td>
<td>0.099</td>
<td>0.139</td>
<td>0.080</td>
<td>0.138</td>
<td>0.099</td>
</tr>
<tr>
<td>A1 &amp; Online shopping/services</td>
<td>0.002</td>
<td>0.179</td>
<td>0.103</td>
<td>0.176</td>
<td>0.002</td>
</tr>
<tr>
<td>A1 &amp; Subscription-based info</td>
<td>0.000</td>
<td>0.197</td>
<td>0.114</td>
<td>0.193</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 6.20 shows that the two-sided *asymptotic significance* of different groups in the university and degree of usage of electronic resources. The Open Web scores greater than 0.05 which means that the differences are due to chance variation, and there is no significant relationship between A1 (different groups in the university) and the degree of usage of free public domain information (Open Web). This can be interpreted as meaning that the Open Web is commonly used by all groups in the university to obtain information. The two-sided *asymptotic significance* of different groups in the university and the degree of usage of electronic resources – other digital books (e.g novels) is 0.036, and as it is close to 0.05, it is difficult to determine that the difference is not due to chance variation. For all the others (A1 with usage of Library catalogue, A1 with usage of digital text books, A1 with usage of online...
shopping/services and A1 with usage of subscription-based information), the two-sided asymptotic significance and symmetric measures for Phi, Cramer’s V and Contingency are all equal to or less than 0.002. This indicates that there are statistically significant relationships existing between these variables. The relationship observed in the crosstabulation is real and not due to chance. However, even though the values of the three measures for usage of library catalogues is greater than 0.3, it still not close to 1. Hence it cannot be claimed that there is a strong relationship between different groups in the university and the degree of usage of library catalogues. For the others, because the values of all three measures are under 0.3, the relationships are definitely not strong.

Attention now turns to the influence of age on attitudes towards means of accessing electronic resources. The same method as above was used to analyse relationships between different age groups accessing electronic resources. The results indicate some differences. The details are shown in Table 6.21.

**Table 6.21: Different age groups in the university and access to electronic resources**

<table>
<thead>
<tr>
<th>Different age groups</th>
<th>CDROM</th>
<th>Internet</th>
<th>Publisher websites</th>
<th>Online book shops</th>
<th>Libraries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 20</td>
<td>63</td>
<td>203</td>
<td>57</td>
<td>22</td>
<td>93</td>
</tr>
<tr>
<td>20 – 29</td>
<td><strong>104</strong></td>
<td><strong>465</strong></td>
<td><strong>157</strong></td>
<td><strong>92</strong></td>
<td><strong>261</strong></td>
</tr>
<tr>
<td>30 – 39</td>
<td>31</td>
<td>160</td>
<td>69</td>
<td>50</td>
<td>98</td>
</tr>
<tr>
<td>40 – 49</td>
<td>13</td>
<td>74</td>
<td>29</td>
<td>24</td>
<td>47</td>
</tr>
<tr>
<td>50 – 59</td>
<td>9</td>
<td>32</td>
<td>16</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>60 – and - over</td>
<td>0</td>
<td>7</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>941</td>
<td>330</td>
<td>203</td>
<td>525</td>
</tr>
</tbody>
</table>

However, from this table alone it is impossible to decipher further detailed information about these relationships. By checking the chi-square test and symmetric measures, evidence of a relationship between each age group and the ways of accessing electronic resources can be identified, as well as the strength of these relationships. Table 6.22 shows these statistics. Different age groups are represented by variable A2.
Table 6.22: Statistical test on the differences shown in table 6.21

<table>
<thead>
<tr>
<th>A2 &amp; the way of accessing electronic resources</th>
<th>Asymp. Sig (2-sided)</th>
<th>Phi Value</th>
<th>Cramer’s V Value</th>
<th>Contingency Coefficient Value</th>
<th>Symmetric Measures Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2 &amp; CDROM</td>
<td>0.052</td>
<td>0.106</td>
<td>0.106</td>
<td>0.105</td>
<td>0.052</td>
</tr>
<tr>
<td>A2 &amp; Internet</td>
<td>0.534</td>
<td>0.065</td>
<td>0.065</td>
<td>0.065</td>
<td>0.534</td>
</tr>
<tr>
<td>A2 &amp; Publisher web site</td>
<td>0.014</td>
<td>0.121</td>
<td>0.121</td>
<td>0.120</td>
<td>0.014</td>
</tr>
<tr>
<td>A2 &amp; Online Book Shop</td>
<td>0.000</td>
<td>0.200</td>
<td>0.200</td>
<td>0.196</td>
<td>0.000</td>
</tr>
<tr>
<td>A2 &amp; Libraries</td>
<td>0.006</td>
<td>0.129</td>
<td>0.129</td>
<td>0.128</td>
<td>0.006</td>
</tr>
</tbody>
</table>

Table 6.22 shows that the two-sided **symptotic significance** between different age groups and access to electronic resources via CDROM is greater than 0.05 and that access via the Internet is greater than 0.10, which means that the differences are due to chance variation and that there is no significant relationship between A2 (different age groups) and accessing electronic resources via CDROM and Internet. This can be interpreted as meaning that access to electronic resources via CDROM and the Internet is common to all age groups. For all others (A2 with accessing electronic resources via publishers’ web sites, A2 with accessing electronic resources via online book shops and A2 with accessing electronic resources via libraries), the two-sided **symptotic significance** and **symmetric measures** for Phi, Cramer’s V and Contingency are all less than 0.05. This indicates that there are statistically significant relationships existing between these variables. The relationship observed in the crosstabulation table is real and not due to chance. However, because the values of all three measures are under 0.3, these relationships are not very strong.

From the crosstabulation table (Appendix F3) which details different age groups and their usage of electronic resources, the table provides an overview of the usage of digital formats from an age perspective. The findings can be summarised as follows:

- A strong link to the age group of 40 years plus, which seems in line with the possibility of a library format lacking appeal with the younger generation.
• A definite trend toward non-use of the digital text book facility across the full spectrum surveyed. The same traits are displayed with other digital books.

• The Open Web facility is proving popular with all parties.

• Online shopping although having some usage is not well supported.

• While all groups have experienced exposure to subscription-based information, the facility is yet to be fully accepted.

The *crosstabulation* table demonstrates differences between each age group using different electronic resources. However, it will not indicate if these relationships are statistically significant or the strength of the relationships. The *chi-square* statistical analysis in Table 6.23 is important for further identification.

**Table 6.23:** Statistical test of the difference between age groups and the use of electronic resources

<table>
<thead>
<tr>
<th>A2 &amp; the use of electronic resources</th>
<th>Asymp. Sig (2-sided)</th>
<th>Phi Value</th>
<th>Cramer’s V Value</th>
<th>Contingency Coefficient Value</th>
<th>Symmetric Measures Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2 &amp; Library catalogues</td>
<td>0.000</td>
<td>0.397</td>
<td>0.199</td>
<td>0.369</td>
<td>0.000</td>
</tr>
<tr>
<td>A2 &amp; Digital text books</td>
<td><strong>0.055</strong></td>
<td><strong>0.181</strong></td>
<td><strong>0.090</strong></td>
<td><strong>0.178</strong></td>
<td><strong>0.055</strong></td>
</tr>
<tr>
<td>A2 &amp; Other digital books</td>
<td>0.006</td>
<td>0.205</td>
<td>0.103</td>
<td>0.201</td>
<td>0.006</td>
</tr>
<tr>
<td>A2 &amp; Open Web</td>
<td>0.028</td>
<td>0.187</td>
<td>0.094</td>
<td>0.184</td>
<td>0.028</td>
</tr>
<tr>
<td>A2 &amp; Online Shopping/Services</td>
<td>0.000</td>
<td>0.275</td>
<td>0.137</td>
<td>0.265</td>
<td>0.000</td>
</tr>
<tr>
<td>A2 &amp; Subscription-based info</td>
<td>0.000</td>
<td>0.251</td>
<td>0.126</td>
<td>0.244</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 6.23 shows the two-sided *symptotic significance* of different age groups and the degree of usage of electronic resources. Digital text books score greater than 0.05, which means that the differences are due to chance variation, and that there is no significant relationship between A2 (different age groups) and the degree of usage of digital text books. It can thus be interpreted that the practice of accessing digital text books is equally strong for all age groups.

For all others (Library catalogue, other digital books, Open Web, Online shopping & services and subscription-based information), the two-sided *symptotic significance* and *symmetric measures* for *Phi*, *Cramer’s V* and *Contingency* shows some less than 0.001, one equal to
0.006 and one is less than 0.05. This indicates that there are statistically significant relationships existing between these variables. The relationship observed in the crosstabulation table is real and not due to chance. The values of three measures for the usage of the library catalogue are still less than 1. So it can still not be claimed that there is strong relationship between different age groups and the degree of usage of library catalogues. In all other cases, because the values of all three measures are under 0.3, the relationships are not strong.

6.7.4.3 Relationship between roles within the university and ages and differences in behaviour with regard to online activities

The crosstabulation table (Appendix F4) details different groups in the university and shows online activity engaged in by this cross-section of university personnel. The findings are summarised as follows:

- Downloading music is commonplace among all groups.
- Postgraduate students are prolific downloaders of journal articles whilst academics, TAFE and undergraduates students all indulge, but not to the same extent.
- Postgraduate students download other publications on a regular basis. However academics, TAFE and undergraduates do not use the facility extensively.
- Downloading of videos has reached moderate levels across all groups.
- Downloading of software shows an even pattern among all groups.
- The option of purchasing e-books online is yet to gain significant acceptance by any of the groups polled.
- Purchasing of subscriptions is yet to gain significant acceptance by any of the groups polled.
The *crosstabulation* table demonstrates differences, however it will not indicate if these relationships are statistically significant or the strength of the relationships. The chi-square statistical analysis in Table 6.24 is important for further identification.

Table 6.24: Statistical test of the difference between university groups and their online activities

<table>
<thead>
<tr>
<th>A1 &amp; behaviour of online activities</th>
<th>Asymp. Sig (2-sided)</th>
<th>Phi Value</th>
<th>Cramer’s V Value</th>
<th>Contingency Coefficient Value</th>
<th>Symmetric Measures Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 &amp; Downloading music</td>
<td>0.002</td>
<td>0.178</td>
<td>0.102</td>
<td>0.175</td>
<td>0.002</td>
</tr>
<tr>
<td>A1 &amp; Downloading journal articles</td>
<td>0.000</td>
<td>0.477</td>
<td>0.276</td>
<td>0.431</td>
<td>0.000</td>
</tr>
<tr>
<td>A1 &amp; Downloading others</td>
<td>0.000</td>
<td>0.363</td>
<td>0.210</td>
<td>0.342</td>
<td>0.000</td>
</tr>
<tr>
<td>A1 &amp; Downloading video</td>
<td>0.548</td>
<td>0.107</td>
<td>0.062</td>
<td>0.106</td>
<td>0.548</td>
</tr>
<tr>
<td>A1 &amp; Downloading software</td>
<td>0.666</td>
<td>0.100</td>
<td>0.057</td>
<td>0.099</td>
<td>0.666</td>
</tr>
<tr>
<td>A1 &amp; Purchasing e-books</td>
<td>0.074</td>
<td>0.145</td>
<td>0.084</td>
<td>0.144</td>
<td>0.074</td>
</tr>
<tr>
<td>A1 &amp; Purchasing subscriptions</td>
<td>0.061</td>
<td>0.147</td>
<td>0.085</td>
<td>0.146</td>
<td>0.061</td>
</tr>
</tbody>
</table>

Table 6.24 shows that the two-sided *symptotic significance* of different groups in the university and their behaviour towards online activities. Downloading videos and software are greater than 0.10, and purchasing e-books and subscriptions are greater than 0.05, which means that the differences between these variables are due to chance variation. There are no significant relationships between A1 (different groups in the university) and the online activities of downloading video, downloading software, purchasing e-books and purchasing subscriptions. This can be interpreted as meaning that downloading videos, software, purchasing e-books and subscriptions are online activities which are used equally by all groups in the university. For the other three areas, the downloading of music, journal articles and other publications, the two-sided *symptotic significance* and *symmetric measures* for Phi, *Cramer’s V* and *Contingency* are less than or equal to 0.002. This indicates that there are
statistically significant relationships existing between these variables. The relationship observed in the *crosstabulation* is real and not due to chance. With regard to the values of the three measures for downloading journal articles and other publications, although two of them (*phi* and *Contingency*) are greater than 0.3, but because they are still far more less than 1, it cannot be claimed that there are strong relationships between the different groups in the university and these activities. In the case of downloading music, because the values of all three measures are under 0.3, it is safe to say that the relationships are not strong.

On the issue of the impact of age on online behaviour, the same method as above was used and a *crosstabulation* table (see Appendix F5) for different age groups and their behaviours towards online activities was created. This table provides an overview of the practice of downloading according to age. The findings are summarised as follows:

- The downloading of music has very strong support from those under 30 years of age, declining in the middle age bracket, with a resurgence in the over 60 age group.
- The only group not engaged in the downloading of journal articles is the under 20 age group. The downloading of other publications reflects an almost identical pattern to that for the downloading of journal articles.
- The age groups 30-59 displays a lack of interest in downloading videos, while all other groups show a steady usage of this facility.
- All groups, except those in the 40-49 years, have a healthy uptake of downloading software.
- Purchasing e-books is yet to make an impact on any of the groups.
- The option of subscription purchasing is not favoured by any of the groups.
The *crosstabulation* table demonstrates differences, however it will not indicate if these relationships are statistically significant or the strength of the relationships. The *chi-square* statistical analysis in Table 6.25 is important for further identification.

### Table 6.25: Statistical test of the differences in age groups and their online activities

<table>
<thead>
<tr>
<th>A2 &amp; behaviour of online activities</th>
<th>Asymp. Sig (2-sided)</th>
<th>Phi Value</th>
<th>Cramer’s V Value</th>
<th>Contingency Coefficient Value</th>
<th>Symmetric Measures Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2 &amp; Downloading music</td>
<td>0.000</td>
<td>0.442</td>
<td>0.221</td>
<td>0.405</td>
<td>0.000</td>
</tr>
<tr>
<td>A2 &amp; Downloading journal articles</td>
<td>0.000</td>
<td>0.420</td>
<td>0.210</td>
<td>0.387</td>
<td>0.000</td>
</tr>
<tr>
<td>A2 &amp; Downloading other publications</td>
<td>0.000</td>
<td>0.309</td>
<td>0.155</td>
<td>0.295</td>
<td>0.000</td>
</tr>
<tr>
<td>A2 &amp; Downloading video</td>
<td>0.000</td>
<td>0.373</td>
<td>0.187</td>
<td>0.350</td>
<td>0.000</td>
</tr>
<tr>
<td>A2 &amp; Downloading software</td>
<td>0.000</td>
<td>0.228</td>
<td>0.114</td>
<td>0.222</td>
<td>0.000</td>
</tr>
<tr>
<td>A2 &amp; Purchasing e-books</td>
<td>0.014</td>
<td>0.197</td>
<td>0.099</td>
<td>0.194</td>
<td>0.014</td>
</tr>
<tr>
<td>A2 &amp; Purchasing subscriptions</td>
<td>0.009</td>
<td>0.201</td>
<td>0.101</td>
<td>0.197</td>
<td>0.009</td>
</tr>
</tbody>
</table>

Table 6.25 shows the two-sided *asymptotic significance* and *symmetric measures* for *Phi*, *Cramer’s V* and *Contingency* of different age groups and their behaviour towards online activities. Downloading music, journal articles, other publications, video and software are all less than 0.001. Purchasing e-books and subscriptions are less than 0.02. These statistics show that the differences between these variables are not due to chance variation, and that there are significant relationships between A2 (different age groups) and these online activities. This can be interpreted as meaning that all these various online activities are used by different age groups. However, the differences shown in the crosstabulation table (in Appendix X5) are real, and not due to chance variation. In regard to the values of three measures for downloading music, journal articles and other publications, although two of them (*phi* and *Contingency*), are greater than 0.3, because they are still far more less than 1, it cannot be claimed that there
are strong relationships between different age groups and the online activities of downloading music, journal articles and other publications. For all others (downloading video, downloading software, purchasing e-books and purchasing subscriptions), the values of all three measures (*Phi, Cramer’s V and Contingency*) are under 0.3, so it is clear that these relationships are not strong.

### 6.7.4.4 Relationship between technology developments, involvement in online activities and acceptance of digital publishing

Finally, the end user survey sought to shed light on the issue of whether technical developments such as those in multi-function devices (PDA, Mobile) and in content format conversion technology were likely to increase peoples’ engagement in online activities and therefore, enhance their acceptance of digital publishing.

To answer these questions, *crosstabulation tables* for two ordinal variables were produced, in order: (a) to discover if there was any relationship between the variables, (b) to identify any significant difference existing in the table, and (c) to identify the strength of these relationships. To this end, the *Symmetric and Directional measures* of *Gamma* and *Somers’d* were employed.

The first analysis relates to multi-function devices. A *Crosstabulation table* for online activities via developments in multi-function devices is shown in Appendix F6. This table shows no clear pattern. Although there are some apparent differences existing in the table, it is difficult to say whether these differences are significant or not, and if there are any relationships between the variables. However, SPSS provides some statistical measurements which can assist identification. The details are listed in Table 6.26.
Table 6.26: Statistical test of the relationship between developments in multi-function devices and online activities

<table>
<thead>
<tr>
<th>Developments in multi-function devices with online activities</th>
<th>Asymp. Sig (2-sided)</th>
<th>Gamma</th>
<th>Somers’d</th>
<th>Symmetric Measures Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-function devices &amp; Downloading music</td>
<td>0.000</td>
<td>0.183</td>
<td>0.143</td>
<td>0.000</td>
</tr>
<tr>
<td>Multi-function devices &amp; Downloading journal articles</td>
<td>0.000</td>
<td>0.160</td>
<td>0.127</td>
<td>0.000</td>
</tr>
<tr>
<td>Multi-function devices &amp; Downloading other publications</td>
<td>0.000</td>
<td>0.213</td>
<td>0.168</td>
<td>0.000</td>
</tr>
<tr>
<td>Multi-function devices &amp; Downloading video</td>
<td>0.000</td>
<td>0.238</td>
<td>0.189</td>
<td>0.000</td>
</tr>
<tr>
<td>Multi-function devices &amp; Downloading software</td>
<td>0.000</td>
<td>0.192</td>
<td>0.151</td>
<td>0.000</td>
</tr>
<tr>
<td>Multi-function devices &amp; Purchasing e-books</td>
<td>0.000</td>
<td>0.289</td>
<td>0.189</td>
<td>0.000</td>
</tr>
<tr>
<td>Multi-function devices &amp; Purchasing subscriptions</td>
<td>0.000</td>
<td>0.200</td>
<td>0.139</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 6.26 shows that all the two-sided symptotic significance and symmetric measures for Gamma and Somers’d are less than 0.001, indicating that there are statistically significant relationships between developments in multi-function devices and the above online activities (downloading of music, journal articles, other publications, videos, softwares, purchasing E-books, and purchasing subscriptions). The relationship observed in the crosstabulation is real and not due to chance. Regarding the values of the two measures (Gamma and Somers’d), these are all less than 0.3, which indicates that the relationships are not strong. However, from Table 6.26, it can be seen that some of the relationships are stronger than others. For example, the two measures (Gamma and Somers’d) for developments in multifunction devices and purchasing e-books are higher than the other facilities. This indicates that there is a strong possibility that developments in multifunction devices will influence people to make decisions to purchase e-books than avail of other facilities. In reviewing the results, it appears that advanced and high quality multi-function devices (PDA, Mobile) will influence people’s decisions to engage in online activities, therefore enhancing their acceptance of digital publishing. However, there is no guarantee of any linear relationships in this regard.
As regards developments in content format conversion technology and the involvement of end users in online activities, including their acceptance of digital publishing, an analysis of the relationships and differences was conducted using ordinal-by-ordinal variables.

Following the same method as used above, a crosstabulation table for online activities via developments in content format conversion technology was created (Appendix F7). This table shows some differences between each cell. However it does not indicate a clear pattern and it is difficult to ascertain if the differences are significant or not, and if there is any relationship between the variables. SPSS provides some statistical measurements which can assist in identifying them. The details are listed in Table 6.27.

Table 6.27: Statistical test of the relationship between developments in content format conversion technology and online activities

<table>
<thead>
<tr>
<th>Developments in content format conversion technology with online activates</th>
<th>Asymp. Sig (2-sided)</th>
<th>Gamma</th>
<th>Somers’d</th>
<th>Symmetric Measures Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content format conversion &amp; Downloading music</td>
<td>0.000</td>
<td>0.183</td>
<td>0.143</td>
<td>0.000</td>
</tr>
<tr>
<td>Content format conversion &amp; Downloading journal articles</td>
<td>0.000</td>
<td>0.160</td>
<td>0.127</td>
<td>0.000</td>
</tr>
<tr>
<td>Content format conversion &amp; Downloading other publications</td>
<td>0.000</td>
<td>0.213</td>
<td>0.168</td>
<td>0.000</td>
</tr>
<tr>
<td>Content format conversion &amp; Downloading video</td>
<td>0.000</td>
<td>0.238</td>
<td>0.189</td>
<td>0.000</td>
</tr>
<tr>
<td>Content format conversion &amp; Downloading software</td>
<td>0.000</td>
<td>0.192</td>
<td>0.151</td>
<td>0.000</td>
</tr>
<tr>
<td>Content format conversion &amp; Purchasing e-books</td>
<td>0.000</td>
<td>0.289</td>
<td>0.189</td>
<td>0.000</td>
</tr>
<tr>
<td>Content format conversion &amp; Purchasing subscriptions</td>
<td>0.000</td>
<td>0.200</td>
<td>0.139</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 6.27 shows that all the two-sided symptotic significance and symmetric measures for Gamma and Somers’d are less than 0.001, indicating that there are statistically significant relationships between developments in content format conversion technology and all the above online activities (downloading of music, journal articles, other publications, videos, softwares, purchasing E-books, and purchasing subscriptions). The relationship observed in
the crosstabulation table is real and not due to chance. The values of the two measures (\textit{Gamma} and \textit{Somers’d}) are all less than 0.3, indicating that the relationships are not strong. However, from Table 6.27, it can be seen that some of the relationships are stronger than others. Again, the two measures (\textit{Gamma} and \textit{Somers’d}) for developments in content format conversion technology and purchasing e-books are higher than others. This indicates that there is strong possibility that developments in content format conversion technology have a greater influence on decisions to purchase e-books than others factors. A review of the results indicates that developments in content format conversion technology could be very important in attracting people to engage in online activities, therefore enhancing their acceptance of digital publishing. However, as with developments in multi-function devices, there is no guarantee of any linear dimension to such relationships.

6.8 Summary of the findings

In general, the character of responses to the survey of book publishers conformed largely to what would be expected from an analysis of the literature. The overall findings are summarized as follows:

- 70\% of respondents reported increased growth in revenues from existing products/services and nearly 60\% from new products/services.
- Publishers were pragmatic in their response to digital technology, mindful of earlier disappointments, but aware of the need to keep in touch with reader trends and expectations in this regard.
- The main benefits anticipated from digital technologies were in the areas of new niche markets, the repackaging and repurposing of existing content, consumer-generated content and the enhancement of value chains.
• The most profound effects expected from digital publishing were in the areas of specialist business/professional/academic publishing, government and web-based publishing.

• The critical success factors for digital business models were identified as being technical robustness, consumer acceptance and financial logic.

• Subscription-based and content creation business models were the most highly regarded, frequently in the context of niche markets.

• Key organisational changes anticipated included:
  ♦ Introduction of digital media divisions.
  ♦ Introduction of integrated platforms for all editorial operations, print and digital.
  ♦ Changes in human resource practices to suit a digital environment.
  ♦ Organisation-wide promotion of cultural change to suit a digital environment.
  ♦ Introduction of new strategies for the digital market.

• Current use of technology
  ♦ Web based publishing and electronic publishing are catching up quickly with traditional publishing to become major publishing media.
  ♦ All companies are making maximum use of electronic facilities to maintain contact with their customer base (websites 100% and e-mail 94%).
  ♦ Only 12% of are companies using Blogs.
  ♦ 77 percent of companies were able to identify areas of impact due to digital technology.

In evaluating the findings emerging from the survey of book publishers in Australia, it should be pointed out that whereas in publishing terms this is not a large market, it is nonetheless important in that most of the big players in Australia are in fact offshoots of global publishing
giants. It is also clear that even within segments of the Australian market for books, different market conditions will offer different prospects and mandate different digital strategies. Not altogether surprisingly in view of the ownership pattern involved, one trend already evident in the U.K. whereby publishers in markets for educational and technical publications and their potential complementary products are enjoying a positive digital experience (Lee-Amis et al., 2006) is being repeated in Australia. Likewise, not only are digital technologies being confirmed as at best enablers, but also those companies currently enjoying success in digital publishing have continued to maintain a clear focus on customers (often in niche markets) and on the strength of their brands. Also as elsewhere, whereas an initial expectation was that so-called disruptive technologies would result in disintermediation, with supply chain integration, digital distribution and digital production technologies leading to a realignment of value chains, if anything the opposite has occurred. Nor indeed, does success in digital publishing by any means equate with the demise of print, with the two formats tending to support and reinforce each other.

Although wary of the potential dangers of technological determinism, it is probably true to say that the researcher embarked on this project with a couple of assumptions in place. The first assumption was that technology would continue to have a major impact on book publishing, and that digital technology most notably those associated with the Semantic Web could well transform the industry. The second assumption was that the printed book, like it or not, was in long-term decline, not least owing to developments in technology, but also as the result of demographic changes. Before the final analysis of the survey data became available, qualifications were being applied to both these assumptions. In the first place, while literate in technological terms, book publishers were clearly unwilling to stake scarce resources on the latest set of silver bullet solutions. Few in fact had even heard of the Semantic Web, although
as this research has shown, it is already impacting upon the industry. In the second place, despite reports of declining readership and of increasing preferences for electronic formats, book publishers and their customers continue to display a strong attachment to the printed book. Clearly there is no guarantee that either of these will continue to be the case, but the point is that not only is there increasing complexity in markets for book publishing but also that as regards format – hard copy or electronic, this is unlikely to be a zero sum game.

The overall findings emerging from the survey of end users can be summarised as follows:

- The majority of respondents access computers, CD-ROM or DVD drives either at home or at their workplace. Broadband and direct network connections to the Internet are becoming commonplace.
- Commonly accepted devices include MP3s, mobile telephones and digital cameras. Other technologies such as PDAs, PSPs, Xboxes and mobile videos have yet to gain widespread acceptance.
- The most common online activity is downloading, the percentage of which among respondents varies according to the material required. The downloading of music, videos, software and journal articles is becoming increasingly popular. However the downloading or purchasing of e-books is yet to attain any significant momentum. The difficulties associated with consumer acceptance of the e-book are twofold, the first being the content format and the second with the actual device, the e-book reader.
- The major drawbacks preventing people from using digital technology and electronic resources, and purchasing online relate to convenience, ease of searching, cost, trust, privacy, and e-security issues.
- Relationship analyses are summarised in the following Table 6.28:

<p>| Table 6.28: Summary of relationship analysis |</p>
<table>
<thead>
<tr>
<th>Relationships</th>
<th>Age groups (Under 20, 20-29, 30-39, 40-49, 50-59 and 60 or over)</th>
<th>Role within the university (Academic staff, PG Coursework, PG Research, TAFE &amp; Undergraduate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The use of digital technology (PC, Broadband, Direct network and Video chat)</td>
<td>Apart from video chat, which is more popular with the younger generation, all the others are used without significant differences by all age groups.</td>
<td>No significant differences</td>
</tr>
<tr>
<td>The use of digital devices (Mps, Xbox, PSP, PDA, Mobile video, Digital record audio)</td>
<td>The statistics indicate that there are statistically significant relationships. These relationships are real and not due to chance. However they are not very strong.</td>
<td>The statistics indicate that there are statistically significant relationships. These relationships are real and not due to chance. However they are not very strong.</td>
</tr>
<tr>
<td>The means of accessing electronic resources (CD Rom, Internet, Website, Online book shop, Libraries)</td>
<td>CD ROM and Internet are widely used by all age groups. For others, the statistics indicate that there are statistically significant relationships. These relationships are real and not due to chance. However they are not very strong.</td>
<td>CD ROM is widely used by all groups of people. For others, the statistics indicate that there are statistically significant relationships. These relationships are real and not due to chance. However they are not very strong.</td>
</tr>
<tr>
<td>The usage of electronic resources (Library catalogue, digital text books, Open web, Online shopping/services, Subscription-based info and other digital books)</td>
<td>The practice of accessing digital text books is equally strong for all age groups. For others, the statistics indicate that there are statistically significant relationships. These relationships are real and not due to chance. However they are not very strong.</td>
<td>Open Web is widely used by all groups of people. For others, the statistics indicate that there are statistically significant relationships. These relationships are real and not due to chance. However they are not very strong.</td>
</tr>
<tr>
<td>The behaviour in regards to online activities (Downloading videos, software, music, journal articles and other publications, Purchasing e-books, Purchasing subscriptions)</td>
<td>For all these activities, the statistics indicate that there are statistically significant relationships. These relationships are real and not due to chance. However they are not very strong.</td>
<td>Downloading videos, software, purchasing e-books and subscriptions are online activities engaged in by all groups in the university. For the other activities, the statistics indicate that there are statistically significant relationships. These relationships are real and not due to chance. However they are not very strong.</td>
</tr>
</tbody>
</table>

- Relationships between both the development of multi-function devices and online activities (the downloading of music, videos, journal articles, E-book and
subscription purchasing) and between content format conversion technology and these online activities are statistically significant, as they are real and not due to chance. However, some relationships are stronger than others, for example, those between developments in multifunction devices and content format conversion technology for e-book purchases. This indicates a strong possibility that developments in multifunction devices and developments in content format conversion technology will influence people to purchase e-books. In reviewing the results, it appears that developments in advanced, high quality multi-function devices (such as PDAs, Mobile) and in content format conversion technology may influence people’s decisions to engage in online activities and their acceptance of digital publishing.

6.9 Conclusion

Owing to the limited number of responses from the publishers’ survey, it was not possible to complete a detailed statistical analysis of this exercise, and instead resort was made to the use of frequency analysis. The end user survey, on the other hand, produced 998 responses, and both frequency and statistical analysis was possible. Chi-square and its related statistics were also implemented in this chapter, to enable identification of any relationships that existed between response groups and the use of digital devices, and the means of accessing electronic resources and online activities.

Ongoing developments in technology could well contribute to an enhancement of end users’ acceptance of digital publishing. In this section, comparisons between developments in multifunction devices with some online activities, and developments in content format conversion technology with some online activities were conducted. Statistical measurements indicate that there are significant relationships between the ordinal data, and that differences shown in the
crosstabulation tables are real and not due to chance. However these relationships are not strong. Additional statistical methodology could be employed to conduct a more in-depth analysis. However this is a task for a separate study rather than for this thesis. The findings from these two surveys will be compared with case study findings and the literature in Chapter 8.
Chapter 7 Case studies: Book publishers in Australia

7.1 Introduction

Another component of the research, a series of in-depth case studies, examines the Australian book publishing industry in the context of five categories. The case studies gave the researcher the opportunity to meet face-to-face with senior members of publishing companies and to discuss the results of the survey analysis with them. The case study instrument was designed to enable respondents to take ownership of the process and respond within the boundaries of meta-level questions (Molla et al., 2006). The purpose of the case studies was to obtain an overall picture of current trends in the Australian book publishing industry, and also to identify how current and emerging book publishing business models compared with regard to scope, design and structure. Furthermore, the research sought to obtain a sense of how publishers were approaching the challenges created with the advent of new technologies and their subsequent implications in a digital environment, particularly aspects involving potential changes to their business models.

This chapter initially provides a brief outline of the case study publishers, how the five categories were defined and how this thesis addressed quality control issues with respect to all 14 cases. Secondly, the chapter provides details of trends in the Australian book publishing industry from both an historical and current perspective. The chapter concludes with a detailed analysis of five companies, one from each of five categories, with supporting comments regarding other companies in the category should there be any substantial variations in experience from the company under scrutiny.
7.2 The case study companies and quality control in case practice

The case studies, 14 in all, are exploratory and descriptive in nature, rendering them suitable for the kind of interpretive research undertaken in this thesis. For reasons of confidentiality, these 14 publishers have been identified only by the designations P1 to P14. The companies that served as case study participants for this research came from five different categories: general trade publishers, educational publishers, professional publishers, specialist publishers and university presses.

Issues of quality control in these case studies have been discussed in Chapter 5. Accordingly in this chapter, Table 7.1 summarises the quality control tests applied and indicates where the research design and conduct of the case study method in this thesis conformed to the earlier recommendations.

Table 7.1: Quality control in cases: Tests, tactics and actions
In analyzing the case studies a combination of approaches was adopted. This included elements of the descriptive components of the scenario-based methodology outlined in Figure 3.7, and a set of categories drawn both from the scenario-based methodology and from interviews with publishers. These latter categories were:

<table>
<thead>
<tr>
<th>Tests</th>
<th>Case Study Tactic</th>
<th>Research phase in which tactic occurs</th>
<th>Action taken in this research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct validity</td>
<td>Use multiple sources of evidence</td>
<td>Data collection</td>
<td>Use of interviews, documentary evidence (annual reports, strategic plans, mission statements, publishers’ websites, government statistical websites and newsletters)</td>
</tr>
<tr>
<td></td>
<td>Establish chain of evidence</td>
<td>Data collection</td>
<td>Interview data both taped and transcribed in real time; multiple evidence sources entered into customised object-oriented database</td>
</tr>
<tr>
<td></td>
<td>Key informants review draft of case study report</td>
<td>Composition</td>
<td>All interview reports (draft case study reports) reviewed by key informants.</td>
</tr>
<tr>
<td>Internal validity</td>
<td>Do pattern matching</td>
<td>Data analysis</td>
<td>Patterns identified across cases and compared with those in the results of the survey of publishers</td>
</tr>
<tr>
<td></td>
<td>Do explanation building</td>
<td>Data analysis</td>
<td>Not performed in this research</td>
</tr>
<tr>
<td></td>
<td>Do time series analysis</td>
<td>Data analysis</td>
<td>Not performed in this research, but under consideration as part of follow-up work</td>
</tr>
<tr>
<td></td>
<td>Do logical models</td>
<td>Data analysis</td>
<td>Not performed as it requires time series data</td>
</tr>
<tr>
<td>External validity</td>
<td>Use rival theories within single cases</td>
<td>Research design</td>
<td>Not used because of the exploratory nature of this research and the lack of an existing theory. Rather than use existing theory, this research adopted elements of a Design Science paradigm.</td>
</tr>
<tr>
<td></td>
<td>Use replication logic in multiple case studies</td>
<td>Research design</td>
<td>Multiple cases investigated using replication logic</td>
</tr>
<tr>
<td>Reliability</td>
<td>Use case study protocol</td>
<td>Data collection</td>
<td>Identical data collection procedure was followed for each case. A consistent set of initial questions was used in each interview, and all interview questions emerged from the survey questions to publishers. A comparison of interviewee responses to these questions follows in Chapter 8</td>
</tr>
<tr>
<td></td>
<td>Develop case study database</td>
<td>Data collection</td>
<td>Interview transcripts, other notes and links to online were entered into Microsoft Word and Excel</td>
</tr>
</tbody>
</table>
• **Company backgrounds**: General background information for each of the case companies selected.

• **Products, services and value propositions**: The primary products and services provided by the company.

• **Customer base**: Target customers and maintenance of customer relationships.

• **Corporate information technology management**: Technology issues including the use of and attitudes to technology, digital strategy and e-book issues.

• **Relationship management**: All issues related to the management of relationships including authors, suppliers, partners, customers, and collaborative networks.

• **Distribution channels**: Channels through which the companies offer and market their products and services.

• **Financial aspects**: The basic elements of revenue models and cost structures.

• **Value chains and business models**: Company value chains and their link to business models.

• **Risks, opportunities and the future**: Risks and opportunities faced and company expectations for consolidating their position in future marketplaces.

### 7.3 Background, general position and trends

To understand current trends in Australian book publishing, it is first necessary to take a wider perspective, as national environments are likely to be affected by global influences. From a global perspective content industries, which includes publishing, are facing the challenges of maintaining competitiveness within the context of changing markets for their products and services (Ronte 2001; Herther 2005). In general terms, these challenges include (a) the threat of globalisation, (b) the rise of conglomerates and potential new entrants, including those operating under the banner of *Open Access*, (c) the creation of new
opportunities, (d) stakeholders’ demands for improved financial performance, (e) more sophisticated customer requirements, (f) changing relationships with customers, and (g) changing roles in the marketplace. Greco (2005), Straubhaar and LaRose (2006), and IBISWorld (2008) explained the more specific threats to the long-term viability of the various publishing sectors include:

- Quality of the business environment in terms of cost structures, buyer sophistication, consumer acceptance of new products, rights trading, mergers and acquisitions and clustering of firms.

- Legislation relating to copyright and the protection of intellectual property, information technology, privacy, data protection and competitiveness, and to the regulation and ownership of media. A key related issue is that of levels of taxation of digitised products, with variations between tax regimes carrying implications for competition, the pace of transition from print to electronic media, producing distortion in business models through bundling (while potentially stimulating innovation), and the migration of e-content businesses to more favourable tax regimes.

- Drivers of media spending and use, and significantly, the availability of time and money and changing demographic structures. The ageing population is particularly a problem for book publishing, with strong indications that the electronic media are more appealing to the younger generation. Consumer reading time is heavily contested by an increasing range of media, and through the proliferation of new activities made possible by digital technology.

- Shortage of human capital and skills, including the core publishing skills of content selection, editing, packaging, marketing and sales, and business acumen and technical skills.
• Distribution structures, notably efficient supply chains for controlling costs and maintaining profit margins, ensuring that orders are fulfilled speedily and accurately to bookshops, and that stock levels and returns of unsold books are minimised. Entry barriers are lower for books and hence opportunities for new entrants.

7.3.1 Current position of the Australian book publishing sector

Australian Bureau of Statistics (ABS) data portray the make-up of the publishing industry in Australia in the following terms: Books (49%), telephone directories (49%), maps (1%) and others (1%) (IBISWorld, 2008). Domestic and export sales of books by Australian book publishers in 2003-04, by classification was: Adult non-fiction (35.9% of the value of publishers’ sales), Adult fiction (15.3%), Children’s books (9.4%), Tertiary education books (11.6%), Professional and reference books (7.8%), School books (19.4%) and Electronic books (0.6%) (ABS, Book Publishers, 1363.0, 2003-04).

Industry concentration and market share

Australian Bureau of Statistics data (Book Publishers, 2004; Year Book Australia, 2006), reveal that during 2003-2004, there were 244 businesses which were either predominantly engaged in book publishing, or which generated income of $2m or more from that activity. These companies sold a total of 128.8 million books, primarily to book retailers, earning revenue of $1,353.2m. With a total annual income of $1,560.6m, the overall operating profit before tax of these business was $152.1m. Of the total turnover, 77% was generated by only 20 book publishers, achieving 78% ($1,057.8m) by value of total book sales and 76% (97.7 million) by volume. Nevertheless, book publishing in Australia involves a large number of very small operators. The Australian Bureau of Statistics Business Register for June 2001,
disclosed that only 6 of the 2,330 business entities classified within this industry had revenues of $20 million or more (IBISWorld, 2007).

In Australia, as elsewhere, there is a major international presence, with most of the activity in book publishing being accounted for by a handful of large-scale, foreign-owned multinationals exploiting the benefits of global economies of scale and distribution. Locally-owned companies only account for approximately 10% of the book publishing segment’s revenue. (IBISWorld, 2008). The market is however, unstable and market share is susceptible to frequent change. Table 7.2 shows the distribution of market share among the major players in Australia book publishing in the years 2003 to 2007 (IBISWorld 2004, 2005, 2006, 2007, 2008).

Table 7.2: Market share of publishing in 2003, 2005, 2006 and 2007 in Australia

<table>
<thead>
<tr>
<th>Major players</th>
<th>2003-04</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen &amp; Unwin Pty Ltd</td>
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<td>Sensis Pty Ltd</td>
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<td>Scholastic Australia Pty Ltd</td>
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<td>Thomson Corporation Australia Pty Ltd</td>
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Table 7.2 indicates that the major players (apart from Sensis Pty Ltd, which is a publisher of telephone directories and is a wholly owned subsidiary of Telstra), have all suffered declines
in market share owing to the influx of new players into the industry, particularly online publishers such as Amazon.com (IBISWorld, 2008).

**Demand determinants**

IBISWorld (2008) indicates that the major determinants of demand for books include: price, household disposable income levels, economic growth and business conditions, tastes and interests in the community, population growth, the age and gender composition of the population, levels of promotion by both publishers and retailers, technology (household use of the Internet may reduce leisure time, and the Internet can provide access to substitute products, e.g. e-books), and tax on books (GST).

**Basis of competition**

Competition in this industry is high and is increasing. According to the IBISWorld report (2008), competition is predominantly based on quality of content, price, distribution, promotion, brand names, imports, and the existence of substitutes (books compete with other information and entertainment media, such as the Internet and videos).

**Technology and systems**

Based on the IBISWorld reports (2007 and 2008) and the Euromonitor International, Country Market Insight Report (2003), the level of technological change in book publishing in Australia can be categorised as being steady. Major technological developments have included:

- Increased automation, which has enabled the continuous monitoring of quality of content.
- Computerised composing equipment (such as desk top publishing).
• Digital technology, which has enabled digitised information to be transferred direct from computer-to-plate and computer-to-printed page, and is used where material needs to be customised.

• Photo-typesetting equipment, which includes image-setting and scanning, leading to the use of electronic or laser colour scanners.

• Software designed exclusively for the book publishing industry, which automates the entire process from order taking to production, to delivery and invoicing, emerging in for example, the legal publishing arena.

• The ability to download books via the Internet, for printing by ordinary printers or inputting into notebook-sized computers that display books on a screen one page at a time.

• The emergence of electronic books. This is a very small segment of the Australian book market and the products are largely sold as audio books.

A report on innovation and technology in the Australian book industry (Australian Innovation and Technology, 2007) contained a diagram (reproduced here as Figure 7.1) showing how the book trade uses technology throughout the supply chain, not only to conduct transactions, but also to share information.
In Figure 7.1, "\(\rightarrow\)" indicates a commercial transaction and "\(\uparrow\)
\(\downarrow\)" illustrates information flow (both ways and one way) as follows:

- Between creators and traditional consumers (both ways) Publisher and author websites stimulate demand.
- Between creators and online consumers (both ways).
- Between publishers and traditional consumers (both ways).
- Between publishers and bricks-and-mortar retailers (both ways).
- Between publishers and bibliographic/data services (both ways).
- Between publishers and distributors (both ways).
- Between bibliographic/data services and distributors (both ways).
• Between distributors and bricks-and-mortar retailers (one way).
• Between distributors and electronic ordering and invoicing services (using EDI) (one way).
• Between electronic ordering and invoicing services (using EDI) and online retailer/aggregators (one way).

Mergers and Acquisitions

The Euromonitor International: Country Market Insight Report (2003) indicated minimal activity in book publishing with regard to mergers and acquisitions over the previous five years. Within the broader publishing sector, one important example has been that of Sensis Pty Ltd., a wholly owned subsidiary of Telstra Corporation Ltd., which publishes telephone directories. In March 2004, Telstra acquired the Trading Post Group (which owned 22 print publications and five online sites in Australia) and then combined it with the Sensis business. Recently, the most significant developments in the book publishing sector have been the merger of Penguin Books Australia with Pearson Education Australia, and the acquisition of Harcourt International by the Pearson Group in 2007, both part of a strategy to integrate and consolidate resources.

Another current example is that of Australian-based travel book publisher - The Lonely Planet. The company publishes approximately 500 titles. In October 2007, BBC Worldwide purchased The Lonely Planet after securing a 75% shareholding in the company. The purpose of the acquisition was to compliment BBC Worldwide’s search for increased online revenue and to accelerate an expansion of operations in America and Australia. For their part, the Lonely Planet management team felt that BBC Worldwide would provide a platform true to their vision and values, while allowing Lonely Planet to take the business to the next level.
Globalisation

IBISWorld (2008) categorises the level of globalisation in Australia as having minimal impact to date and observes that the trend to globalisation was exhibiting moderate impact. However, most of the larger players in the Australian book publishing segment are foreign-owned and operate in international marketplaces. One example is that of the News Holdings Pty Limited a subsidiary of News Corporation, a company controlled by the Murdoch family, long a stalwart of the Australian publishing industry and these days American-based. The News group has vast global interests. The group began as a single newspaper publisher and has grown to become a major global media group. The group’s global book publishing division is HarperCollins Publishers.

7.3.2 Key trends in the Australian book publishing

According to data from the Euromonitor International Report on Books and Publishing - Australia (2003), the key trends in book publishing in Australia can be summarised as follows:

Emerging book formats: Despite having witnessed the arrival of e-books during the 1990’s, Australian publishers have demonstrated a lukewarm approach to the new product. To some extent this can be justified by the lessons learned from the demise of a substantial segment of the e-book industry in the U.S.A during 2001. In Australia, during the early years of the new millennium, major Australian publishing houses with online selling facilities offered downloadable books, while others engaged in e-book sales via the CD format. However, the high cost of both equipment and content produced only limited interest in these products. Nevertheless, despite such problems, and although the Australian consumer base has continued to demonstrate a preference for traditional print formats, e-books have managed to establish a place in the market, albeit a relatively small one. The current consensus among
publishers is that development of the e-book market will be restricted to the education field. However, it would be rash to underestimate the potentially wider impact that could follow upon the development of a really effective reading device for e-books.

_Emerging distribution channels:_ Despite the demonstrated effectiveness of the Internet as a distribution outlet, Internet-based book sales by Australian publishers have not been particularly strong, with the bulk of business accruing to large U.S-based entities such as Amazon.com and Barnes and Noble. During 2002, the Australian on-line book retailer OzBooks.com, sought to win a segment of the U.S companies’ market share, based on the belief that the product could be delivered cheaper via lower freight expenditure and the absence of the requirement to deal with overseas currency fluctuations. However for a variety of reasons this venture proved to be unsuccessful.

Other Australian-based book publishers have achieved some measure of growth in Internet sales, but active promotion of this facility has been avoided, owing to the fear of channel conflict and potential damage to conventional markets. The Australian Bureau of Statistics Year Books for 2004 and 2006, show that the total profit from Internet sales of books was $1.1m in 2000-01, increasing to $7.3m in 2003-04. IBISWorld (2008) confirms that there is strong growth in sales of books through the Internet. However, it also reported that this method can be more expensive and time consuming than through a retail outlet. Were Internet-based book sellers able to reduce prices and improve delivery times, they could become more competitive and thus represent a serious threat to local publishers.

_Technology developments:_ Technology acts both as an enabler in terms of production and distribution options, and of new products such as e-books, and as a source of
disintermediation, with the potential to increase the power of authors and impact on the industry value chain. Technology also increases the threat of competition for leisure time and of imports over the Internet. However, even revolutionary, initial advantages such as the absence of warehousing costs and excess printing reductions can be eroded by significant printing costs. In 2000, Dbooks became the first company in Australia to have, as its primary function, digital book production, but it failed to sell enough copies to overcome this cost barrier. Future technological advances should overcome these negative aspects, making mass production a viable option. In the meantime, the Australian digital marketplace has therefore, been limited to the production of certain types of book with concentration on niche markets, such as in feminist or science fiction, this has resulted in respectable sales growth.

Industry analysts anticipate an average annualised real growth rate for industry value added (IVA) at around 2% for the six years to 2012-2013. Figure 7.2 shows an overview of the real growth of the industry revenue during 2002-2007 (IBISWorld, 2008).

![Figure 7.2: Real growth of industry revenue in 2002 – 2007](image)

*Development of self publishing:* The online environment provides opportunities not only for access to content but also for authors to engage in self-publishing on-line. However, there is
no evidence that this is happening to any great extent. Nor are mainstream publishers overly-concerned with any threat from self-publishing, given the continuing benefits they can offer in terms of professional experience, editorial input, quality control, and promotion and distribution. In theory, self-publishing does however, offer an alternative to authors and hence, another circulation avenue (IBISWorld, 2008).

7.4 Position of General Trade Publishers

The positions of three publishers are addressed in this section. Company P1 is an Australian independent publisher, whilst Companies P2 and P3 are foreign-owned publishers. General background information of the three companies is provided, followed by a comparative analysis of the three companies in terms of products, services and value propositions, and then of value chains and business models, where P3 serves as representative of the trade publisher category, supplemented where necessary by information from the other two companies.

7.4.1 Company backgrounds

Company P1 is Australia’s largest independent publisher, with a wide ranging trade list including children’s picture books, young adult titles, commercial and literary adult fiction, a broad array of black and white illustrated non-fiction titles, and a small academic list. The company commenced publishing in Australia in 1976 as part of the UK-based parent company of the same name. In 1990, the company’s Australian directors instigated a management buy-out of the UK entity and subsequently stood alone. The company published approximately 220 titles in 2007 and is represented internationally. In addition to its own extensive publishing programme, the company is the Australian and New Zealand distributor for many other publishers.

Company P2 is a foreign-owned subsidiary of News Corporation Ltd., and is one of the world’s leading English-language publishers. The company was founded in 1989 with an
amalgamation of three publishing houses. It is a broad-based publisher with strengths across a broad spectrum. Consistently at the forefront of innovation and technological advancement, the company was the first publisher in Australia to digitise content and to create a global digital warehouse to protect the rights of its authors. This was in response to changing consumer demand, and to generate additional business opportunities. The company has revenues exceeding $1 billion annually.

Company P3 is a long-established, Australian publisher and a subsidiary of an established international publisher. The company’s Australian structure comprises seven subsidiary companies in various areas of publishing and distribution. The diversity and relative autonomy of individual companies within the group is seen to lend a vibrancy and local relevance to its publishing activity in all markets. Similar to Company P2, the titles published cover a broad range of topics.

7.4.2 Products, services and value propositions

Company P3 has 7 main value propositions based on its products and services. Although all three companies have similar value propositions, each company has particular strengths along its own value chain, enabling to out perform the others in this respect.

Value proposition 1: Operation of a full services strategy. Company P3 has developed international distribution subsidiaries in its major publishing centres (UK, USA and Australia). These subsidiary companies cater not only for their parent publishing arms, but also to those of third parties, for example, the acquisition of distribution rights for other publishers and the generation of distribution revenues. Company P3 has also implemented a Publishing Services Unit, the focus of which is sales and marketing. Its purpose is to provide services which adopt
a greater presence in the overall business resulting in further added value. Companies P1 and P2 are endeavouring to replicate this by establishing their own distribution centres.

Value proposition 2: *Provision of high quality content.* All three companies identify as common core competencies the provision of high quality content (in either print or digital format), content organisation including editorial competencies, and the ability to negotiate licensing and royalty arrangements.

Value proposition 3: *Multimedia content distribution and marketing.* All three companies access multimedia to reach existing and to seek new customers and markets, resulting in greater client diversity.

Value proposition 4: *Availability of powerful websites.* All three company websites are well designed and provide detailed information for their stakeholders. They all have website ordering and purchasing facilities, however the major focus is to improve and strengthen the quality of their communications and relationships with all other parties. Company P3 has developed numerous websites to serve various needs. Company P2 has added a free *widget* to its *Browse Inside* digitisation program. The *Widget* can be used to add *Browse Inside* content to *personal websites, Blogs* and *MySpace* pages. Site users are able to embed the same content that is currently shown on the company website into any other website, including cover images, front-matter (a brief overview of content therein), and the opening pages of text. This permits an extension of their reach beyond the company website to include many potential customers who access social communities, *Blogs* or author sites.

Value proposition 5: *Partnership benefits in the sharing of knowledge, expenses and time.* Company P3 has a partnership arrangement with an overseas technology company, with each
entity holding 50% equity. This company was created to act variously as an e-book converter, a host for e-book content and as a website developer. The company is engaged in the digitisation of content, the production of e-books and the establishment of an e-commerce site. The major benefits to Company P3 are twofold: access to knowledge and cost reductions by the provision of services to and with other publishers.

Company P3 also has partnership arrangements with other publishers through an industry-sponsored price and availability service called TitlePage, which is operated by the Australian Publishers Association. Publishers subscribe to the system, which provides bibliographic information for booksellers to access free of charge via the website. This facility provides the publishers with considerable time and cost savings, as they are only required to supply accurate data, obviating the need to employ service staff.

Value proposition 6: Provision of a variety of product format choices to satisfy customer requirements. The major focus for all three companies remains the hard copy book, audio books, CDs and DVDs and e-books. Their digital options are formatted via PDF or XML. Currently their major value proposition continues to be the ability to deliver content in the form of hard copy books, which appear to offer indefinite longevity.

Value proposition 7: Meeting international standards for book title metadata – ONIX. All three companies have adopted the international standard for book title metadata- ONIX. This system provides a number of benefits including: (a) access to complete book title details for inclusion on websites (b) efficient production of catalogues and leaflets (c) no major change requirement to internal systems for participation in TitlePage, and (d) the ability to provide a unique Australian price and availability service for booksellers.
7.4.3 Customer base

The trade publishing customer base differs from that of other categories of publishing owing to its diverse nature. Furthermore, despite differences in size and focus, the customer bases of these three companies are quite similar. As one publisher observed, "Everyone at some time has read or is likely to read a book and this is our market". Targeted customers in the business model for Company P3 include individual customers (both online and through other physical channels), schools, groups of users or companies who use Intranets, State Governments, libraries, book shops (both online and traditional), web browsers (other websites, Yahoo and Google) and other publishers (both local and overseas). These customers are therefore, reached through a range of different distribution channels (details in section 7.4.6).

7.4.4 Corporate information technology management

Use of and attitudes to technology

The three companies believe that effective use of technology will contribute to the development of a more efficient and profitable marketplace. Clearly, technology choices and the timing of implementation are very important. These choices are all subject to the circumstances of the individual companies based on their strategies, business targets, niche markets, their culture and experience. Allowing for individual circumstances, however, it is clear that technologies related to the development of the Internet, of websites and of content management are relevant to the interests of all publishers.

The supply of Print-On-Demand (POD) services is an area where the Australian book publishing industry is lagging. The main deterrent to the involvement of Australian publishers in POD is a lack of potential for economies of scale, where currently the profit margin from sales per copy tends to be smaller than that obtained from traditional sales methods. However,
there is a growing acceptance that POD is an area that must be exploited. There is also the likelihood that if Australian book publishers fail to grasp this opportunity, then others will.

**Digital strategy**

Company P2 has adopted an approach practiced by their parent company, whereby as each new book is digitised it is channelled through an archiving process. This *in-house* approach enables the company to manage the content more effectively and to deal with potential copyright problems.

Company P3 has instigated a digital department which has formulated a strategy aspiring to have all books available in various digital formats. Their long term strategy is to sell books in both print and online formats, develop XML production processes, and have all electronic rights and contractual factors agreed to and in place. The principal director of Company P3 explained:

“As a publisher of quality local Australian books we want to ensure Australian authors benefit from the new opportunities of digital publishing which have been taken up widely overseas. In the main, we’ve found our authors to be incredibly enthusiastic, as they understand we are doing all we can to grow their readership by taking their work into the digital space. We’ve been careful to protect the copyright of their work and we’ve ensured a high quality of print to digital text conversion.”

**E-books**

The e-book has been an issue for decades without generating any great momentum in terms of volume of publications. Although all three companies are involved in the selling of e-books, no significant income is being derived from this activity.
All three companies consider they have sufficient focus on the issue of e-book technologies. Company P1 maintains a limited budget for the production of e-books on a title-by-title basis. Their investment covers R & D, production and marketing costs. Currently, the company only supplies e-books in PDF format. The company has a high percentage of books already in electronic format. However, they consider the e-book to be merely one format among many, and expected returns, if they come, will be in the distant future. Company P1 was one of the first Australian trade publishers to implement revisions to its contracts with authors in order to include provision for e-book rights. The aim is to maintain long term control of content copyrights.

Company P2 has digitised all its content but maintains a cautious approach to e-book technology investment, due to uncertainty over the future e-books. The company considers that the most important areas for e-book technology investment are those of format and copyright. This judgment is common to all three companies. Company P2 only sells their e-books to other businesses or other online businesses, not to the general public. This protects their existing close relationships with their booksellers.

Company P3 has a 50% stake in an aggregation company that handles everything to do with e-books, including digitising of content, production and the establishment of an e-commerce facility. In June 2007, Company P3 launched Australia’s first digital publishing program specific to e-books. They published 400 titles, making them available for browsing, searching and purchasing through a new website. Access to these works is controlled through DRM (digital rights management) to prevent wholesale printing and copying, and to protect the author’s copyright. The company also has a partnership with one of Australia’s largest retail
book stores to cover the sale of e-books. Work to digitise their backlist is ongoing, with the aim being to publish new titles in both print and digital form.

7.4.5 Relationship management

Relationships with authors

Competition among publishers to acquire potentially profitable authors is high, given the premium attached by readers to prominent writers. Hence, the issue of author loyalty and access to quality content is critical, and is a potential source of competitive advantage. Protection of author copyrights (especially for e-books), the provision of promotional and marketing assistance, and loyalty payments are all essential factors in preserving such relationships. Company P1 was one of the first Australian trade publishers to change their author contracts to include e-book rights. As discussed in the previous section, Company P3 sees maintaining satisfactory relationships with their authors as a key issue of their digital strategy.

Relationships with suppliers

Collaborative relationships in book publishing are common, with outsourcing a major practice. The bulk of Company P3’s printing, production, and typesetting processes are outsourced to India. The company retains an on-call team of experts to deal with technical problems. Company P1 outsource their entire printing process, and also employ freelance copy editors, typesetters and proof readers. Design is completed in-house with some use of freelance staff for more difficult projects. Company P2 prefers an in-house approach, having its own editing and design team. Minimal amounts of copy/structural editing and design work are outsourced. The major value proposition stemming from this practice is that it allows stricter time and quality control over its content. Most of the printing is outsourced to an Adelaide firm which provides a fast turnaround.
Relationships with partners

Partnership arrangements can generate cost and knowledge sharing advantages. Companies P1 and P3 place significant focus on this area, and acknowledge the value of working with others. Company P2’s policy is not to indulge in partnership arrangements.

Company P3 collaborates with the TitlePage system, in what is regarded in the trade as a showpiece of collaborative effort. TitlePage not only provides considerable cost savings to booksellers in terms of time and money, but also affords great advantages to publishers. Initial costs in setting up the system were spread between eight publishers who contributed on a loan basis, with the use of a subscription model to amortise repayment of the loans. General membership of the scheme is available as part of a membership fee paid to the Australian Publishers Association.

Company P1 has a partnership arrangement with Alliance Distribution Services, one of Australia’s largest publishing distributors. Company P1 also places more emphasis on partnership arrangements with E-book retailers and library suppliers (for example: Netlibrary, Questia, Ebrary, Ebooks.com), with digital aggregators supplying libraries (for example: EBSCO or Books 24/7 which offer an online subscription library to companies), and for licensing electronic book content (often to non-book customers, for example: corporate websites and consumer websites). The purpose of these partnerships is to provide avenues for the sale of electronic book content. However, the company is determined to retain its control over content.

Relationships with customers
Each company has its own potential target customers within the broader market for book publishing. Key challenges faced include accessibility of these customer groups, including which distribution channels to employ, as well as the successful maintenance of relationships. The availability of content, the promotion of well-known brands, competitive pricing and the provision of excellent service all form part of their strategies.

### 7.4.6 Distribution channels

Company P3 offers and markets its products and services through the following 5 major distribution channels:

Distribution channel 1: *Company websites.* Websites play an important role in areas of promotion, information diffusion and product purchasing. For example, Company P3 has developed websites for different purposes including general information, online shops (downloading e-books, ordering physical books, and POD), virtual community (reader discussion groups), news feeds, new books information, author links, and self-publishing.

Distribution channel 2: *Booksellers,* who provide their main income stream. Spurning fixed contractual relationships with bookselling chains, they seek to utilise all possible distribution channels (discount stores, independents and chain stores) to sell their products, a strategy which they believe produces maximum benefit.

Distribution channel 3: *Electronic aggregators.* Company P3 uses a collaboration site with 8 other publishers. Company P1 is a leader in this area and is actively involved in all three major systems for the sale of electronic books: (a) E-book retail and library supply, (b) Digital aggregators which supply libraries, and (c) Licensing electronic book content, often to non-book customers. This provides access to a broad customer base. Company P2 sells some of its
product through electronic aggregators, but this is organised by their American parent company.

Distribution Channel 4: *Online bookshops or electronic retailers*, for example, Amazon.com or bookshop online services. All three companies sell their books through Amazon.com. Company P3 also sells its e-books through an online facility at a nationwide chain of bookshops, namely Dymocks.

Distribution channel 5: *Web browsers*, such as Yahoo and Google. Companies P1 and P3 have contracts with *Google* to act for them both as a bookseller and a marketer.

### 7.4.7 Financial aspects

Company P3’s revenue streams are derived from services provided to third parties, and sales through their distribution channels, with the most lucrative being traditional hardcopy books based upon long-run models. Generally, this type of model is ideal for publishers of textbooks, trade books and other kinds of books (for example, bibles) involving potentially large scale distribution (Greco, 2007). Increased profits depend on the sale of units from the long-run model, which provides benefits for printers, paper manufacturers, publishers, and most importantly, the consumer, who pays a smaller price for the book than if it was subject to a short run. Owing to the complexity of book publishing, profit and loss calculations for trade books will vary. An example of Company P3’s profit and loss statement relating to their adult trade paperbound book and hardbound (cloth) books is provided in Appendix G1 and G2. This demonstrates the methodology behind trade publishers' profit calculations, and the management of their cost structure. The company’s *frontlist* (first run) books use a traditional
long-run model, but the more costly short-run model or the more economical POD model can both be utilised for backlist (re-run) titles according to circumstances.

Although past or current revenue figures for company P3 were not accessible, its general manager indicated that competition was becoming increasingly strong, and revenue could rise or fall as a result of a variety of factors. The other two companies were employing similar models to Company P3. Based on IBISWorld reports (2008), their revenue performances are:

- Company P1’s sales revenue for 2005-06 increased by 49.2%, with net profit up by 61.6%. IBIS (2008) believes that this was due to sales of bestsellers. The company’s profile report for the period 2002-06 is listed in Appendix H1.

- Company P2’s parent company has global interests in newspapers, magazines, book publishing, cable and satellite TV, internet media and film production. As of June 30, 2007, the global book segment’s assets, valued at USD$1.566 million, accounted for 2.5% of group assets. However, there are no itemised figures available for the Australian subsidiary, Company P2. In 2003, company P2’s parent company reported a slowdown in the book publishing industry. Revenue rose by 10% in 2004, but decreased by 1.1% in 2005-06, although an increased operating income of 1.8% was recorded, due to a higher level of profitable backlist sales in the general books group. For the year ending June 2007, the group’s book publishing segment (including Company P2) generated revenues of US$1.347 million (up 2.7% on 2005-06), achieving an operating income of US$159 million (down 4.8%), owing to disappointing sales of a hitherto profitable title.
7.4.8 Value chains and business models

Value chains in Australian trade publishing are displaying traditional formats, namely those of author to publisher, to printer, to distributor, to bookseller and finally to the reader. However, an increasing number of trade publishers are engaging in the production of e-books and the digitisation of content, with the most significant aspect of such changes to value chains being that of multi-channel distribution. Companies operate different value chains, and specific parts of value chains will lead to different business models. For example, Company P3’s value chain and linked business models have been adjusted as follows (model presentation is followed rules of chapter 3 on page 102):

- **Stage 1**: Buys or licenses content from authors. Company P3’s *content licensing model* is shown in Figure 7.3.

  ![Content licensing model](image)

  **Figure 7.3: Content licensing model**

- **Stage 2**: Authors submit their copy for editing. At this stage some publishers engage in outsourcing. However, for the purpose of controlling content, most publishers prefer to be independent in these areas. This stage includes the obtaining and conversion of digital files involving PDF and XML formats, the creation of metadata and databases, and editing and quality assurance. Common business models used in this stage include the *aggregated model*, the *full service model* and the *shared revenue model*, which have been discussed previously. Company P3’s *full service model* is shown in Figure 7.4.
Figure 7.4: Full service business model

- Stage 3: Printers (all outsourced) produce the physical copy. Publishers digitise books into electronic format and develop e-books (some are developed in-house, but most are developed in co-operation with third parties). POD or aggregated types of models can be linked with this stage. Company P3’s aggregated model of e-book creation is shown in Figure 7.5.

Figure 7.5: Aggregated model – e-book creation

- Stage 4: The books are marketed through various channels. Trade publishers are achieving minimal sales from their own websites, fearing channel conflict and a desire not to upset booksellers. As discussed in section 7.4.6, Company P3 utilises both traditional and electronic channels to sell its products. The business model used in this stage can be termed a multi-channel distribution model. It can be modified to suit
various products. Other models which company P3 can link with this stage are the direct to customer model, the publisher’s representatives selling to booksellers model, online-to-customer and online-to-retailer models, the site licences model, and the subscription model. A combined business model of subscription, site license and licensing data is shown in Figure 7.6.

**Figure 7.6: A subscription, site license and licensing data models**

- Stage 5: Archiving content in digital repositories allows content reprints or reuse in the future. An example of where popular business models have been linked with this stage includes the subscription model and the co-operative model (Shown in Figure 7.7). This model is created in a collaborative sense. This example has been discussed previously with the implementation of TitlePage.

**Figure 7.7: A subscription model and a cooperative model**
No one model is appropriate for all companies, as they all have their own strategies which require modifications to models. Depending on the products and customer segments involved, companies may need to operate various internal models to achieve their business goals.

7.4.9 Risks, opportunities and the future

Most subsidiaries of multinational book publishers, such as Companies P2 and P3, are obliged to rely on the digital publishing policies and investment strategies of their parent companies. Although this can provide valuable savings in terms of finance and labour, and enables the Australian entities to concentrate on development processes, there can be drawbacks such as that of, for example, lengthy delays in project approvals owing to the need to filter new ideas and proposals through various layers of management. However, being an independent publishing house, Company P1 is free to make its own plans and enjoys greater flexibility in its decision making processes.

Although E-books are yet to become a mainstream vehicle for supplying content to the marketplace, maturation of the digitisation process should present great opportunities for publishers. Opportunities and associated risks in connection with the production of e-books include:

- For publishers, an investment in e-books requires careful consideration of the marketplace, as the hard copy book continues to remain an attractive and convenient package for people. It may well transpire that any successful acceptance of e-books will happen only with the arrival of a new generation of user-friendly e-book readers (devices).

- As book publishers are still generating their income stream mainly from traditional value chains, the maintenance of a close relationship with booksellers remains a high priority. The three trade publishers agreed that this was a major reason for their failure
to invest significantly in e-book facilities, as it would involve direct selling to customers.

- Copyright and territorial rights raise serious issues for the publishing of e-books. Company P3 argues that the solution has to be that of collaboration between publishers. Individually, publishers have limited powers and costs can be prohibitive, but through collaboration a united front can be presented, particularly when publishers confront Google and Amazon on issues such as the amount of free content available on their sites. If these copyright and territorial rights are not protected, publishers argue that there is a danger of the publishing industry losing its *raison d’etre*.

- The emergence of e-books has also raised the increasingly controversial issue of contracts. The question of whether or not e-books are merely another edition of the book, and as such should be separated from other kinds of general electronic rights, remains a grey area. With overseas publishers wanting to buy books and their electronic distribution rights from Australian publishers, the issue of rights needs to be settled.

The placing of book titles on *Google Search* or selling through *Amazon.com* presents both opportunities and risks. The most appealing facet is that *Google* and *Amazon* both have huge geographic reach and hence can offer significant sales opportunities. This also provides publishers with the ability to create extra channels to promote and sell their books. However, a potential downside and an increasingly serious issue, is the matter of how publishers can control their content.

Company P1 has contracts with Google, but only for them to act as a bookseller, and has insisted that Google do not scan any unpublished books. This matter is the subject of ongoing
discussions between both parties, and may well be followed by litigation. Within the book trade as a whole, there are signs that Amazon’s appetite is increasingly being viewed as insatiable, something that could present a serious risk for all publishers. Company P1 is concerned that if Amazon actively promotes its e-book program, an in-depth review of its own position would be necessary. Company P3 believes that to survive potential threats from giants such as Google and Amazon, publishers need to actively pursue collaboration with each other.

The three companies agree that they are at the beginning of a transitional period from traditional to digital business. They are all working diligently to maintain their position in the traditional industry which still provides their bread and butter income, while simultaneously finding the time and energy to make speculative investments in new opportunities for the future. The companies are continuing with traditional business models, but are constantly modifying procedures to cope with new online processes. All three trade publishers agree that the current models need revisiting, and that it is essential to consider new business models which can effectively combine both physical and digital processes.

All three companies agree that the emergence of the open access model will have little effect on the book publishing trade. They consider that the future of Open Access will more likely affect journal or other reference publishing.

### 7.5 Position of educational publishers

This section provides comparisons of the positions of four educational publishers in the context of the foregoing criteria. Compared with other categories of publishers, companies P4, P5, P6 and P7 exhibit more common traits than differences. Although all these companies are internationally-based conglomerates, serving a wide range of markets, in this section the focus
is on the respective educational arms of the companies. The guidelines follow the same format as the previous section whereby one company (in this case Company P4) is selected for detailed analysis, with others used for comparison where appropriate.

7.5.1 Company backgrounds

The educational subsidiary of Company P4 was formed in 1998 by amalgamating two other Australian-based publishers for the purposes of specialising in the production of traditional-format textbooks for the education sector. The company is also actively engaged in addressing the electronic and digital dimension to content production. Their parent company is an international media company, a major global player in education, business information and consumer publishing. It focuses on education in the broadest sense of the word, and sees technology as offering a facility to help change the learning habits of people.

Company P5 is part of an Australian publishing group and is a leading provider of learning solutions to school and higher education markets in the United States, Australia and New Zealand. It publishes high quality reference works, textbooks and educational resources for the university, TAFE, professional and reference markets in a variety of disciplines. Since 2001, Company P5 has acquired educational publishing houses and technology companies to enhance its competitive position in educational publishing.

Company P6 is a major educational publisher that focuses entirely on classroom resources for teachers and students in Australian schools. It was acquired by company P4 at the end of 2007 (and in the middle of the research for this thesis).
Company P7’s parent company is an international publishing conglomerate involved in most facets of the book publishing industry from school to higher education, to professional, to trade publishing, and in the production of reference materials. The company publishes into three distinct market segments (divisions) in Australia and New Zealand: the school, the higher education and the professional and trade division. The case study focused on P7’s higher education division, which markets a comprehensive range of university textbooks. The Australian arm’s publishing focus concentrates on the areas of Business, Management, Marketing and Accounting where courses require specific Australian content. This division dominates the Accounting area in Australian and New Zealand universities, where it has approximately 70% of the market. The division also markets the lists of other publishers.

7.5.2 Products, services and value propositions

All four educational publishers claim to possess the foregoing value propositions, but with various stages of progression. Company P4 has six main value propositions for targeted customers that rely on its products and services as follows:

Value proposition 1: Marketability. The company has forged strong links with authors, producing quality content which is well-recognised by consumers.

Value proposition 2: School relationships. Company P4 places a strong emphasis on establishing and maintaining personal relationships with schools. To strengthen this relationship, they have a team of representatives that liaise closely with schools, focusing on regular visitation programs to ensure that all parties have up-to-date information. The company recognises that the bulk of its sales are generated by representatives, with teachers
being the point of sale, as they recommend products to their school administrations for inclusion in the curriculum.

Value proposition 3: *Product variety*. The major focus for Company P4 remains the physical textbook, and to a lesser degree, CDs, DVDs, and e-books. The textbook has prospects of indefinite longevity, providing the mainstream revenue for all the companies, with a modest trade in e-books, PDF formats and the delivery of classroom content via digital or mobile whiteboards.

Value proposition 4: *Multi-function web site*. Includes areas where customers can access a website *question and answer* facility, another function which allows lecturers to select chapters from different sources to create customised textbooks, and a facility for ordering and purchasing on line. However, they are yet to implement sales of e-books online. By comparison, Company P7 planned to launch its e-book online facility during the first semester of 2008. They believe that provision of this alternative service will be beneficial and hence attractive to various sectors of their customer base.

Value proposition 5: *Classroom content delivery methods*. Company P4 provides strong technical support and service for classroom teaching and learning activities when its textbooks are purchased by schools. The company is preparing an educational option for schools which will involve the use of Mp3s in the classroom.

Value proposition 6: *Digitisation of content in PDF or XML formats*. All companies are endeavouring to convert all its old content to digital form.
7.5.3 Customer base

Company P4’s customer base covers the entire educational spectrum. The customer bases for
Companies P5 and P7 are similar to those of Company P4, however Company P6 is restricted
to teachers and pupils in primary and secondary schools. They reach their customers via
distribution channels which will be discussed in section 7.5.6.

7.5.4 Corporate information management

Use of and attitudes to technology

All four educational publishers exhibit similar attitudes towards the take-up and development
of technology. Compared with other categories of publishers, however, these companies are
more pragmatic in their approach, linking developments in technology infrastructure and
applications to market demands. Hence, although they are multinational companies with
ample resources, they do not maintain active research and development programs as such,
preferring to monitor general developments in technology.

Company P4 markets a range of electronic whiteboards which can be used for the delivery of
content under license direct to the classroom. This offers benefits in that it serves as a teacher
resource linked to the main student resource, the textbook, and also because it operates as a
student response device. Although the company has successfully sold these products to
schools, the core problem of a dearth not of content in itself but of content in the form of
suitable digital learning objects remains. Publishers contend that, were they given the
opportunity to produce these learning objects, then the problem would be resolved. However,
they tend to the view that various State governments consistently refuse to recognise
publishers’ expertise in this regard. Despite this unsatisfactory position, Company P4 remains
positive about future prospects for the use of digital technology in the classroom. In the
interim, the company will seek to derive its revenue from sales of hard copy books into which are packaged a free supply of classroom technology. They are hopeful that in the near future, this position could be reversed with the technology representing the major source of income, and the book emerging as a complementary but still valuable accessory. However, there remain concerns over perceived major hurdle, that of insufficient funding for technology in the majority of schools.

Company P6 openly admits that it is not technology orientated, and it confines itself to the use of such basic technologies as CD-ROM. Currently they are involved in a project which entails transferring a selection of books to interactive whiteboards. They have recently been acquired by Company P4 and hence the pace of technology development will be governed by its new parent company.

Company P5 provides a mobile teaching and learning service, enabling students to access the web via mobile telephones. To counter the possibility of poor mobile coverage and black spots in lecture theatres, the company has developed an SMS version of this service. Students need to pre-register by accessing a website (they can use a PDA, a mobile or a laptop), selecting a course and registering their student number. During class, lecturers display the questions individually using a PowerPoint presentation with the students answering through their mobile phones. The lecturer can then display student responses on a group basis. There are pitfalls in this system, including the possibility of students misunderstanding instructions, and the need to pre-register. The benefits of the system include student anonymity, and its ability to enable lecturers to check student understanding of the subject.
Company P7 has addressed the prospect of using Podcasts and Blogs in its delivery options. The aim would be to create Podcasts to provide a more effective connection with their audiences. This would include chapter summaries of new editions textbooks, which would be posted on their website, allowing students to download into Mp3 players. The company does not currently use Blogging but is exploring its potential.

**Digital strategy**

It is inevitable that most students will require access to both hard copy and to e-books. Company P4 believes that owing to differences between the reading generations, there will be clear differentiation in markets. Hence, it is likely that school students currently in Year 6 will have diverse options available to them by the time they commence university. Therefore, publishers need to be vigilant in respect of changes in options and expectations, and of the growing volume and sophistication of products and services.

The content format used by Company P4 is PDF, however Company P5 has experimented with the use of XML in its workflow processes since 2006, believing this to be fundamental for the future delivery of digital content, allowing customers to select and customise content. Company P5 is progressing to a position whereby certain books are tagged post-production and then lodged into an XML data base system. As customised publishing is heavily dependant upon the availability of digital content, the company needs to consider what is required in its database. With the publication of niche books, they realised that only certain chapters were likely to attract demand world wide. Accordingly, their response allowed clients to search for specific choices of text from the database and build their own textbook. This approach, which is attractive in academic circles, is based on a cost structure that is scale driven.
Standards for digital content creation have only recently been adopted by company P7. The company now uses XML, converting most of its titles into digital form. This process applies to all new publications, with digitisation of the backlist being a less extensive affair and conducted on an *as needs* basis. The company recognises that the digitisation of content allows publishers to *slice and dice* their content to meet customer needs. However, there are serious implications for the structure and content of textbooks. For example, in digital *slicing and dicing*, the linear structure of tables of contents will need to become more modular, eliminating references to prior chapters, operate on the basis of no assumed knowledge, and no prerequisites of having to read prior chapters. At the very least, there will need to be recognition of the interconnections and linkages in the content through tagging.

Company P4 has the capacity to provide content through digital channels but its ability to do so is constrained by the nature of its markets. These markets are primary and secondary schools, where apart from institutions in the private sector and a number of showpiece government schools, there is simply not the technology infrastructure to support the provision of digital content and related services. There are also issues of government policy in the field of electronic learning. Across Australia there has been a commitment to content provision through a collaborative project involving both the Federal and State governments called the *Learning Federation*. Unfortunately, this has resulted in the provision of sets of *learning objects* which, while intended to provide animated content to illustrate the use of say, mathematical or scientific concepts for use by teachers, do not go close to meeting the wider educational needs of students. There is evidence from surveys conducted by the Copyright Agency that very few, if any schools regularly use these learning objects.
E-books

All companies have engaged to some extent in the development of e-book products, but still cling to the concept that these will not replace hard copy textbooks. They do, however, acknowledge that they cannot afford to ignore this potential opportunity. Starting from 2008, Company P7’s business model will be adjusted to accommodate the sale of both e-books and hard copy textbooks. Similar to Company P5, they have to consider aspects such as a greater variety of content, different types of outlets, and the provision of greater flexibility for both students and academics and importantly, how to give value for money.

7.5.5 Relationship management

Relationships with authors

Educational publishers now face increasing competition from general publishing houses in sustaining relationships with their authors due to developments involving self-publishing. Educational publishers need to ensure that their payment structure remains attractive to their authors and that content is protected. When interviewed, the General Manager of Company P4 emphasised the following with respect to their method of managing relationships with authors:

“Good relationships are maintained with our authors. Primarily, the aspect that has changed when dealing with authors is the method of payment. Electronic issues make the calculation of royalties a little more complex. We believe that the content is more granular and they expect this trend to continue. There is currently more pressure to produce content for deadlines and so there are more authors contributing to the process. One example is where the company provides a template and a number of authors may contribute (for example, a chapter each) and based on the contribution, they are paid
differently. This model is attractive to the company, has resulted in savings in time and a reduction of the complexity of the royalty process”.

**Relationships with suppliers**

All four companies have similar arrangements in the form of links to printing companies and external editors, based on outsourcing strategies. For example, Company P4 outsource all printing, under the control of their Hong Kong office. Most editing jobs are completed by external freelancers. However, they employ their own project managers to oversee and control work processes in the development phases.

**Relationships with partners**

Company P4 confirmed that that most companies have partnership arrangements which allow for the sharing of benefits, costs and knowledge. For example, Companies P5 and P7 have partnership arrangements with technical service companies, who provide support in such areas as e-book design, web design and maintenance. Company P4 maintains a partnership relationship with other publishers through the Copyright Agency (CAL) and the Australian Publishing Association (APA) projects. Publishers provide content, and CAL and APA create a site where customers can access and select content, for the creation of customised textbooks. Company P7 is involved with other publishers in a CAL *Smart Edition* project which aims to make their content available, for example, on a single chapter basis, to universities who can create their own customised copies from the CAL website. Companies P4, P5 and P7 all have sales and distribution relationships with overseas publishers.

**Relationships with customers**

The companies all have similar target customers and distribution channels as discussed in section 7.5.3. The provision of high quality and flexible content, of technical support and
services, and quick delivery to booksellers are all essential in maintaining good relationships with customers.

7.5.6 Distribution channels

All companies offer and market their products and services through multi-distribution channels. Company P4’s main distribution channels are as follows:

Distribution channel 1: *Schools or Universities via company representatives.* As discussed in section 7.5.2. The company reaches its customers predominantly through school teachers and university lecturers.

Distribution channel 2: *Company websites.* Customers can access a diverse range of information, and can order, purchase, and download e-books. Teachers can subscribe to specific chapters from various textbooks to create their own training materials, with the school paying the bill.

Distribution channel 3: *Booksellers.* Distributors deliver their products to local bookshops and libraries at discounted prices. For overseas sales, they co-operate with overseas publishers and distributors.

Distribution channel 4: *Electronic aggregators and online bookshops.* Company P4 sells its products through Amazon.com and maintains relationships with Google and Yahoo. Individual customers can browse these websites and order direct from the company. The other three companies have declined to participate in these kinds of relationships owing to copyright control problems.
Distribution channel 5: *Cooperative website*. Linked to a separate *Smart Edition* website created by the Copyright Agency allowing customers to subscribe to content from the site.

### 7.5.7 Financial aspects

Company P4’s income streams are derived from the above distribution channels with the most important (95%) being sales to booksellers. As with the trade publishing segment, educational publishers are using the long-run model. Generally, textbooks have a 3 year life cycle and their average annual sell-through rate runs at 90% for the first year, 45% for the second year and 10% for the third year, a pattern reflected directly in profit levels. An example of a four years profit and loss statement for a textbook is listed in Appendix H2.

Company P4 experienced decreased sales revenue in 2004, reversing the trend in 2005 by increasing sales by 8.3% and again by a further 4.9% in 2006. Its profitability, dampened by the amortization of intangibles, improved in the three years to 2006, owing to maintaining a tight rein on costs and revenue growth. The company’s profile report for 2003 to 2006 is listed in Appendix H3. During 2007, Company P4 acquired Company P6, which had a strong business in educational assessment. As Company 4 is also involved in assessment, the acquisition strengthened its presence in this area.

Company P5 was part of a publishing group that derived 80% of its consolidated revenue from electronic, software and services in 2006 (compared with 69% in 2005), and 20% from print (compared with 31% in 2005). The decline in print format is believed to be primarily due to the discontinuance of Company P5, which was sold off in July 2007, and with customer migration to online formats. Prior to its sale, Company P5’s estimated revenue was
around $2 billion per annum. The group profile report for 2002 to 2006 (including Company P5) is listed in Appendix H4.

As with Company P5, there is no revenue data available for Company P7. In 2007, its parent company reported revenues of US$1234.9 million p.a. and net income of US$99.6 million p.a. of which 61% was derived from book publishing.

### 7.5.8 Value chains and business models

Educational publishing value chains in Australia are traditionally from author to publisher, to printer to distributor, to bookseller to reader, operating as follows:

- **Stage 1**: The publisher buys or licenses content from an author. Company P4 has implemented two business models, one for its contracted authors and one for casual authors. The *content creation model* is shown in Figure 7.8.

  ![Figure 7.8: Content creation model](image)

- **Stage 2**: The authors submit copy for editing. This stage has undergone a number of significant changes, including the online submission of author material, with the outsourcing of various areas common. The company uses *the co-operative model* in this stage (model shown in Figure 7.9), as do the other publishers. Company P5 is currently researching a project whereby an existing published book is sent to an overseas vendor with the request that they recreate, that is re-engineer, the entire process from start to finish. The company will provide the manuscript checking and editorial process.
Stage 3: Printers (all outsourced, mostly overseas) produce the physical copy (or alternatively) digital copy which is stored in databases for future use. A full service model is used by Company P3. The model is shown in Figure 7.10.

Stage 4: The books are marketed through various channels including sales representatives, print media and the firm's website. Multi-channel sales are both popular and important. The company has many models linked with this stage, the most common being those of selling through company representatives, online to customer, discount sales, site licence and licensing data, and subscription. An example of the selling through company’s representative model is shown in Figure 7.11.
All the companies see themselves as traditional educational publishers, and operate traditional business models. The most popular and profitable model for the companies is the *selling through company’s representative* model (above Figure 7.11).

### 7.5.9 Risks, opportunities and the future

Despite their relatively limited presence in digital markets, the future, whether in terms of technological or related change, holds few fears for these four companies. Hence, although much has been made of potential disintermediation in the value chain for publishing, consequent upon the empowerment of authors, or on competition from new players in the market, these four publishers are confident that whereas booksellers may be adversely affected, changes in publisher-author relationships are likely to operate in their favour. This said, they do recognise that there could be a risk of channel conflict were they to move to any substantial form of direct-to-customer sales, or indeed to any wholesale attempt to deliver content through their Website (hence conflicting with the traditional book selling model).

Alternatively, threats from the wholesale digitisation of texts, say by *Google* or *Yahoo*, are seen as more a matter for old material than for new content. Their customers are showing interest in gaining access to new and dynamic content. Educational curricula constantly change, and publishers possess unique expertise, not only in updating content, but also in scoping and sequencing in relation to course changes and more generally, in the organisation of content. Their view is that if the Internet has taught them anything it is that *more is not necessarily more* when it comes to, timely, relevant and high quality content of credible provenance.
All four companies are comfortable with the traditional marketing channels and compared with other categories of publishers they have demonstrated a reticence to becoming involved with emerging technology. Whilst they have not ignored recent developments in technology, they have been somewhat lukewarm in their attitudes to this. They believe that they are constrained by governmental factors and that any major changes to be implemented would invariably encounter lengthy delays from the viewpoint of both the approval and the funding aspects.

7.6 Position of professional publishers

Only one professional publisher was investigated in the course of this research. This company, P8, was the funding partner for the ARC Linkage project upon which this thesis was based.

7.6.1 Company background

Company P8 was established in 1969, and it is a member of a leading international publishing and services company. In Australia, the company is the dominant player in the fields of Tax and Accounting, Superannuation, Financial Planning, Law, Human Resources and Occupational Health and Safety. Over 75% of company sales come through subscriptions. Its strength to date has resided in its well-established brands, such as its Master Series, featuring for example its Master Tax Guide, which is noted for its width and depth of reliable, accurate information. Through acquisitions and investments it has also developed interests in software-based products and business training programs.

Their parent company has worldwide publishing interests and uses its Asia Pacific operations as a test-bed for an online strategy, which is aimed to make Company P8’s web portal a key supplier of content, software and professional services (Australian Financial Review, October 30, 2001). The group envisages a transition from book shelves to desktops, through a mixture
of acquisitions and alliances. The IBISWorld (2008) reports however, that Company P8’s market share and revenue have actually fallen since 2002.

### 7.6.2 Products, services and value propositions

Company P8 offers seven main value propositions relating to its products and services as follows:

**Value proposition 1: A diverse range of products.** Company P8’s products are directed towards professional services businesses. Customers can enjoy a one-stop information service from their home or office computer.

**Value proposition 2: Effective information processing network.** Aiming to gain priority access to emerging information. A feature of this network is the company's special presence in Canberra during the annual budget process, enabling them not only to sell subsequent information to third parties, but also on occasions, to re-sell it back to the government creators. The company considers it a relatively simple task to find suitable authors to transfer information to publishable content. The company also recognises the importance of market research and accordingly, employs a team to ascertain customer trends.

**Value proposition 3: Product format variety.** The company has many products in varying formats including:

- *Subscription* – subscription services comprise the majority of Company P8’s product services. Content packages are renewed on an annual basis.
- *Loose-Leaf Book* – Used for periodical information. Updated periodically and clients are invoiced for individual updates.
• **Software** – specially designed for professionals. All software is standard and can be easily integrated with purchasers’ current systems (all computer operating systems). Additionally, customer support service is provided for new software.

• **Books** – As reference sources for individual customers

Value proposition 4: *Informative and powerful website.* The company’s strategy is to collate information, tools and services to assist customers. This is essential for customer retention, and reinforces market perceptions of the company’s competence.

Value proposition 5: *Multi-ordering methods, and multi-channel delivery format.* The company is able to provide its products in various formats including: print (material can be faxed or mailed to customers), online (material can be downloaded from a web page or e-mail), CD-Rom (material can be mailed to customers), and others (most of their products come with additional inclusions, for example newsletters incorporating updated information and disks). If the product is to be used by more than one individual, additional licenses are required. Customers can order by telephone, fax, e-mail, online or if in book form, can purchase from book shops. Investment in leading edge e-commerce technologies has paid dividends, and the company’s payments system ensures customers’ ability to transact online in a safe and secure environment.

Value proposition 6: *The provision of updated information services.* Company P8 updates information on a regular basis using:

• **Newsletters** – Weekly, fortnightly or monthly, available in print, CD and online formats

• **Free web news** – Updated daily, free for everyone who registers on the company’s web portal.
• *Daily Email Alerts* – Available after 3pm each working day, these contain a resume of all news articles published on the company’s portal during the previous 24 hours. They are not linked to any paid subscription service.

• *Premium Web News* – Subscription based (apart from a free 30 day trial), enabling subscribers to access all news available on the company’s web site.

• *Political Alerts* – Subject to a fee, advises news of relevant legal and regulatory changes prior to its appearance in newspapers.

• *Online TV programs* – Reporting of tax news, superannuation, practice management, technology and information, accessible from the company website via their own PCs.

• *Learning Service* – Details all relevant information, questions/answers and training programs for new products.

Value proposition 7: *Technological advantages.* The company considers itself to hold a competitive edge over its rivals when it comes to publishing technology. A large number of technicians maintain infrastructure and systems, for example, search tools and a workflow solution system which includes an *online data room,* provide significant benefits for customers. Search tool benefits include:

• Time saving when searching for information across Asia-Pacific

• Standardising HR procedures, policies and documents

• Reduced reliance on consultants

• Connecting to essential employment law content via a global web based tool

By using the workflow solutions system, the company has established partnerships with leading service providers to assist in offering clients true end-to-end solutions. These solutions have the flexibility to deliver not only a full range of document production services,
but also to complete such projects as merger and acquisitions activities online. The basic details of the online data room include:

- **Workflow** – The system is a complete solution for a number of applications
- **Quicker transactions** – The system is unique in incorporating personalised access permissions
- **Security** – The system is deployed to a high level of security specification as standard, including servers housed in a defence – level approved, co-technology and infrastructure provider
- **Robustness** – The system is unique by being involved in its fourth generation of development. Typically transaction times are reduced by 30% – 50% compared to hard-copy or CD data rooms and other online systems.

### 7.6.3 Customer base

Their market sectors are integrally linked to professional services and to other industries. Their customer base includes:

- Small, medium and large Accounting, Law and professional service firms
- Academic sectors including pre-school, primary and secondary schools, post school education and business training.
- Government bodies.
- Individuals who communicate directly with the company.
- Bookshops and libraries.

### 7.6.4 Corporate information technology management

**Use of and attitudes to technology**
The company believes that the exploitation of technology is essential to maintain its competitive position. The company carefully investigates all aspects: business and technical, before committing investment funds. They have a view that technology cannot be ahead of the business, although forming an integral component. The company maintains its’ focus as being a provider of content using the relevant search tools. A tool that they currently provide is Solution Finders, a proven, user friendly facility.

In order to maximise technology investments, the technology department at Company P8 enjoys a certain amount of independence from the parent company, with freedom to take independent decisions regarding the establishment of business platforms. This section has responsibility for the development of individual systems, and has overseen the introduction of digital publishing with new technology drivers. The company initially operated a domestic publishing platform (Sigmalink), then converted to a regional platform (Dynatex), which has an improved search capability.

The range of publishing technologies currently used at Company P8 includes:

- **Networking and communication**: Including Internet, Intranet, WWW, client/server, web-database integration and storage and printing devices.

- **Database**: Including relational databases and query languages.

- **Authoring systems**: Including XML and SGML, user interfaces and browser for searching.

- **Web page and security system**: Including the backend administration system allows only limited content access, and incorporates a back up system against hackers and a subscriber’s login system which requires personal details to gain access.
Digital strategy

Regarding digital publishing, the company’s regional Chief Technical Officer (CTO) indicated that: “The Company’s market research shows that there is no significant downward trend of traditional paper publishing, despite the growing awareness of digital publishing. We believe that there remains strong demand for paper, however we cannot afford to ignore the looming areas of new digital technology.” The company argues that the digital world is not necessarily generational, and that they are still in a learning stage, seeking more information.

Technology decisions at the company are determined by two major considerations. First is the goal to consolidate all Asia-Pacific content, with the ultimate objective of conversion to a truly global platform. Second is, their belief that while digital technologies will drive many of their activities, it is important not to let technology get ahead of business realities. Currently the company is at a medium level of technology development, operating somewhere within the network service paradigm, which is to say that it has moved beyond the stage of Web connectivity to a position characterised by an architecture facilitating the combination of content publishing in media rich channels with core business and supply-chain processes.

Management at Company P8 has detected a growing acceptance among the customer base that digitisation is inevitable. In the meantime they have to provide for different market segments in terms of information formats. Accountants generally tend to favour CD Rom as an information vehicle, and are only now starting to make use of online facilities, as opposed to the legal professional which has long been an enthusiastic consumer of online information. The development of products and services to achieve client satisfaction continues to be regarded by the company as a major challenge. To this end, Company P8 understands the
need for research and indeed, for learning on its own part, and crucially, understanding customer behaviour and expectations.

**E-books**

Currently they do not sell e-books, although they are confident of their ability to develop e-books, on the basis that all their content is digitised in XML files. However, they perceive a lack of enthusiasm for e-books within their customer base and consequently, e-book production is not a priority.

### 7.6.5 Relationship management

**Relationships with authors**

Company P8 maintains strong relationships with its authors and believes in the punctual production of quality content. The company uses long term contracted authors and in-house staff, to create content based on information provided by the company. Occasionally the company accepts articles for publication from external authors, but this is rare. Company P8 obtains information of interest from various sources including regulatory bodies, Acts of Parliament, rulings and judicial decisions and they assign a suitable author to transcribe this material into the necessary format.

**Relationships with suppliers**

The company’s main suppliers are production companies (involved in formatting, editing and checking) and printers, and it employs an outsourcing strategy for these purposes. IBISWorld (2008) reports, that in October 2004, Company P8 moved their production process from Australia to Malaysia for cost saving purposes. Areas within this process included formatting, sub-editing and checking. However the most important production jobs: writing and editorial
remained in Australia. Their printing requirements (both paper and CD/DVD) are met on shore by Australian printing companies.

**Relationships with partners**

In certain situations, the business partners of Company P8 can also be their competitors. This is a reflection of the nature of digital publishing, which enables both competition and collaboration between participating companies. For example both government and book trade partners from time to time repackaged Company P8’s information for resale through other channels.

Another form of partnership involves co-operation with other legal and financial firms. These firms are their customers on the basis of accessing content and also providers in that they act as a source of content.

The company has incorporated a facility whereby third parties who rent space on their web site are able to gain access to the company’s professional information. This facility relates to taxation matters and is therefore, targeted towards tax professionals. This service takes the form of an online TV program which provides current news about tax matters. It obviates the need to attend seminars and briefings, offering savings of both time and money to the recipient.

**Relationships with customers**

In addition to maintaining conventional relationships (book shop customers, libraries), it also maintains three kinds of relationships through its web site, involving memberships, subscribers and visitors.
• **Memberships**: Customers (individuals or groups) join by paying an annual membership fee to access relevant information and products. Membership levels incur a scale of fees based on information requirements.

• **Subscribers**: Purchase products on a by pay-per-view basis.

• **Visitors**: No orders or purchases are involved, simply the search for information. A purchase through a book shop may occur as a result of their search. Visitors are regarded as being potential members or subscribers.

### 7.6.6 Distribution channels

The company offers and markets its products and services through the following six distribution channels:

Distribution channel 1: *Company websites*. These account for the bulk of revenue via subscriptions. Products are downloaded or mailed to the customer.

Distribution channel 2: *Booksellers*. The company continues to distribute its books to bookshops, with discounts available to encourage access to prime shelf space.

Distribution channel 3: *Libraries*. The company sells both hard and electronic copy to libraries. With electronic copy, libraries have to purchase a site licence to enable their members, students and academics to have access to the products.

Distribution Channel 4: *Online bookshops or electronic retailers*. The company sells its books through online bookshops or electronic retailers, for example *Amazon.com*. However this is not a major channel and sales are nominal.
Distribution channel 5: *Web browsers*, such as *Yahoo* and *Google*. The company lodges its product and services information on *Google* or *Yahoo*, enabling customers to access information and then return to the company web site or to book shops to initiate a purchase.

Distribution channel 6: *Via other publishers*. The company sells its products to other publishers through a syndication model. This syndication model for content is created and sold to the client by Company P8, and offers them the option of on-selling *as is*, or on the basis of additional value added. This model allows Company P8 to sell basic *vanilla* packages to clients and in the process, transfer to clients any risks associated with the creation of additional content. It is clear that customers increasingly value the opportunity to create this option, something that will undoubtedly result in newer versions of business models.

### 7.6.7 Financial aspects

Owing to confidential and privacy requirements, the researcher was not able to ascertain information on the profit and cost structure for the company's products.

Company P8 does not publish separate results. However for the year ended 2003, the parent company’s annual report indicated that revenues from their Australian operations amounted to $93.2 million. The parent company’s Annual Report for 2003, indicated that the Asia-Pacific region segment (with Australia as the major source of revenue) grew revenue by 5% in constant currency terms. A strong performance in Australia and New Zealand was partly due to results from *Lawbase* and *Tax Solution Finder*, and from a significantly improved performance by *Diskcovery*. Electronic revenue made up 28% of segment revenues. The Australian group’s (which includes Company P8) profile report for 2002 to 2006 is listed in Appendix H5.
7.6.8 Value chains and Business models

The various value chains for products and services have been affected by a condensing of
distribution channels. The company operates numerous value chains, specific parts of which
necessitate the operation of different business models. Asked to define a successful business
model from a company perspective, a group of senior staff responded thus: “An organism that
delivers value to its targets (customers).” and which “must embody its sensory capacity and
the flexibility to react effectively to what it hears from the marketplace.” As a professional
services publisher, Company P8 has developed many models to suit its diverse business
requirements, and places them in the different stages of value chains. Their general value
chain example and the business models employed can be explained as follows:

- Stage 1: Harvest information through their information networks via an information
collection model. See Figure 7.12.

![Figure 7.12: The information collection and creation model](image)

- Stage 2: Assign the creation of manuscripts to internal or external authors via a content
creation model. The company believes that content creation options notwithstanding,
the market is still in the process of re-evaluating content, and does not fully recognise
its value or the contribution which publishers make to this value. Consequently, the
company is developing models linked to the building of communities, which can then
be harnessed for additional revenue. The content creation model is shown in Figure 7.12.

- Stage 3: Obtain and convert digital files involving PDF and XML formats, the creation of metadata and databases, editing and quality assurance. Common business models used in this stage are the Co-operation (outsourcing) model and content processing model which have been discussed previously. These models are shown in Figure 7.13.

![Figure 7.13: Outsourcing and content processing/management model](image)

- Stage 4: Printing and CD-ROM production (outsourced in Australia) with content held in their database. Production output is currently divided into 55-60% paper print, 30% online and 10% CD-ROM. The Co-operative model is normally selected as they outsource this part of content production to third parties. The model is shown in Figure 7.14.

![Figure 7.14: Co-operative (outsourcing and distribution) model](image)

- Stage 5: Distribute through traditional or online channels. As subscription services dominate Company P8’s products and services, customers require a name and password to gain access which is covered by their membership fees. Non-members can
access individual items on a pay per view basis. The models used in this stage are the
Syndication model (shown in Figure 7.15), the Subscription model, the Membership
model, the Site Licence model and the traditional bookshop model. The company has
experimented with a variety of pay-per-view models all of which proved to be dismal
failures.

Figure 7.15: A syndication model

- Stage 6: Sales, marketing and promotion through a range of media. Customer demand
  is almost entirely local. The online promotion, traditional media promotion,
  subscription, and aggregation models can be used in this stage. An online promotion
  model and subscription model are shown in Figure 7.16.

Figure 7.16: A subscription model and online promotion model

- Stage 7: Archiving content in digital repositories allows content reprints or re-use in
  the future. A content management model is employed at in this stage. It is shown in
  above Figure 7.13.

On the issue of future business models, Company P8, not surprisingly, is reluctant to divulge
too much. They believe however, that along with emerging markets in health and industrial
relations and in the provision of software and solutions, there will still be demand from their
traditional accounting and legal segments, albeit in a context of increasing digitisation. They will shortly adapt their online platform in response to growing indications that customers want to create their own content within the company’s content.

7.6.9 Risks, opportunities and the future

The company seeks to minimise future risk by keeping abreast of developments in technology and indeed, by aiming to be initiators in technology adoption. Nevertheless, management reiterates its commitment to maintaining the company’s position as a provider of the highest quality in markets where content continues to be king and the major priority of clients remains that of accessing current, relevant information. The challenge however, is to view this situation through their customers’ eyes. They can strategise for digital marketplaces, but this has to align with customer requirements.

As a leading professional publishing house in Australia, Company P8 has unlimited, potential opportunities. Their well known brand name, strong financial support, sound technology base, strong author team, and information collection team all combine to help them remain a competitive player.

Whilst recognised as a publishing entity that specialises in niche markets within the domain of business professions, the company is actively expressing a wider outlook. They do not look upon themselves so much as book publishers as of conduits of data and information, as knowledge publishers and information service providers. They reinforce this perspective by emphasising that they are not so much media-based as focused on information and knowledge management.
The company considers Thompson, the Canadian-based multinational, and Lexis Nexis the U.S. legal database publisher as its two major Australian competitors. However, Company P8 considers that neither has the overall range of strength in areas that it sees as its core competencies. The company concedes that on occasions, the very excellence of its own services can lead its customers into becoming competitors. An example is where the Australian Taxation Office places content purchased from the company on its public website, thus putting at risk purchases from others who can find what they want on the ATO website at no cost. Although the company does not consider government websites to pose an immediate threat, their response to such problems is to be first in the market with the highest quality content.

The company’s ability to make independent decisions of technology, provides incentive to maintain a competitive edge over its main rivals. Company P8 intends introducing software to support content creation and to integrate workflow with content. This process will enable conversion to workflow and management, knowledge and document. However, they consider the development of software to be an important ongoing task.

Finally in terms of risk, there is the question of where liability sits with a publisher in respect of content integrity. For example, if a publisher allows customer access into their content, with the addition of footnotes, or content comments content, what is the liability of the publisher and what are the limitations regarding copyright? This is a serious challenge for the company to consider.

### 7.7 Position of specialist publishers

Three specialist publishers were targeted as the subject of case studies. Companies P9, P10 and P11 are all relatively small in size, and operate in specific business areas and niche
markets. Once again, one company (Company P10) was selected as being representative of the current experiences and perspectives of specialist publishers, with the other two companies being mentioned where major differences occurred or comparison are appropriate.

### 7.7.1 Company backgrounds

Company P9 is an Australian publisher engaged almost entirely in the production of digital output, serving a niche market grounded in the academic conference sector. This involves reliance upon a very expensive and sophisticated technology infrastructure. The basic value proposition entails the provision of a digital publishing service which combines the traditional virtues of quality and provenance with those of digital production and distribution. The major area of activity for the company is that of refereed journal papers sourced from their conferences. However, they have traditionally operated a hard copy book publishing operation, comprising about 20 standard texts with an educational and learning focus. When launched, the company required significant expenditures on technology, and on editorial and technical staff. Central to the delivery of its value proposition was the need to develop and promote its own proprietary mark-up language for describing digital texts. Based on an aggregation of common terms and concepts, this language is now capable of mapping to some 17 different standards. It would have been extremely difficult to fund this development and to pay for the editorial and technical staff, without massive subsidies from the conference business.

Company P10 is an Australia independent publishing entity that, despite its small size, has established itself in the niche market of feminist publications. Operating for 17 years, the company employs only four staff, all of whom are part-time. The company sees itself as somewhat of a pacesetter in the field of Internet publishing and e-books, and in 1995 become only the third Australian publisher to have its entire catalogue placed online. As a
consequence of its size, company P10 has the advantage of being able to implement change quickly and effectively.

Company P11 is an Australian independent publisher of travel guidebooks, catering to a global customer base, and exporting the majority of its output. Their books have been published in 8 different languages. The company is based in Melbourne and has offices in the Britain and the United States. The company generates revenues of around A$50 million, 85% of which is earned from exports (IBISWorld, 2008). The company was formed thirty years ago, and has proven to be a most successful venture, capturing a niche market. The company considers itself a traditional type publisher, producing hard copy output, and it envisages that this format will survive for another 15-20 years. The company principals however, acknowledge that the industry will inevitably be engulfed by electronic processes, and to this end they are looking at prototype business models to allow a smooth transition.

7.7.2 Products, services and value propositions

All three companies identify as core competencies: the provision of high quality content (in either print or digital formats), the ability to organize content, including editorial competencies, the ability to negotiate licensing and royalty arrangements, and to operate within networks of business partners and services, including those for production, distribution, marketing and selling. However, each of these specialist publishers has its own products and services and therefore, has specific value propositions to support them in the market. As an example, Company P10 has 4 unique value propositions as follows:

Value proposition 1: Niche market. Company P10’s focuses on feminist books, and as such this value proposition constitutes one of only a handful of such offerings.
Value proposition 2: *Quick decision maker and flexible business management*. The company takes advantage of its small size and flat organizational structure to offer customers the benefits of changing technologies with provision of rapid and responsive services.

Value proposition 3: *E-book design and format*. Since 2006, they have been co-operating with *ValueChain* (a company that designs e-books) to develop *eBookstore*. By 2007 they had released around 60 titles in e-book format, compared with only four new books in print. They were the first publisher in Australia to make e-books available in four formats namely: Adobe, DX Reader, Microsoft reader and Mobipocket.

Value proposition 4: *Availability of website and trained staff*. The company revamped their website in late 2006, to allow greater flexibility and faster updating. They train staff to maintain the site with information such as reviews, events, awards, new books and also to participate in the design of e-books. The website includes *search, communicating* and *ordering* facilities, has open communication channels with their customers, and offers content in the form of both hard and electronic copy, including the downloading of e-books. The other two companies have similar websites but they are yet engaged in the sale of e-books.

For survival, it is important for specialist publishers to locate a niche market in the publishing industry. Companies P9 and P11 exemplify success in this field. Company P9 offers a full electronic publishing service including the provision of software, metadata, file conversion, content management and quality, whilst Company P11 offers the provision of an additional marketing, sales and promotion channel to its customers.
Company P9 has minimal trade in hard copy books (4% of output), but offers a full e-publishing service to a growing client list. They also sell consultancy services (both publishing and technological), and host world wide conferences based on a variety of themes, revenues from which subsidise other publishing activities including:

- Access to digital content in the form of monographs, single papers and electronic journals.
- Access to journal contents via an archive of titles and abstracts.

Company P11 continues to sell hard copy books, CDs and DVDs. Although they are not yet selling e-books, travelers are able to search the company website for information. Their website is extremely powerful in comparison with those of other publishers and provides specific services as follows:

- Title details for published books (book information)
- A facility for purchasing online (online shop)
- Booking services for accommodation (Hayspack Accommodation)
- Digital guides (Pick & Mix)
- Classified advertisements (for example, e-bay buy and sell…)
- Displays of images and TV (TV, Youtube)
- Consumer e-mail addresses (Comet e-mail update)
- Bluelist (Multimedia: Online, Print)
- Thorntree (Online forum)
- Forum for Bloggers (Travel stories, information)
7.7.3 Customer base

Company P10 operates in a number of niche markets, including those for specific trade and educational books, but its particular area of interest is the field of feminist publications. Their client base is diverse. A number of their books have been translated into different languages for publication overseas.

Company P9 has a history of expansion into overseas markets. Their customer base predominantly consists of academics who seek either to publish their own papers or to access those of others, on a subscription or per item basis. The company provides a direct sale facility for all its products via its website. However this channel is currently not generating significant revenue.

Company P11 caters to a worldwide traveller base who seek information regarding travel, history, geography and social and political conditions in a wide variety of travel destinations. They lay claim to an extremely loyal customer base both as information providers and content creators. The company has pioneered the use of multiple physical and electronic channels to serve multiple customer segments.

7.7.4 Corporate information technology management

Use of and attitudes to technology

As a small independent publisher, Company P10 believes that it has to utilise new technologies to maintain an advanced technological position if it to acquire an adequate market share. Although they recognise the fact that larger companies tend to have more investment funds for new technology, they argue that this advantage can be weakened by slow responses and decision making.
The company places great emphasis on the effects new technology will have on its readers and authors. For example, on the development of e-books, a company director said: “Once we were able to see how we might use the technology, we could then see how our readers might. We subsequently contacted our authors and requested their permission for electronic rights with a royalty, because we hope to increase income streams for our authors. To satisfy our readers’ requirements for reading e-books, we have made e-books available in four formats.”

Company P9 is reliant on new technology to stabilise its business. Following extensive work involving 20 industry standards, the company developed a core publishing and workflow management system, claiming it as the world’s first, fully online publishing environment. The system is capable of handling management publishing proposals, version control for drafts and editions, and contracts. The system automatically places completed texts (print and electronic) into an easily managed self-publishing site, as well as into personal sites for each author. Company P9 attributes the dramatic growth of its business (ten fold over the last five years) to the existence of its core management systems. The company is aware of the potential inherent in the semantic web, something that along with Company P9, differentiates it from most mainstream commercial publishers. The company is an extensive user of XML for the management of often relatively small print runs, and for the transition from source to print and web outputs using open standards. A long-standing interest in metadata and ontologies aligns well with the company’s interest in the semantic web, but they realise that there is a long way to go before such potential can be fully understood, let alone exploited.

Compared with Companies P9 and P10, Company P11 has adopted a more cautious approach towards new technology investment. Whilst they believe that technology is important and influences publishing operations, they argue that the implementation of new technology is not
just an internal decision. They consider that the industry as a whole needs to change and that customers need education as to the challenges of new technology. The company believes that their traditional system provides a sound operating base and, as the adage says, “if it’s not broken, why fix it?” They believe that as a new technology, POD will only be effective with the advent of a digital environment facilitating direct customer interaction, and that the amalgamation of POD technology within traditional formats will prove to be ineffective from a financial perspective. The company does consider however, that POD technology will experience rapid advances in the future. For the present though, the company will concentrate on developing its web sites as multimedia windows for different customer segments. They believe that the development and exploitation of a powerful website holds the key to future customer satisfaction and the expansion of their business.

**Digital strategy**

All three companies have their own digital strategies, based on their particular situations and management experience. Company P10 believes that revamping of their website and training staff is their first priority. By comparison, Company P9 believes that technology and copyright are the most important vehicles to drive their business into a digital environment. Company P11 is still involved in employing traditional methods, and considers that the most important aspects that need to be addressed are the design of powerful web sites and digitising their content.

**E-books**

Company P10 is concentrating on the development of e-book technology and its various formats. They believe that e-books will provide future solutions for the problems facing book publishers. Company P9 agrees, however as they are not a mainstream book publishing business, they do not see the need to become involved with the design of e-books. Conversely,
Company P11 considers that customers are not ready for e-books, and they do not think that the production of e-books is currently relevant to their specialist business.

7.7.5 Relationship management

Relationships with authors

When interviewed regarding relationships with authors, a director of company P10 said:

“It in the past we accepted unsolicited manuscripts, usually via various networks we have in place. In our academic circles we sometimes learn of work being undertaken which is of interest to us, and we would then ask the author to send us their finished manuscript. We also have had a commitment to publishing our authors more than once, so some authors have four or five titles published by us.”

The company generally contracts its authors and since they commenced selling e-books, they request authors’ permission for electronic rights for payment of a royalty. Company P9 adopts a more simplified procedure, inviting authors to submit papers and if accepted, offering them a contract giving the company publishing rights over a specific time frame, with the author retaining copyright. As with Company P10, Company P11 has various relationships with its authors, including instances where its authors are also its customers.

Relationships with suppliers

Prior to Company P10 adopting their e-book strategy, they outsourced editing, production, marketing and printing. Since the beginning of 2007, the company has been heavily involved in e-book development. Most of their products are now in e-book format and are sold online. They have basically ceased hard copy printing. The company still outsources editing tasks, but most e-book design is completed in-house. Company P9’s Mumbai office engages in data harvesting, which involves trawling the Internet for e-mail addresses, which provides a
valuable marketing tool for sourcing potential clients for their conferences. The Mumbai office other activities include typesetting and checking manuscripts, which entails the use of sophisticated technology and highly qualified staff, with a strong focus on quality control.

**Relationships with partners**

All three firms engage in common partnership arrangements. Company P10 has an interest in building partnerships or collaborative relationships with publishers, both local and overseas. They co-operate with other publishers in co-productions and in the translation of their books into different languages. The company maintains strong partnership links with technical companies to assist them in the creation of e-book frameworks and maintenance of their website.

Company P9’s partnerships are associated with its conference business. Company P11 differs from Companies P9 and P10 in that it does not engage in partnerships relating to its core business. It does however, collaborate with partners from other industries (e.g. in tourist accommodation or airlines), and with licensing book content to foreign publishers, with Amazon.com and various other distributors. However, for efficiency, their preference is to conduct their business independently.

**Relationships with customers**

All the companies seek and encourage feedback from customers. Following the introduction of an eBookstore, Company P10 has access to both existing and potential new readers via its website. They still sell small amounts of their books through traditional feminist bookstores, book clubs and libraries, all of which provide alternative distribution windows. Their ultimate goal however, is to conduct their business entirely online. To reach their customers, Company P11 use their well-known brand name, multi-functional websites, customer interaction
activities and frequently updated information, to complement a wide range of services and marketing tools. The company believes that in a digital environment, all players can potentially comprise a virtual community, and that open communication channels are vital to the future success of each business.

### 7.7.6 Distribution channels

The three case study companies market their products and services through various channels, both traditional and electronic. There are occasions where they use the same channels but a different methodology. Company P10’s 3 major distribution channels are as follows:

Distribution channel 1: *Company websites.* This is the company’s main channel for contacting customers following the shift in focus from printing books to primarily publishing e-books. Customers still have the option of purchasing hard copy books through the website.

Distribution channel 2: *E-aggregators.* The company has placed its e-book information with e-books aggregators (for example eBook.com), e-operators (such as *Google*) and e-retailers (such as *Amazon.com*). When customers click on a link, it will automatically link back to their own web site.

Distribution channel 3: *Traditional distribution channel.* The company maintains partnership arrangements with both local and overseas distributors. Local distributors forward books/CDs/DVDs to bookshops, libraries, and book clubs. If overseas, the publishers will also be responsible for translation.
By comparison, Company P9’s main channel is their websites, which accounts for the majority of sales. Only their academic books are distributed into bookshops. Company P11 has multi-channel distribution activities similar to those of general trade publishers.

### 7.7.7 Financial aspects

Currently, Company P10’s main income stream is from their website. Their major product is e-books, however they still maintain a repository of hard copy books from previous years and books purchased from book fairs (normally 300 to 1000 copies).

The company was unable to provide accurate financial information regarding their income from e-books. In general however, compared with traditional books, there are cost savings on the printing, stock on hand, shipping, and distribution of e-books. On the negative side, e-books necessitated increased investment in the re-design of their web site, infrastructure and software. As opposed to other publishers, Company P10 does not consider e-books as an additional extra, but rather, as its priority product. The company does however, believe that it is premature to evaluate and to share the success of their e-book models.

### 7.7.8 Value chains and business models

All three specialist publishing houses operate their own value chains. To satisfy each stage of the value chains there are optional business models available. For example, a generic value chain of Company P10 and its various business models would be as follows:

- **Stage 1:** Acquires content from authors or owners (via licensing or payment). Owners can be other publishers, both local and overseas. Company P10 has found the annual Frankfurt Book Fair to be a valuable source for co-productions. The content licensing model and the co-operative model are used in this stage (Shown in Figure 7.17).
Stage 2: Designs e-books and presents them on their website. The major focuses are designing and converting digital files into four formats (Adobe, DX Reader, Microsoft reader and Mobipocket), creation of metadata and databases, editing and quality assurance. During this stage, all technology issues are handled by a third party, whilst Company P10 manages the content. They have revamped their website to enable staff to make changes in accordance with company guidelines. The general business models in this stage are the *e-book creation* model and the *co-operative* model, as shown in Figure 7.18.

Stage 3: Printing. Since 2006, the company has embarked on a strategy of converting their publishing from traditional books to e-books, which is characterised by small print-runs. An example is that of co-productions stemming from Book Fairs, producing print runs of 300 to 1000 copies per title. The company will consider POD...
for requests of old titles where no stock is held. The POD model and the multi-printing and multi-delivery formats model (shown in Figure 7.19) can be utilised in this stage.

Figure 7.19: A multi-printing and multi-delivery formats model

- Stage 4: Sales and marketing. The bulk of sales are via their website. Promotion of their hard copy books and e-books are through their websites, other e-aggregators’ websites, and some traditional media such as radio or TV. The business models used are the direct-to-customer model, the aggregation model, the multi-online-distribution model and site licensing model. The multi-online-distribution and aggregation models are shown in Figure 7.20.

Figure 7.20: Multi-online-distribution model and aggregation models

By comparison, Company P9 operates a value chain sourced from conference papers (where authors submit papers which are sent to referees). If the papers are accepted, content
management proceeds through the workflow process (formatting, quality control, inclusion in
website and databases). The final step is distribution (direct to customers via community and
author portals, and to the retail trade through a B2B e-commerce channel, and small amounts
via traditional trade distribution channels). The company’s main business model is the
conference processing model.

Company P11 differs from the other two companies as follows:

- **Content acquisition process.** Occasionally the company acquires content from authors
  or owners (via licensing or payment), whereby authors are requested to send their
detailed plans for inclusion in a selection process. This process is completed either by
the company’s own editors or by commissioned editors. After a project has been
selected, authors are requested to submit a manuscript by a certain date. Finally, the
manuscript will be proof read by internal or commissioned proof readers.

- **Printing.** Whilst the company retains control over logistics (supply of paper,
  transportation), 98% of printing is outsourced. Current alternative products are CD-
ROM and DVD. They have nominal involvement in e-book design and they do not
have a POD technology implementation strategy in place.

- **Distribution.** Their own warehouses are used for local requirements, whilst overseas
  commitments are outsourced.

- **Sales, marketing and promotion.** Are channeled through print media, TV or radio
  programs, physical and virtual book shops, such as Google and Amazon.com.

Company P11 operates a well-established sequential model for product development. The
process commences with the company creating a brief, based on a new idea. It then searches
for authors, contracts them, compiles research material, creates, edits, prints, distributes and
finally sells to customers. To support printing and distributing activities, they utilise a large production and distribution model. They still see themselves as traditional publishers, and believe that the traditional business models will continue indefinitely. The only foreseeable changes to the models will be from single to multiple inputs and outputs. Multiple inputs can be Blogs, SMSs, Manuscripts and Feeds. Multiple outputs can be Mobil, Print, Internet, Video and Audio. These multiple inputs and outputs will eventually lead the company to consider various ways of product development, production and distribution.

7.7.9 Risks, opportunities and the future

Company P10 perceives significant opportunities if the demand for e-books increases. As one of the few publishers in Australia completely devoted to the production of e-books, they see themselves as holding a competitive advantage. However, as e-books are still considered to be at the embryonic stage, there is always a high risk element in being a pacesetter. Some of the major risks that Company P10 faces are:

- Market demand uncertainty
- Technical problems associated with e-book readers or devices.
- Marketing: Alternative channels to say, traditional book shops, have to be developed.

As an early player in the e-book market, company P10 has to learn how to respond to this marketing challenge from the ground up. They will need to explore different avenues to promote their books whilst being mindful of the cost factor.

Ironically, one potential area of both risk and opportunity for Company P9 stems from its technological strengths. Although advanced technology can viewed as an advantage, this needs to be balanced with the cost factor involved with implementation and fine tuning. There is also a significant cost factor in retaining appropriately skilled people, with the
accompanying risk of knowledge loss and damage to the business through the departure of these key people.

Company P11 has been highly innovative in its use of the web. They are keen to develop their web site as the platform for interacting with their customers and to increase customer satisfaction. Their ambition is to become international leaders in the electronic publishing field. They are taking advantage of collaboration with other industries, for example with producers of Global Positioning Systems and B2B customers in Hotels, Airlines and Media, to establish their global position whilst creating revenue stream opportunities. As a specialist and niche publisher, they have unique opportunities that are not immediately available to other publishers. They are currently merging with a major global media company, and they believe that this decision will provide opportunities for increased levels of success. The main challenges for the company will be how to operate in the merged environment and how to introduce new technologies while maintaining their unique style, voice and brand positioning.

The major source of risk for the company is how to identify and respond to the demands of the younger generation. The company currently still delivers the bulk of its content delivered through traditional channels, as it takes time to turn new ideas into reality. Customers now demand efficient, punctual updating of information in a variety of formats. There are now a number of platforms available such as Blogs, Flickr, Youtube, Myspace, and additionally, there are self-publishing opportunities for people to both communicate and exchange information.

Company P10 has published 170 books in hard copy format, but has now changed its focus to e-books. This strategic change has necessitated a change in business models. The new business model (e-book model) has so far progressed only to the first stage, which is that of
the conversion of hard copy to digital format. The next stage will be that of marketing and sales, although they remain unsure about how to promote the new product. Furthermore, despite the decision to cease publishing in hard copy format, the company now finds that following the appearance of some books in an e-format, customers have begun to request hard copy versions. This clearly has serious implications for business models, but at least the company is clear about one thing. It will adhere to the decision no longer to sell its books through book shops, which at least will bring a little more certainty to this aspect of its future business models. They indicated however, that if a book is showing signs of a continued lifespan, reprinting hard copy would be considered, plus POD or an electronic book. The company believes that the digitisation of its entire list has resulted not only in increased sales, but also in demonstration of the long tail effect in the form of print-on-demand sales.

Company P9 is extremely comfortable with its competitive position in the marketplace, given that it owns a conference business which underpins the supply of content to its publishing arm. They perceive potential opportunities through the development of semantic technologies and, given their existing expertise in connecting and processing digital documents, they believe that they have every reason to be positive about their future.

The three cases discussed above all have their particular focus areas involving the implementation of various strategies. They all have confidence that their businesses can survive in a competitive climate, and believe that technology is pivotal to achieving their business goals. Technology selection does, however, need to be carefully considered in relation to their individual situation and financial circumstances. Finally, the companies need to commit themselves to a full understanding of their current business models, and of how to integrate them into the emerging digital environment.
7.8 Position of university presses

Of the established university presses (Companies, P12, P13 and P14), Company P14 has been selected for a detailed description, with the other two serving as a basis for comparison. Company P14 can be characterised in terms of a cross-section of traditional and digital publishing.

7.8.1 Company background

Established in 1962, Company P12 is one of Australia’s leading publishers in the fields of Australian studies and natural history. Its list also includes a wide range of titles in other scholarly and general subject areas. The company has traditionally been textbook based, although in recent times it has become more diversified. Print runs are governed by client requirements and there are cases where additional copies are printed (maybe 100 or 200) for the trade or booksellers if there is a perceived need. The company sees itself as a traditional university press, with the majority of sales derived from traditional distribution channels. Revenue (95%) comes from sales of hard copy books. They recently launched an online bookshop on behalf of the existing campus bookshop.

Company P13 has a thirteen year history and has evolved from being a producer of CD-ROMs to being Australia’s foremost aggregator of databases, as well as being an online publishing service. The company is Australia’s only university press that is principally electronic, with 96% of its sales coming from electronic products. The company claims to be Australia’s leading scholarly e-press, with online delivery of Australasia’s largest collection of scholarly research material. Company P13 publishes Australasian content for the education, research and business sectors, and publishes more than 80 online indexed databases, including a range of indexed databases with links to full text documents online.
Company P14 has been at the forefront of innovative Australian publishing for more than 50 years. It has launched the careers of many great Australian novelists, published contemporary Australian poets, been a pioneering force in children’s and young adult publishing, and has set the benchmark for award-winning scholarly and Black Australian writing. It is a dynamic university press known for its risk-taking philosophy, and a commitment to publishing works of high quality and cultural significance. They are actively involved in the development of a digital dimension to all their activities, and intend to be major players when the digital age matures. Currently they provide a range of packages which, depending on the needs of the purchaser, comprise the book, electronic versions of the book in PDF format and CDs, and e-books. Company P14 specialises in Print-on-Demand services, and is the leader in the use of POD technology in the Australian book publishing sector.

7.8.2 Products, services and value propositions

Company P13 clearly differs from Companies P12 and P14, as the company derives the majority of its revenue from the sale of digital products and services. Companies P12 and P14 have similar products – books, CDs and DVDs, but their services and distribution channels vary, which leads to different value propositions. Company P14, for example, has 5 major value propositions as follows:

Value proposition 1: \textit{Print-on-Demand (POD)}. The main source of revenue for the company is from POD. Their internal bookshop uses POD technology to provide a full service from printing to binding. Books or single chapters can be ordered.

Value proposition 2: \textit{Sales of books through their own website}. The company also regards this as a communications and promotional resource, enabling downloading of images of their...
covers, and author information. Their web site can also provide a link to other services (for example, to e-books or Mp3s) and acts as a resource for reading groups and educators.

Value proposition 3: *Self-publishing services.* The company provides a platform on its website which enables self-publishing. They believe there is potential for self-publishing via a POD model, including the re-use and re-packaging of published materials to create new text books. The general manager indicated that some lecturers prefer to create their own teaching context. POD can be very effective in this situation.

Value proposition 4: *Strength in copyrights.* The company recognises that copyright issues are extremely important, but are difficult to deal with in a digital world. They have set up strategies to deal with Rights issues. They operate the DOI (Digital Object Identifier) system, which enables the identification of content in all course notes that lecturers provide, and ensure that it complies with copyright.

Value proposition 5: *Sales through collaboration with other publishers.* The company is one of seven publishers who co-operate with the Copyright Agency to provide their content for sale through CAL. They can sell their books on a chapter-by-chapter basis (as well as in their entirety), and CAL administers the platform and a search engine.

By comparison, the main source of revenue for Company P12 is through sales of hard copy books. They also have some partnership arrangements, where they undertake special publishing projects for clients, to whom they sell the finished product. As opposed to both Companies P12 and P14, the key value propositions for Company P13 are:
• Easy search infrastructure using to their bibliographic online databases. These online databases give access to fully indexed text journal articles by using a single search interface.

• E-press, which is a full e-publishing service representing a cover-to-cover aggregation of journals, monographs, conference papers, reports, occasional series and other grey literature published in Australia, and hitherto not widely available online.

• Copyrights, the agreement between Company P13 and the Copyright Agency to clear rights to these journals for inclusion on the aggregated service, marked a significant turning point in online access to scholarly content in Australia.

7.8.3 Customer base

The management teams at the three university presses were interviewed, with outcomes revealing both similarities and dissimilarities in approach, but in each case, the objective of maintaining what were remarkably stable customer bases. The majority of customers for Company P14 include libraries, an internal bookshop (most sales are POD), external bookshops, Amazon, individuals (teachers, students or others) who purchase online, and online bookshops (collaborative material, POD and e-books).

There are considerable similarities in the makeup of the customer bases of the three firms, who are all basically involved in the academic or higher educational market. However, there are some aspects where they differ. Company P12 has developed a special niche within its customer base, involving the publication of books for local councils, who supply manuscripts for compilation, editing, and publishing, following which they are resold back to the councils. Company P13’s customer base comprises libraries (notably academic, state and corporate libraries) and small publishers, with nominal direct sales to end users via the Web. Their
customer base also includes government agencies and research institutes in Australia and New Zealand, and increasingly in Asia, the UK and North America.

7.8.4 Corporate information technology management

Use of and attitudes to technology

Whereas all three university publishers agreed that technology issues were important, they differed in respect of attitudes to its development and implementation. Companies P13 and P14 have adopted a somewhat more positive approach to the use of technology, than Company 12. Although the latter believes that book production has been revolutionised through the onset of digital printing and desktop publishing, with design and typesetting being integrated and related activities completed on a screen, their attitude toward new technologies remains one of *wait and see*. They are enthusiastic however, about the development of their website, which they believe to be an important tool for marketing and sales. However, at this stage they are not directly involved in *Blogging*, although they do encourage authors to set up their own *Blog* facility, as this is potentially valuable for promotion and for obtaining customer feedback.

Companies P13 and P14 have both made extensive use of technology in order to gain market share and to obtain a competitive edge. They have both sought to market a technology-intensive value proposition. Company P13 has endorsed the potential of *many-to-many* forms of communication, including contributions from end users and the potential value of distributed content and cognition. They have developed expertise in metadata creation, file conversion and content management. They are extensive users of XML for the management of often relatively small print runs, for the transition from source to print, and for web outputs.
using open standards. They are interested in the potential contained in developments involving the *Semantic Web* and *Web 2*.

Company P14 is heavily involved in the use of Print-On-Demand technology. In 2001 they initiated their own POD centre within a retail book shop, taking advantage of the opportunity to aggregate content that was held digitally. Company P14 is interested in how to integrate digitisation with efficiency in their prepress operations, leading to sales opportunities and commercialisation of their content into different formats. They have invested in the development of their website, and believe that it is a very important resource in terms of the company’s image, marketing and sales. Currently, they are creating *MySpace* sites for the provision of high profile books. They believe in the concept of different sites for different demographics (for example, age and gender groups).

This commitment to technological development by Companies P13 and P14 is a reflection of their continued appreciation of the value of technology to the future sustainability of their businesses. Hence, while Company P13 outsource aspects of metadata creation and file conversion, this has been done more for technical and quality reasons than simply to cut costs. Both Companies P13 and P14 have invested in proprietary content management and workflow systems. Key files and databases at Company P13 are based on the Terratext Foundation software developed within the company's parent institution, and for which Company P13 has a permanent licence. In the case of Company P14, all files are digitised and tagged digitally following Digital Object Identifier (DOI) guidelines to cover copyright issues. This process simplifies content management.
Digital strategy

All three companies have implemented strategies based on their belief that they are entering changing times and that preparedness is essential. Company P14’s strategy involves a step-by-step process including web site development, digitisation of their content, POD and e-book development.

E-books

Company P14 believes that the new digital world and its related technologies will provide excellent opportunities to exploit backlists, POD and e-books. They argue however, that the marketplace for e-books is still very immature. Despite offering some e-books through their web site, sales were minimal. As a traditional university press, Company P12 is currently not concerned about the development of e-books. They sell reference information through their website, for example, a law reference book (4000 units of hard copy) is now available online with associated search facilities, but is not available for downloading. Access to this material is via a password and subscription fee. Compared with companies P12 and P14, Company P13 is more advanced in e-book development. The company is accepting proposals for scholarly monographs to be published in e-book format, which will be available to all their customers via the Company’s web sites or through third party aggregators.

7.8.5 Relationship management

Relationships with authors

As Companies P13 and P14 are involved in POD and self-publishing, their authors can also be their customers, who search for suitable content, then compile and publish as new text books. Company P14 sees considerable merit in the collaborative creation of content, arguing that all links between creators (authors) and editors, and those additional external collaborative components can add to the overall result. They are in a quandary however, over
the issue of the potential sale to authors of rights for books whose shelf life has ended. They foresee continuing issues of ownership and copyright in this matter.

**Relationships with suppliers**

Companies P12 and P14 outsource their printing operations. Company P12 also outsource editing and technical typesetting within Australia, and minor production jobs to Mumbai. Company P12 specialises in publication projects for local councils where it compiles, edits, and publishes customised material for resale back to the client.

**Relationships with partners**

Although the three firms have particular relationships with higher education and scholarly communities, they differ markedly in their collaborative activities. Company P13 has the most diverse range of partners including the National Library of Australia, the Copyright Agency, and a range of government departments, various research centres in such diverse fields as family studies, criminology, agriculture and languages, and a number of small publishing operations seeking to go digital.

Companies P12 and Company P14 are more traditional university presses who nonetheless seek to work in collaboration with external partners. One example of such collaboration is their relationship with Amazon.com. Both companies sell their books through Amazon.com. However this occurs not through a direct relationship with Amazon, but on the basis of partnership arrangements with agents or distributors in the U.S. This arrangement operates on the basis of commissions paid to the agent or distributor based on sales. The major differences in partnership and collaborative arrangements between these two university presses include:

- Company P12 has partnership arrangements with E-operators including: U.S. Libraries, netLibraries and Google scholar. In many ways these partners add value to the
products and services of the case companies. Company P12 partners with Google Scholar, which provides them with exposure. Potential clients can only printout 2-3 pages and the table of contents, with normally only 20 percent of the content being available on the Web. These restrictions are imposed by Company P12. Google is allowed access to these tasters when people click, and also receives advertising revenue. The link between Google and Company P12 operates on the basis of the provision of content by the company, and the display of its material on the Google site, with each click resulting in money for Google.

- Company P12 maintains co-operative links with other publishers, both local and overseas. If the company considers that a publication has overseas selling potential, it will seek out an overseas publisher and sell an edition. Alternatively, a common practice is where the company sells the rights to the other publishers. In such cases, the authors receive a reduced royalty of 10% of what the publisher has purchased, which is generally at an already substantial discount (sometimes up to 75%). Authors receive more from local sales than from arrangements with overseas co-publishers.

- Company P14 has a strong relationship with CAL and with other publishers. These partnerships have paid dividends by giving Company P14 the ability to publish customised content, using the DOI (Digital Object Identifier) system to draw content from different sources. The DOI system enables the publisher to identify the content that individual lecturers provide, and to confirm that it complies with copyright. They tag it digitally (following DOI rules), and can subsequently assure CAL that the published material conforms to the requirements of copyright legislation. The various publishers involved all receive a royalty when the book is printed.

- Company P14 has a partnership agreement with an external distributor, who warehouses the company’s books and is paid a fee. In addition to distribution, the firm
is responsible for promotional activities, such as talking with literary agents, book
sellers and media reviewers. Company P14 only appoints publicists on rare occasions.

Relationships with customers

All three companies’ customers are predominantly students and academics. Company P12
maintain relationships with customers through traditional means, that is largely through
bookshops. Company P13 through an online environment, and Company P14 uses both
methods. However, depending on their distribution channels, they have to consider various
options to maintain good relationships with their customers.

7.8.6 Distribution channels

All companies offer and market their products and services through multi-distribution
channels. These distribution channels include both traditional bookstores and online facilities,
with the majority of sales continuing to be channeled through internal and external bookstores.
Company P13 communicates with its customers mainly through online channels. Company
P14’s main distribution channels are as follows:

Distribution channel 1: Internal bookstore. Company P14 distinguishes itself from the other
two companies by its heavy involvement in Print-On-Demand. This is accessed by both
students and lecturers in the company’s own campus bookshop, resulting in the bulk of
revenue coming from the POD operation rather than from sales off-the-shelf.

Distribution channel 2: Company web site. They have online ordering and purchasing
facilities, enabling customers to purchase direct via the web site, both in hard copy and
electronic format. They can also download e-books. Teachers, can also purchase chapters
from different books.
Distribution channel 3: *Collaborative web sites*. Customers can purchase through the collaborative web sites, for example those of the APA and the CAL.

Distribution channel 4: *External books shops via distributors*.

Distribution channel 5: *Electronic aggregator and online bookshops*. This involves the sale of products via aggregators such as e-Book.com and e-retailers, like Amazon.com.

Distribution channel 6: *Schools or Universities via representatives*. Company representatives visit schools and universities to promote their books. Normally academics who include books on their reading lists are eligible to obtain free copies, because the publishers rely on them to do this.

### 7.8.7 Financial respects

Company P14 derives income from various distribution channels. However, unlike other publishers, their most important income stream is from a POD service provided at the university bookshop. The company began their POD centre in 2001, and now sells 8 million pages a year (@8 cents per page, $640,000 per annum) through this internal channel. The company believes that the initial investment for the equipment was prudent. For the external market, the major income stream is derived from sales to bookshops via distributors in the normal way. The company's traditional profit and loss table is similar with that of other educational publishers an example of which is shown in Appendix H6.
7.8.8 Value chains and business models

The value chains of the three firms are all familiar in scope, although that for Company P12 is a more traditional chain of: author to publisher to printer to distributor/bookseller to reader. While in essence the same, the value chains for companies P13 and P14 are much more geared to the needs of a digital environment. The major stages in the value chains for Company P14 are as follows:

- **Stage 1:** Acquiring content from authors or owners (via licensing or payment). There are two models used in this stage, the content licensing model and the self-publishing model. The self-publishing model is shown in Figure 7.21.

![Figure 7.21: A self-publishing model](image)

- **Stage 2:** Obtaining and converting digital files involving PDF and XML formats, the creation of metadata and databases, editing, quality assurance and copyright confirmation (through CAL, DOI system). Content creation models, outsourcing models and co-operative models are used in this stage.

![Figure 7.22: A content creation model](image)
• Stage 3: Printing (outsourced, black and white in Australia, colour overseas) with content held in digital repositories. Aggregation models, co-operative models, outsourcing models can be used in this stage.

![Diagram](image)

**Figure 7.23:** A outsourcing model and a co-operative model

• Stage 4: Distribution to Amazon through a U.S. agent and to external bookshops via a distributor in Australia. Aggregation models and co-operative models are used in this stage.

![Diagram](image)

**Figure 7.24:** An aggregation models and co-operative models

• Stage 5: Sales, marketing, promotion through representatives, print media and virtual and physical book shops. There are many models used in this stage, depending on their distribution channels. These include the POD model or direct-to-customer model where they sell through their own bookshop, traditional representative sales model where they promote their books to schools and universities, online-to-customers model
where they sell their books or e-books through their websites, and a subscription model or aggregated model, used when they sell through partners.

Company P12 has traditionally been textbook-based, although in recent times it has become more diversified. The main parts of their value chain differ to those of Company P14, as they have their own distribution arm and do not make extensive use of POD technology. Their adherence to traditional methods is reflected in their business models. Their mainstream revenue is derived from sales through bookstores. Their major business model is therefore, linked to bookstore selling operations. They also use an online to customer model, a direct to customer model to cater for telephone or fax requests, and aggregated models for collaboration with Google or Amazon. Although not firmly committed to the production of e-books, the company employs POD technology to cater for books that do not warrant a long print run.

Company P13 has different value chains to the other two companies, due to its involvement with online publishing and distribution activities. Their value chain can be described in the following stages:

- **Stage 1**: Licensing content from owners, using the services of the Copyright Agency.
• Stage 2: Obtaining digital files from a number of partners, including the National Library (who provide the files by scanning them) or individual publishers (who send the material as PDF or XML). This involves extensive outsourcing. For example, metadata production is outsourced and for journal indexing, journals go direct from the journal to the indexer. However, the publisher plays a key role in quality assurance.

• Stage 3: Building files and databases: This is currently performed in-house using their own software. They are investigating other arrangements including gaining a presence on corporate Intranets and Portals.

• Stage 4: Sales, marketing, promotion, based on a combination of links to various consortia, licensing and selling content.

Company P13 sees itself as having a hybrid business model that involves publishing and aggregating largely on a business-to-business basis. The hybrid model emerged in 1989 as a cost-recovery model, but since 1997 Company P13 has operated as a commercially sustainable (but not-for-profit) publisher and aggregator. Extending this perception to take a more atomic view of things, a number of component or sub-models can be discerned in operation at the company.

7.8.9 Risks, opportunities and the future

Company P12 is a successful, long-established university press. The company has traditional business methods, and is comfortable in the knowledge that the business continues to display healthy growth patterns. Initially apprehensive regarding the digital revolution, they have now commenced steps to change and expand their business. Having established relationships with e-operators to expand their distribution channels, they are aware of content control and copyright issues, aspects that require constant attention. Compared with the other two university presses (Companies P13 and P14), Company P12 adopts a pragmatic attitude
toward technologies, despite believing that technology has and is fundamentally affecting their business processes. The company is comfortable with its current situation and is reluctant to embrace radical change. The risk for the company is that if they do not become involved in digital change, they may lose their competitiveness in the future.

Company P13 sees very little on the horizon regarding potential risks, and in particular, nothing in the way of threats from new entrants or from developments in technology. In terms of good governance, they are focusing on keeping costs down, for instance in relation to royalty and licensing fees. The company continues to seek opportunities to improve the delivery of its infrastructure, in order to reduce the unit costs of production. There is little sign of any potential problems from for instance, channel or supplier conflict. The company is satisfied with ongoing developments in Open Access publishing, regarding it as being highly domain and content-specific and where the future may lie in the publication of material that is not saleable on a commercial basis. Company P13 is currently participating in a local repository experiment, for which it is providing input on software and content management. However they see this more as a goodwill gesture than as a commercial venture. So far as technology is concerned, they have been early adopters of digital opportunities, and foresee further opportunities in the digital publishing space, owing to their strengths in metadata creation and management and in indexing and searching. They are also intending to pursue new markets comprised of library consortia and large libraries in Asia, the United Kingdom and North America. The wider objective is to repack and reformat existing materials for corporate and enterprise markets, and to develop new products both with regard to aggregated services and content.
Company P14 is considered a pioneer in the publishing industry through its involvement in the use of Print-On-Demand technology. The availability of POD provides an opportunity for them to establish closer business relationships with their customers, and to gain an edge over their competitors when the digital era fully matures. However there are risks which they have to address:

- Copyright: How to control copyright is a serious issue.
- Channel conflict: In particular, how to maintain relationships with booksellers.

All three companies are confident of maintaining their place in the market in the face of expected changes to value chains in the future. They are not overly concerned about possible disintermediation as a result of technology, but all agree that booksellers have reason to be concerned.

### 7.9 Comparing the categories

Although each of the five categories of book publishing has been analysed in some detail, a few words of comparison between the categories might be helpful at this stage. While emphasising that the five categories are still to some extent arbitrary in nature, and that there are overlaps as well as differences between the five, four themes have been selected for comparison: general trends, technology development, supply and value chains and business models.

*General trends*: All five categories of book publishing have been affected by the impact of globalisation and technological change, although not always to the same extent. The Education and Trade segments have been most affected by changes in these areas, but even then one must be careful with generalisations. For example, company P6, while subject to strategic decisions taken in the United States, is very much influenced in decisions on content...
by the demands of the local market and in particular, by the requirements of State
governments. This to a somewhat lesser extent is also the experience of professional
publishers. Trade publishers on the other hand, with minor modifications for local markets,
are much more homogeneous with regard to markets and products, and are frequently at the
leading edge in technological terms. Specialist publishers reflect elements of both sets of
experience. For example, company P11, which operates in a niche market, is nonetheless
global in scope, and very advanced in its use of technology. Companies P9 and P10 on the
other hand, while technologically advanced, are focused on much more limited markets,
despite these being to some extent international. University publishers, while national in
orientation, tend to operate most effectively at state level, and all employ advanced
technology.

Technology development: The research suggests that in this area, what happens is not simply a
matter of money. Hence, global education publishers, while enjoying substantial financial and
technical support, tend in Australia to limit their infrastructure and applications to the abilities
of their customers to interact with such facilities. In the case of one professional publisher, P8,
their regional role enables them to operate somewhat more independently of their European
parent. Both specialist publishers and university presses are in the fortunate position of being
able to take independent decisions on both technology infrastructures and applications, with
for example company P9 making growing use of semantic technologies, and P10 deciding to
exploit technology to focus entirely on the publication of e-books. In the case of P14, this
involves a major injection of resources into print-on-demand. Again Company P11 finds itself
in the position of not only being technically-advanced, especially in terms of Web
developments, but also of having a global, technology-literate client base spanning a range of
demographics. Finally what emerged very clearly from the case studies is the fact that
technology is only technology. Technology is a necessary element in the process of digitisation in book publishing but it is not sufficient. For real progress to be made both in terms of digitisation and the future of book publishing in Australia, cultural change is required across the industry. In the absence of such change the uptake of e-books seems likely to continue to be confined to small groups of readers within very specific niche markets. This conclusion can also be drawn from the findings of the end user survey.

Supply and value chains: Most of the case study companies were in the position of operating traditional supply chains, while exhibiting various signs of hybridisation. The exceptions were P9, P10 and P14. P9 was effectively digital from the outset, while P10 had recently migrated from a traditional to a digital supply chain. P14 had more in common with the mainstream in terms of its hybrid supply chain, but lay outside the mainstream owing to the nature of its commitment to the hybrid approach. A similar picture emerged with regard to value chains, with in all cases the focus on customers becoming stronger, and the influence of digitisation reflected in the presence of new players and/or new roles for existing players. The research has produced no evidence for any form of disintermediation in either value chains or supply chains. In general, educational publishers such as P5 and P7, continue to exhibit most adherence to traditional value chains, with specialist and professional publishers as represented respectively by P11 and P8, being further down the continuum towards digitisation.

Business models: At first glance, the great majority of business models in use across the five categories of publishers investigated in this thesis are the same. However, on closer inspection and notwithstanding evident similarities, there will be found to be differences in scope, design and structure, and in sources and recipients of value. Indeed, the research disclosed that an
explicit interest in business models among book publishers in Australia was a relatively recent phenomenon. Until quite recently, the nature of book publishing did not allow for much variation in the range of activities and transactions involved. However, globalisation, the threat of competition from non-traditional as well as traditional sources, and the hyperbole that inevitably surrounds advances in technology, have all led publishers to re-visit fundamental issues of value and profit, and of how these might be modelled. In practice, this has resulted, not in any wholesale jettisoning of tried and tested business models, but in experimentation and combination, linked to ongoing changes in value and supply chains. In this research, the most notable example of this approach was that of company P3, which developed a series of different business models corresponding to different stages in the value chains for different products and services. On the other hand, educational publishers such as P4 and P6 emerged as being the most conservative in this respect, believing for example, that for them traditional sales and distribution channels were still the most effective.

7.10 Conclusion

The Australian book publishing industry is complex, incorporating many different categories of book publishers. In this thesis, book publishers have been divided into the five main categories of trade book publishers, educational book publishers, professional book publishers, special list book publishers and university presses. This chapter has summarised the results of case studies relating to the five categories, based on their products, services, customers, value propositions, relationships, technologies, financial aspects, risks, opportunities, and business models. The following chapter will compare the results from both surveys and case studies, and summarise the findings.
8.1 Introduction

Research for this thesis has reinforced the picture within the literature of book publishing as an area undergoing steady and in some respects radical change. The purpose of this chapter is to report and discuss the key findings arising from two online surveys and 14 case studies. This includes findings in respect of those external and internal forces impacting on Australian book publishing, of supply chains and value chains, and of current and emerging business models. This chapter also summarises current e-business issues in book publishing and concludes by evaluating the two research paradigms employed in the thesis. It discusses how an interpretive paradigm helped identify key elements of business models, and how elements of design science were used to evaluate the business models developed in this research.

8.2 External forces

8.2.1 Globalisation, mergers and acquisitions

Globalisation essentially entails the greater integration of economic, cultural and social factors leading in the view of its proponents, to expanding spheres of opportunity. Opponents claim that globalisation in fact leads to damage to the planet, and to human costs in poverty, inequality, injustice and the erosion of traditional cultures. The majority of Australian publishing companies are now subsidiaries of global parent companies. Multinational conglomerates such as Random House and Penguin currently dominate the Australian market with both imports and Australian titles.

Book publishing has a long history of merger and acquisition activities, something that has continued unabated into the present century, generally on account of strategic marketing
considerations brought about by the impact of globalisation. For the firms concerned this has undoubtedly produced benefits in terms of tax benefits, asset acquisition and access to advanced technology. Critics would regard this merger and acquisition phenomenon as representing a situation in which too few companies own too much, with potentially anti-competitive outcomes. That this is not always the case, is demonstrated by those smaller companies operating outside such conglomerates, who have adapted by necessity, seeking and developing their own niche markets in order to survive.

For a time, the geographic isolation of Australia served to delay the impact of changes elsewhere, but globalisation and advances in technology have changed all that. The impact of overseas conglomerates has resulted in their Australian entities (and local independent companies) being cognisant not just of the need to adopt new technologies, but also to engage in (and where appropriate, partnerships and similar arrangements) with both competitors and other associates for mutual benefit.

**8.2.2 Technological changes**

The impact of the digitisation of content is said to have been almost as profound as has been the introduction of the Internet. The ability to reproduce perfect copies of content assets, and to use compression technology for distribution, has opened new horizons for content distribution and exploitation. Specific digital technologies investigated in this research include operating systems, management systems, content management, digital asset management, marketing and service provision, and content delivery.

The state of digital publishing in Australia in many ways mirrors that reported in the relevant literature. Publishers have been cautious yet positive in their attitudes towards and adoption
levels of digital technologies. They recognise the potential for new options and business models, and even the transformation of the book publishing life cycle, and the possibility of new revenues from books that need no longer go out of print. There could also be a long-term solution to the problem of book returns. They also acknowledge that levels of technology adoption must be driven by the market and in particular, by a realistic understanding what users will actually do with these technologies, what they want and what they are willing to pay for (Thompson, 2005). In terms of the uptake of specific technologies, the following findings have emerged from the research.

8.2.2.1 Disruptive technologies

The key disruptive technologies for book publishing in Australia have been the Internet and the World Wide Web. All the publishers interviewed (which included every multinational player in Australia) had an established web presence. Most were moving to enhance it to take advantage of opportunities, not only for the storage and delivery of content, but also for customer interface and community building as elements in Web-based marketing. All the global players located in Australia were engaged in Blogging and the use of Podcasts. In terms of Website development, the example of the leading Australian independent publisher is not untypical. It displays title details for every book it publishes or distributes; contains a facility for individuals to purchase books online, has dedicated sites for media (with downloadable author photos), booksellers and international rights; and support sites for key academic textbooks. Booksellers can go directly to the site when they want cover images for a newsletter or blurb copy for newly released titles. Journalists can access key information without needing to approach the publicity team. The website draws on book subject categories to generate dedicated mini-sites for a wide range of subject areas. The company also has been experimenting with other forms of online advertising for individual titles, such as the use of banner ads and Google Adwords.
The researcher was surprised to learn that little attention was seemingly being paid by publishers to developments in the Semantic Web, something which in certain circles had been promoted as the ultimate *killer application* and as the technology that would enable publishers to win back control of content (Davis and Walter, 2004a). In fact, only two of the companies interviewed, a university press and a small Melbourne-based, entirely digital publisher, even admitted to having heard of the Semantic Web. Both these companies, however, expressed strong interest in both the Semantic Web and Web 2, largely on the basis of their history of involvement with and expertise in metadata. Both these companies are heavy users of XML for the management of often relatively small print runs, and the transition from source to print and web outputs using open standards and a high degree of automation. To this extent they see themselves as already beginning to engage with the notion of the Semantic Web, but realise that there is a long road ahead before this comes to fruition.

On reflecting on the responses of the majority of case companies, it becomes clear that these other firms are already involved with aspects of the Semantic Web. The Semantic Web is an evolving concept and one that presents considerable challenges to those outside this specialist area of computer science. Its scope and complexity can be summarized and dated as follows:

- **Web 1 (1900-2000):** Unidirectional, employing *push* technology.
- **Web 2 (2000-2010):** Two-way in operation, embodying Blogs, Wikis, Video, Podcasts, 2D portals, sharing and personal publishing.
- **Web 3 (2010-2020):** Avatar representation, 3D portals, interoperable profiles, integrated games, education and business, with all media flows in and out of virtual web worlds.
• Web 4/5 (2020-2030): The semantic world, characterized by Intelligent Agents and Adaptive information (Hayes, 2006; Spivack, 2007).

It is clear that the Semantic Web has been in operation since Web 2, and that Australian book publishers are already engaged in the use of semantic technologies. Equally important, book publishers are using the additional intelligence of Web 2, along with metadata and ontologies to link and share data, and to reap substantial economies in data integration and interface projects. As the Semantic Web develops businesses, including book publishing, will be able to treat the entire Web as a database, being able to query data across it and build as-needed applications based on relevant data drawn from diverse sources (Berners-Lee, 2006).

8.2.2.2 Workflow, content and digital asset management

All the publishers interviewed had automated much of their back and front end processes, from typesetting to order fulfilment. A typical comment on this issue, from a leading university press, was that technology had and was, fundamentally changing what they were doing. Over time, production had been revolutionised by digital typesetting, printing, and desktop publishing. Today it is all done on a screen. In another example, at Australia's leading independent publishing house, a major effort has gone in to improving their title metadata and upgrading databases. In the process they adopted the international standard for book title data, ONIX soon after it became available.

Many publishers interviewed had content management systems in place, some of them developed in-house, but most of them purchased on the open market. One small Melbourne-based publisher, which developed its own content management system, had grown its business ten-fold over the previous five years. It claimed to be one of the first companies in Australia to implement a publishing and content management system in a fully online publishing environment.
Several of the global players and one Australian-owned publisher, had a digital asset management system in place. Based on a digital repository, to which copy of all PDF files were lodged with the printers, this had been implemented with a view not just of preservation, but also, of potentially the creation of additional revenue streams through print-on-demand (POD). While debate continues regarding acceptance of XML as the format for in-house archives rather than PDF, the practice in Australia to date has been to use PDF, which is also employed for typesetting, and for supplying to e-book sellers.

All the global players interviewed maintained links with Amazon.com and Google. However, they were mindful of the difficulties of dealing with the latter, resulting in attempts to limit viewing capacity on these sites.

8.2.2.3 Blogging, Podcasts and communities

Although its value is still being questioned by some in the book trade, Blogging is catching on in Australia. In all likelihood it will ultimately affect books in the way that it has impacted on markets for music, and in the creation of network communities. One major university press, while not itself in Blogging, but encourages its authors to do so, as the resulting two-way flow of discourse is extremely useful for marketing, communication and feedback. Other publishers, taking advantage of their long experience of direct marketing to individuals, special interest groups and retailers, have embraced Blogging enthusiastically. They are now developing ways of promoting books, including e-books, beyond straightforward emails. New strategies include approaching influential Bloggers about newly released titles in their areas of interest. In addition to seeking coverage from mainstream media, some publishers are also producing promotional footage such as MPEG grabs of authors discussing their books, which are then uploaded onto YouTube. These approaches are being made to various groups, but in
the knowledge that building relationships takes time and effort, and accepting that results cannot be achieved overnight.

8.2.3 E-books

One major finding emerging from the interviews, was that Australian-based publishers were unconcerned by continuing predictions of the death of the book consequent upon digitisation. Not only was it generally recognized that if anything, digital technology could extend the life and reach of the book, whether hard copy or digital, but also that one is still talking about book publishing. Publishers were concerned about issues of digital rights and copyright protection and with the risks of getting ahead of the market. They were also mindful of the dangers of channel conflict, and the alienation of booksellers and distributors, when it came to leveraging book sales from their web site. Where digital sales occur, whether in the form of downloads to customer devices or in hard copy format, the norm tended to be to add postal charges to the price, thus rendering the books dearer than those bought through bookshops.

Both surveys and case studies indicate that consumer acceptance of e-books is adversely affected by the two key factors of content format and the reading device. The fact that there are multiple content formats for e-book readers means that e-book files cannot be read on multiple devices that support the same software and DRM. For publishers to make all formats available for the same content would be prohibitively expensive. As regards e-book readers, the major problems continue to be those of screen size and battery life, price, lack of multifunctional capability, and the lack of digital rights management systems which would allow consumers to purchase content and transfer it between different devices.
As has been seen in Chapter Two, however, there are real signs of progress in many of these issues. The advent of E-Ink and the lessons learned from convergent devices has clearly impacted on the attractiveness and usability of both the Sony Reader and the Amazon Kindle. What is needed now is not just improvements to the attractiveness, usability and cost of reading devices, but also emergence of the same kind of tipping point that occurred in the music industry, where digitisation enabled shift in focus from the object (the record or CD) to the content (digital music files). In reaching this stage, the music industry has been able to overcome what once appeared to be insurmountable obstacles of file format and digital rights management (Young, 2007). The ability to access and download digital books from electronic bookstores using intelligent search algorithms on ubiquitous networks could similarly transform the book publishing industry.

However, for this kind of tipping point to be reached there is clearly a need for industry-wide changes to the culture of book publishing. As Young (2007) pointed out, the production of books today, up to the point where they are printed and bound is entirely digital. However, the critical step towards digitisation of the book’s format is where the process encounters cultural obstacles to do with economics and with stakeholder relationships. The great bulk of the cost of book publishing currently lies in printing, warehousing and distribution. Digitisation of both production and distribution could eliminate much of this cost while, in the process, solve long-running problems to do with non-viable print runs and book returns. However, publishers not unreasonably, remain concerned about the perceived risks that digitisation presents to intellectual property and copyright, and to partnerships with printers and booksellers. To people brought up on the belief that their industry was somehow different, and a major element of cultural heritage, the challenges involved in such changes are understandably daunting. Doubtless similar concerns were expressed in the music industry,
where record companies feared the destruction of their infrastructure and markets, but that industry has seemingly survived such developments and continue to prosper. It is perhaps not too improbable to envisage a similar scenario emerging in a book publishing industry facing the kinds of technological and market changes reported in this thesis.

### 8.2.4 Shifts in customer demand

The growing variety of options available to potential book purchasers is leading to a customer base that is increasingly discerning. Customers are the key player in supply and value chains. Publishers are seeking to implement strategies that specifically define and cater to customer needs, which now include demands for flexibility in access and format, and the building of relationships with publishers and authors. The adoption of new technologies can facilitate such activities, but whatever the response, the acquisition of improved knowledge of customer behaviour is of paramount importance to the ongoing success of the book publishing industry. Evaluation of the results of the end-user survey indicated compliance to this concept.

Increasingly, people and not just those under the age of twenty-five, are accessing information via the Internet, and in the process are using a range of tools from e-mail and SMS, to Blogs and RSS feeds. Increasingly, these readers form and join communities of interest, and become creators of content. A new form of publishing is emerging, a field in which the costs of marketing and distribution will drop to near zero, and where organisational barriers to entry will decrease. Not only will this lead to pressure on mainstream publishers to align with and create their own communities, but also it will be hard for them to publish in as many areas as before, and they will need to investigate specialising in niche fields. In these niche markets, the audiences themselves will be players, with their rating activities, appending and tagging, in effect comprising huge components of both the editorial and marketing functions of
publishing in the 21st Century. All of this content may be deliverable to iPods of incalculable power (Shatzkin, 2007). Therefore, book publishers face many challenges in a world where marketing techniques based on the book as a form, will be replaced by those based on vertical rich media, and focused on niches. At the same time, this need not signal the complete end of the printed book. Rather this could be one form in which publishers can be active, while engaged in the production of e-books, Podcasts, and in targeting niches, often using print-on-demand. Naturally, digital technology is a key driver and facilitator, but content and the demands of the market are likely to be king. Publishers must maintain an awareness that they need to consider their diverse marketplace required flexibility of product provision, which is confirmed from results from the end-user survey.

8.2.5 Competition

Publishers are currently faced with ever-increasing forms of competition, owing to the complexities and demands in the marketplace for new products and services, and the presence of established competitors, and of new entrants from both within and outside the industry. Although much of this competition is technology-based, companies need to be innovative and forward thinking regarding the benefits that technology will provide. Australia’s book publishing industry remains extremely competitive. However, it must continually strive to remain so, because to do otherwise would be to risk oblivion.

Book publishers are becoming increasingly concerned with the current activities and the frightening potential of Amazon.com. With its global brand and its relentless pursuit of the market, Amazon.com has positioned itself with e-books, POD, used and rare books and potentially, audio. With its new Kindle reader and its drive to have more titles loaded in Mobipocket format, Amazon.com will be able to use its unparalleled market reach and its
*BookSurge* print-on-demand capability to offer a complete publishing service. Whereas until now, the threat from Amazon has been seen as applying largely to booksellers, there are clearly grounds for publishers to be concerned. Potentially this could be a more potent threat to publishing than anything emanating from Google, Yahoo or Microsoft.

### 8.2.6 Government polices

Governments will continue to exert substantial influence on the book publishing industry. They have the power to implement crucial legislation to enhance the future viability of the industry. Government financial support to schools is particularly important to the prospects of educational publishers, as schools are their major customer base. There is a continuing undercurrent of opinion among Australian education publishers that governments generally underestimate publishers as players in the education system, for example under-valuing their potential contribution to the development and operation of school curricula. When it comes to matters of taxation, and of policies with regard to copyright and the ownership of intellectual property, government policies are a matter of major concern to all kinds of publishers.

### 8.2.7 New media

In this thesis, the term *new media* has been employed to recognize the convergence of traditional with digital formats where both can co-exist successfully. Specifically, new media provide various forms of electronic technology platforms, allowing a widespread choice of delivery formats to the consumer. Traditionally, most publishers have not aggressively marketed directly to consumers. However, the development of broadband, mobile and wireless technologies provide potential opportunities in terms of media richness and the downloading of content. Third generation mobile technology, for example 3G mobiles,
includes a second generation of tablet PCs and e-book readers to facilitate the publishing of e-books, further enhancing their potential.

The revolution in digital technologies, coupled with eroding margins and reduced retail sales has changed the publishing landscape. Online environments offer opportunities to vastly reduce the cost of accessing potential customers through so-called email blasts, e-newsletters, Blogs, Podcasts, Facebook, and YouTube. As discussed in section 8.2.2.3 and 8.2.5, Blogs offer readers, publishers and editors sneak previews of work-in-progress from top authors. Another work in progress innovation is the development of reader communities and interest groups by publishers, aimed at the promotion of books and authors and of reading in general. They are as diverse as the subject and include consortia of publishers, as well as individual houses and feature interviews, video clips, games and competitions, with many having sponsored links to Amazon.com. A recent technological innovation in the marketing area is the development of Widgets. Widgets offer functionality similar to Amazon’s Search Inside the Book, but unlike the Amazon example, which is restricted to their own website, they are designed for use on almost any website, including social networking sites such as YouTube and MySpace. The 14 case study companies have all experimented with these various areas, however they most are as yet to formally commit. The general feeling is however, that Widgets are here to stay.

8.3 Internal forces

The dominant internal force in Australian book publishing is the decisions and actions of senior management. Executive management has ultimate responsibility for all business issues, and particularly for maximising the business value of intellectual property. This responsibility manifests itself most notably in areas of organisational culture and structure, human resources, marketing and technology strategies.
Organisational culture, a critical aspect in any industry, presents a series of challenges to publishing management faced with a turbulent and dynamic environment. Book publishing began, and continues to be one of the great cultural icons, founded on respect for knowledge and learning, and with the mission of maintaining the cultural record of humankind. While still important, such perspectives are inevitably today feeling the pressures of change in turbulent global markets that seem often to be driven by technology. In the circumstances, traditional cultures can be seen as operating as obstacles to progress and, although this is not always the case, there is a growing need for management action in order to educate people and help to overcome any natural hesitation and reluctance to change. An example would be situations where long term employees have to become conversant with emerging technologies, but consider themselves too old to change. There is also a clear need for changes in employment practices. These continue to involve the recruitment of staff that are bookish and literary, but not really equipped to deal with the cultural as well as business challenges presented by digitisation. This will also require a rethinking of current approaches to rewarding and remunerating this new breed of employee.

Organisational structures play a significant role in the responses of book publishers to the challenges and opportunities of changing markets and technologies. One obvious example is the continued inflexibility of hierarchical structures, a relic of the age of family-owned firms, and another could be structures dominated by decisions taken overseas. One significant structural development revealed in the case studies, was the emergence of new entities and titles, notably those of Digital Divisions and Digital Directors. Similar structural changes in other areas of the book trade are reported in the literature, with for example, publishers increasingly offering POD facilities in bookshops, with obvious implications for supply
chains. However, research conducted for this thesis revealed that in Australia, print-on-demand has still a long way to go before being accepted by either book publishers or booksellers. Nevertheless, advances in digital technologies continue to impact on publishing and the wider book trade structures, with the growth of networking and outsourcing, and their impact on value and supply chains.

Among the range of organisational strategies that must align with cultures and structures are those for production, human resources, markets, marketing and technology. Across the spectrum of production from digital composition to editorial activities, the book publishing industry has embraced outsourcing. Outsourcing provides cost benefits and flexibility, along with access to a diverse range of technology and associated skills. Although in some instances it can affect managerial control, and as a rule, companies would be wary of outsourcing key strategic functions, such collaboration is on the increase in book publishing. This extends, not just to arrangements with traditional trading partners, but also to networks involving new partners and where circumstances dictate, competitors.

Human resource management has traditionally not been regarded as a priority in the book publishing industry. However, today it is recognized that the recruitment, training and development of suitable personnel is critical to an organisation’s performance. If employees are to operate as real value-adding assets, they need to be motivated, informed, and suitably renumerated. The research confirms the need for staff to have a diverse range of skills and educational backgrounds in order to cope with the challenges and opportunities of digitisation. Marketing strategies now reflect the changing nature of markets, with multi-channel marketing and Web-based strategies an increasing presence, the latter aimed simultaneously at individuals, organisations and communities of interest. A constant factor in all this change
however, is the need for publishers to maintain strong relationships with their customers, suppliers and partners, relationships based on loyalty, trust and a high level of service. Another key is for all publishers, large and small, to seek out new and developing markets based on new media and formats, but based on recognition of the fact that users are demanding instant access to innovative and increasingly interactive products and services.

Niche markets cater to a precise customer base which possesses similar characteristics or needs. In many instances, the development of niche markets has provided a lifeline to publishing houses, particularly to smaller enterprises which can focus and serve these customers more effectively than their larger competitors. However, the practice also extends to the activities of global players specialising in for example, textbooks for higher education. The building of stronger relationships between the publisher and the customer forms an integral part of this business.

Technology, both in terms of infrastructure and applications, continues to offer potential benefits to book publishers in terms of access to markets, enhanced productivity and competitiveness. Nonetheless, this research confirms that senior management in the Australian book publishing sector understands that above all, technology is an enabler, and can only be applied effectively in the context of sound business strategies, especially those aimed at customer satisfaction.

### 8.4 Supply chains, value chains and value networks

Book publishing supply chains are complex, embodying a variety of products, players and many common processes and related information flows. The advent of digital publishing has necessitated changes to supply chains, and distribution channels, with the research indicating that *multi-input* and *multi-output* will be the dominant characteristics. The research also
indicates that while booksellers remain the prime candidates for disintermediation, this has yet to happen to any significant extent. All the case study companies investigated in this research acknowledged the importance of maintaining flexibility in their approach to supply chains.

The characteristics of digital publishing necessitate changes to production processes, supply chains, and distribution channels. A significant aspect will be the creation of virtual communities, where the consumer forms a close liaison with the publisher and is directly involved in the creation of content. Figure 8.1 depicts a generic supply chain model for the case study book publishers (other than that small number engaged in the production of e-books). It is hybrid in nature, depicting elements of the traditional physical supply chain and changes (ongoing and anticipated) brought about by the uptake of digital technologies.

![Figure 8.1: Digital book publishing supply chain model](image)

Figure 8.1: Digital book publishing supply chain model

At this point it might be helpful to compare the supply chain depicted in Figure 8.1, with those depicted in Figures 2.7, 2.8, and 2.9 respectively. While the content of Figure 8.1 is clearly different from that of the traditional book publishing supply chain shown in Figure 2.7, it is not radically different from that in Figure 2.8. This can be explained by the fact that the purpose of Figure 2.8 was to depict the researcher’s perspective on ongoing changes to book publishing supply chains at the outset of the research, a view based largely on the literature. The generic book publishing supply chain depicted in Figure 8.1 on the other hand, is based on the subsequent research and on data emerging from the case study publishers. As such it
reflects implementation of some of the changes anticipated in Figure 2.8., notably the inclusion of a virtual dimension. Although the activities described in Figure 8.1 might not be as advanced as that anticipated in Figure 2.9 (An optimal digital publishing supply chain model), it nevertheless represents clear progress as the Australian book publishing sector responds to the challenges and opportunities of digitization.

In research for this thesis, the value-adding activities in Porter's original value chain (1985) were adapted to comprise those of selection, access, development, aggregation, navigation and authority. Each element of these value chain activities can create value, resulting in value flows to the endpoint, achieving an optimal publishing performance. Value chains in Australian book publishing vary by category. Trade and educational publishers tend to be traditionalists whose value chain formats have remained stable for many years. However, an increasing number of publishers have ventured into the production of e-books and the digitisation of content. The most significant impact of such changes in value chains is that of multi-channel distribution.

The case study companies accept that they have to change, but opinion is divided on how and when to act. Although open to misinterpretation, given the pace of organisational and technological change, and the variety of players in the publishing market, this ambiguity nonetheless provides the opportunity to propose broad generic models of current value chains for the book publishing industry, as in Figure 2.12 in Chapter 2. However, this traditional linear value chain is subject to change, as digitisation, multi-channel content creation and distribution have all impacted on supply chains. The impact of digitisation on value chains for book publishing includes the emergence of value networks, which are gradually supplanting the earlier, traditional linear value chains. For each distribution channel, there is a linking
value chain to form a value network, creating values. The relationship between value chains, value networks, essential value points and business models arising from this study is shown in Figure 8.2. The four essential value points are:

- **Strategic positioning**: Industry structure, sustainable competitive advantage, market segmentation, customer focus, market differentiation and firm composition.
- **Product and services**: Scale economies, scope of applications, distinctiveness, uniqueness, products and services differentiation suitable for niche markets.
- **Value proposition**: Application and services outsourcing, customer value creation, multi-channel distributions, benefits and risks assessment.
- **Technology advantages**: Availability and limitations, competitors’ positions, technologies for implementing cost and benefit analysis, and market research support.

![Figure 8.2: Life cycles of value creation in digital publishing business models](image)

**8.5 E-business issues emerging in the interviews**

Generally, the Australian book publishing industry is positive in its response to digitisation. Significantly this perception begins with the realisation that at the end of the day, technologies are essentially enablers, and that business decisions and market drivers will determine the outcome of digital publishing ventures. Prominent among issues of broader
concern, are those to do with competition for readers’ time (so many alternative media exist today), and the deleterious effects of demographics, with the younger generation less focused on reading either as a recreational or a learning activity. By the same token, because so many people spend much of their time reading off screens, be they computer screens, PDAs or mobile telephones, it would appear that the book still has a future, albeit in digital form.

Publishers are aware of the potential of digitisation, both as a source, both of risk and opportunity. The risks include loss of intellectual property, threats to copyright ownership, and even loss of mainstream business to giants such as Amazon and Google. The benefits include control of content, and the option of selling or licensing content under different arrangements to online booksellers, content aggregators and enterprises that are search engine-based such as Google and Microsoft.

### 8.6 Business models

The importance of considering fresh, more appropriate business models in a context of growing digitisation is widely acknowledged by book publishers. They also understand that the business environment is volatile, and that there can be no single model to suit all products and services. Publishers were sometimes reticent when interviewed regarding the details of their existing business models. This reluctance may have stemmed from considerations of commercial confidentiality, but could also have been due to their inexperience with the new business models. In order to facilitate dialogue on this matter, the researcher provided publishers with examples of business models against which they could compare their own. Based on feedback which varied both in detail and type, the researcher was then able to work on building prototype business models both for individual firms and of a more generic nature.
The general lessons emerging from the survey of book publishers and the subsequent case studies were as follows:

- Business models no longer focus on the organisation per se as in traditional business models. Within each organisation’s business units, separate business models may be implemented, and some of these business models are likely to include external partners.

- Digitisation in book publishing impacts through new technologies, organisational structures and cultures, strategies, value chains and business models. Book publishing business models have already reached the *hybrid* stage, combining traditional and emerging elements. Full service models are showing signs of popularity, and fully digital models are on the horizon.

- The critical success factors for digital business models were identified as those of technical robustness, consumer acceptance and financial logic.

- The most highly regarded business models were subscription-based, content creation, full service, multi-distribution, and aggregated models, often in the context of niche markets.

- All case study companies employed at least two of the following atomic e-business models: Direct-To-Customer, Content Provider, Intermediary (Aggregator) and Shared Infrastructure.

A generic business model for book publishing, including a range of atomic e-business models is shown in Figure 8.3, followed in Figure 8.4 by a potential generic model embodying changes driven by digitisation.
Figure 8.3: A generic book publishing model
Figure 8.4: A potential generic model for e-book publishing
8.7 Evaluation of business models

This thesis employed an interpretive research paradigm, seeking to identify the perceptions of industry stakeholders on the current and potential future implications of digitisation for book publishing. This enabled a deeper understanding of the business and of relationships with suppliers, customers and partners, enabling the researcher to identify the most important elements of book publishing business models.

As mentioned in Chapter 3, there are many constructs employed in descriptions of business models, but the key elements can be summarised as: value proposition, target customer, distribution channel, customer relationship, value configuration, capability, partnership, cost structure and revenue model. Table 9.1 contains examples of these elements as employed by various authors. Each cell contains a number, 0, 1, 2 or 3 to show the degree to which the elements were involved in the earlier research. ‘0’ denotes that the element was not present, ‘1’ denotes element mentioned, ‘2’ denotes element described, and ‘3’ denotes element modelled. The elements employed in the course of this research are presented in the last row of Table 8.1.

Table 8.1: Key elements of business model comparison
Design Science was also chosen as one of the research paradigms for this thesis, because of its relevance to applied research and particularly, to the building and evaluation of artefacts, in this case, business models. In this evolving paradigm, it is not necessary for all of the stages to be implemented in full for the outcomes to be deemed valid. This thesis employed the two core elements of design science: **Building** (the process of designing constructs, models, methods and instantiations according to initial goals), and **Evaluating** (the process of determining how well the constructs, models, methods and instantiations performed).
March and Smith (1995) argue that in design science, the evaluation of constructs tends to involve completeness, simplicity, elegance, understandability, and ease of use. Model evaluation requires consideration of their conformity to reality, levels of detail, vigour, and internal consistency. Additionally, the new model must be aligned with respect to existing models to enable researchers to fully appreciate the position.

This thesis emphasised the model building and instantiation elements of the design science research framework. Model building was based on lessons from the literature, modified to suit the circumstances of the case study companies. Evaluation and instantiation occurred on an iterative basis, involving consultation with and feedback from publishers. Further validation emerged in the course of presenting papers to audiences at relevant international conferences. Figure 8.5 shows how the design science framework embodying these elements was applied.
Based on March and Smith (1995), this research implemented the following four evaluation methods:

- **Compare business model with literature**: This was achieved in this dissertation by identifying similarities and differences and by comparison with the models built by the researcher.

- **Evaluation of business model content by practitioners**: This was achieved through interviewing book publishing managers on the potential content and structure of business models.

- **Test business model framework with case studies**: This was achieved by presenting the final version of the models to book publishers, in order to assess their appropriateness to the business logic of individual firms. The validity of the frameworks was confirmed by all case study publishers. However, owing to space constraints, only one publisher’s business model framework appears in this thesis.

- **Research community interest**: This was achieved by presenting papers to audiences at four international conferences between November 2006 and December 2007, all of which received positive feedback.

### 8.8 Conclusion

This chapter has summarised and discussed issues related to external and internal forces based on the literature, on surveys and case studies. It has reported changes to supply chains, value chains and value networks, and commented on important peripheral issues regarding business models. Examples of two generic business models (current and e-books) for book publishing...
were provided. Finally, the chapter confirmed the appropriateness of the interpretive and design science research paradigms to the research.
9.1 Introduction

The objective of this thesis was to identify the implications of digitisation for Australian book publishing, and in particular, the implications for business models during the transition from traditional publishing to digital publishing. In relating the findings to the three original research questions and sub-questions (listed in Chapter 1), this chapter also reports on the contribution and limitations of the research and identifies topics for future research.

9.2 The key findings of the research

The major findings emerging from this research are summarised under the research questions and sub-questions as follows:

9.2.1 Research question one: What are the major trends emerging within the Australian book publishing industry?

The major trends detected in Australian book publishing were the continued effects of globalisation, the growth of consumer choice and influence, and the ongoing presence of technological change.

Globalisation exercises a significant influence on Australian book publishing, as reflected in the incidence of mergers and acquisitions, and in firm strategies and structures. It directly impinges on editorial, production, marketing and distribution practices, affecting everything from decisions on outsourcing and niche markets, to collaborative as well as competitive practices. An equally significant trend is that of growing customer power in markets where new products and services in a variety of formats offer a comprehensive range of choices.
Technology remains a pervasive presence. Digital publishing provides hitherto unattainable functionality as regards production, formatting and content management. It has brought the promise of new markets, products and services, raising the spectre of disappearing entry barriers to traditional markets, the disintermediation of long-established value chains and relentless conglomeration and competition.

The relevant sub-question concerned the current status of digital publishing in Australia. The general consensus was that digital publishing will have the most profound effect in the areas of specialist business, professional and academic publishing, and to a lesser extent, on government and web-based publishing. Digital publishing success will depend on such factors as: access to leading authors, the provision of quality content, control of content and copyright ownership, knowledge of the customer base, ownership of strong brands, an entrepreneurial outlook, and organisational agility within flexible structures.

Despite predictions of doom and gloom, the printed book remains a viable entity notwithstanding the arrival digital technology. The general explanation for this survival is that books are different from other media, in that they do not rely on advertising as do newspapers, magazines and television, and that the experience they offer is unique.

The general consensus is that digital publishing will have the most profound effects in the areas of specialist business, professional and academic publishing, and to a lesser extent, in government and web-based publishing. The success of digital publishing will depend not only on control of content and copyright ownership, and access to leading authors but also, on the ability to respond quickly and flexibly to a demanding customer base. To be able to do this, publishers will need to reorganise business processes, and redefine the roles of various
stakeholders in their value chains. Content is likely to continue to be King, and content creators, aggregators, packagers and customers all remain vital cogs in the book publishing wheel. The strategy of multi-channel distribution is emerging as a key to book publishing longevity. The facility to access a wide customer base, including in niche markets, and to establish strong ongoing links, is vital for all categories of publisher.

9.2.2 Research question two: How do current and emerging business models compare with regard to scope, design and structure?

Although the business models depicted here are perhaps better described as being indicative rather than representative of the Australian book publishing sector as a whole, they do reflect likely responses to the impact of digital technologies. Whatever the category of publishing moreover, and the scope, the target markets, products and services concerned, it is clear that all book publishers must adhere to similar stages and processes in building supply and value chains, and in designing business models. Depending on their products and services, their distribution channels, customers and business strategies, publishers need to design business models for each stage of their value chains. This activity will undoubtedly reflect the growing importance of customer choice, and of multi-channel distribution facilities.

Although book publishers are already engaged in building business models for a digital era, total embracement of the concept remains in the future. All the case study companies were anxious to develop business models suitable for operation in both the old and new business environments. A useful guide to such perceptions is general attitudes among publishers towards respectively POD and e-books. The general perception is that while currently not commercially viable, POD technology will experience rapid growth in the future, and in the process, will help to drive changes from traditional to digital publishing. So far as e-books
are concerned, most publishers take an optimistic view of the future, despite current low sales volumes. Ongoing developments in storage capacity and screen quality on handheld digital devices (readers), and the birth of new generations of customers, comfortable with portable, digital, cross-media experiences, may well vindicate this optimism. In both the case of POD and e-books, the implications for business models could be profound.

Although this research did not specifically address issues of Open Access publishing models, the matter was raised broadly during interviews. None of the case study companies believed that Open Access models posed a threat to the book publishing industry either now or in the foreseeable future. Open Access models were not currently considered to be viable in Australia’s book publishing industry. Indeed, overwhelmingly, the opinion among publishers was that, while potentially useful in terms of relationship building, Open Access did not make much sense where what it actually amounted to was publishers giving their product away for nothing.

The relevant sub-question in this case had to do with sources and recipients of value in emerging business models. The short answer seems to be that most players continue to operate as both providers and recipients of value. Traditional players continue to operate familiar and profitable business models, while implementing or participating in hybrids which allow for the activities of additional players and the impact of digital technologies.
9.2.3 Research question three: What technologies and applications offer the greatest potential for supporting value creation activities and business model development in the digital era?

Although technology has clearly impacted on Australian book publishing, there has been little in the way of truly radical technological change. Despite predictions of the onset of disruptive technologies for publishing (notably semantic technologies), the most significant technologies in publishing in Australia remain the Internet and the World Wide Web. Those technologies which now and in the medium-term would appear to offer most in regard to value creation and business model development include:

- **Production technologies:** With growing digitisation of both back and front-end processes, leading increasingly to fully online publishing environments.

- **Content technologies:** Most notably workflow, content and digital asset management systems, offering added value in production, distributing and archiving, along with potential new markets through Print-On-Demand (POD)

- **Communication technologies:** Dominated by the Internet and the World Wide Web, but including the use of Blogging and Podcasts to add value in areas as diverse as advertising, the storage and delivery of content, customer interface and community building activities.

The relevant sub-question here concerned remaining challenges with regard to digital technologies for book publishing. Although there are key issues to do with standards in content production and communication, the vital breakthroughs needed are those to do with portable formats and devices.
Although relatively few Australian publishers have embraced leading edge technologies, all those interviewed and surveyed agreed that continued exploitation of technology for business sustainability was essential. What could be seen as a lack of initiative with regard to the production of e-books, has to be tempered with acceptance of the market and commercial realities, and not least the continuing viability of the printed book. Australian book publishers are also conscious of the reading habits, or otherwise of generation X and potentially even more so, Generation Y, with a widespread perception that young people are more attracted to multi-media formats and intuitively comfortable with the devices to play and access them. Although such matters as battery life, screen size, functionality, format digital rights management and cost continue to pose challenges, the answers may well not be all that far away.

9.3 Contrasts between the research findings and the literature

In general, the trends detected within the Australian book publishing sector were similar to those identified around the world. The major exceptions were as regards the levels of uptake of technology, and its expected impact upon book publishers. Little in the way of adoption of truly disruptive technologies was encountered, with only two of the 14 case companies for example, explicitly engaged in the use of semantic technologies. Likewise, as regards the predicted effects of new technologies, there were few, if any signs within the industry, of disintermediation within supply and value chains owing to existing players being made redundant by technology. Indeed, if anything, the opposite was the case, with digitisation leading to the introduction of additional players in the book publishing industry.

9.4 Summary of the findings

This thesis has conducted an in-depth analysis of the shifting relationships and alliances between key stakeholders in Australian book publishing, in a context of complex
technological change and high value electronic information services markets. By using a multi-staged approach, the research identified the fundamental requirements and expectations of key stakeholders in five categories of book publishing. The thesis also provides detailed book publishing models, based on the companies selected from each of the five categories.

The thesis identifies trends in areas of technology, distribution, supply and value chains and in business models relevant to both domestic and global issues. The trends are supported by current information and data, and rely for their validity not only on the literature or various statistical reports, but also on 14 case studies and two online surveys. The research also provides an insight into potential developments and risks as the book publishing industry endeavours to address the complex issues associated with digitisation.

The outcomes include an analysis of the book publishing space in Australia, and a redefinition of value propositions and business models, with practical significance for the development of the digital publishing industry in particular. Previous research into business models was of great value in informing the approach taken by this researcher, although none of the 22 most relevant researchers identified was engaged in research into book publishing. Therefore, the conceptual and empirical work undertaken in this thesis is important in that there has been little work undertaken either in Australia or elsewhere into the implications of digitization for business models in book publishing.

The findings emanating from this research lead to a clear picture of the state-of-the-art of book publishing in Australia, with particular reference to the current impact of digitization. This has led the research to a number of conclusions. Clearly the book publishing sector is under pressures that are global in nature, and is operating in conditions of ever-increasing...
competition from inside and outside the industry. The need for investment in infrastructure of various kinds and not least in human capital has perhaps seldom been greater, and is well appreciated within the industry. Global and more local pressures have contributed to a re-examination of markets and to subsequent adjustments to business models, but publishers are cognizant of fundamentals such as value propositions and the bottom line and there has been no wholesale rush into silver bullet solutions of a technological or other nature.

9.5 Contribution of this Research

The contributions of this research can be summarised as follows:

Firstly, the thesis adds to what is known about book publishing in general, by confirming key trends identified in other countries.

Secondly, it presents innovative findings in relation to the effects of digitisation on the Australian book publishing sector. In doing so, it identifies technologies and applications which have the potential to support value creation activities and business model development in the digital era.

Thirdly, it contributes to the literature of business models, and particularly to the area of business models in book publishing, through what is possibly the first piece of research of its kind in Australia. It identifies and compares current and emerging business models, with regard to scope, design and structure. The business models built during the research will be of value, both to future researchers and to publishers seeking to respond to the challenges of digitisation.

Finally, the case studies reported in the thesis will be of value, not only to publishing students, but also to staff and students in business and management courses.
9.6 Research limitations and directions for future research

This thesis focussed largely on book publishing in Australia. Further research is necessary which takes a more global approach, and which looks at other categories of publishing.

The thesis identified organisational culture, structure, and top management as important internal forces which will affect the decision making process regarding digital publishing. However, the parameters of this research did not allow an in-depth study of any of these aspects. To achieve better understanding in these areas, further research will need to consider questions of how and more important, of why book publishers might decide to adopt digital technologies.

The thesis provides a platform from which Australian book publishing companies can re-examine their business models. Elements of the Design Science paradigm were employed for the building and evaluation of business models. It would be useful if future research employed the full complement of Design Science elements, perhaps allied to the use of ontologies, as has been attempted by Osterwalder (2005).

The thesis provides an overview of Australia’s current book publishing industry in respect of the uptake of digital technology. Future research will need to focus on the specifics of this technology, including the detailed analysis of still-emerging technologies and their implications for particular elements of book publishing.

The conduct of end user surveys in this research was limited to academic groups. This could profitably be extended to other groups of end users, particularly those within generation Y.
This could include further research in e-book devices, as well as into downloading and purchasing behaviours.
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