https://dspace.org/

Business model innovation in the South African ICT and financial services sector

Motjolopane, Ignitia

2017

https://hdl.handle.net/10539/26106

Motjolopane, Ignitia Mafusi Mamajeremane, (2017) Business model innovation in sample companies in the financial services and ICT sectors in South Africa, University of the Witwatersrand, Johannesburg, https://hdl.handle.net/10539/26106

Downloaded from a DSpace repository. https://dspace.org/

Business model innovation in the South African ICT and financial services Sectors.

Thesis

By

Ignitia Motjolopane
Student No: 579450

Research Supervisor:
Prof. Louise Whittaker

In fulfilment of the requirements for the Doctor of Philosophy Degree
Wits Graduate School of Business
Faculty of Commerce, Law and Management
University of the Witwatersrand

Abstract

The only constant is change itself. The purpose of this research study was to investigate how companies manage business model innovation to compete effectively in a changing business environment. In the business environment the winds of change are generated by factors such as increasing competition, changing customer needs, deregulation and technological advancement that includes the network-era. Despite theories that companies compete effectively by adopting one of the three generic strategies of cost leadership, differentiation and focus there are prominent business model innovation examples that illustrate the value of business model innovation for gaining competitive advantage. As business model innovation supports companies gain competitive advantage differentiating business models in ways that are hard to replicate for incumbents and new entrants. In addition business model innovation is linked to company growth and financial performance with the fasted growing companies as those that undertake business model innovation. Such is the importance of business model innovation that a mediocre technology commercialised with a good business model is of a greater value than a great technology supported with a mediocre business model.

Despite these explicit potential benefits of business model innovation and growing interests from both research and academic community research in business model innovation is still in its infancy with need for research in areas such using the business model concept to anchor identification of information systems impact, the business model innovation process and on how companies manage business model to compete effectively in a changing business environment. This research study is an effort to contribute in the research gap by investigating how companies manage business model innovation to compete.

A pragmatism approach that strive for to a problem solving approach that takes into account existing knowledge and experience in business model innovation both from theory and practice to fuel best practice in business model innovation. Six case studies were selected from companies in the Information Technology Communication and financial services sectors in South Africa. The key findings from the study is a conceptualisation of

managing business model innovation to compete in a changing environment is a complex activity with interrelated concepts of business model innovation drivers, process and business model components that are redesigned. These conceptualisation is used to develop a business model innovation framework that contributes to theory and practice in business model innovation. Furthermore, the research study identifies the importance of both entrepreneurial and inspirational leadership and quality of staff as important conditions under which the proposed conceptual framework would most likely support companies in managing business model innovation to compete in a changing business environment. As the proposed conceptual framework As such the proposed conceptual framework could serve as a basis for further empirical research that is both qualitative and quantitative. Such future work could assist in evolving and validating theoretical coherence, practical relevance and applicability of the conceptual framework elements in manging business model innovation to compete effectively in a changing environment. In terms of contribution to practice proposed conceptual framework with the detailed analysis of the business model innovation drivers, process and business model components may a useful guideline in undertaking a business model innovation

Dedication

A dedication to my Mom and Dad

Declaration

I, the undersigned, hereby declare that the work contained in this thesis “Business model innovation in the South African ICT and financial services sectors” is my own original work, and that it has not been submitted before for any degree or assessment in any other University, and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references.

Ignitia Motjolopane

Signature: _____ Date: _____

Acknowledgements

In giving thanks glory to the Almighty God who has been my source of inspiration, endurance and protection during the journey of completing this work. I am eternally grateful to Him who has not only planted the idea of this research into my heart but also equipped me with the power of execution.

As they saying goes “It takes a village to raise a child”, the same could be said for this research study, with a number of people and organisations having contributed in supporting this scholarly pursuit. Allow me to express my sincere gratitude and appreciation to only a few of these people.

My heartfelt appreciation goes to my supervisor Professor Whittaker without whom this study may not have reached fruitions, her passion and insistence on “academic rigor” and her unwavering commitment, for always believing in me and pushing me beyond my limits her support, guidance and shining the light are truly appreciated and she has made me to aspire to be.

My appreciation also goes to the Wits Business School academic and support staff for their patience and support during this endeavour especially the Postgraduate Programme Coordinator Ms Mmabatho Leeuw.

My family and friends for their unwavering support throughout my winding research journey.

The Tshwane University of Technology Department Of Informatics Dr Billy Kalema and his staff for encouraging me to complete my studies but also for the department allowing me the space and time to do so and to the students with whom I have had the privilege to work with at Tshwane University of Technology your determination and drive inspires me. In deed the future belongs to those who dare to dream.

The company executives who shared their time and insights to the research thus providing value input in the study I am eternally grateful.

The study has also been made possible through various funding that was received from National Research Foundation Innovation Fund, Wits University and Bankseta and I am truly thankful for the support.

Last but not least to my two wonderful sons Thato and Reabetsoe who were the sustaining force for my laughter and joy throughout my studies journey. This was indeed a dream to reality journey of knowledge discovery and growth.

I thank you all.

List of abbreviations

4I-2M	: a business model innovation process comprising of mobilisation, initiation, ideation, integration and monitoring
BMO	: Business Model Ontology
BEE	: Black Economic Empowerment
B-BBEE	: Broad Based Black Economic Empowerment
EE	: Employment Equity
IT	: Information Technology
ICT	: Information and Communication Technology
GMA	: General Morphological Analysis

Glossary

Term	Definition
Business model	The underlying economic logic of how a business makes money and creates value in serving the target customer, taking into account key activities, resources and partnerships as well as the value exchanges between the company and its partners.
Business model innovation	Adapting an existing business model innovating one or more components of the business model or innovating business model components to create a completely new business model for the company with both adapted and created business models seeking to enable the company compete effectively in a changing environment.
Business model ontology (BMO)	BMO is also known commonly as the Business Model Canvas is a business mode ontology that visualises business models using the nine key components of value proposition, key activities, partner network, key resources, cost structures, revenue model, client segments, distribution channels and client relationships (Osterwalder, 2004)
Design artifact	Constructs that include vocabulary and symbols, or models with abstractions and representations. As well as methods that specify algorithms and practices, including instantiations in terms of implemented and prototype systems(Hevner,March,Park and Ram, 2004).
e3value	A business model ontology that graphically illustrates how value is created and exchanged amongst the stakeholder's network modelling value network between the stakeholders (Andersson,Bergholtz,Edirisuriya,Ilayperuma,Johannesson,Gregoire,Schmitt,Dubois ,Abels,Hahn,Gordijn,Wigand and Wangler, 2006).
General Morphological Analysis (GMA)	A method for investigating the relationships contained in multi-dimensional, non-quantifiable complex problems(Ritchey, 2006).
Ontology	An artifact, that constituted with a specific vocabulary to describe a certain reality and specifies the explicit assumptions regarding the intended meaning of the vocabulary words(Guarino, 1998).
Rea	A business model ontology that uses business accounting concepts on the flow of physical and financial resources between the company, and customers and suppliers to visualise the company's business model (Gregoire and Schmitt, 2006)
Reference Ontology	A business model ontology that uses the ontologies of BMO, REA and e3value as a basis for creating a reference ontology for visualising business models

Table of contents

1.1 Introduction 1

1.2 Business model innovation challenges 3

1.3 Contextual background to ICT services and financial services in South Africa 5

1.4 Research rationale and design 9

1.4.1 Knowledge gap 9
1.4.2 Research problem 12
1.4.3 Research objective and sub-objectives 12

1.5 Expected contribution 13

1.6 Delimitations 14

1.7 Limitations 14

1.8 Chapter summary 14

1.9 Overview of the chapters 15

2.1 Introduction 18

2.2 The concept business model innovation 18

2.2.1 What is business model innovation 18
2.2.2 Business model innovation criticism 21

2.3 Business model innovation drivers 23

2.3.1 Technological advancement 24
2.3.2 Market factors 27
2.3.3 Regulatory factors 28
2.3.4 Organisational factors 29

2.4 Business model visualisation, components and redesign approaches 30

2.4.1 Business model components 31
2.4.2 Business model ontologies and visualisation 42
2.4.3 Business model redesign approach 53

2.5 Business model innovation process 57

2.5.1 Mobilisation and techniques 58
2.5.2 Initiation and techniques 59
2.5.3 Ideation and techniques 60
2.5.4 Integration and techniques 62
2.5.5 Implementation phase and techniques 63
2.5.6 Monitoring phase and techniques 63

2.6 Business model innovation conceptual framework 64

2.7 Conclusion 68

3.1 Introduction 69
3.2 Research philosophy 70
3.3 Research method and approach to theory development 77
3.4 Research strategy and sampling 79
3.5 Business model innovation research and complexity 82
3.6 Data collection and analysis 83
3.6.1 Data collection 84
3.6.2 Data analysis technique: thematic analysis 87
3.7 Research validity and reliability 97
3.8 Ethical considerations 100
3.9 Conclusion 101
4.1 Introduction 102
4.2 Context Digital Marketing Company 103
4.2.1 History and business model overview 103
4.2.2 Business model innovation drivers 106
4.2.3 Business model components 111
4.2.4 Business model innovation approach 116
4.2.5 Business model innovation process 116
4.2.6 Business model innovation lessons learnt 117
4.3 Context Large ICT Company 118
4.3.1 History and business model overview 118
4.3.2 Business model innovation drivers 123
4.3.3 Business model components 128
4.3.4 Business model innovation approach 135
4.3.5 Business model innovation process 137
4.3.6 Business model innovation lessons learnt 140
4.4 Context Small ICT Company 142
4.4.1 History and business model evolvement 142
4.4.2 Business model innovation drivers 146
4.4.3 Business model components 150
4.4.4 Business model innovation approach 154
4.4.5 Business model canvas B-BBEE opportunities 155
4.4.6 Business model innovation process 155
4.4.7 Business model innovation lessons learnt 156
4.5 Context Financial Services Provider A 157
4.5.1 History and business model evolvement 157
4.5.2 Business model innovation drivers 159
4.5.3 Business model components 163
4.5.4 Business model innovation process 170

4.5.5 Business model innovation lessons learnt 171
4.6 Context Financial Services Provider B 172
4.6.1 History and business model evolvement 172
4.6.2 Business model innovation drivers 176
4.6.3 Business model components 181
4.6.4 Business model innovation approach 185
4.6.5 Business model innovation Lessons learnt 186
4.7 Context Financial Services provider C 187
4.7.1 History and business model evolvement 187
4.7.2 Business model innovation drivers 190
4.7.3 Business model innovation approach 198
4.7.4 Business model innovation process 198
4.7.5 Business model innovation lessons learnt 200
4.8 Conclusion 202
5.1 Introduction 203
5.2 Business model context 203
5.3 Business model innovation drivers 204
5.4 Business model innovation process 207
5.5 Business model components and communication 207
5.6 Business model redesign approach 207
5.7 Conclusion 208
6.1 Introduction 209
6.2 Research objective 1: Explore why and how business models articulated are. 211
6.3 Research objective 2: Determine the components that are used to visualise the business model. 215
6.4 Research objective 3: Examine the drivers of business model innovation? 217
6.5 Research objective 4: Determine process is used to manage business model innovation. 227
6.6 Research objective 5: study the components of the business model that are redesigned 233
6.7 Research objective 6: Review the effective and in effective practices in managing business model innovation 235
6.8 Research objective 7: Explore the relationship between business model innovation drivers and re-designed business model components? 238

6.9 Conclusion 239

7.1 Introduction 241

7.2 Main findings 241

7.3 Proposed conceptual framework and theoretical and empirical findings 244

7.3.1 Business model innovation drivers 247
7.3.2 4I-2M Business model innovation process 252
7.3.3 Business model components and communication 258
7.3.4 Business model redesign approach 262
7.3.5 Theoretical contribution and summary 263

7.4 Practical contribution 265

7.5 Limitations and future research 267

7.6 Conclusion 268

7.7 Reflexivity 269

List of figures

Figure 2-1: Business model innovation drivers compiled by researcher 30
Figure 2-2: Business model components adapted from (Fleisch and Wortmann, 2015) and (Pigneur, 2006) 42
Figure 2-3: ColorMailer REA business model compiled by the researcher 45
Figure 2-4: ColorMailer e3value business model compiled by the researcher 47
Figure 2-5: ColorMailer Business Model Canvas Business Model compiled by the researcher 49
Figure 2-6: ColorMailer reference ontology business model compiled by the researcher 50
Figure 2-7: New value curve strategies (Kim and Mauborgne, 2005) 54
Figure 2-8: Business model design themes (Amit and Zott, 2001) 55
Figure 2-9: Business model innovation process steps compiled by the researcher 64
Figure 2-10: Conceptual framework compiled by the researcher 67
Figure 3-1: Saunders et al. (2015) 70
Figure 3-2: Diagrammatic representation of thematic analysis steps with information from (Braun and Clarke, 2006, 2012) 90
Figure 3-3: Business model innovation data codes 93
Figure 3-4: Conceptual framework and research questions 95
Figure 3-5: Mapping codes research questions and sub questions to conceptual framework: 96
Figure 4-1: Business model context Digital Marketing Company compiled by the researcher 104
Figure 4-2: Business model innovation drivers Digital marketing Company compiled by the researcher 107
Figure 4-3: Business model visualisation house analogy compiled by the researcher 111
Figure 4-4: Digital Marketing Company business model components compiled by researcher 112
Figure 4-5: Digital Marketing Company benefits business model visualisation compiled by researcher 115
Figure 4-6: Large ICT Company history and business model context compiled by researcher 119
Figure 4-7: Large ICT Company business model innovation drivers compiled by researcher 123
Figure 4-8: Large ICT Company business model components compiled by researcher 129
Figure 4-9: Business model cloud information supplied by participant 138
Figure 4-10: Stage gate model (Bonadonna and Pennington, 2014) 139

Figure 4-11: Business model innovation process Large ICT Company (compiled by researcher) 140
Figure 4-12: Small ICT Company History and business model context compiled by researcher 144
Figure 4-13: Small ICT Company business model innovation drivers compiled by researcher 146
Figure 4-14: Small ICT Company history and business model context 151
Figure 4-15: Financial Services Provider A history and business model context 157
Figure 4-16: Financial Services Provider a business model innovation drivers compiled by researcher 159
Figure 4-17: Financial Service Provider A business model components compiled by researcher 163
Figure 4-18: Financial Services Provider B history and business model context compiled by researcher 173
Figure 4-19: Financial Services Provider B business model innovation drivers compiled by researcher 177
Figure 4-20: Financial Services Provider B business model components compiled by the researcher 182
Figure 4-21: Financial Services Provider C history and business model context compiled by researcher 187
Figure 4-22: Financial Services Provider C business model innovation drivers compiled by researcher 191
Figure 4-23: Financial Services Provider C business model components compiled by the researcher 197
Figure 6-1: Business model innovation drivers 226
Figure 7-1: Business model innovation conceptual framework compiled by the researcher 246

List of tables

Table 2-1: Sample business model definitions 20
Table 2-2: Business model visualisation techniques 52
Table 3-1: Sample case study companies 81
Table 3-2: Participants table 82
Table 3-3: Case studies sources of data 87
Table 6-1: Case study results and conceptual framework 210
Table 7-1: Potential business model innovation artifacts 264

Chapter 1: Research introduction and rationale

1.1 Introduction

The purpose of this research study was to investigate how companies manage business model innovation to compete effectively in a changing business environment. The business environment is continually changing because of the increase in technological advancement, globalisation and changing customer needs. As Albas, Diez, Olmos and Rodriguez (2005) suggest, the business ecosystem is undergoing change as a result of globalisation, increasing competition and changing customer needs. This view of a changing environment is supported by Casedesus-Masanell and Ricart (2010) who highlight that the competitive landscape is profoundly changing due to globalisation, deregulation and technological advancement. In this changing environment, despite Porter (1980) theorising that companies compete effectively by adopting one of the three generic strategies of cost leadership, differentiation and focus, there are prominent business model innovation examples that illustrate the value of business model innovation for gaining competitive advantage.

The examples include that of Intel who, according to Pigneur (2006), despite chip design and technology that is marginally differentiated, have excelled at partnerships with PC manufacturers, Microsoft and retailers resulting in an increased competitive advantage. Another business model innovation example is that of Gillette, which pioneered innovation on customer relationships by giving away razors and making money on the blades in what is also known as 'bait and hook' (Pigneur, 2006). In South Africa, 'bait and hook' is used by the BMW financial services, which gives the customer good car deals and makes money on the financial packages (Sinfield,Calder,McConnell and Colson, 2012). Another example is that of the technology giant Google that innovated the revenue component of the business model, bringing together searchers and advertisers in a unique way, thus creating an entirely new industry with high growth potential, leveraging on unique assets and new market space in the competitive landscape (Giesen,Berman,Bell and Blitz, 2007). Another business model innovation example from South Africa is that of Capitec that innovated the banking business

model, offering customers a simplified offering by undercutting traditional procedures with a simple swift approach that speeds up service processing and providing customers with a simplified service compared to that of competitors (Mosala, 2012).

In addition to these examples there are a number of reasons why business model innovation may support companies in gaining a competitive advantage. Firstly, Wirtz (2011) indicates that companies may effectively manage business model innovation to differentiate themselves and ensure competitive advantage. Moreover, innovating the business model enables companies to differentiate business models in ways that are hard to replicate for incumbents and new entrants (Teece, 2010). Thus business model innovation is more important where companies are facing challenges with homogeneous business models and commoditisation by offering the companies the potential to generate profit (Johnson, 2010) to survive and grow by enabling them to differentiate their business models and find innovative revenue streams while reducing costs (Lee,Shin,Hong and Kim, 2011). Companies using homogeneous business models are selling commodities and compete on price and availability, as well as serving customers who buy based on price and availability (Chesbrough, 2007, 2010), and are thus at risk of failing to survive and grow. This is because competing on price and availability is not sustainable because price can be matched and price wars may break out, resulting in some of the players being forced out of business.

Secondly, business model innovation is of importance because it is linked to growth and financial performance, with an IBM 2006 Global CEO Study having found that the financial outperformers put twice as much emphasis on business model innovation as underperformers (Giesen et al., 2007), and an IBM 2008 global CEO study suggesting that financial outperformers pursue the most collaborative and disruptive business model innovation (IBM, 2008). Furthermore, the fastest growing companies are those which have undertaken business model innovation (Casedesus-Masanell and Ricart, 2010) and those in which technology innovation includes business model innovation (Chesbrough, 2007) because a mediocre technology commercialised with a good business model is of more value than a great technology supported by a mediocre business model (Chesbrough, 2010)

Thirdly, business model innovation may be of importance to IT project success and aligning IT projects with market needs. As according to Meertens, Iacob, Niewehuis, Sinderen, Jonkers and Quartel (2012) designing a processes that are designed should be linked with a business model which is translated and refined into enterprise architecture ensure future system that will be developed fit with the market needs. Thus ensuring that IT projects are not a result of technology push but rather initiated from proper analysis of the problem and business context (Iacob,Meertens,Jonkers,Quartel,Nieuwenhuis and Van Sinderen, 2012)

Finally, business model innovation is of importance because of the continuously changing customer needs. Companies no longer regard product innovation as the only source of competitive advantage (Gunzel and Holm, 2013), mainly because with shortening product life cycles product-focused innovation no longer provides sustainable competitive advantage (Marolt,Lenart,Maletic,Borstnar and Pucihar, 2016). Despite business model innovation's potential to support company performance, survival and growth, business model innovation poses both opportunities and potential risks. In addition Johnson et al. (2008b) suggest that while business model innovation could re-shape industries and drive spectacular growth most companies find business model innovation difficult.

1.2 Business model innovation challenges

Business model innovation poses challenges due to the inherent risk associated with redesigning an existing business model. For instance, business model innovation could involve huge investments, high levels of uncertainty, complexity and risk, with a chaotic implementation approach having the potential of being fatal to the core existing business model (Taran,Rene and Boer, 2015). Sosna, Trevinyo-Rodriguez and Velamuri (2010) highlight the importance of trial and error learning approach to business model innovation.

Business model innovation poses challenges because for the redesigned business models to create sustainable competitive advantage the new business models must counteract competitor moves. According to Casedesus-Masanell and Ricart (2011), to compete effectively companies need to design business models that trigger self-reinforcing loops,

that will over time expand value creation, capture, weakening competitor cycles and creating complementarities with competitor cycles (Casedesus-Masanell and Ricart, 2011).

An additional challenge to business model innovation is that in most companies there is limited understanding of the existing business model which serves as a starting point for innovation. In a majority of companies, the business model is not articulated (Chesbrough, 2007, Johnson,Christensen and Kagermann, 2008a, Yariv,Boer and Lindgren, 2015a) and there is no process for managing business model innovation specifically in companies that are using business models that are not differentiated (Chesbrough, 2007). Articulating an existing business model not only generates an understanding of the current business model, but also lays the foundation for business model innovation (Chesbrough, 2007, Sakelladris and Stiakakis, 2011, Wang,Jaring and Wallin, 2009). Furthermore, articulating the existing business model assists the companies to generate alternative paths for business model innovation and identify the most viable paths (Chesbrough, 2007). Hence, making a choice between the competing alternatives is hard and requires objectively comparing alternative business models and selecting the best course of action (Meertens,Strarreveld,Iacob and Nieuwenhuis, 2013).

The articulation of the business model and generation of alternatives is of value for business model innovation though it may be hampered by lack of a defined process for business model innovation. While Chesbrough (2007) articulates a maturity related framework for business model innovation, with companies progressing from having a business model that is not differentiated, to one with some differentiation on products and services evolving to a segmented business model, and to a business model that is externally aware and eventually at the highest level having a business model that integrates innovation processes, these stages of growth are not linked to the kind of process maturity that is required. However, Moore (2014) highlights that Capability Maturity Model Integration (CMMI) suggests a five-level model for introducing improvements in organisational practices where at the first level initial phase processes are not controlled, a second level with processes being managed reactively and then at the third level processes being documented, defined and standardised, a fourth level with processes being quantitatively managed and a fifth level where processes are optimised and focused on continuous improvement.

The potential for business model innovation in supporting companies to compete effectively and the challenges in business model innovation are identified using perspectives from companies in European (Alba et al., 2005, Casedesus-Masanell and Ricart, 2010, Casedesus-Masanell and Zhu, 2011, Osterwalder, 2004, Sakelladris and Stiakakis, 2011, Santos,Spector and Van Der Heyden, 2009), American (Chesbrough, 2007, Johnson et al., 2008a) and Indian markets (Johnson et al., 2008a)**.** Despite this, business model innovation is expected to be of substantial value to companies in South Africa. South African companies are operating in a business environment that is similarly impacted by rapid changes in terms of globalisation, deregulation, and fast pace in technological changes and changing customer needs. Hence, one may expect that both the challenges and potential benefits of business model innovation will be relevant to South African companies, in particular to companies in the ICT services and financial services sectors as both these sectors are of prominence in moving to a knowledge-based economy.

1.3 Contextual background to ICT services and financial services in South Africa

ICT services and financial services are of importance in the South African national economy with ICT involved in almost every aspect of the economy contributing to multiple industries such as manufacturing, business services and telecommunications(South Africa, 2017). Furthermore, while the country's economy was traditionally rooted in the primary sectors due to the favourable agricultural conditions and mineral wealth, there has been a structural shift since the 1990s to move South Africa to a knowledge-based economy with a greater focus on technology, e-commerce, financial and other services (Media Club South Africa, 2016). The South African ICT sector continues to demonstrate dynamic growth, particularly as driven by the mobile sector (Gillwald,Moyo and Stork, 2012).In particular Independent Communications Authority of South Africa (ICASA) report mobile data revenue for the 12 month period ending 30th September, 2016 increased by 25.4 whilst mobile voice decreased by only5.9% (Independent Communications Authority of South Africa, 2017)

The ICT sector contributes around 2.9% to GDP (Republic of South Africa, 2015) with South Africa ranked as the 47th largest exporter of ICT products with exports amounting to around

ZAR 7.4bn and the 35th largest importer, importing ZAR 62.8bn worth of ICT in 2012 (Wesgro, 2014) . Despite the country's having a small share in the global ICT market the sector is deemed to be a growing contributor to economic growth and export markets as well as being an important enabler for the other economic industries in the country (Rijkers-Defrasne, 2004). The South African ICT market is mainly centered in three ICT hubs based in three of its provinces, namely Gauteng, which accounts for 57% of ICT firms, followed by Western Cape, which accounts for 17% and Kwazulu-Natal, which accounts for 8% (Wesgro, 2014).

The South African ICT sector, being the largest and one of the most advanced in Africa, is characterised by technology leadership, particularly in the field of mobile software and electronic banking services (Media Club South Africa, 2016). However, affordability of services remains a major limiting factor to further growth of the mobile market (Gillwald et al., 2012). Despite South Africa's being characterised as a technology leader the country has characteristics of both an advanced and a developing economy with high-income users being early adopters of leading-edge technologies in a way that is parallel with developed economies, while the majority of the public sector, and small, micro and medium enterprises reflecting slower adoption patterns typical of developing countries (Gillwald et al., 2012). The South African ICT sector provides some PC assembly but most of the hardware is imported from Europe, North America and the Far East and marketed and distributed. This is also true for software market as South Africa imports almost all generic software, which is then marketed and distributed. ICT services comprise mainly consulting, custom application development, implementation and ICT education (James,Esselaar and Miller, 2001). Furthermore , several international corporates, recognised as leaders in the IT sector, operate subsidiaries from South Africa, including IBM, Unisys, Microsoft, Intel, SAP, Dell, Novell and Compaq (Media Club South Africa, 2016) with some International companies sometimes partnering with local concerns, as in the case of Bharat Sync Technologies of India, who are rolling out mobile email push and calendar services with South Africa's Milestone Connexions (Young, 2013).

There is need for the South African ICT sector to innovate its business model. As Abrahams and Goldstuck (2010) point out, the South Africa ICT sector is highly competitive with many

players: specifically more than 2,428 companies and a workforce of 141,929 people operating across the hardware, software and IT services. In highly competitive environments business model innovation would provide companies new ways to generate money while reducing costs. In addition, globally ICT suppliers such as hardware resellers, software houses and system integrators are facing a period of change in their strategies and business models (Balocco,Ghezzi,Rangone and Toletti, 2012). A global survey by KPMG (2012) identifies innovating business models to realise cost efficiencies, and embedding sustainability as an element in the business models as two of the top four challenges facing South African companies. Having briefly outlined the ICT context in South Africa the next paragraphs discuss the financial services context.

The financial services sector in South Africa is one of the key economic sectors. As growth and momentum have slowed down in a number of service sectors in the economy, financial services has been the best performing sector over the past five years (Industrial Development Corporation, 2016). The financial services sector caters for a number of services. According to Lufteneger et al. (2011) the financial services sector comprises incumbent competitors such as retail banks and investment banks while insurgent players include web-based financial services, telecommunications, industrial corporations, retailers and car manufacturers. The South African financial services sector also comprises both domestic and foreign institutions that provide commercial, retail, merchant banking, mortgage lending, insurance and investment, with retail banking being dominated by the 'big five' banks, namely Absa, FNB, Standard Bank, Nedbank and Capitec (which is a newcomer to the industry) (Brand South Africa, 2016). Thus there is a high degree of concentration and interconnectedness with the top five banks holding 90.5% of the banking assets and for the insurance market the top five insurers account for 74% of the long term market (International Monetary Fund, 2014). Such interconnectedness is further compounded by the fact that all major banks are affiliated with insurance companies through holding companies or direct ownership and the concentration enables the major financial institutions to have pricing power that drives higher returns on equity and assets (International Monetary Fund, 2014). South Africa, despite its 'emerging market' status, has a sophisticated financial sector (Media Club South Africa, 2016) with the sector being among the most stable and well-functioning in the world and ranked 3rd by the World Economic

Forum 2012-2013 in terms of financial market development, which includes factors such as soundness of the banks, regulation of securities, legal rights and others (Sanlam, 2014) . In a 2016 global ranking of the top 100 banks conducted by Lafferty using financial and non-financial disclosures that included the quality of the organisations and their respective business models, South Africa's 'big five' made it to the top 100 with Capitec being ranked the number one bank globally and Absa ranked 2nd (BusinessTech, 2016).

In the ICT sector there is an expressed need to adapt innovative business models in the financial services sector, as the high concentration in the banking sector in South Africa does not necessarily imply a lack of competition (Simatele, 2015). According to James et al. (2001) banks have long been extensive users of ICT, due to the nature of their services being information based. Changes in the ICT sector have led to access to better and faster information, resulting in services being extended to previously underserved communities and to a proliferation of different financial services and increased competition. Furthermore, technology is evolving at increasing speed, challenging existing banking business models with new entrants emerging outside traditional banking, as in the case of M-Pesa, the mobile banking platform from Vodaphone (Brinckman and Govender, 2015). Technologies such as Bitcoin have entered the South African online payment market with PayFast as the first South African Company to use Bitcoin for its clients such Takealot (Crighton, 2015), one of the top e-commerce retailers in South Africa. Pierre Fourie, the Head of Financial Services Markets for KPMG South Africa adds that the rising regulatory pressures combined with economic and commercial factors are forcing banks to re-examine their business models and strategies(Fourie, 2015). Thus South African ICT and financial services sectors present a good opportunity for investigating how companies manage business model innovation to compete due to the intense competition in these sectors. Moreover both sectors have global relevance with leaders such as Microsoft and IBM operating in the ICT and with the some of the companies in financial services sector in the top 100 in global rankings in terms of the quality of organisations and respective business models. It is in this environment that sample case studies were selected and data collected using structured interviews.

1.4 Research rationale and design

1.4.1 Knowledge gap

There is limited research on managing business model innovation to compete effectively in a changing environment because previous research focused on defining the business model and its components. Thus there is a growing body of theory on business models bringing clarity to our understanding of the existing business model by specifying the business model components (Alt and Zimmerman, 2001, Hedman and Kalling, 2003, Johnson et al., 2008a, Morris,Schindehutte and Allen, 2005, Osterwalder, 2004, Pateli and Giaglis, 2003, Shafer,Smith and Linder, 2005). Furthermore additional business model research examines modelling the business model components (Alberts,Meertens,Iacob and Nieuwenhuis, 2012, Andersson et al., 2006, Geerts and Mccarthy, 2002, Gordijin,Akkermans and Vliet, 2000b, Meertens,Iacob and Nieuwenhuis, 2011, Osterwalder, 2004). Moreover there is growing research on linking business models to enterprise architecture (Iacob et al., 2012, Meertens et al., 2012) and evaluating business models (Meertens et al., 2013) and analysing or managing business model risk (Johnson,Iacob,Valija,van Sinderen,Magnusson and Ladhe, 2013, Yariv,Rene and Harry, 2015b).

Despite the growing theory about business models, Wirtz et al. (2016) suggest that research into business models may be regarded as being still at an early stage with need for additional research in business model. As Zott and Amit (2015) indicate that a generalised process model on how companies work with business model innovation is missing from the literature. Research specific to business model innovation has focused on the various approaches for innovating the existing business model (Almedia and Frias, 2009, Giesen et al., 2007, Lufteneger et al., 2011, Mahadevan, 2004, Venkatraman and Henderson, 2008, Wirtz, 2011) and examined the stages of business model innovation (Chesbrough, 2007). Business model innovation research has begun to examine business model innovation drivers (Wang et al., 2009) and business model innovation process (Frankenberger,Weiblen,Csik and Gassmann, 2013, Mitchell and Coles, 2004, Osterwalder and Pigneur, 2010, Sinfield et al., 2012, Wirtz, 2011, Zott and Amit, 2015) as well creating value through business model innovation (Amit and Zott, 2012) and introducing disruptive business models (Habtay and Ojah, 2010). In addition, Viet, Clemons, Benlian, Buxman,

Hess, Span, Kundisch and Leimeister (2014) indicate that addressing the business model concept as an anchor in the identification of information systems impact remains largely under researched. Thus additional research that seeks to contribute to this body of knowledge in such an understanding of business model impact on Information systems and the link to business model innovation process could be of importance, as Zott and Amit (2015) add there is limited research on business model innovation process.

In terms of business model innovation research conducted in South Africa, previous research has examined how innovation is managed (Mayer, 2012), sharing insights regarding business model innovation trends and strategies (Kruger, 2010), the introduction of disruptive business models using examples from service firms (Habtay and Ojah, 2010), and formulating business models for telecommunication SMEs to gain competitive advantage (Obehholzer, 2007). Research conducted in South Africa has also looked at constructing a business model framework for providing specialised support services to SMEs (du Plessis, 2012), the analysis of existing business models in the motor body repair sector(Muyengwa,Dube and Battle, 2012), incumbents' response to disruptive business model innovation (Habtay and Holmén, 2014) and the capacity of information technology for business model innovation in the financial services (Kok and Baets, 2016). In addition Cunningham (2012) suggests that in South Africa, business model innovation is the least discussed and receives little attention from business leaders and the public sector in comparison to product and process innovation. Additional research in South Africa explored South African small to medium enterprises' appetite for and use of open innovation and using the business model canvas to explore how independent musicians in South Africa view their music careers (Pienaar, 2016).As well as examining University-driven inclusive innovations in the Western Cape (Grobbelaar,Tijssen and Dijksterhuis, 2017).
Both local and international studies contribute valuable insights on managing business model innovation; however, numerous studies have identified the need for additional research on business model innovation (Bucherer,Eisert and Gassmann, 2012, Krcmar,Böhm,Friesike and Schildhauer, 2011, Morris et al., 2005, Taran,Boer and Lindgren, 2009) because structured guidelines to support companies in managing business model innovation to compete effectively are still limited with Björkdahl and Holmén (2013) identifying managing business model innovation as still one of the grand challenges. In

particular, there is a need for research on the business model innovation process which covers the concept of managing the business model innovation process (Chesbrough, 2007) including understanding the business model innovation process and its constituent elements (Schneider and Spieth, 2013) and research on using the business model to compete effectively (Casedesus-Masanell and Ricart, 2011).

Calls have also been made for research on the business model innovation process phases, specifically studies on the ideation phase to provide systematic ways of generating new business models and using the 4I-framework as a basis for empirical research in business model innovation (Frankenberger et al., 2013). In addition, there is a need for testing and evaluation of the sufficiency of existing business modelling tools, such as the business model ontology canvas which models business components (Krcmar et al., 2011).

Most recently Teece (2017) indicated that there is need for empirical research on business model innovation to provide better understanding of business model innovation implementation and change as such studies could shed light on important aspects of dynamic capabilities. Furthermore, a google scholar search on the latest articles on managing business model innovation yields a number of literature review articles, case studies as well as concept papers. In particular there are concept papers that explore issues such as quantitative innovation readiness levels measure that seeks to assess the assess the amount challenges an idea is likely to create for the company (Evans and Johnson, 2013) and the role of business model innovation on companies going through transition (Sarasini and Linder, 2017), business model innovation strategy framework that proposes four quadrants of existing products and new products (Verhoeven and Johnson, 2017) challenges companies face when dealing with potential disruptive technologies and creating viable business models (Vorbach,Wipfler and Schimpf, 2017). The Literature review studies that have examined business model innovation literature, include a critical assessment of these research efforts, (Foss and Saebei, 2017) and on the evaluation of digital business models within the different stages of the business model innovation process (Tesch and Brillinger, 2017)There review highlights the growing body of empirical research mainly case studies that have examined issues such as how technological spinoffs innovate existing business models by leveraging intellectual capital (Elia,lerro,Passiante and Schuima,

2017)creating a sustainable business model for in a non-profit organisation (Halia,Hoveskog,Danilovic and Olofssson, 2017)analyse business model innovation effectiveness in Small Medium Enterprises (Heikkilä and Heikkilä, 2017) and challenges related to risk management in managing business model innovation (Taran et al., 2015).Thus Foss and Saibei (2017) review business model innovation research published from 2015-2016 highlight that whilst business model innovation research is growing empirical research is not cumulative with the identification of key conceptual and theoretical gaps and cumulative empirical work still needed. As cross sectional research on business models and business model innovation cases or cross cases is still limited(Heikkilä and Heikkilä, 2017)

The research study seeks to contribute to the identified research gaps o(Heikkilä and Heikkilä, 2017)n managing business model innovation to compete effectively in a changing environment. Using sample South African companies, the relevance of a generic business model innovation process which is supported by an understanding of both the business model innovation drivers and business model components will be examined. In the research study the business model ontology canvas potential in articulating existing business models is examined.

1.4.2 Research problem

Despite companies facing challenges with survival and growth, a large number of South African companies are not managing business model innovation to compete effectively in a changing business environment. Furthermore, insights from the few companies that are managing business model innovation to compete effectively are not documented and the literature does not provide structured guidelines on how to manage business model innovation to compete effectively. In addressing this research problem, the research objectives for the research study are outlined in the next section.

1.4.3 Research objective and sub-objectives

The main research objective is:

Investigate how - companies manage business model innovation to compete effectively in a changing business environment?

The sub-objectives are:

1. explore why and how are business models articulated
2. Determine the components that are used to articulate the business models,
3. Examine the drivers for business model innovation drivers-.
4. Determine the process that used to manage business model innovation?
5. Study a components of the business model that are redesigned.
6. Review effective practices in managing business model innovation.
7. Explore the relationship between the business model innovation drivers and the re-designed business model components?

The research objective and sub-objectives formed the basis upon which primary data was collected. Such primary data was analysed and in conjunction with the literature review enabling the researcher to achieve the specified objectives. In the next section the expected contribution will be briefly examined.

1.5 Expected contribution

The research study is expected to contribute towards expanding the limited theory on managing business model innovation to compete in a changing environment. In particular the research study contributes to the theory by empirically examining the relevance of a conceptual framework for managing business model innovation in sample companies in South Africa. The conceptual framework comprises the drivers, process and business model components, by examining how companies manage business model innovation to compete effectively in a changing environment. In so doing the research study responds to calls for additional research on the business model innovation process and examines the use of the business model ontology canvas to visualise existing business models.

The research study may be of practical relevance in supporting companies in managing business model innovation as the proposed conceptual framework may be of value in guiding business model innovation endeavours. The companies could monitor the identified business model innovation drivers which trigger the business model innovation process and adopt the proposed continuous 4I-2M process to redesign the existing business models.

1.6 Delimitations

The research delimitations aim to describe the scope of the research by specifying those parameters which are included in the research and those which are excluded. The study delineates and is limited to sample companies in South Africa in the financial services and Information Communication Technology (ICT) services sectors. Furthermore, the abstraction level of the business model ranges from a very detailed product level, the business level and the company level to the much more aggregated industry level. Where the company has more than one business model only one business model that has been recently introduced will be examined.

1.7 Limitations

The main limitation is that the proposed study adopts a case study research design and does not attempt statistical generalisation. Due to the sectoral and geographic delimitations and use of six sample case studies the research is not representative of all the companies in South Africa. Because the study is cross sectional, it only examines one instance of business model innovation as opposed to how the company manages business model innovation on a continuous basis to create sustainable competitive advantage.

1.8 Chapter summary

The chapter laid the foundation for the study with the preceding sections providing an introduction to the proposed study, introducing business model innovation potential benefits some examples of companies that have used business model innovation to thrive. The challenges for companies aspiring to innovate business models and the knowledge gap in managing business model innovation to compete effectively in a changing business environment were noted. The knowledge gap serves to ground the research study within

the existing body of knowledge on managing business model innovation to compete effectively. Furthermore, the relevance of business model innovation in the South African context was briefly outlined and the research problem and questions for the proposed study specified. In the next chapter the literature review on managing business model innovation is presented.

1.9 Overview of the chapters

A brief overview of the thesis is as follows

Chapter Two: Conceptual framework business model innovation.

This chapter puts into perspective the theoretical and empirical considerations involving managing business model innovation. In doing so it presents the literature review of the concepts of business model innovation drivers, business model innovation process and the business model components which are the focus of innovation in the business model innovation process. As a conclusion to the chapter a conceptual framework for managing business model innovation to compete effectively based on these concepts is presented. This conceptual framework is examined for relevance in sample case study with the data collected based on the conceptual framework.

Chapter Three: Research design and methodology.

The chapter presents the research philosophy for the study. Thus provides an overview of the main research philosophies and selects pragmatism as a research philosophy for the study. In addition the chapter outlines the research approaches and sampling techniques. The innovation practice in a company was used as a unit of analysis, with case study companies selected using criterion sampling technique. In this chapter the data analysis techniques that are used in the research study are briefly outlined as well as the techniques that are adopted to ensure research validity and reliability are explained. The ethical considerations relevant to the study are discussed with clear strategies to ensure that participant privacy and confidentiality are protected.

Chapter Four: Data analysis and findings.

This chapter presents the data collected from research participants who are executives in the sample companies. In presenting the data a contextual background to each case study is presented based on the data collected from the interviews and documents that were received from sample companies and the data that could be gleaned from the participant companies' websites and popular media. The contextual background sets the scene for making case study comparisons and to achieve the research study objectives.

Chapter Five: Cross case comparing ICT and Financial services

A comparison between the case studies in the ICT services and financial services sectors presents an interesting view, but the discussion on the comparisons needs to be treated with caution as the sample was small and the findings may not necessarily be true regarding all the companies in these sectors. The case studies comparisons are presented based on the key elements of the research study namely the business model context and the business model innovation drivers and process. In addition comparisons are made between the business model components, communication and the business model redesign approach. One key similarity in the case studies was that the business models of the sample companies are perceived to be differentiated from those of competitors to varying degrees.

Chapter Six: Research results

In Chapter Six the way in which the research objectives are achieved is presented and in Chapter Four (individual case studies) and the case study comparisons presented in Chapter five. Accordingly, the data analysis investigates the research objectives, which correlate to aspects of the conceptual model, the main research objective being to investigate how companies manage business model innovation, to compete effectively in a changing environment. The collected data from sample companies is analysed with qualitative software ATLAS.ti to support data analysis and with data networks generated to provide answers the research questions. The research questions are answered using the thematic analysis approach that was presented in chapter three.

Chapter Seven: Conclusions and implications.

The chapter concludes the study by highlighting the main findings and presenting the conceptual framework for managing business model innovation. It illustrates the practical implications for the conceptual framework and emphasises the conditions under which the proposed conceptual framework would most likely support companies in managing business model innovation to compete in a changing business environment. In addition, the theoretical contribution of the research study is presented together with the limitations and recommendations for future research. The chapter concludes with a reflection on the study.

Chapter 2: Conceptual framework business model innovation

2.1 Introduction

An analysis of the literature was conducted to position the current study within the existing literature on business model innovation. The literature review covers the business model innovation concept and the three main concepts that relate to managing business model innovation to compete effectively in a changing business environment, namely business model innovation drivers, business model components and the business model innovation process. An initial literature search used google scholar to identify the most cited and most recent articles in the area of business model innovation. In the process of identifying articles the search terms “business model innovation”, “business model”, “business model innovation process” and “managing business model innovation” were used. These was followed by a search in the academic electronic databases that include Emerald, Science Direct, IEEE, Springer and Ebcohost. In addition to the two searches additional source were identified from the citations in the papers that were reviewed. The subsequently the articles were analysed and used to conceptualise the study. In the next sections, each of these four aspects of the business model innovation concept, process, drivers and business model components will be examined in detail. The review will conclude by outlining a conceptual framework. In the following section, the business model innovation concept is discussed.

2.2 The concept business model innovation

2.2.1 What is business model innovation

Defining business model innovation is challenging because there is no consensus on what the business model is from which the concept of business model innovation is drawn. A number of researchers highlight the diversity in business model definitions (Al-Debei,El-Haddadeh and Avison, 2008a, b, Alt and Zimmerman, 2001, Heikkilä and Heikkilä, 2017 , Johnson et al., 2008a, Johnson et al., 2008b, Morris et al., 2005, Osterwalder, 2004, Petrovic,Kittl and Teksen, 2001, Schmitt,Gregoire,Incoul,Ramel,Brimont and Dubois, 2004, Shafer et al., 2005, Teece, 2010, Timmers, 1998, Wirtz et al., 2016). Schneider and Spieth (2013) add that academic literature on business models is fragmented with inconsistencies

in definitions and construct boundaries (Schneider and Spieth, 2013). For example, DaSilva and Trkman (2014) define a business model as a combination of resources which through transactions generate value for the company and customers. However, this perspective imply that the uniqueness of business models would consist of resources and the way transactions are processed. But business model uniqueness could also be in any of the components of the business model, such as the way revenue is generated, as in the case of Google where the search software is provided for free and money is generated through advertising. Furthermore, Wirtz et al. (2016) not so long ago indicated that t despite the growing number of papers in business model innovation there is limited understanding of the phenomena with previous studies characterised by a heterogeneous comprehension of the concept.

To clarify the definition of a business model, efforts have been made to merge the different definitions. One such approach is discussed in Taran et al. (2009), categorising the diverse definitions and highlighting that researchers took three main perspectives: a narrow technological or financial focus; a more general perspective; or incorporating strategy in their definitions. Another effort in merging the diverse definitions is found in Wirtz et. al. (2016) who indicate that business model definitions either focus on the structure in terms of components of the business model or the task of the business model in terms of key activities. The commonalities between the business model definitions have been explored and according to Petrovic et al. (2001), while the definitions are diverse, a commonality between them is that the definitions include a description of how a business makes money to sustain itself while providing value to the customers, thus reinforcing the idea that business models represent the intent of value creation. This declarative intent on how value is created was evident in the sample business model definitions reviewed, for example (Al-Debei et al., 2008a, Amit and Zott, 2012, Andersson,Johannesson and Zdravkovic, 2009, Casedesus-Masanell and Ricart, 2010, Chesbrough, 2007, Chesbrough and Rosenbloom, 2002, DaSilva and Trkman, 2014, Fielt, 2011, Gordijin,Akkermans and Vliet, 2000a, Johnson et al., 2008b, Magretta, 2002, Morris et al., 2005, Osterwalder, 2004, Osterwalder and Pigneur, 2010, Shafer et al., 2005, Teece, 2010, Timmers, 1998, Wirtz et al., 2016, Zott,Amit and Massa, 2011). These are summarised in Table 2.1.

Table 2-1: Sample business model definitions

Authors	Definitions	Comment
Timmers (1998)	An architecture for the product, service, information flow and the various actors and roles; and a description of the potential benefits for the actors as well a description of the sources of revenue.	Stipulates value creation through architecture and actors roles and sepecifies value capture in the sources of revenue as well as the value proposition in the product and service
Gordijn, Akkerman & Vliet (2000a)	Describes the way of doing business between actors, thus sparks off requirements at business level.	Specifies the value creation aspect in the business model
Chesbrough & Rosenbloom (2002)	Articulates value proposition, market segment, structure of value chain, estimating the cost structure and profit potential of the offering and describes value network and formulates the competitive strategy.	Specifies value proposition, target market and value creation in the structure of the value chain and value network and value capture in the profit potential and cost structure and value proposition and differentiation in the competitive strategy
Magretta (2002)	Explain underlying business logic how the business delivers value to its customers, at an appropriate cost, specifying the target customer and the value of the offering to the customer	Specifies the underlying logic and specifies value creation value capture in the approritae cost and the taget customer and the value proposition
Ostewalder (2004)	A conceptual tool that contains a set of elements and their relationships, expressing the business logic of a specific company, outlining the value offered to one or more segments of customers, the architecture and partners for delivering value and the relation between this value and capital such that profitable and sustainable revenue streams are generated	Specifies the business logic and the interelelationships between the business model components, stipulates the value proposition, target market segments, value creation in architecture, partners and resources as well as value capture profitable sustainable revenue streams
Morris, Schindehutte & Allen (2005)	A concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture and economics are addressed to create sustainable competitive advantage in defined markets	Specifies the interrelationship between the business model components and specifies value creation and value capture target markets as well as differention as implied in the competitive advantage
Shafer, Smith & Linder (2005)	A representation of a firm's underlying core logic and strategic choices for creating and capturing value within a value network	Stipulates the underlying core logic and capturing and creating value and strategic choices that imply a sense of value proposition differentiation
Chesbrough (2007)	Articulates value proposition, identifies market segment, defines value structure whilst specifying revenue generation mechanisms, position of the firm within the value network and formulates the competitive strategy.	Specifies value proposition, target market and value creation in the value structure and value network as well as articulates valu capture in the revenue generation and implies diferentiation in the competitive strategy
Al-Debei & El-haddadeh (2008a)	An abstract representation of an organization core interrelated architectural , cooperation, and financial arrangements designed and developed by an organization presently and in the future, including the core products and services that the organization offers or will offer, based on the arrangements that are needed to achieve strategic goals and objectives.	Stipulates the interelationship and value creation in the architecture and cooperation arrangements and articulates the value proposition in the product and services and value capture in the finacial arrangements
Johnson, Christensen Kagermann (2008)	A combination of the interlocking elements of customer value proposition, profit formula, key resources and processes that when taken together create and deliver value	Articualtes the inter relationship and specifies the value proposition and the customer as well as value creation in the key resourcesand processes and value capture in the profit formula
Andersson Johannesson & Zdravkovic (2009)	Captures the relationship between resources, actors and the events that result in the creation distribution of resources among the actors	
Casadesus-Masanell Ricart (2009)	The logic of the firm, the way it operates how it creates value for its stakeholders	Articulates logic and value creation and implies value capture in the creation of value for stakeholders
Teece 2010	articulates the logic and provides data and other evidence that demonstrates how a business creates and delivers value to customers outlining . the architecture of revenues, costs, and profits associated with the business business enterprise delivering that value.	Specifies target the logic, target customer, and value creation in the architecture and stipulates value capture in the revenue, costs and profits
Fielt (2011)	Describes the value logic of how a company creates and captures customer value	Specifies the logic and value creation and capture aspects
Amit & Zott (2012)	A system of interconnected and interdependent activities conducted by a company and its partners to satisfy a perceived customer need.	Specify the interelationship between the business model components and stipulates value creation in terms of activities and partners, and articulates target customers and implies value proposition in satisfying the perceived customer need
Da silva & Trkman(2014)	as a combination of resources which through transactions generate value for the company and customers.	Specifies value creation in the combination of resources and articulates target customer and implie value proposition
Wirtz 2016	A simplified aggregate representation of the company's relevant activities highlighting how value is generated for the customer in order to secure competitive advantage	Specifies the aggregation and value creation in the acitivities and implies value proposition

The various definitions were compared and a holistic approach adopted in defining what a business model is in the current research study. In comparing these sample definitions, those of Magretta (2002) Osterwalder's (2004), Chesbrough (2007), Johnson et.al (2008a), Osterwalder's and Pigneur (2010) and Teece (2010) are perceived as specifying the goal of the business model and the components of a business model; hence, these definitions are adapted in the research study and a business model is defined ***as the underlying economic logic of how a business makes money and creates value in serving the target customer, taking into account key activities, resources and partnerships as well as the value exchanges between the company and its partner****s.* In similar manner to business model the definitions of business model innovation are diverse as highlighted by Tesch and Brillinger (2017) next to the term "business model", also a variety of different definitions of the concept of business model innovation .The adopted definition of what a business is leads to **business model innovation** being defined as either adapting an existing business model innovating one or more components of the business model or innovating business model components to create a completely new business model for the company with both adapted and created business models seeking to enable the company compete effectively in a changing environment. *the* This definition for business model innovation differs from that used by Kok and Bates (2016) which takes a narrower view by defining business model innovation as a different way to engage with the customers and earn revenue. This view implies that business model innovation covers only three components of the business model, namely the distribution channels, relationships and revenue components. In addition to the definition contests business model innovation research faces complexity in terms of the level of abstraction and confidentiality around company business model initiatives.

2.2.2 Business model innovation criticism

Based on the diversity and lack of consensus around business model definitions, Porter (2001) criticises the business model concept as murky at best, and the business model approach to management becomes an invitation to faulty thinking and self-delusion, as this business model definition focuses only on how a company generates revenue, not on creating economic value. However, taking a broad view of business model and business model innovation ensures that a business model integrates both value creation and generation. Hence, the business model may be regarded as a unifying approach that

integrates various streams of management, namely the resource-based view, the value chain framework, industrial organisation economics, transaction cost economics, and strategic network theory as such is not biased by any specific strategic management theory (Mosala, 2012). Furthermore, the business model innovation concept relates to Michael Porter's 'Industry Structure View' based on the Five Forces Framework (Porter, 1979) and Generic Strategy Model (Porter, 1985). One may argue that the business model concept is of value in analysing companies where there is more than one traditional business model, as the Five Forces Framework is static and linear in nature and not highly relevant where traditional industry boundaries are blurring, as illustrated in companies such as Google, a company that is involved in books, software and mobile phones, or Apple, a computer company operating in the telecoms, music and film industries (KPMG, 2012).

An additional argument as to how business model innovation links to creating economic value stems from the difference between strategy and business model that is presented in Casedus-Masenell and Ricart (2010) that indicates that the business model is not strategy but a direct result of strategy, depicting the realised strategy, as the business model reflects the current position of the business based on the realised strategy.
According to Hamel and Breen (2007)the innovation stack is four level stack with operational innovation on the bottom of the hierarchy and is dependent on the quality of IT infrastructure but such IT based advantages diffuse rapidly and difficult to defend. The second level in the hierarchy is perceived as product innovation which an iconic product yield some competitive value the pace of technological advancement is such that breakthrough products rarely provide lasting advantage. A third hierarchy is the strategic innovation that is described as a bringing in a bold new business model that puts incumbents on the defensive. The fourth level of innovation according to this hierarchy is management innovation that has unique capacity to create competitive opportunities that are hard to replicate and present disruptive business models (Hamel and Breen, 2007). In this research study business model innovation is conceptualised to include both the strategic innovation level and the management innovation level as business model innovation is perceived to encompass both adapting the business model and disruptive business model

In addition Pateli and Giaglis (2003) suggest that business models are a conceptualisation of strategy and represent the foundation for the implementation of business processes and information systems. In terms of this view of business models as a conceptualisation or realised strategy. Casedesus-Masanell and Ricart (2010) highlight that strategy reflects what a company aims to become, while business models describe what a company really is at a given time. As a result business models are of value to business management, focusing the attention of the strategist on decisions that have short-term consequences (DaSilva and Trkman 2012) but also brainstorming about the future (Ching and Fauvel, 2013). Hence, Amit & Zott (2001) suggest that business model must be seen as the replacement or complement of the traditional units of analysis as a result of altered economic conditions. Furthermore, Abraham (2013) makes a case for the use of both strategy and business model, with the business model focusing on bringing understanding of the current business model and whether or not it needs to be enhanced or replaced, while strategy focuses on defining the competitive advantage through strategic analysis of industry, competition, markets and other environmental factors. In this research study, while a business model could be considered to be realised strategy as it describes the current position of the firm, innovation brings in an element of the future by redesigning the existing business model components. Hence, business model innovation is perceived as a complement to strategy. In a company business model innovation is triggered by a number of drivers.

2.3 Business model innovation drivers

Business model innovation in a company is triggered by either external or internal factors which are referred to as business model innovation drivers. Despite the awareness of business model innovation drivers as triggers, there is paucity of research in the area. For example, a Google Scholar search in 2016 using the search term ‘business model innovation drivers’ reflects this paucity of research with 25 results, while the term ‘business model innovation triggers’ yields six additional results. Furthermore, one may argue that this is a new area of exploration as the references are dated from 2010 to 2016. However, Mahadevan (2004) had earlier identified competition, technology, value shrinkage, changing customer needs, regulatory factors and firm level competencies, while Morris et al. (2005)

identified growth aspirations as a driver for business model innovation. Despite the drivers being both internal and external, Sosna, Trevinyo-Rodriguez & Velamuri (2010) suggest that often the triggers are external. However, Bucherer et al. (2012) put forward the view that the drivers could be internal or external and be categorised into threats and opportunities which could also be internal or external. Meeterns et al. (2013) add that these drivers could either threats or opportunities and the drivers should have enough potential to be worthy of pursuit.

The external drivers have been identified as technological advancement (Bucherer et al., 2012, Casedesus-Masanell and Ricart, 2010, Mahadevan, 2004, Marolt et al., 2016, Teece, 2010, Wirtz, 2011), market factors (Bucherer et al., 2012, Wirtz, 2011) and regulatory factors (Alt and Zimmerman, 2001, Bouwman and MacInness, 2006, Bucherer et al., 2012, Wirtz, 2011). The internal drivers have been recognised as growth aspirations (Morris et al., 2005) and resources (Bucherer et al., 2012), as well as time management challenges, highly skilled experts and joy in produce producing high quality products (Marolt et al., 2016).

2.3.1 Technological advancement

Technological advancement triggers business model innovation by bringing opportunities for new value-creation strategies (Johnson et al., 2008a, Mahadevan, 2004), enabling increased collaboration and providing opportunities that make it easier for companies to collect and analyse consumer data (Bhatnagar,Maryott and Bejou, 2007). In addition, technological advancement may present new sources of revenue (Hoffman and Novak, 2003). Furthermore, according to Tongur and Engwal (2014), technological advancement requires companies to master double complexity in terms of both technology and business model innovation, as technological advancement may often require a new business model, resulting in the company running dual business models. According to Markides (2013), running dual business models could pose challenges as the new business model could require value chain activities that are in conflict with those of the existing business model. Hence, trying to compete with both business models could risk mismanaging both and destroying value (Markides and Charitou, 2004).

Technological advancement may be classified as either sustaining or disruptive. Christensen (1997), provides an explanation of the two types of technological advancement, suggesting that sustaining technological advancements are aimed at enhancing the performance of existing value propositions and are the most common and could either be incremental or radical. However, there is a difference between the two because incremental innovations seek to provide value propositions that meet the user requirements more efficiently, while radical innovations' value proposition often results from new technologies that provide new functionalities. Thus, according Norman and Verganti (2014), incremental innovations seek to do better with existing solutions while radical innovations aim to do what the value propositions did not do before.

In terms of disruptive technological advancements Christensen (1997) points out that these are rare and bring in value propositions that perform less than established mainstream products and are typically cheaper and simpler, but have led to the failure of leading companies. Christensen (1997), identifies additional challenges with disruptive technological advancements are that both the market and the final product features are unknown in the beginning, and listening to dominant customers leads to failure. Furthermore, whilst identifying effects of a disruptive innovation is relatively easy, definitions of what is a disruptive innovation is quite elusive despite the Christensen having identified that disruptive innovations are either new market innovations or low-end innovations(Nagy,Schuessler and Dubinsky 2016). In clarifying this confusion Nagy et al. (2016) propose identifying disruptive innovations based on functionality, technical standards and ownership and provide explanations as to how an innovation could be disruptive to some adopters and at the same time be not disruptive for others.

An additional challenge to disruptive business model innovation is discussed in Foss and Saebei (2017)and provide an example of how the sharing economy provides an illustrative case where business model innovation from companies such as Uber in the transportation business and Airbnb in the accommodation expansion that are considered to be disruptive are being hampered by country's competition law. Furthermore, Habtay(2012) suggests that technological advancement conform to the disruptive innovation theory whilst market

factors deviate from the theory by failing to progress further after quickly disrupting a portion of established markets.

Technological advancement is a driver for business model innovation as technology is enabling people to share information instantaneously all over the world through the internet for personal and business purposes to collaborate, cooperate, and co-create for value generation and distribution, thus presenting opportunities for new business (Lee and Trimi, 2012).The key technologies driving business model innovation include mobile computing, cloud computing, data analytics, and 3D printing and social networking. For example, mobile computing has created opportunities for business model innovation such as in the ability to use mobile phones to facilitate and transfer payments (Mustafa, 2015) as well as changing services in e-tourism, e-health, e-marketing and education (Sousa, 2015). On the other hand advances in cloud computing present companies with on-demand computing services over the internet enabling innovative and transformational shifts in how IT services are managed and delivered (Garrrison,Wakefield and Kim, 2015) resulting in the adaptation of ICT companies' business models. Thus, Clohessy, Acton and Morgan (2016) suggest that cloud computing has accelerated business model innovation for delivering ICT solutions. Another technology that is expected to drive business model innovation specifically in manufacturing is 3D printing, which offers manufacturing companies rapid prototyping while lowering costs, presenting the companies a high degree of flexibility and more product variants available in the market (Weller,Kleer and Piller, 2015). Hence, manufacturing companies could innovate existing business models to exploit these opportunities and to cope with the increased competition generated by the vast product variants in the market. In addition to mobile computing, cloud and 3D printing, big data and data analytics are driving business model innovation with data analytics being used to leverage big data to provide valuable insights for business model innovation. For example, according to Bryat, Katz and Lazowska (2008) Walmart contracted Hewlett Packard to construct a data warehouse to capture transaction data from their 6,000 stores worldwide and apply data analytics to detect patterns indicating effectiveness of pricing strategies and marketing campaigns, as well as to support the improvements in supply chain management. Having discussed how technological factors trigger business model innovation the next section looks into how market factors drive business model innovation. Thus, in conclusion the technological factors that drive business model innovation include sustaining

technological advancements that are either incremental or radical as well as disruptive technological advancements. The internet having become an enabler of new opportunities for companies, in addition mobile computing, cloud computing, data analytics, and 3D printing and social networking driving business model innovation.

2.3.2 Market factors

The market factors which drive business model innovation include the changing customer and the increasing competition. Changing customer needs drive business model innovation by pushing companies to offer value propositions that meet the changing needs as well as meet the needs of un-served customers. The changing customer needs are a result of the increased access to information and commoditisation (Chesbrough, 2007, Johnson et al., 2008a, Teece, 2010) and the opportunities to serve the un-served customers (Johnson et al., 2008a). Un-served customers are excluded either because the current value propositions are extremely expensive, extremely time consuming, extremely complicated or extremely inaccessible (Johnson, 2010). There are a number of additional challenges in serving customers that may include the fact that customer needs exceed solution capability as technology lags behind customer demand, while in other situations the solution capability exceeds customer needs as technology exceeds customer expectations (Dewulf and Mann, 2002). Moreover, with technological advances, modern customers are sophisticated and well-informed and seek value beyond price, quality, speed and customisation from products and services, also seeking enriching experiences (Lee and Trimi, 2012).

Beside the changing customer needs, the competitive forces are the other set of market factors which motivate for business model innovation. The competitive forces driving business model innovation include the need to fend off low-end disrupters and respond to shifting bases of competition as the perception of what is an acceptable value proposition changes over time (Johnson,Christensen and Kagermann, 2008c) as well as the competitor rivalry. The competitor rivalry is exacerbated by the ‘China price’ effect, which is a cliché coined in the mid-2000s that equates to ‘whatever your own price is, less than 30%’. The ‘China price’ drives business model innovation as companies need to find new sources to lower costs and increase quality to remain competitive in terms of acquiring capabilities to move from commodity producing areas to specialist services and creativity-based products

and services (Keen and Qureshi, 2006). The competitive forces have resulted in value shrinkage and business model homogeneity, thus further driving business model innovation (Mahadevan, 2004). Having looked at how competitive forces drive business model innovation, the study will analyse how the regulatory factors trigger business model innovation.

In summary market factors that drive business model innovation are centred on customer needs in terms of changing customer needs, the opportunities to serve the un-served customers. As well as competitive factors concerning the need to respond to the intensifying competition, shifting basis of competition, fending off the low-end disrupters Furthermore, competitive factors include o value shrinkage as a result of business model homogeneity and the "China price" effect.

2.3.3 Regulatory factors

Regulatory issues that drive business model innovation include changes in the regulatory environment which provide opportunities for new value creation (Mahadevan, 2004). Regulatory changes have resulted in deregulation, causing pressure, with trade liberalisation and overcapacity increasing commoditisation and eroding operating margins in more and more industries and pushing for business model innovation (Bouwman and MacInness, 2006). Alt and Zimmermann (2001) highlight that legal issues are an important component of the business model because legal issues may influence the general vision, decisions on value creation systems and revenue models. Besides trade liberalisation due to deregulation, intellectual property (IP)management issues are driving business model innovation, with companies seeking to generate revenues from IP that it is not being used internally and buying IP from external partners (Wang et al., 2009). IP is moving from only a protection mechanism to a tradable good; for example the Deutsche bank buys substantial IP mostly from universities and high-tech ventures (Gassmann,Enkel and Chesbrough, 2010) . Thus Chesbrough and Brunswicker (2014) suggest that the practice of buying and selling innovations is becoming prevalent in large companies with customer co-creation, informal networking and university grants as the most common inbound practices, while outbound practices include joint ventures and selling market-ready product ideas to another company that eventually sells the products.

In conclusion regulatory factors driving business model innovation emanate from deregulation, intellectual property management with IP becoming a source of additional revenues as companies either selling intellectual property that they are not using or buying IP from external partners. Such moves intended to speed up the delivery of new product and services.

2.3.4 Organisational factors

The main internal organisational drivers for business model innovation are identified as both resources and growth aspirations. According to Bucherer et al. (2012), resources that become costly or unnecessary represent a driver for business model innovation. Comes and Berniker (2008) add that underutilised resources or capabilities in terms of technology, human resources or manufacturing could drive business model innovation. As an example of the use of underutilised resources, American Federal Express courier services leveraged its large body of knowledge in repairing electronic devices that employees use to make deliveries to offer the repair of electronic devices directly to customers, creating a business model that capitalises on existing capabilities and excess capacity to provide repair services on a global scale (Matzler,Vieder and Kathan, 2015).

In addition to resources another of the key internal factors that is a driver for business model innovation is growth aspirations. Company growth aspirations, according to Morris et al. (2005), are classified into four main categories, namely subsistence, income, growth or speculative. Subsistence growth aspiration companies seek to meet basic financial obligations, and may not have a strong motivation to undertake business model innovation. The income, growth and speculative groups are most likely to pursue business model innovation to support their growth aspirations. This is mainly because income-generating companies invest to a point where the business generates a stable income for the owners, while growth-focused companies undertake initial investment and reinvest to grow the company, while speculative companies aim to demonstrate venture potential before selling out.

In summary the organisational factors driving business model innovation per the discussion include resources and growth aspirations with the aspirations categorised along the four

dimensions of subsistence, income, and growth or speculative. The resources include both technological and human resources that are available in the company

The business model innovation drivers are illustrated in Figure 2.1, indicating that business model innovation is triggered by technological advancement, market factors, regulatory factors and the internal factors.

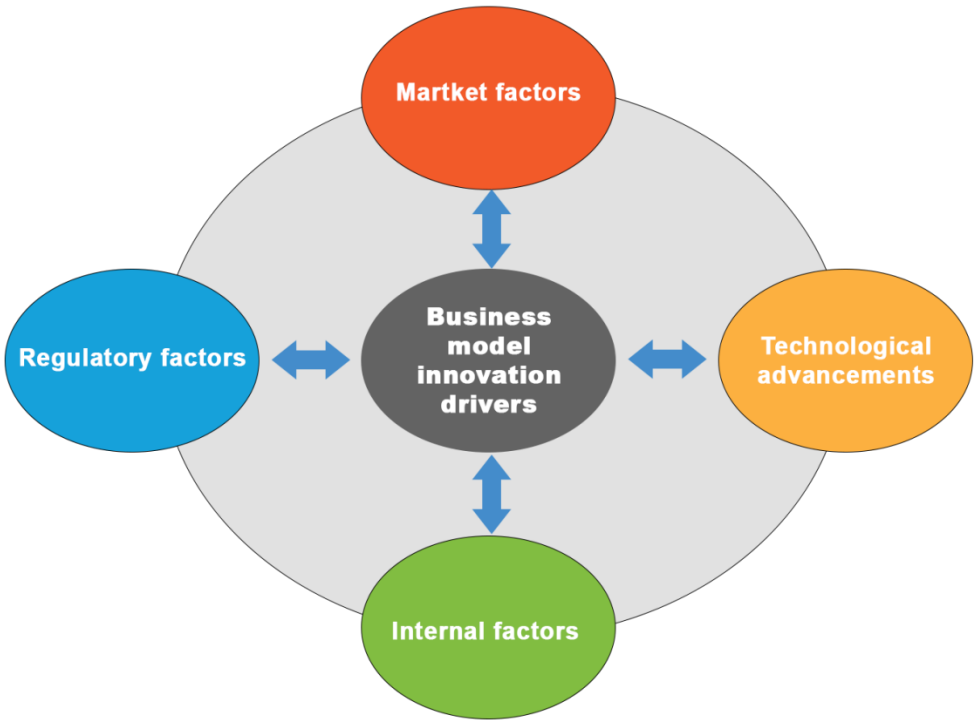

Figure 2-1: Business model innovation drivers compiled by researcher

2.4 Business model visualisation, components and redesign approaches

An understanding of the components of a concept adds some clarity leading to an in-depth comprehension of the concept. The business model components specify the interrelated set of elements which together constituent a business model with Zott, Amit and Massa (2011) stating that each of the components could constitute a part of a generic business model.

2.4.1 Business model components

The lack of consensus on what a business model is and boundaries for the concept has resulted in divergent views on the components of the business model. Andersson et al. (2007) suggest that a number of ontologies have been developed to state precisely what to include in a business models, while Chandrasekara (2008) highlights that previous research has ended with confusing business model components. In this research study the business model components are identified from previous studies on business models and business model ontologies. A business model answers key questions pertaining to the underlying economic logic in a company. According to Osterwalder's and Pigneur (2002) a business model identifies what value is offered by the company; to whom the company offers value in terms of one or more customer segments; and how the value is created, taking into account company architecture and partners and relating this to how much profit is made (Osterwalder and Pigneur, 2002).

These questions are used as a basis to organise and present the discussion on business model components identified in the literature review. However, while the external factors are identified as components of the business model in some studies (Alt and Zimmerman, 2001, Hedman and Kalling, 2003, Morris et al., 2005) they are excluded from the discussion. While the external factors are important to the business model they are not necessarily part of the underlying economic logic of how the company makes money and captures value but are rather treated as the business model innovation drivers. The first business model components group to be examined is the group that comprises the value proposition and differentiation.

2.4.1.1 'What' group – value proposition; value proposition and differentiation

The value proposition (also referred to as value offering, value model or value object) provides an answer as to what value is offered to the target customer (Alt and Zimmerman, 2001, Osterwalder, 2004, Taran et al., 2015) and is linked to the company mission (Almedia & Frias, 2009; Alt & Zimmerman, 2001). The value offered should have an economic value to at least one of the actors (Gordijin and Akkermans, 2006) and represents the value that is created for the customer (Chesbrough and Rosenbloom, 2002). Furthermore, Johnson et al. (2008a) state that the value proposition is a response to a specific customer need which

refers to as ‘a great way to get an important job done’, emphasising that the customer need must be regarded as important by the customer. A different view on the value proposition is offered by Stähler (2002) who argues that the value proposition should not only indicate the value created for the customers but specify the value proposition for both customers and value partners in terms of other entities that are involved in the value creation process.

The value proposition specification not only requires stipulation of what is offered but implies the specification of how such value would be differentiated, as the value proposition, besides specifying the value, should indicate why customers are willing to pay for the value and how the value is differentiated from that offered by competitors (Andersson et al., 2006, Chesbrough and Rosenbloom, 2002, Osterwalder, 2004, Richardson, 2008). The value may be differentiated along the basis of overall cost leadership or differentiation (Porter, 1980) that may be along the dimensions of product leadership, operational excellence and customer intimacy (Treacy and Wiersema, 1993).

According to Porter (1980) companies apply an overall cost leadership or a differentiation in either a broad or narrow scope. Overall leadership entails being a low-cost producer by having a high asset turnover, supplying high volume of standard products with no frills and focusing on mass production. Overall cost leadership is viable in large companies that enjoy economies of scale and often overall cost leadership targets a broad market segment. Treacy and Wersema (1993) elaborate the differentiation into three distinct categories of product leadership, operational excellence and intimacy. Product leadership entails a continuous stream of state-of-the-art products and services, while operational excellence covers the delivery of reliable products and services at competitive prices with minimum difficulty or inconvenience, and intimacy refers to segmenting target customers and providing tailored offerings that meet exact demands.

As an alternative to focusing on either product leadership or differentiation Kim and Mauborgne (2005) propose breaking off the trade-off between differentiation and cost by simultaneously pursuing differentiation and low cost by focusing on alternatives and unserved customers. This entails eliminating the value proposition attributes that are irrelevant to customer needs and reducing value proposition attributes that have been

overdesigned in an attempt to match or outperform competition as this attributes increases the company cost structure at no gain to the company by over-serving the customers. In addition to the elimination and reduction of value proposition attributes the value-cost trade off requires raising well above industry standards those value proposition attributes that are of high relevance to the customer, and creating new attributes.

2.4.1.2 'Who' group – customer interface, target customer, distribution channels and customer relationship

The customer interface comprises the target customer, distribution channels and customer relationships. The target customer component provides answers as to who is the target customer to whom the company wants to offer value, specifying customer segments (Osterwalder,Pigneur and Tucci, 2005, Pateli and Giaglis, 2004), delivery channels used (Osterwalder et al., 2005, Petrovic et al., 2001) and customer relationship strategies used per target market segment (Morris et al., 2005, Osterwalder, 2004, Osterwalder et al., 2005, Petrovic et al., 2001) . A closer look at each of these components will now be taken to gain further clarity by looking at their sub-components.

Target market segmentation is an important aspect within the business model with Osterwalder's and Pigneur (2010) suggesting that customers are at the heart of the business model, as without profitable customers the company will not survive for long. When there is a large group of end consumers that rate the value proposition equally (Gordijin,Petit and Wieringa, 2006) the customers should be sub-divided into distinct subsets that behave in a similar manner or have similar needs customers (Foedermayr and Diamontopoulos, 2008, Osterwalder and Pigneur, 2010) or other attributes (Osterwalder and Pigneur, 2010). However, despite agreeing that customers need to be segmented Osterwalder's and Pigneur (2010) argue that customer segments have substantially different profitability and are willing to pay for different aspects of the value proposition.

Determining the segmentation variables is of value because inappropriate segmentation may lead to lost sales and missed opportunities (Sun, 2009). Moreover, customer segmentation enables the company to allocate investment and resources to the customers that will be most attracted by the company's value proposition (Osterwalder, 2004).

Customers may be segmented into two main markets – either consumer or business (Sun, 2009). Each market has its own segmentation variables. Segmentation variables suggested for consumer markets include geographic, demographic, psychographic and behavioural segmentation and suggested variables for business markets include demographic, customer operating variables, purchasing approaches, situational factors and personal characteristics (Morris et al., 2005, Sun, 2009).

These customer segments will influence the type of relationship the company maintains with the customers. As according to Osterwalder's and Pigneur (2010). The customer segments needs require and justify unique value propositions, reached through different distribution channels and require different types of relationships. Furthermore, Morris et al. (2005) indicate the customer relationship could either be transactional or relational. According to Rangan, Moriarty & Swartz (1992), in business markets buyers may be transactional, relational, programmed bargain hunters with the company having to adopt different suitable approaches to relationship management.

Managing and maintaining customer relationships is of relevance to business model innovation. Osterwalder's and Pigneur (2010) define customer relationship as the relationship a company establishes with a specific customer segment. According to Winer (2001) the Internet enables companies to build better relationships with customers and presents opportunities for companies to respond directly to customer requests and provide customers with an inter active and customised experience and to establish, nurture and sustain long-term customer relationships. Managing customer relationships is motivated by customer acquisition, retention, upselling and customisation (Osterwalder and Pigneur, 2010). In managing the customer relationship companies could choose to adopt different strategies in different target market segments.

The customer segments and managing customer relationships are directly linked to delivery channels. According to Osterwalder's and Pigneur (2010) delivery channels refer to communication, distribution and sales channels that the company uses to reach customer segments, and such channels influence the customer relationship. Furthermore, Andrejic and Kilbarda (2016) suggest that efficient delivery channels contribute to customer

satisfaction and loyalty. Such delivery channels may either be direct or partner channels. As Osterwalder's and Pigneur (2010) observe, companies may choose to use own channels or partner channels or a mix of both with direct channels comprising in-house sales forces, retail stores or websites, while indirect channels could include retail stores owned or operated by company partners.

In summary, the customer interface entails the target market segment, customer relationship and delivery channels. The target market component can be described from a customer perspective as the group of customers that assign economic value to objects or from a company perspective as the customer segments to which the company wants to offer market value. Such segmentation could be based on whether the customer is a business customer or a direct consumer and using segmentation variables that are appropriate for the grouping. The customer relationships specify the type of relationships the company adopts in the various segments. The delivery channels address the aspect of how the company communicates and reaches the customer segments to deliver the value proposition.

2.4.1.3 'How group' – value configuration; key activities, resources and partners

Companies aim to create value for the target customer and in a business model the aspect of value creation is covered in the value configuration. The value configuration answering the question as to how value is created comprises key activities, resources and partners. It depicts how value is created for the target customer (Osterwalder, 2004), identifying key activities, resources and partners (Richardson, 2008). In value configuration, resources and activities must be acquired, activated and organised in a way that improves the quality of offering in relation to customer preferences and competitors (Hedman and Kalling, 2003). Key activities specify the processes which are undertaken to create and deliver value to the target customer and such activities consume resources. The activities could be production, problem-solving, platform and others. Key resources outline the resources which are consumed in the creation and delivery of value to the target customer. Key partners reflect the type of partners, motivations of such partnerships and the alliance types which are involved in the value configuration (Osterwalder and Pigneur, 2010) and value exchanges between the company and the partners.

The resources and activities in a business model have been referred to as value creation and delivery system (Richardson, 2008), infrastructure management (Osterwalder, 2004, Osterwalder et al., 2005), core competence (Morris et al., 2005) resources (Hedman and Kalling, 2003, Pateli and Giaglis, 2004, Petrovic et al., 2001), assets (Lai, Weill, and Malone, 2006) and value architecture (Al-Debei et al., 2008b). Lai, Weill & Malone (2006) add that assets are commonly referred to as components of the resource-based view or core components. According to Hedman & Kalling (2003) in the value configuration resources and activities must be acquired, activated and organised in a way that improves the quality of offering in relation to customer preferences and competitors.

In the analysis of resources and activities Morris et al. (2005) define core competence as the company's internal capability or skill set that enables the company to perform relatively better than competitors. Morris et al. (2005) does not give any categorisation of the core competencies but highlights that these competencies include production or operating systems, selling or marketing approach, information management, mining or packaging and supply chain management. Core competence could also include technology, research and development, creative or innovative or intellectual capacity and networking or source leveraging or financial transactions or arbitrage. Lai, Weill & Malone (2006) categorise assets used in value creation into physical, financial, intangible and human. Physical assets are durable items such as houses and computers as well as non-durables such as food, clothing and paper. Financial assets give owners rights to potential future cash flows and include cash, bonds, securities and stocks. Intangible assets include legally protected intellectual property such as patents, copyrights and trade secrets including intangible assets such as knowledge, goodwill and brand image. Human assets include people's time and effort.

Hedman & Kalling (2003) categorise resources into human, physical or organisational. While Pateli and Giaglis (2004) define resources as capabilities assets as well as key activities including intra- and inter-organisational business processes, thus bringing in the value configuration perspective into the definition of internal capabilities. The configuration perspective is supported in Petrovic et al.'s (2001) resource model that is described as the

logic of how the elements are combined in the value creation. In Osterwalder's (2004) resources and activities are viewed as both resource and value configuration and are referred to as infrastructure management that comprises the company's capabilities, and the value configuration in terms of how activities and resources are arranged in value creation and partnerships that the company cooperates with in the value creation process. A similar integrated view on resources and activities is supported in Richardson's (2008) presentation of value creation and delivery where internal capabilities components are identified as resources and capabilities, organisation of the value chain, activities and processes as well as the company position in the network. Al-Debei (2008b) supports the inclusive resources and configuration view, arguing that value architecture revolves around company resources and capabilities as well as to how these are configured for value creation.

In addition to the key activities an important component in how value is created is the company's key partners. According to Osterwalder's and Pigneur (2010) key partners consist of a network of suppliers and partners that enable the business model. The value network deals with the alliances and partnerships that the company establishes (Pateli and Giaglis, 2004), representing the external arrangements that a company conducts with other businesses in the value network in order to offer products or services (Al-Debei et al., 2008b). In addition Osterwalder's (2004) suggests that key partnerships are voluntarily initiated cooperative agreements formed between two or more independent companies in order to carry out a project or a specific activity jointly by coordinating the necessary capabilities, resources and activities.

Partnerships are becoming the cornerstone of many business models. The value network determines the role a company chooses to play (Alt and Zimmerman, 2001, Chesbrough and Rosenbloom, 2002, Shafer et al., 2005) as well as the agents that constitute the network and industry focus on customers and products (Alt and Zimmerman, 2001). The value network includes suppliers, customer information, customer relationship, information flows and the product or service flows (Shafer et al., 2005). In addition Chesbrough & Rosenbloom (2002) indicate that not only do participants in the value network include company suppliers and customers but also potential complementors and competitors. Furthermore, on the supply

side the value network increases the supply of complementary goods while on the demand side the value network increases the network effects on the consumer.

In managing business model innovation to compete, the partnerships would need to be managed and a positive alignment must exist between the company and its partners. According to Chesbrough & Rosenbloom (2002) a positive alignment of the company within the value network can leverage the value of technology, while failure to align with the value network can dissipate the potential value of offering. In managing the partnerships Venkatraman and Henderson (2008) propose an approach to managing relationships with key partners that is in a continuum between exclusive or inclusive. Where exclusive relationships generally tight knit centrally controlled partnerships with defined boundaries and adopt a design or dominate strategy, as in the example of Nike and Apple, or adopt a deliberate approach to value creation to acquire and adapt as in the case of GE's diversification strategy. In terms of the inclusive relationships the different partnerships and alliances are loosely controlled and companies could either connect or create, as in the case of Microsoft, relying on ecosystem to adapt the business model with a deliberate approach towards value creation, or explore and exploit like Google.

In summary, resources and activities are may be referred to as value configuration. Resources could include physical, financial, intangible and human. Value configuration deals with the high level view of what activities are undertaken in creating value for the customer. Value configuration is an important aspect in this research study because the value configuration links to the process model, which will expand on the activities perspective by providing details of how the value is created.

2.4.1.4 'How much' group – financial aspects; costs and revenue

The 'how much' group illustrates the financial aspects in terms of how much value creation and delivery costs, as shown by the costs and revenue model, reflect the profit model for creating and delivering value to the target customer (Chesbrough and Rosenbloom, 2002, Morris et al., 2005, Pateli and Giaglis, 2004, Petrovic et al., 2001, Richardson, 2008) . The cost structure sums up the monetary values of creating and delivering value. The cost structures are either value driven or cost driven with the costs characterised by fixed costs,

variable costs, economies of scale and economies of scope. On the other hand, revenue streams describe the various revenue streams through which the company earns money. Revenue sources have been categorised using two different dimensions. Hoffman and Novak (2003) classify revenue streams into direct and indirect revenues. Direct revenue streams range from direct sales of goods and services, and indirect revenue streams collect fees, including transaction fees, hosting fees, referral fees, subscription fees, licence fees, pay-per view and others. Another categorisation comes from Osterwalder's and Pigneur (2010), who use the dimensions of once-off, recurrent and use-based group revenue streams. The dimension of once-off includes asset sale and registration, recurrent streams relate to subscriptions and advertising, while use-based revenues include transaction-based revenues, commission, and brokerage and lending, renting or leasing. The revenue streams are related to pricing strategies.

Pricing has a bearing on the revenue model, thus business model innovation will require an innovative approach to pricing. While Osterwalder's & Pigneur (2010) suggest that pricing may be either fixed in terms of list price, product based, customer-segment based and volume-based strategies, or dynamic, in the case of bargaining, yield management, real-time and auction pricing strategies. Hinterhuber and Lizoiu (2012) add that companies need to acquire sophisticated pricing skills, as the varying price realisation capabilities and price realisation capabilities have an impact on the revenue model. These authors further suggest that companies either use cost-based pricing, competition-based pricing and customer value-based pricing, with the most advanced companies using customer based pricing with high levels of price realisation.

The financial aspects illustrate how much value creation and delivery costs, as shown by the costs and revenue model, reflect the profit model for creating and delivering value to the target customer (Chesbrough and Rosenbloom, 2002, Morris et al., 2005, Pateli and Giaglis, 2004, Petrovic et al., 2001, Richardson, 2008). An understanding of business model components provides valuable input in managing business model innovation to effectively compete, but does not provide information on the process that is adopted.

Financial aspects (Osterwalder, 2004) are also referred to as economic factors (Morris et al., 2005), value capture (Richardson, 2008, Shafer et al., 2005) revenues (Alt and Zimmerman, 2001), revenue model (Petrovic et al., 2001), cost and revenue model (Pateli and Giaglis, 2004), cost and profit potential (Chesbrough and Rosenbloom, 2002) and value finance (Al-Debei et al., 2008b). The financial aspects describe the company logic for earning profits (Morris et al., 2005, Petrovic et al., 2001, Richardson, 2008).

The core components of the financial aspects are the cost structure, revenue model and profit (Chesbrough and Rosenbloom, 2002, Osterwalder, 2004, Osterwalder et al., 2005, Pateli and Giaglis, 2004, Richardson, 2008, Shafer et al., 2005). According to Osterwalder's *et al*. (2005) cost structure in essence sums up the monetary consequences of creating value. Dubosson-Torbay, Osterwalder's & Pigneur (2001) add that the costs structure measures all the costs a company incurs in creating, marketing and delivering value to the customer.

According to Osterwalder's et al. (2005) the revenue model describes various revenue flows from which the company makes money. Pateli & Giaglis (2004) stress that the revenue model includes both the pricing policy and revenue streams. According to Leminen, Tinnila & Miikkulainen (2007) pricing of products and services is a complex task and prior research on pricing identifies the three main categories based on Porter's generic strategies. These are a product-driven pricing, cost-based pricing and competitive pricing to support a cost effectiveness strategy. A cost-effective strategy may be supported with either a product-driven pricing, cost based pricing or competitive price, while a differentiation strategy could be linked to either a customer driven pricing, value based pricing and competitive pricing. In a focused strategy business model a company could adopt either a value-based or customisation pricing. Besides pricing the revenue model includes revenue sources.

According to Alt & Zimmermann (2001) sources of revenue need to be carefully analysed from both short-term and mid-term perspective. Hoffman & Novak (2003) highlight that there are number of revenue streams that range from direct commissions on sales of goods and services, to other less direct models for collecting fees.

The profit component measures the ability of the company to create positive cash flow (Dubosson-Torbay et al., 2001). In addition, Osterwalder's and Pigneur (2002) state that a profit model is basically an outcome of the differences between the revenue model and the cost structure. Furthermore the profit model is directly linked to costs, as efficient management of costs optimises the profit model while the value proposition and the target customer have the ability to maximise revenue, thus optimising profit.

In concluding the discussion on the financial aspects, one may argue that the financial aspects of the model cater for the specification of cost of value creation and the overall revenue from the various streams that a company generates from delivering value to the customer. In addition the business model financial aspects reflect profit that is the differential between costs and revenue. Furthermore, the financial aspects need to be analysed from both a short-term and long-term perspective.

In conclusion, in the business model components discussion an illustration of the business model components is presented. Figure 2.2 illustrates the business models categories as grouped around the 'what', 'how much' and 'who'. As highlighted in the discussion the business model components groups comprise the value proposition and how it is differentiated. The 'how' reflects the key activities, key resources and key partners. In addition the 'how much' represents both the revenue structures and cost structures, while the 'who' that is the core in the business model is in the middle of these other components illustrating the target customers, distributional channels as well as the customer relationships that the company maintains with the customers.

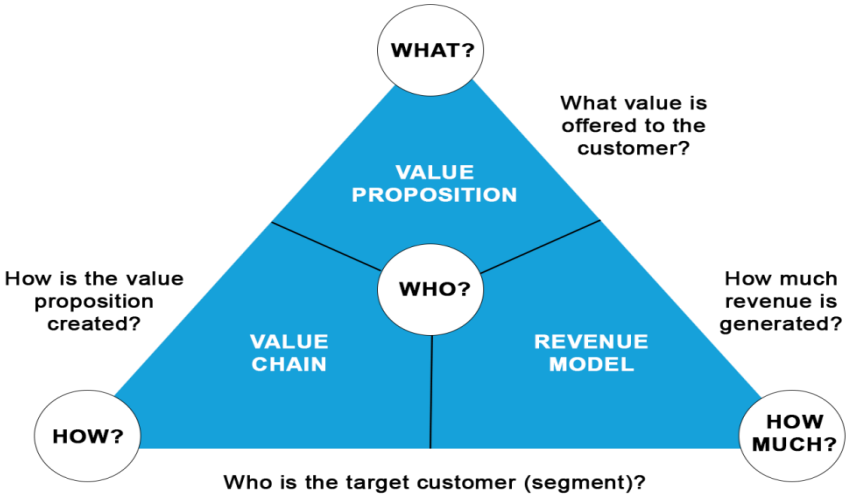

Figure 2-2: Business model components adapted from (Fleisch and Wortmann, 2015) and (Pigneur, 2006)

In expanding business model understanding business models are visualised with ontologies. According D'souza et al. (D'Souza,van Beest,Huitema,Wortmann and Velthuijsen, 2014) business model ontologies are effective tools for designing and evaluating business models. The next section presents business models visualisation using the various business ontologies.

2.4.2 Business model ontologies and visualisation

Business model visualisation is of value in managing business model innovation to compete as management models are a means of communication that aims to bridge the differences in abstraction to provide comprehensiveness (Van Assen,Van den Berg and Pietersma, 2009). Business modeling is defined as the set of cognitive actions aimed at representing complex business activities in a parsimonious, simplified form which is a business model as well as to the set of activities that cognitively manipulate the business model to evaluate alternative ways in which it could be designed (Aversa,Haefliger,Rossi and Baden-Fuller,

2015). Hence this definition implies that modelling entails a visualisation of the business model and the steps taken to innovate existing business models. Visualising the business models graphically facilitates communicating and developing understanding of the existing business models.

Regarding visually presenting business models Schmitt et al. (2004) suggest business models need to be represented formally with ontologies so that business models may be compared and evaluated to reveal strengths and weaknesses that would serve as input in subsequent business simulations. Furthermore, Johnson, Iacob Valja van Sinderen, Magnusson and Ladhe (2013) add that an visualising business models provides an overview between the actors involved in a business collaboration and the manner in which the actors benefit financially and otherwise. Furthermore, such visualisation with ontologies facilitates business model communication within an organisation as ontologies are primarily used to communicate between people, and as a basis for communication between computers (Borch and Stefansen, 2004).

The prominent business model ontologies are Resource Event Agent (REA), e3 value and Business Model Ontology (BMO) (Andersson et al., 2006, Decreus and Poels, 2008, Edirisuriya and Johannesson, 2008, Pijpers and Gordijin, 2007, Samavi,Yu and Topaloglou, 2009) and Reference Ontology. Furthermore, Decreaus and Poels (2008) add that these ontologies are partially overlapping and that a Reference Ontology that is based on the business model ontologies has been proposed. However, these ontologies do not link business models with enterprise architecture with Archimate having been proposed to link business models to enterprise architecture with business models representing strategic aspects while architecture models capture operational aspects (Iacob et al., 2012). Furthermore, another key limitation of the ontologies identified by Johnson et al.(2013) is that ontologies' failure to model risk in terms of the uncertainty relating to the considered business collaboration, for which the authors recommend Enterprise Architecture Analysis (EAA) to add a probabilistic setting. The following sections will briefly discuss each of the business model ontologies of REA, e3value, BMO and Reference Ontology starting with REA, and sample business models from the perspectives of these ontologies will be illustrated. In illustrating the business model a Swiss photography business named ColorMailer will be

used and the information will be extracted from Lagha, Osterwalder's and Pigneur (2001) as well as from Osterwalder's and Pigneur (2002).

2.4.2.1 REA

REA ontology was originally used in accounting (Borch and Stefansen, 2004, Geerts and Mccarthy, 2002, Gregoire and Schmitt, 2006) but has been extended to enterprise information systems and to include enterprise as a whole (Borch and Stefansen, 2004, Geerts and Mccarthy, 2002). According to Gregoire & Schmitt (2006) REA specifically traces to business accounting concepts where the flow of physical and financial resources between the company, and customers and suppliers are documented in books of accounts.

The fundamental assumption in REA is that that the essence of an enterprise is to exchange goods for other goods and REA expresses an enterprise in terms of this basic pattern of exchange (Borch and Stefansen, 2004). According to Geerts & McCarthy (2002) company activities are made of economic exchanges or economic conversion with parties inside and outside the company's boundaries. Andersson et al., (2006) add that the underlying logic is that every business transaction can be described as an event where actors exchange resources, and to get a resource an agent has to give up some other resources.

REA ontology has both strengths and weaknesses when used to visualise business models, According to Borch and Stefansen (2004) while new abstraction levels have been added to the REA ontology the exchange patterns remains the primary focus. The focus on exchange patterns is a key strength for REA ontology as this makes the core model, powerful and easy to grasp, thus providing guidance in the conceptual modelling. However, Borch & Stefansen (2004) go on to highlight that the focus on exchange patterns is both a strength and a weakness in the REA ontology. The key limitation is that the focus on exchange patterns forces one to view everything in an enterprise as an exchange but this is not always the case; for example, where a company pays tax on a donation, there is a cash resource outflow with no corresponding inflow.

Another key challenge that is encountered with REA ontology is that REA is strong in modelling company external exchanges in the value chain while weak in illustrating value

creation from a company-centric viewpoint. In addition, REA accounts only indirectly for revenues and costs induced by an economic event, and resources that are involved are not essential but secondary to an event (Gregoire and Schmitt, 2006).

According to Borch and Stefansen (2004) in using REA to visualise business models the issue of duality of exchanges between companies is of concern as the exchange patterns are not sufficiently defined in terms of the relationship. The logic of REA suggests inflow events are paired to outflow events, where one event is paired to one outflow event, many to many relationships may exist.

In the case of ColorMailer an economic event is one where the customer uploads digital images to the ColorMailer website and images are printed either on photographic paper, T-shirts or gifts or other items based on customer's choice. The printed images are delivered directly to customer's address. In essence there are six main agents that participate in economic events within ColorMailer business models. However, illustrating all the economic events becomes very complex; hence, Figure 2.3 illustrates a single economic event between ColorMailer and its customers.

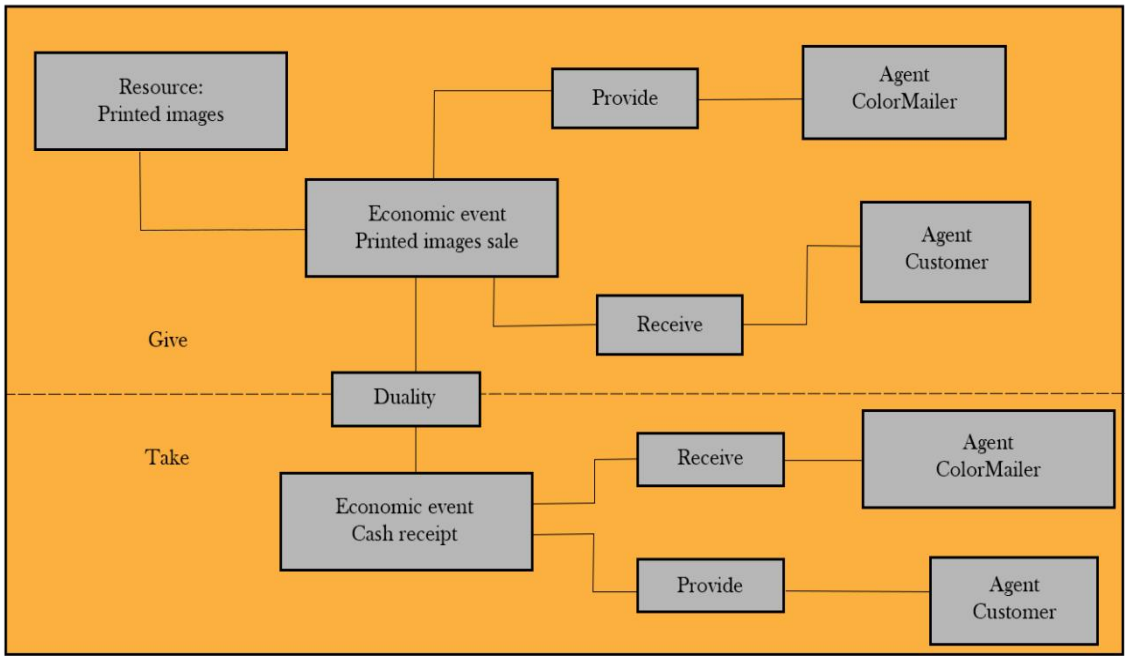

Figure 2-3: ColorMailer REA business model compiled by the researcher

2.4.2.2 e3value

In modelling the business model e3value focuses on the partners' component and in addition depicts the key activities and customers with the aim of assisting to communicate the value generated by each participating partner. As e3value ontology centres around graphically illustrating how value is created and exchanged among the stakeholders in a network (Gordijin et al., 2000b), focusing on modelling the value network between the partners (Andersson et al., 2006). Thus Gregoire and Schmitt (Gregoire and Schmitt, 2006) suggest that e3value represents the value chain view of the business model. However, this is not necessarily the case as e3value illustrates the key activities and partners but excludes the resources used which are part of value chain aspect within a business model.

The ontology's central argument is that actors are involved in a value web (Pijpers and Gordijin, 2007) where a group of companies and the final customers jointly create, distribute and consume objects of economic value (Gordijn,Ostewalder and Pigneur, 2005) depicting the essence of business collaboration (Gregoire and Schmitt, 2006). Therefore, e3value facilitates the representation of objects of economic value that are created, exchanged and consumed, representing who is doing business with whom (Gordijn and Akkermans, 2001).

The main strength of e3value, according to Gregoire & Schmitt (2006), is that e3value seems to be a good tool when developing new business ideas in identifying the possible market segments showing who brings in what in value creation and what they expect in return. This is mainly because e3value is suitable for describing the roles, inputs and outputs by mapping actors and value objects. According to (Andersson et al., 2006) e3value supports profitability analysis of business cases. Pijpers and Gordijn (2007) add that e3 value may be used to calculate net profit per actor over different periods. Gordijn et al. (2006) state that using e3 value a net value sheet may be generated that shows the net cash flow of each actor involved in the value creation to give an indication whether the business model at hand is commercially successful for each actor. In addition, e3 value may be used to model how value evolves over time with each model representing a snapshot at specific point in time.

The key limitation of e3 value is identified by Gregoire & Schmitt (Gregoire and Schmitt, 2006) as that e3-value depicts the essence of the business collaboration, hence expressing a value chain viewpoint, while not providing a comprehensive account of value creation within a single company. Furthermore, e3value partially maps resources while ignoring the process and activities which are inferred from the value exchange. Figure 2.4 illustrates ColorMailer business model using the e3value ontology.

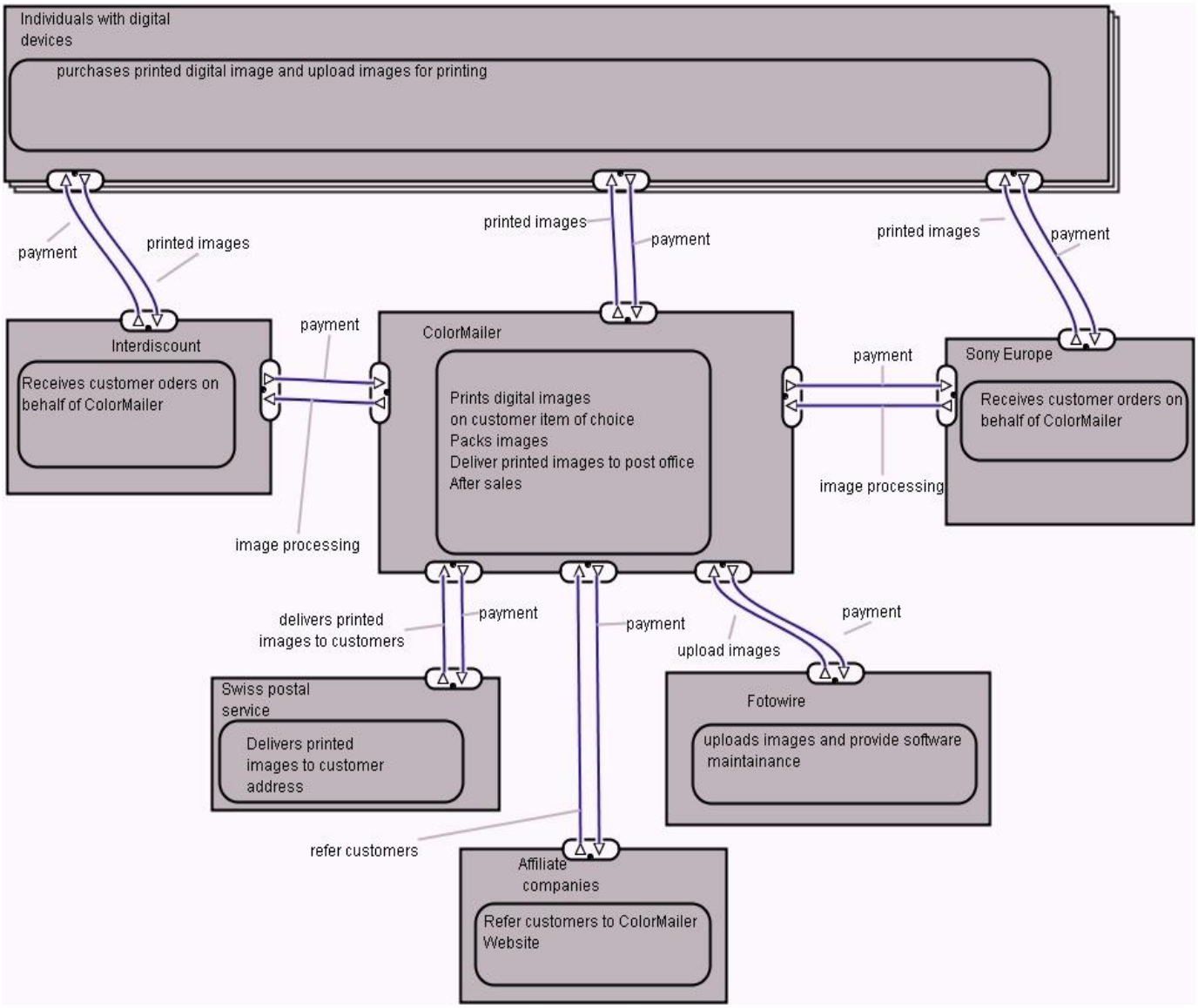

Figure 2-4: ColorMailer e3value business model compiled by the researcher

2.4.2.3 BMO/Business Model Canvas

BMO is also known commonly as the Business Model Canvas. According to Gregoire and Schmitt (2006) BMO focuses on the internal perspective of a single company, providing information on the four main business model components of value proposition, customer interface, value configuration and financial aspects. Gordijn et al. (2005) expand this view, proposing that a business model is a conceptual tool elaborating on the elements and their relationship expressing the business logic. Thus a business model answers what value is offered by the company; to whom the company offers value in terms of one or more customer segments; how the value is created and delivered taking into account company architecture and partners and relating this to how much profit is made (Osterwalder and Pigneur, 2002).

The key strength of BMO, according to Andersson et al. (2006), is that BMO provides an ontology that facilitates detailed accurate business model modelling taking the perspectives of a single company and highlighting the company's environment and concerns for delivering a value to particular customer demands. However, Gregoire & Schmitt (2006) suggest that BMO serves to model 90% of all the concepts of the business model but lacks the ability to describe the interface a company has with suppliers and customers from a value chain viewpoint. This therefore ignores the socio-economic factors within which a company operates in the value creation, excluding analysis of the impact of rules and regulations of the market in which the company operates. Figure 2.5 shows the ColorMailer business model canvas.

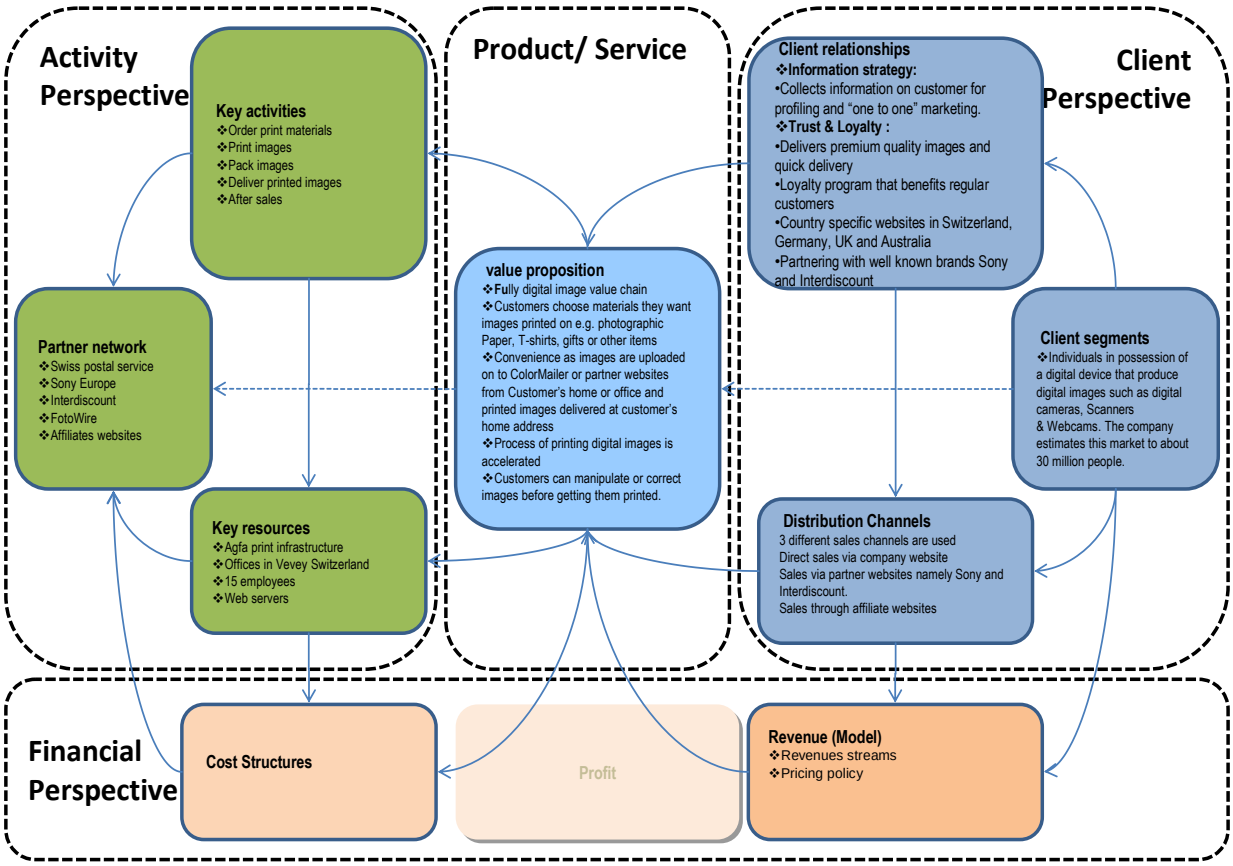

Figure 2-5: ColorMailer Business Model Canvas Business Model compiled by the researcher

2.4.2.4 Reference Ontology

Andersson et. al. (2006) identify the basic notions of business models by constructing a Reference Ontology based on three most established business model ontologies of REA, e3 value and BMO that were discussed in the preceding sections. These authors suggest that these three ontologies are well defined and provide an adequate basis for Reference Ontology; these ontologies are used as inputs to analysis and subsequent synthesis.

The main strength of the reference ontology is that the reference ontology served to gain a better understanding of the original ontologies of BMO, REA and e3value and may serve as a mapping tool where business models could be transformed from one formalism to another (Andersson et al., 2006). However, Andersson et al. (2006) allude to the fact that the reference ontology still needs to be validated with future research. In addition a literature search for studies that have adopted the reference ontology in modelling business models

could not be easily identified from a search on online databases. While a total of 133 articles cited this article it appears those articles do not provide empirical work using the ontology.

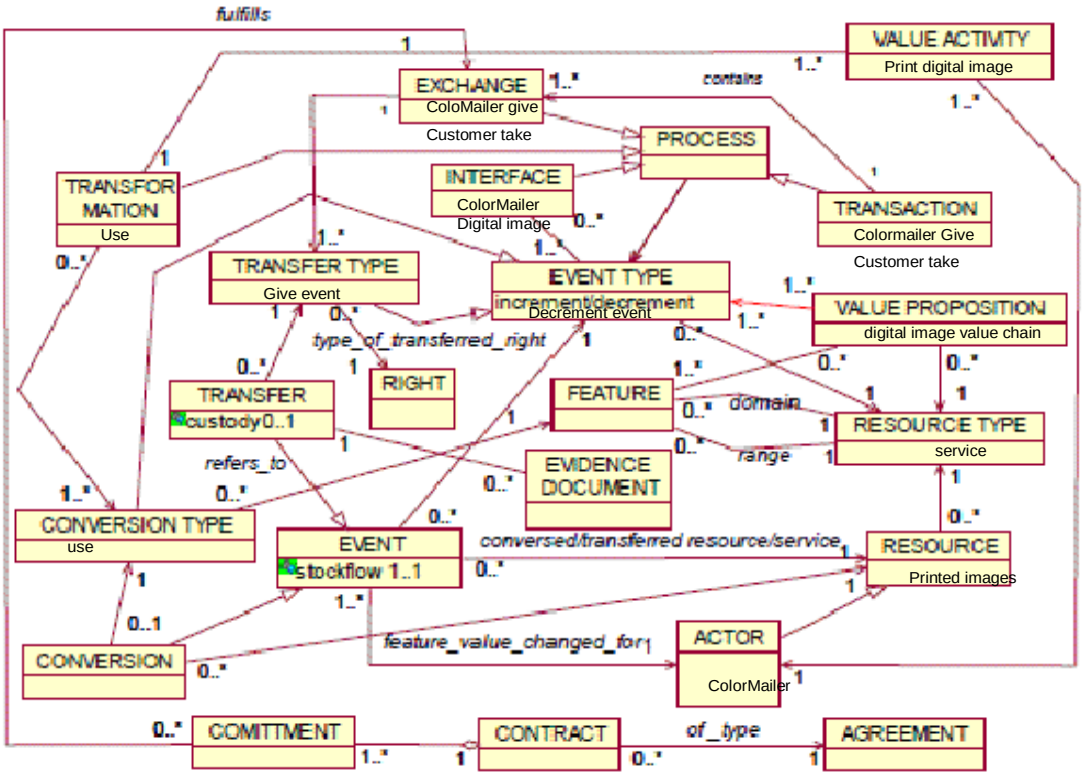

Figure 2-6: ColorMailer reference ontology business model compiled by the researcher

2.4.2.5 Ontologies comparison and selection

As the discussion highlights, each of these business model ontologies have the potential to visualise the business model. Hence a comparison was made to select a suitable ontology to use for visualising business models in the research study. Table 2.2 presents the ontologies and their capability in visualising business model components. Thus using the table to review of the business model ontologies, one may argue that the four ontologies have the potential to visualise companies' existing business models. All four ontologies do not visualise the external aspects of the business model, while either partially or fully visualising the components of the business model.

In particular REA and e3Value and BMO only partially model the value proposition modelling value offering while excluding the differentiation aspects. In terms of the target market perspective only BMO fully support the visualisation, allowing for the modelling of the target customer as well as the channels and the customer relationships while REA, e3Value and Reference ontology do not provide the capability to model the distribution channels and customer relationships. Another key difference between the ontologies is that only BMO and Reference Ontology support the visualisation of key activities and resources.

The main similarity between the ontologies is that all the ontologies support the visualisation of the key partners with e3value as the only ontology that has the capability to quantify the value delivered by the external partners using financial metrics. In contrast, BMO fully supports the visualisation of the financial aspects while REA and Reference Ontology only visualise the revenue duality exchanges and e3value visualises revenue and partially models costs.

Table 2-2: Business model visualisation techniques

Component	Rea	e3value	BMO	Reference ontology
Value proposition	Partial support product offering not how product is differentiated	Partial support product offering not how product is differentiated	Fully supported	Fully supported
Target Market	Partial support target customer not distribution channels and customer relationship management	Partial support target customer not distribution channels and customer relationship management	Fully supported	Partial support target customer not distribution channels and customer relationship management
Resources and activities	not supported	not supported	Fully supported	Fully supported
Value network	Fully supported	Fully supported	Fully supported	Fully supported
Financial aspects	partial support accounts indirectly for revenues in the duality of exchange	supports financial aspects with additional capability to assess the value generated by each partner	Fully supported	partial support accounts indirectly for revenues in the duality of exchange
External environment & & growth	Not supported	Not supported	Not supported	Not supported

Thus due to the fact that BMO fully supports the visualisation of the business model components except the value proposition differentiation BMO will be used reflecting the differentiation aspect in the visualisation of the business model. The next section examines some of the common approaches to business model redesign.

2.4.3 Business model redesign approach

There are a number of suggested approaches towards innovating business models such that business model components are re-configured in a way that generates value for the stakeholders. These could include the use of Kim and Mauborgne's (2005) red oceans or blue oceans strategy, design themes (Amit and Zott, 2001) and business model patterns(Osterwalder and Pigneur, 2010). The next sections briefly review these approaches.

2.4.3.1 Red oceans and blue oceans strategy

The red oceans and blue oceans strategy approach suggests the two contrasting approaches to competition. According to Kim and Mauborgne (2005) companies could compete in either a red ocean or blue ocean, whereby in the red ocean the company competes in existing markets, beating competition to explore existing demand while making a value and cost trade-off, aligning with either differentiation or low cost. In the blue ocean the company creates uncontested markets, making competition irrelevant by capturing new demand while breaking value or cost trade-off aligning with differentiation and low cost. Thus in a blue oceans strategy a company creates a new value curve, either eliminating or reducing those customer value attributes in which the customer is over-served, while creating or raising desired value attributes (Kim and Mauborgne, 2005). These value creation strategies in the blue oceans are illustrated in Figure 2.7, showing the four key strategies of reducing

or eliminating industry standards or creating new value or raising the standards and the questions that companies need to ask under each strategy.

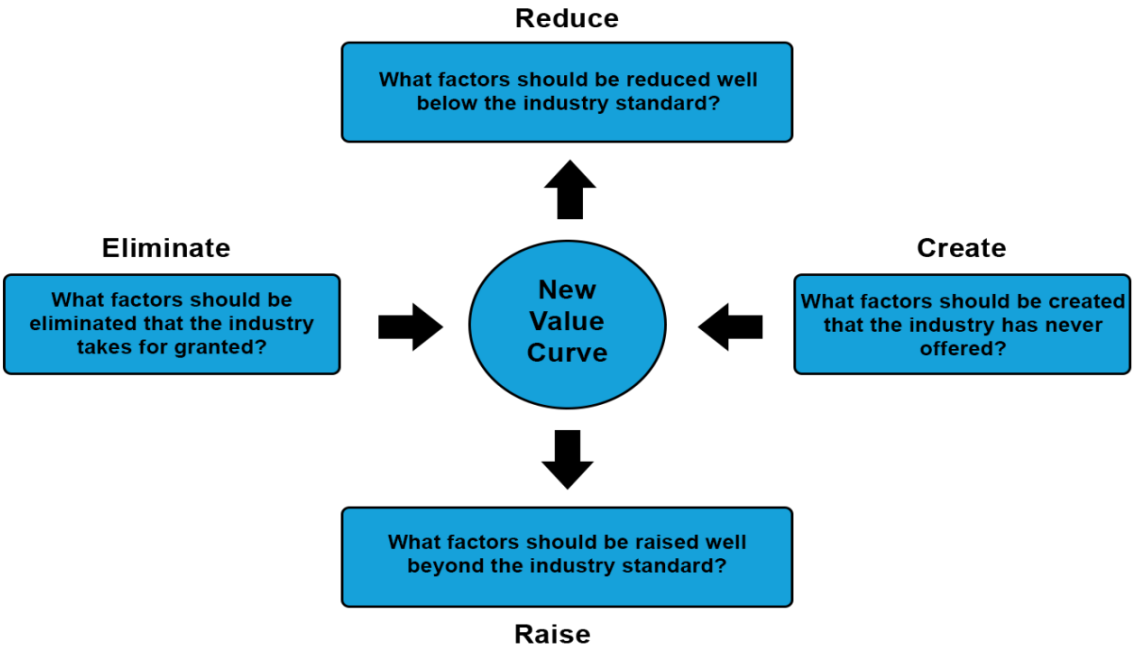

Figure 2-7: New value curve strategies (Kim and Mauborgne, 2005)

The red oceans and blue oceans strategy that is presented whilst providing a potential options that companies may follow to innovate business models does not necessarily provide the steps or process to be followed.

2.4.3.2 Design themes

Design themes represent potential guidelines to business model innovation. According to Amit and Zott (2001), business model represents an opportunity for value creation through the main design themes that include efficiency, novelty, lock-in and complementarities, with efficiency designs creating value by reducing transaction costs for customers or for the company and its partners, while novelty designs relate to the conceptualisation of economic transactions in new ways and connecting previously unconnected parties. Lock-in designs prevent the migration of customers and key partners by engaging customers in repeat transactions and by the extent to which strategic partners have incentives to maintain and improve association with complementarities designed to bundle goods together with either core transaction or non-core transaction goods to provide more value than the total value derived from having each of the goods separately (Amit and Zott, 2001). The design themes

of novelty, lock-in, complementarities and efficiencies are shown in Figure 2.8, together with some of example approaches applicable in each of the design themes.

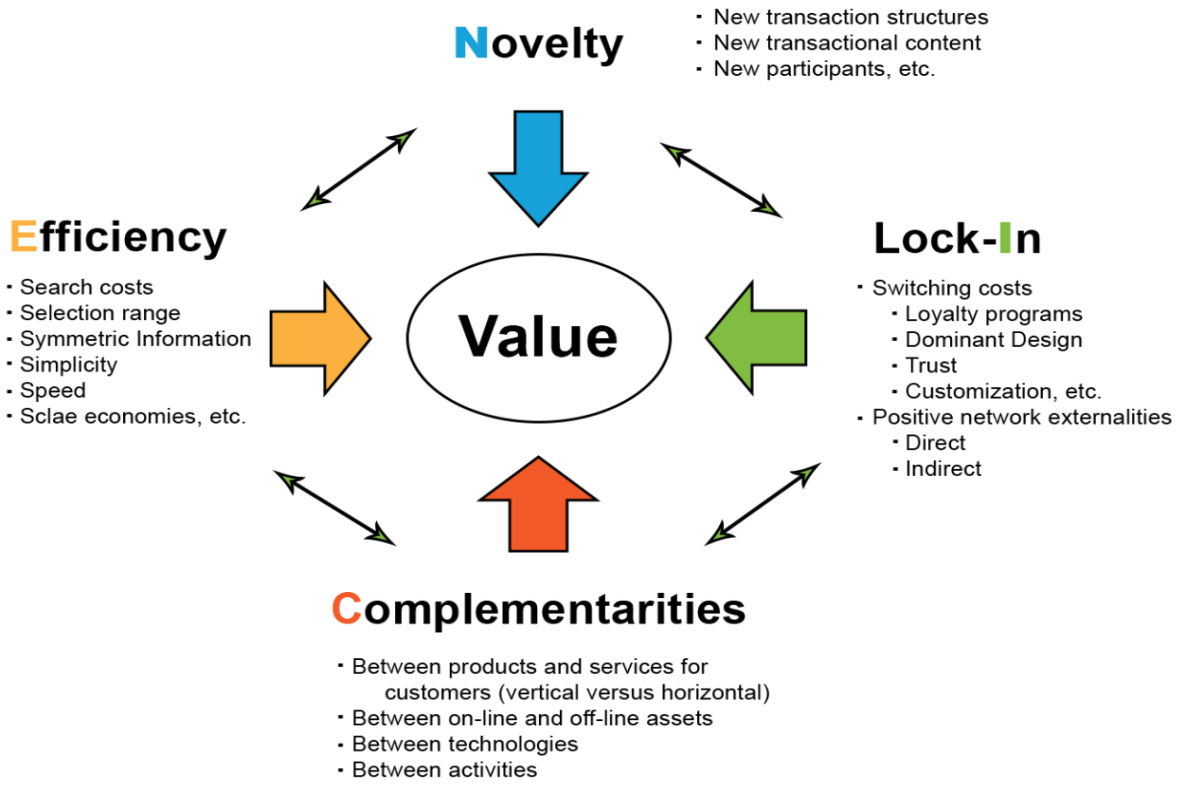

Figure 2-8: Business model design themes (Amit and Zott, 2001)

These design approaches provide four main approaches that companies may adopt in innovating business models focusing on either efficiencies in that could include saving cost or economies of scale, whilst novelty approaches could entail new transaction structures or even new participants in the value chain. The lock-in on the other hand seek to provide techniques such as increasing switching cost and complementarities approach aiming to provide complementarities between activities and technologies or products. These business model design patterns presents a basis for business model innovation. However, one may argue the business model design are limited as once a design has been selected a company is not provided with the some guideline on a process that may be adopted to create the new business model based on the approach of choice.

2.4.3.3 Business model design patterns

The recurring business model patterns are specified by Osterwalder's & Pigneur (2010) to include the unbundled, long-tail, multi-sided platform, free and open business models. A bundled business model is used when a company has multi-dimension focus on product leadership, operational excellence and customer intimacy to divide the business model into three distinct business models. A long-tail business model is used where costs of a niche product are reduced and the low frequency sales will support a sustainable business model. A multi-sided platform business model serves two or more interdependent customer segments offering value to one group of customers only if the other groups of customers are also present. Free business model is based on the notion of delivering the value proposition for free to at least one of the players. There are three distinct types of free business models, namely advertising based, 'freemium' and 'bait and hook'. In an advertising-based free business model, the offer is free based on a multi-sided platform where one party pays and the other receives the value proposition for free. In a 'freemium', the basic services are free while the user is charged for optional premium services. In the 'bait and hook' business model, also called a 'razor blade', a free or inexpensive initial offer lures customers into repeat purchases. Open business model entails acquiring R&D from external sources, resulting in lower innovation costs and faster time to market. In addition, in an open business model, unexploited innovation may be sold to other companies to bring more revenues. An understanding of business model components and the business model re-design approaches provides valuable input in managing business model innovation to compete effectively, but does not provide information on the process that is adopted.

In addition to these different approaches business model innovation may be simple or complex. Business model innovation complexity is additionally influenced by the scope in terms of the number of components that are innovated. As such business model innovation may be either simple or complex with simple business model innovation involving a change in one of the components of the business model, while complex business model innovation could entail simultaneous changes in the various components of the business model (Yariv et al., 2015b). However, both complex and simple business models are important with Amit and Zott (2010) suggesting that it is necessary to innovate the business model even if it may

not be game-changing for the industry and Yariv et al (2015b) indicating the change in the business model components may either be radical or incremental. In the current study the focus was on both simple and complex business model innovation. The following sections present the business model innovation process.

2.5 Business model innovation process

A process for managing business model innovation to compete effectively is a continuous process because over time, business models diffuse and business models become homogeneous; therefore to compete effectively companies need to continuously innovate and sustain the business model (Chesbrough, 2007, Mahadevan, 2004). However, determining the next circle for business model innovation is challenging as financial performance may be still ascending while market relevance is decreasing and the financial performance influences top management not to actively seek new business identification and development (Lufteneger et al., 2011). In a continuous business model innovation process, the business model is designed to counteract competitor moves while strengthening company capabilities (Casedesus-Masanell and Ricart, 2011). The innovation process is not necessarily linear but is iterative; however, a phase-based approach serves as a useful guideline in undertaking a business model innovation (Frankenberger et al., 2013). While there is general agreement that innovation is not linear but complex and dynamic the normative process model helps to reduce complexity and derive the required activities and decision points (Bucherer et al., 2012). Furthermore, Zott and Amit (2015) highlight that while companies jump back and forth through the steps a generalised process model provides normative implications for researchers and useful guidance for practitioners.

In examining the business model innovation process phases Frankenberger et al, (2013), indicate that only a few scholars have focused on a business model innovation process which consists of phases or process steps. The few scholars that propose business model innovation phases, propose phases that are more or less similar or complementary (Bucherer et al., 2012, Frankenberger et al., 2013, Osterwalder and Pigneur, 2010, Wirtz, 2011, Zott and Amit, 2015) and Frankenberger et al. (2013). The 4I-framework is developed from innovation management literature and adapted to business model innovation through

an exploratory study in 14 cases. However, Zott and Amit (2015) criticised Frankenberger et al. (2013) as having focused on discussing the challenges in the phases rather than elaborating on the particular activities undertaken in the steps. In the proposed research the Frankenberger et al. (2013) 4I-framework will be used as it is empirically tested through 14 exploratory cases and supported by the Zott and Amit (2015) design process model and Meertens et al. (2011) to elaborate on the key activities undertaken in each step.

The 4I-framework phases include initiation, ideation, integration and implementation. The Frankenberger et al. (2013) framework will be extended with mobilisation (Osterwalder and Pigneur, 2010) and monitoring phases (Bucherer et al., 2012, Osterwalder and Pigneur, 2010, Wirtz, 2011) to become 4I-2M framework. The mobilisation phase is added because mobilisation creates awareness for the need for the new business model (Osterwalder and Pigneur, 2010). Such an awareness could serve as a cornerstone in securing top management and employee commitment to the business model innovation process by involving them at the start of the process, as securing expressed top management commitment through the business model innovation process is identified by Elbers (2010) as essential for business model innovation success. Furthermore, early involvement of top management and employees at the mobilisation phase contributes to overcoming internal resistance, which is identified by Frankenberger et al. (2013) as the most common challenge in successful business model innovation. The monitoring phase is added as to support the monitoring of the new business model performance and the business model innovation drivers. Osterwalder's and Pigneur (2010) highlight that monitoring could serve to continuously monitor, evaluate and adapt or transform the business model in response to the market changes.

2.5.1 Mobilisation and techniques

The mobilisation phase serves to create awareness on the need for business model and assembling the business model innovation team ensuring access to the right people and information and creating a shared understanding of design requirements (Osterwalder and Pigneur, 2010). Mobilisation is about bringing people from different parts of the company and motivates for business model innovation as presenting an opportunity for sharing knowledge on business models. Hence the mobilisation phase could entail developing a

shared understanding of what business model innovation is and sharing information on examples of successful business model innovation cases. It also provides the business model innovation team with information on the factors that are driving business model innovation and the business model innovation process to be adopted. Furthermore, mobilisation secures top management and employee involvement at the initial stages of the business model innovation process. Such top management commitment to the business model innovation process is essential for business model innovation success (Elbers, 2010). The key challenge at the mobilisation phase is the overestimation of the value of initial ideas (Osterwalder and Pigneur, 2010). The overestimation may be avoided by collecting baseline metrics and setting realistic goals and objectives.

2.5.2 Initiation and techniques

The initiation phase focuses on understanding and analysing the company's current business model and the ecosystem that comprises customers, suppliers, competitors, universities and government (Frankenberger et al., 2013). As such the initiation step entails understanding the ecosystems, it requires continuous attention and alertness (Cavalcante, 2014). Furthermore, Wirtz (2011) adds that the analysis of the current business model should include an evaluation of the strengths and weaknesses of the existing business model. In addition the analysis could specify the challenges that are facing the current business model (Cavalcante, 2014), as well as identifying the desired change in the business model (Gunzel and Holm, 2013). According to Johnson (2008a) the identification of a clear customer value proposition serves as sound basis for defining the new business model. In supporting the value proposition identification Zott and Amit (2015) suggest undertaking an encompassing observation activity that entails developing an understanding of how the customers use the products and services with the aim of understanding the customer experience, especially the problems faced when buying and consuming products as services, and the roles played by the various stakeholders in the business model. Furthermore, the initiation step would be more valuable if supported by the Zott and Amit (2015) synthesis step, where the information collected from the observations would be synthesised to present a comprehensive and holistic understanding of the design challenges and market gaps. As such a synthesis will form a valuable basis of the ideation step that will follow the initiation step. According to Elbers (2010) developing an understanding of the market and

customer needs requires the definition of the stakeholders, including customers, and mapping them in an empathy map. Furthermore, Meeterns et al (2011) make a valuable contribution, suggesting that one of the key aspects in understanding the existing business model is the identification of roles using a stakeholder analysis method and supporting such an identification with relations recognition to generate as output a stakeholder analysis supported with the relationship mapping of such stakeholders. As well as using the relations mapping to specify activities and quantifying the existing business model a quantified business model would be invaluable in generating potential alternatives in the ideation as such alternatives need to be considered in the light of the changes or influences that are required on the existing business model.

The key challenge in the initiation phase is communicating the existing business model and evaluating the existing business model, as well as understanding the needs of the players, specifically customer needs (Frankenberger et al., 2013). Developing an understanding and communication of the existing business model may be supported by using the business model ontology canvas pioneered by Osterwalder's (2004), and the business model evaluated against those of competitors using a strategy canvas initiated by Kim and Mauborgne (2005). Understanding of customer needs could be supported by the proposed encompassing observation and synthesis (Zott and Amit, 2015) with iterative designs that are supported with customer feedback on the business model components (Markides and Charitou, 2004), as well as adding relations to the stakeholder analysis, specifying activities and quantifying the business model as suggested by Meerterns(2011)

Therefore, the initiation phases comprise the sub-steps of understanding the market and customer, using both observations and synthesis and modelling the existing business model. This should include identifying the stakeholders, their relationships and specifying activities and quantifying the business model as well as evaluating the existing business model against those of competitors.

2.5.3 Ideation and techniques

In the ideation phase, ideas are generated for redesigning the business model. Zott and Amit (2015) refer to this phase as 'generate', suggesting that in idea generation companies

are either making modifications to an existing business model or creating a new business model. In a more or less similar view Meeterns (2011) refers to this phase as the 'develop to be' model that comprises designing and analysing alternatives. The ideation phase should include the activities from the 'generate' phase (Zott and Amit, 2015) as well as the 'develop to-be model' as suggested in Meeterns et al (2011).

Osterwalder's & Pigneur (2010) indicate that in idea generation, one needs to see beyond the status quo and explore multiple ideas. Furthermore, the multiple ideas would need to be assessed to identify how such the changes might affect the other business model components (Cavalcante, 2014, Gunzel and Holm, 2013). Meeterns et al (2011) suggest the alternatives would need to be analysed and quantified using techniques such as sensitivity analysis , technology assessment and interpolation using best and worst case scenarios. Furthermore, Meertens et al. (2013) add that the analysing of alternatives should include effects analysis of both positive and negative impacts and undertaking a risk analysis linked to both worst and best case scenarios and analysing both the expected investments, expected profit and the expected break-even point.

In the generation and analysis of alternatives Wirtz (2011) propose that both a rough and a detailed partial business model be developed with potential business model structures. In addition Blank (2004) suggests using a 'lean approach' for experimentation, and gaining customer feedback and an iterative design approach that builds on a 'minimum viable product' using the business model canvas to sketch out the hypothesis for the potential business models. Thus, rather than engaging in lengthy periods of extensive planning, a series of untested good guesses or hypotheses should be summarised in the business model canvas, with the hypothesis tested by asking the potential customers and partners' feedback on each of the components of the business model including pricing.

Having generated multiple business innovation would require a funnelling approach and Zott and Amit's (2015) 'refine' step recommends a refine activity that entails consolidating the various alternative business models and evaluating the alternatives and adopting rapid prototyping to narrow down the fundamental choices for the new business model. Such a

‘refine’ activity would then be followed by selection of a new business model, which would then go through an integration phase.

The challenges in the ideation step include difficulties to overcome the current logic and to ‘think’ business models as well as the lack of systematic tools to develop new business model ideas (Frankenberger et al., 2013). In supporting the business model ‘thinking’ Amit and Zott (2015) suggest the use of disciplined brainstorming to generate ideas for the new business models. In addition creativity techniques could be used to stimulate business model ‘thinking’. One of the creativity techniques is General Morphological Analysis (GMA), pioneered by Fritz Zwicky in the late 1940s, (Ritchey, 2006), which could serve as a systematic technique to stimulate the generation of innovative business model designs and to analyse inter-relationships between the business model components.

2.5.4 Integration and techniques

The integration phase is adapted from Frankenberger et al. (2013) and will focus on integrating and aligning the new business models to those of both old and new partners. Moreover, Frankenberger et al. (Frankenberger et al., 2013) argue that integrating with the partners’ business models is challenging and requires the management of partners, and complexity arises with a lot of time and resources needed to get buy-in. Hence Wirtz (2011) suggests companies need to negotiate with business partners in the integration phase . Furthermore, the problems in dealing with partners are compounded by the fact that the financial perspective used in the form of business cases is not sufficient to uncover dependencies and incompatibilities in the business model. The business modelling tool e3value, developed by Gordjin et al. (2000b), may be used to illustrate the interdependencies by showing who brings in what in value creation and what they expect in return, and supporting profitability analysis of business cases for the parties involved in value creation and delivery. As indicated in Johnson et al. (Johnson et al., 2013) one of the key motivations of business modelling is to provide an overview of the actors involved as well as the relationship between the actors and clearly specifying the way each actor will benefit financially and otherwise.

Now that the integration phase and its challenges and probable solutions have been covered, the next sections examine the implementation phase.

2.5.5 Implementation phase and techniques

The implementation phase focuses on implementing the new business model and is regarded as the most challenging step in the business model innovation process and typically involves huge investments (Frankenberger et al., 2013). However, implementing the new business model through pilots, trial and error and experimentation contributes towards successful implementation (Frankenberger et al., 2013, Sosna et al., 2010) . A 'big bang' approach is rarely used with the roll-out of the business model undertaken only after one or several iterations of the cycle (Frankenberger et al., 2013) . Furthermore, Sosna et al. (2010) add that in reality new business models rarely work the first time around. Uncertainty regarding viability and changes in market conditions requires an experiential 'trial and error' learning approach to conceptualise and implement the new business model.

An additional tactic that may be used to enhance business model innovation implementation success is identifying ex ante the challenges that the companies would need to overcome during implementation and providing measures to address the challenges (Cavalcante, 2014). In addition, implementing business model innovation would include translating the business model innovation changes into specific activities and back casting the ideal transition path that assesses the path and interdependency between the activities (Gunzel and Holm, 2013). Furthermore, Zott and Amit (2015) suggest that organisational redesign may be required to make the new business model work and ensure that resources and capabilities are modified to fit the requirements of the new business model. The implementation phase is followed by the final phase, namely the monitoring phase.

2.5.6 Monitoring phase and techniques

The monitoring phase aims to use appropriate tools to monitor both the implementation and performance of the business model (Wirtz, 2011) as well as the business model innovation drivers. Furthermore, such monitoring is a continuous process that includes monitoring for success and business model innovation drivers (Bucherer et al., 2012). A business model performance audit is applied to assess the fulfilment of the service

commitment, satisfaction of customer demands and profitability, while the techniques used in the monitoring of the drivers should continually monitor the business model environment and send triggers for the start of the next business model innovation cycle (Wirtz, 2011). In summary the main phases in a continuous 4I-2M business model innovation process are illustrated in Figure 2.9, which shows the six main phases in the business model innovation process: mobilisation, initiation, ideation, integration, implementation and monitoring.

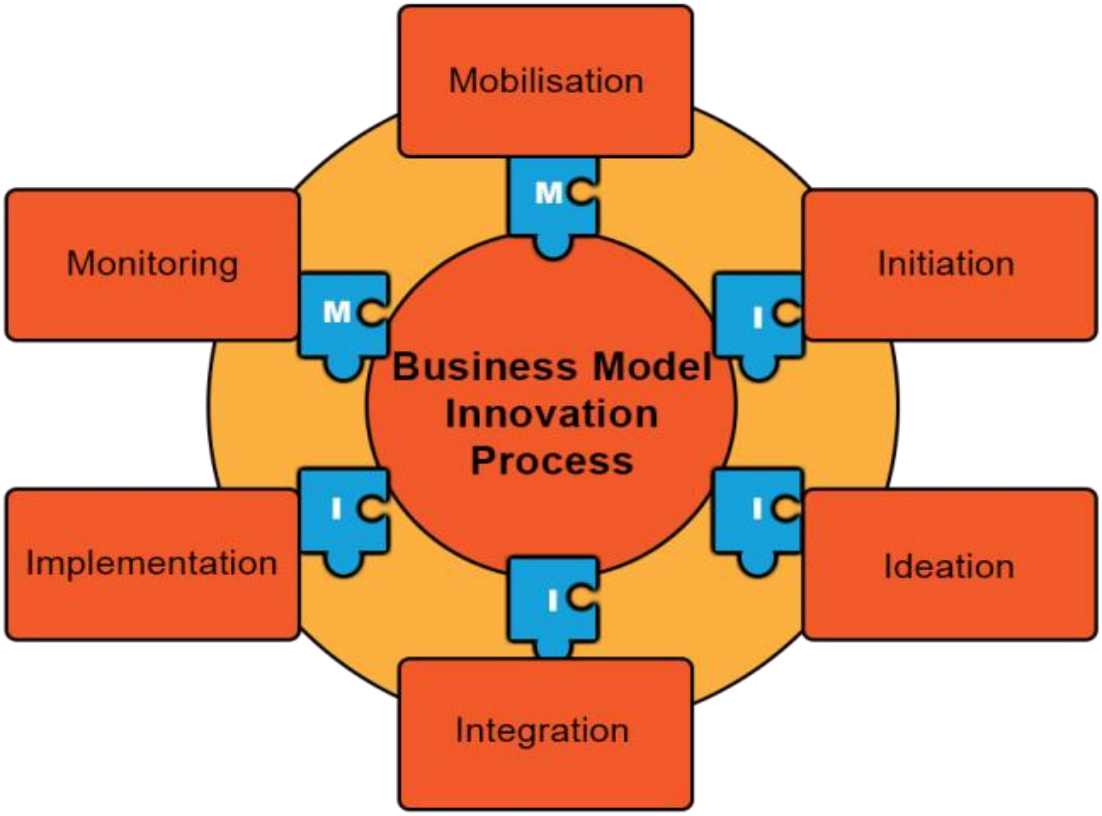

Figure 2-9: Business model innovation process steps compiled by the researcher

2.6 Business model innovation conceptual framework

Badenhorst (2008) indicates that doctoral research requires the researcher to provide a conceptual framework. Such a framework provides a tentative theory of the phenomena under investigation (Maxwell, 2013). This introduces clarity in the research by modelling the relationship between the concepts while showing the theories which influence the research

and provides a theoretical basis to design and interpret research (Leshem and Trafford, 2007).

In the proposed research the conceptual framework is based on premise that managing business model innovation to compete effectively requires adopting a continuous business model innovation process, an understanding of both business model innovation drivers and business model components, and the relationships between the concepts. The business model innovation process redesigns existing business model components and is influenced by the business model innovation drivers. If the business model innovation process is efficiently managed to compete effectively, there will be an internal fit among the redesigned business model components and such an internal fit will be guided by an understanding of the inter-perspective relationship among the business model components.

The conceptual framework illustrates that there are potential relationships between the business model innovation concepts, in particular, to specify the link between the 4I-2M business model innovation process, business model components and business model innovation drivers. Technological advancement in particular is expected to have a relationship with the business model components that are redesigned, as technological advancement is likely to bring opportunities for value creation affecting the value proposition. In addition technological advancement enables increased collaboration with both partners and customers, affecting how companies interact with customers and partners in the business model. Furthermore, technological advancement could present opportunities for companies to collect and analyse customer data as well as new sources of revenue. The market factors in terms of the changing customer needs in conjunction with technological advancement are likely to push companies to create value propositions to meet the changing customer demands and opportunities for serving the unserved customers. These identified preliminary relationships were examined for relevance in sample companies. The conceptual framework formed the basis upon which data was collected. Data was collected on the business model innovation drivers, business model components as depicted by the company's existing business models and the business model innovation process that was adopted.

The expectation was that business model innovation would enable companies to effectively compete and survive in a changing business environment. The assumption is that companies are adopting various approaches to compete and survive. Companies have either explicitly or implicitly articulated the existing business model. The companies that have undertaken business model innovation have an awareness of the business model innovation drivers, having adopted either an organic or structured business model innovation process, and having redesigned the business model components that are closely related or similar to the business model components proposed in Osterwalder's (2004). Hence the conceptual framework shows these three concepts as central to the proposed research as illustrated in Figure 2.10. Besides the concept specifications, the conceptual framework in Figure 2.10 illustrates the relationship between the concepts by means of arrows. In summary the argument presented in the conceptual framework is that the manner in which companies managing business model innovation. The illustration indicates that business model innovation is driven by the business model innovation drivers as depicted in the diagram. There are market, regulatory, technological, and internal factors which are the kind of drivers that trigger business model innovation. These drivers as the arrows indicate have a cause and effect on the business model innovation process as business model innovation process is a response to these triggers. The business model innovation process however, has a step that monitors the drivers hence the drivers are partially part of the business model process as the second arrow that comes from the business model innovation process to the drivers. Another relationship exists between the drivers and the business model components that are redesigned. As the arrows show a direct relationship between the business model innovation process and the business model components that are redesigned.

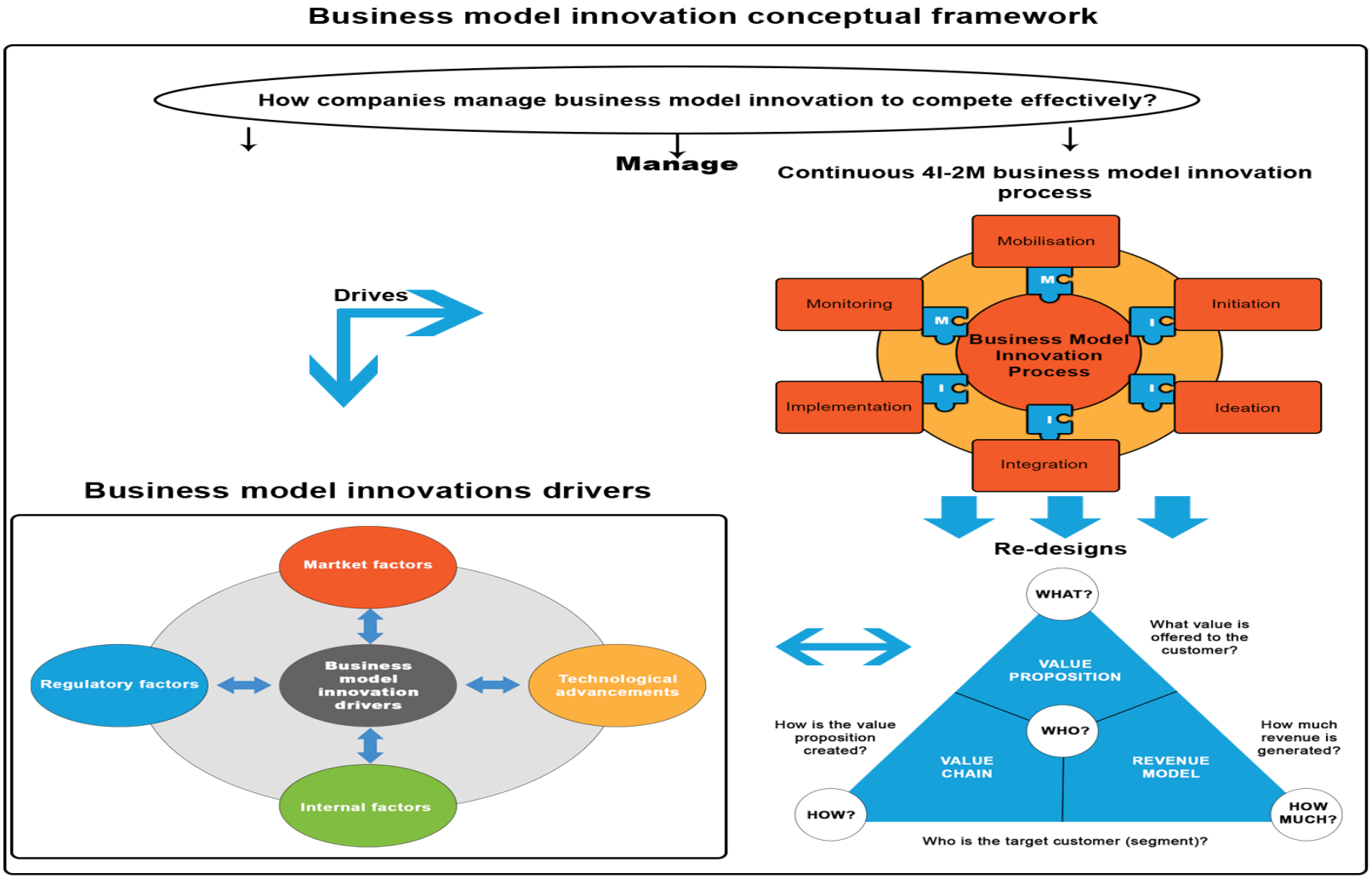

Figure 2-10: Conceptual framework compiled by the researcher

2.7 Conclusion

In this chapter the conceptual framework derived from the literature review is presented. Specifically the review focuses on discussing the business model innovation concept and the four main drivers to business model innovation which include technological advancement, market factors, regulatory factors and internal factors. An outline of the business model components is presented together with the various approaches for visualising and communicating the business model and the different approaches for redesigning the business model. In addition a review of the business model innovation process that entails a continuous 4I-2M approach to business model innovation whose steps include mobilisation, initiation, ideation, integration, implementation and monitoring is discussed. As a conclusion a conceptual framework based on this concepts and the relationship between the concepts is presented. The conceptual framework is examined for relevance using data collected from sample case studies. In order for one to collect data, a research design needs to be selected and the research design for the proposed research will now be briefly outlined.

Chapter 3: Research design and methodology

3.1 Introduction

A research design specifies the overall approach to the research that is used to test the thesis statement connecting the empirical data to a study's initial research objectives (Hofstee, 2006). The chapter presents the research and design methodology adopted to examine the thesis statement and link secondary data and empirical data.

The selection of research methods that was followed in the research aimed to make the research philosophy explicit as not to follow what Babbie (2017) highlights the importance of making paradigm explicit as opposed to implied as there is more than one view point when one conducts research. The selection of the methods and techniques was guided by Saunders, Lewis and Thornhill's (2015) research onion approach that highlights that data collection is in the centre of the research onion and is guided by the choices in the outer layers of the onion. Furthermore Saunders et al. (2015) indicate the outer layers of the onion include the research philosophy, approach to theory development, research methods, time horizon and the data collection and analysis techniques. The research onion is illustrated in the figure below showing the philosophies on the outer layer, followed by approaches, strategies, choices of methods, time horizons and techniques and procedures for conducting the research. In this research study a pragmatism philosophy was selected. The discussion that follows examines research philosophies and justifies choice of a pragmatism as a philosophy for the study, the approach that is used linking to the pragmatic philosophy is qualitative. Whilst the design that is selected is a case study design with a cross sectional time horizon, and interviews as the main data collection techniques supported with documents and a researcher diary.

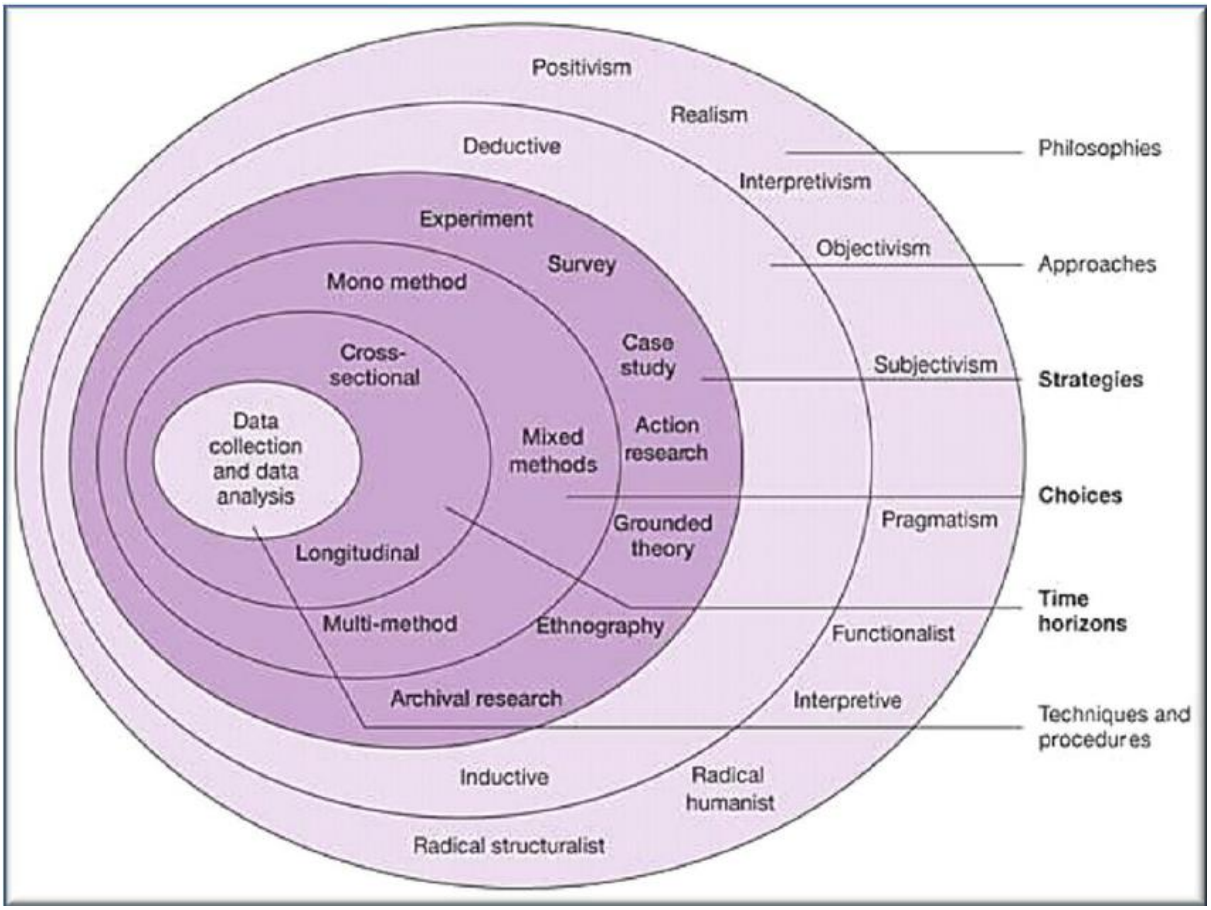

Figure 3-1: Saunders et al. (2015)

3.2 Research philosophy

In the paragraphs that follow the pragmatism philosophy ontology and underlying epistemology are discussed. Including a discussion of the research methods, strategies and techniques that are used in the research. The research philosophy is also referred to as a research paradigm (Bhattacherjee, 2012, Guba and Lincoln, 1994, Myers, 2009) and philosophical worldview (Creswell, 2014). The research philosophy refers to a system of beliefs and assumptions about knowledge development (Saunders et al., 2015). Furthermore, according to Guba and Lincoln (1994) the set of beliefs about truth is not open to proof in a conventional sense. In addition Bhattacherjee (2012) suggests that the research philosophy is often hard to recognise because it is often implicit, assumed and taken for granted in most research studies. However, the research philosophy is a basic belief system or worldview that guides choices of research methods however there is contention amongst the paradigms for intellectual legitimacy (Guba and Lincoln, 1994). In revisiting the paradigm controversies Lincoln, Lynham and Guba (2011)redraw the initial tables that

demarcate the ontology, epistemology and methodology between the paradigms of positivism, postpostivism, critical theory and constructivism also known as interpretive research and add a new participatory paradigm. Due to the nature of the differences between the paradigms , Creswell (2014) recommends that researchers should make the philosophical stance explicit and justify research methodology choices. This is seen as more of an issue in areas such as Information Systems that is said to have a rich tapestry of paradigms(Niehaves, 2007). The research philosophy takes into account the researcher's own philosophical assumptions and beliefs. However, a researcher's familiarity with the major research philosophies would enable the making of active and informed choices on research philosophy, having a clear understanding of the underpinning assumptions and beliefs (Saunders et al., 2015).

According to Burrel and Morgan (1994) the philosophical beliefs and assumptions relate to ontology, epistemology and axiology with Denzin and Lincoln (2011) suggesting that philosophical beliefs encompass assumptions on ontology, epistemology, methodology and axiology. Ontology refers to the assumptions about reality (Denzin and Lincoln, 2011, Saunders et al., 2015) and how researchers see the world (Bhattacherjee, 2012) with epistemology focusing on the assumptions of what constitutes legitimate knowledge (Saunders et al., 2015) and the best way to study the world (Bhattacherjee, 2012)and methodology focusing on the best way of gaining knowledge about the world (Denzin and Lincoln, 2011) and axiology relating to the role of individual values and ethics in the research (Saunders et al., 2015).

In facilitating selection and justification of a research philosophy for the current study the ontological, epistemological and axiological assumptions of the major research philosophies will be examined. According to Bhattacherjee (2012) the two most popular philosophical beliefs among social science researchers are positivism and post positivism. In contrast, Creswell (2014) suggests that positivism and post positivism are synonymous but Guba and Lincoln (1994) differentiate between these two paradigms and acknowledge four paradigms of positivism, post positivism, critical theory and constructivism, also known as interpretivist. These four philosophical beliefs are further discussed and updated with the participatory paradigm in Lincoln *et al.* (2011). In addition Saunders (2015) discusses these

major philosophical beliefs but excludes participatory paradigm and adds a pragmatism paradigm.

In discussing the most popular philosophical beliefs the participatory paradigm is excluded. The reason for excluding participatory paradigm is that according to Breu and Peppard (2003) the participatory paradigm research goes beyond elicitation of meaning but commits itself to action and with researchers not only co-creating the models and tools but also co-implementing the models and tools. This strategy of co-creation and co-implementation will not be viable in the current research study. As such the philosophical beliefs that are examined comprise positivism, post positivism, critical theory, interpretivist and pragmatism.

The positivist paradigm is based on the work of the French philosopher Auguste Comte and dominated research until the mid -20th century (Bhattacherjee, 2012) . Positivism refers to a received view and dominated research for some 400 years (Guba and Lincoln, 1994). Positivism's ontological assumption is that of naive realism that posits that an objective reality exists that can be understood (Guba and Lincoln, 1994, Lincoln et al., 2011). This reality is universal and granular (Saunders et al., 2015) and could be described by measurable properties (Myers, 2009).

Positivism's epistemology focuses on discovering observable measurable facts and regularities that may use casual and predictive explanations to generate law-like generalisations that researchers could use to explain and predict behaviour and events in organisations (Saunders et al., 2015). The epistemological assumption underpinning positivism is that of a dualistic objectivist (Guba and Lincoln, 1994, Lincoln et al., 2011) suggesting that the researcher is separate from the research. As such the axiology assumption supporting positivism is that the researcher should remain distant from the research subjects so that researcher's actions do not influence the participants.

Knowledge in a positivist stance is generated by verification of a hypothesis as fact with quality judged on the rigour of data produced (Lincoln et al., 2011). Methodologically positivism believes in the scientific method of falsification where findings are true until

disproved (Guba and Lincoln, 2005) with inquiry aimed at prediction of natural phenomena (Lincoln et al., 2011) with experimental and manipulative methods used for hypothesis verification (Guba and Lincoln, 1994).

Post positivism ontology is that of critical realism that while there is a single reality, nature can never be fully understood, as humans may not fully understand what this reality is nor how to get to the reality (Guba and Lincoln, 1994, Lincoln et al., 2011) as there are hidden variables and lack of absolute nature (Lincoln et al., 2011). Hence reality is imperfectly or probabilistically understood (Guba and Lincoln, 2005). Epistemologically the post positivism assumption is that of modified dualism (Guba and Lincoln, 1994) with participants' interaction kept at a minimum level (Lincoln et al., 2011) and research and statistics providing a way to make decisions using incomplete data (Lincoln et al., 2011) and findings are regarded as probably true (Guba and Lincoln, 2005). The knowledge that is generated is a non-falsified hypothesis that probably represents facts (Guba and Lincoln, 1994) with quality judged on the confidence level and objectivity of the data produced, and attempts to arrive at an answer that is close to reality (Lincoln et al., 2011).

Axiological post positivist researchers aim to gain a better understanding of reality through the use of statistics that explain and describe what is known as reality through propositional knowing (Guba and Lincoln, 2005) and ethically attempting to be as statistically accurate as possible in the interpretation of reality (Lincoln et al., 2011). Methodologically post positivist researchers will use modified experiments for falsification of hypotheses (Guba and Lincoln, 1994, 2005) and may include qualitative methods with researchers (Guba and Lincoln, 2005) attempting to ask more questions than in the positivist paradigm so as to provide for the unknown variables involved (Lincoln et al., 2011).

Critical theory seeks to create change to the benefit of those oppressed by power (Lincoln et al., 2011) and is based on the ontological assumption of historical realism that believes that virtual reality is shaped by social, political, cultural, economic, ethnic and gender values that have crystallised over time (Guba and Lincoln, 2005) with human nature based on the struggle for power (Lincoln et al., 2011). Therefore, some meanings and interpretations and realities dominated and silenced by others (Saunders et al., 2015). Epistemologically critical

theory research is driven by the study of social structures, freedom, oppression, power and control with enquiries aiming at critique, transformation, restitution and emancipation and knowledge generated to create structural or historical insights (Guba and Lincoln, 2005).

The quality of critical theory is judged on the erosion of unearned privileges and conveying action for creating a fair society (Guba and Lincoln, 2005). Therefore the axiology underpinning critical theory is that of changing existing education, social institutions policies and practices for developing a society without injustices, with enquiries seeking to find social power struggles (Lincoln et al., 2011). The methodological assumption of critical theory is dialogic and dialectic. The typical methods underpinning critical theory are deconstructive reading of texts with in-depth investigation of anomalies. Silences and absence using typical qualitative data analysis methods (Saunders et al., 2015).

Interpretivist researchers seek to gain understanding by interpreting participants' perceptions (Lincoln et al., 2011) with the ontological relativist assumption of multiple realities that are local and specific and may sometimes be in conflict with social reality (Guba and Lincoln, 1994). The interpretivist paradigm's ontological assumption is that there are multiple realities or multiple truths based on one's interpretation and construction of a social reality (Hussey and Hussey, 1997, Sale,Lohfeld and Brazil, 2002).

The epistemological assumption supporting interpretivist is subjectivist, where the enquirer and the enquired are joined together and the findings are a creation of the their interaction, and knowledge is created from the interaction ,with inquiries aiming to understand and interpret phenomena through joint construction and reconstruction of meaning (Lincoln et al., 2011). The epistemological stance indicates how one comes to knowledge about what is true and the relationship between the researcher and the researched (Hussey and Hussey, 1997). Sale *et al.* (2002) highlight that in interpretive research the investigator and the investigated are not independent entities, as there is no access to reality independent of our minds, investigator and the object of study being interactively linked.

The quality of knowledge in an interpretivist stance is measured by trustworthiness, credibility, transferability, dependability and confirmability (Guba and Lincoln, 2005).

Axiological knowing is perceived as instrumentally valuable for social emancipation with researchers seeking to gain increased knowledge by interpreting participants' perceptions and interaction with social context, not necessarily attempting to get involved and change power like critical realists (Lincoln et al., 2011). Interpretivists' typical methods are inductive, using small samples and in-depth investigations using qualitative methods of analysis (Saunders et al., 2015). Moreover, methodological interpretivists are supported with hermeneutics and dialectics with individual constructions elicited and refined harmonically and compared and contrasted dialectically to generate one or more constructions with substantial consensus (Lincoln et al., 2011).

Pragmatism philosophy originated in the late ninetieth and early twentieth centuries in the USA from philosophers Charles Sanders Peirce, William James and John Dewey. It suggested an approach to reconciling traditional dualisms between objectivity and subjectivism (Johnson and Onwuegbuzie, 2004, Saunders et al., 2015). Hence pragmatism's ontological assumption departs from the dualism of subjectivism and objectivism to inter-subjectivity of an informative relationship between inquiry and practice as opposed to a linear relationship where inquiry informs practice (Green and Hall, 2010). Furthermore, according to Powell (Powell, 2001) pragmatism's research mandate is not to find truth or reality but rather to facilitate human problem solving.

Reality in a pragmatist worldview is assumed to be tentative and changing over time and findings from research should be regarded as provisional truths as organisms are constantly adapting to new situations and environments. (Johnson and Onwuegbuzie, 2004).

Epistemologically pragmatism offers an understanding of knowing of interactions called transactions that are taking place in nature and in which nature is understood as moving from the whole of the interacting parts (Biesta, 2010). Furthermore, in terms of epistemology, pragmatism focuses on the relevance of problems and practices with the intention of solving problems and informing future practice with inquiries aiming to contribute practical solutions to inform practice (Saunders et al., 2015). In a pragmatist worldview knowledge is seen as being both constructed and based on the reality of the

world we experience and live in (Johnson and Onwuegbuzie, 2004)with knowledge acquired through a combination of interaction and reflection (Biesta, 2010).

Methodologically pragmatism has no set of methodological requirements but a consequential action knowledge framework to guide inquiry, allowing the researcher to select any method based on the method's appropriateness to the study (Green and Hall, 2010). As such pragmatism does not require a particular method, or method mix and does not exclude methods (Feilzer, 2010) Hence typical research methods in a pragmatism will include a range of methods such as qualitative, quantitative, action research and mixed methods and will follow the research problem and question with the emphasis on practical solutions and outcomes (Saunders et al., 2015). The research results from a pragmatic stance are judged on transferability in terms of the possibility of findings being used in other settings (Green and Hall, 2010). Furthermore, in the epilogue of SAGE handbook of mixed methods in social and behavioural research Tashakkori and Teddlie (2010) highlight that most mixed methods researchers have affinity to pragmatism as a paradigm of choice. Thus one may argue that pragmatism as a philosophical stance is a layer above the methodological choices as opposed to mixed methods influencing pragmatism. Moreso, Biesta (2010) cautions that as a pragmatism philosophical stance should not be blindly taken up for mixed methods research without a clear understanding of the characteristics of the pragmatism philosophy. While the five research philosophies presented viable paradigms for conducting the current research study, the pragmatist paradigm was selected, as according to Morgan (2014) pragmatism can serve as a philosophical programme for social research, regardless of whether that research uses qualitative, quantitative or mixed methods. In particular, it is a paradigm that departs from the dualism of subjectivism and objectivism to an informative relationship between inquiry and practice that is not linear in nature (Green and Hall, 2010) with such an inquiry focused on problem solving (Powell, 2001). Furthermore, Cavaleri (2008) notes that pragmatism presents a logical framework that uses knowledge of experience to improve performance, continuously focusing on choosing actions that will be reliable in achieving organisational goals and enabling organisational learning. In addition Hevner (2007) relates pragmatism to design science suggesting that design science is pragmatic in nature due to the emphasis on relevance and making contribution to application environment whilst ensuring synergy between relevance

and rigour. Hence in presenting the research results a design science approach that takes in to account the eight components of an Information Systems design theory discussed in Gregor and Jones will be is used (Gregor and Jones, 2007). However caution must be placed as one of the key requirements of design science is the evaluation of artifacts that are generated and in the current study the artifacts have not been evaluated One may argue that pragmatism offers the same potential for business model innovation research as a framework that takes into account existing knowledge and experience in business model innovation to fuel best practice in business model innovation. Moreover, the ontological assumption of an informative relationship between inquiry and practice, and the epistemological assumptions of focusing on relevant problems and practices, with the aim of contributing practical solutions to inform practice, fits with the current research aims of using both the literature and practice to generate insights that contribute towards the establishment of best practice in managing business model innovation in a competitive, changing environment Furthermore, using design theory specification of the eight components enabled one to outline the research results along the dimensions of purpose and scope, constructs, principles of form and function, artifact mutability, testable propositions, justification of knowledge as well as principles of implementation and expository instantiation as suggested by Gregor and Jones (2007)

3.3 Research method and approach to theory development

A research philosophy needs to be supported by appropriate research methods. A pragmatist paradigm allows for flexibility in the choice of the research method. According to Creswell (2014) research methods entail the forms of data collection, analysis and interpretations that are used in a research study and there are three main approaches of quantitative, qualitative and mixed methods. However, Saunders et al. (2015) identify three methods that expand these methods into six methods that are grouped into to mono quantitative or qualitative, multi quantitative or qualitative and mixed methods that may be simple or complex, and these methods are linked to the three distinct approaches to theory development that include deduction, abduction and induction.

Deduction is one of the main approaches to theory development. According to Johnson and Gray (2010), Johnson and Onwuegbuzie (2004) link deduction to quantitative research, highlighting that deduction focuses on confirming theories or testing hypotheses and providing explanations and prediction using standardised collected data and statistical analysis. This collected data is used to evaluate hypotheses in relation to existing theories (Saunders et al., 2015). However, one of the main limitations of induction is that the knowledge produced may be too abstract and general for direct application to specific local situations, contexts, and individuals (Johnson and Onwuegbuzie, 2004).

Abduction as a theory development approach enables one to explore a phenomenon and identify and explore themes (Saunders et al., 2015). According to Johnson and Gray (2010) some researchers' view abduction as a form of inductive reasoning while others see it as separate, involving back and forth reasoning looking for the best explanation. Kelle (1997) highlights that while the application of 'theoretical codes' to empirical data is based on a logic of discovery which is either inductive or deductive, abduction seeks to combines in a creative way new and interesting empirical facts with previous theoretical knowledge

According to Saunders (Saunders et al., 2015) induction focuses on generating untested conclusions with data collection used to explore a phenomenon to identify themes and patterns and create a conceptual framework. The inductive approach to research is linked to qualitative research, with induction used to discover and explore theories, and hypothesis generation, with the researcher as the primary 'instrument' of data collection. However, the results are easily influenced by the researcher's personal biases with data analysis often time consuming, while the results produced may not generalise to other settings with findings possibly being unique to the relatively few people included in the research study (Johnson and Onwuegbuzie, 2004).

Johnson and Onwuegbuzie (2004) link deduction to quantitative research, highlighting that deduction focuses on confirming theories or testing hypothesis and providing explanations and prediction using standardised collected data and statistical analysis. This collected data is used to evaluate hypotheses in relation to existing theories (Saunders et al., 2015). However, one of the main limitations of induction is that the knowledge produced may be

too abstract and general for direct application to specific local situations, contexts and individuals (Johnson and Onwuegbuzie, 2004).

In terms of the research methods, mono qualitative research linked to the abduction theory development approach was used. As according to Saunders (2015) abduction may entail making abductive inference to generate a testable conclusion with data collection used to explore phenomena and identify themes and patterns which are then located in the conceptual framework and tested through subsequent data collection, either moving from theory to data deductively, or from data to theory inductively. Hence a conceptual framework for the study was developed from the literature review there after data was collected. In analysing the collected data as an approach to ensure that the analysis is tightly linked to data an inductive approach was adopted with the codes and themes identified from the data. Thereafter a deductive approach was embraced to map the themes identified from the data to the conceptual framework.

3.4 Research strategy and sampling

There are a number of strategies for conducting qualitative research inquiries. According to Creswell (2014) some of the viable strategies for qualitative research include ethnography, grounded theory, phenomenology, narratives and case studies. In the current research study a case study research design was adopted.

The unit of analysis refers to the units of observation (Babbie and Mouton, 2004) related to the research question (Yin, 2014)and consequently the research objective. Therefore this study seeks to investigate how companies manage business model innovation to compete, so the unit of analysis the innovation practice at a company. Case study companies were selected in two sectors for variation purposes, in particular from ICT and financial services in South Africa. As companies in the two sectors are regarded as important as the country's economy is structurally shifting from the primary sectors such as minerals and agriculture to a knowledge-based economy (Media Club South Africa, 2016). Moreover, while the ICT service sector contributes only 2.9% to the Gross Domestic Product (Republic of South Africa, 2015) the sector is regarded an enabler of other economic sectors (Rijkers-Defrasne, 2004) and highly competitive (Abrahams and Goldstuck, 2010). The financial services sector

is one of the best-performing sectors over the past five years (Industrial Development Corporation, 2016) and ranked 3rd globally by the World Economic Forum in 2012-2013 (Sanlam, 2014). Having made choices on the unit of analysis, the succeeding paragraphs address the sampling strategy.

In the research study criterion sampling is used, where selection is based on certain criteria (Onwuegbuzie and Leech, 2007). In particular, the criterion was a company that has previously undertaken business model innovation as identified from popular local media publications or from meetings between the researcher and innovation services consultants. These companies are selected because having previously undertaken business model innovation meant that they were in a good position to share their insights on the business model innovation drivers and business model innovation process adopted and the business model components.

Choosing the number of case studies is one of the key decisions that one needs to make when conducting qualitative research. According to Yin (2014), case studies could involve either a single case or multiple cases with multiple cases substantially increasing analytical benefits. Furthermore, Remenyi (2012) suggests that for a doctoral research three to five case studies would be considered sufficient. In the research study multiple cases studies covering six in-depth cases are used and pseudonyms are used in reporting on the data. The table below presents a brief overview of case study companies.

Table 3-1: Sample case study companies

	Sector	Company Context	Business model innovation drivers	Business model innovation process
Case study A Digital Marketing Company	ICT	Leading digital marketing having won several awards and the company perceives itself as a trail blazer in the digital marketing space. Services provided include search Engine marketing, digital advertising, big website developments and training. The products include the content management systems, webcam, mail systems and CRM systems.	Market factors, technological advancement and regulatory factors. As well as growth aspiration, quality of staff and entrepreneurial leadership.	Organic approach
Case study B Large ICT Company	ICT	Outsourced IT services and products for mission critical systems to some JSE-listed companies as well as public and private companies including companies in the mining sector.	Market factors, technological advancement and regulatory factors. As well growth aspiration staff quality and leadership	Structured approach in some business units while in others units an organic approach is adopted.
Case study C Small ICT Company	ICT	A consulting services, e-learning and software systems provider to large enterprises in South Africa. Using the business model canvas to support customers to document business models and identify broad based economic empowerment (BBEE) opportunities.	Technological factors, market factors and regulatory factors.	Organic and develops as things go
Case study D Financial Services Provider A	Financial services	A financial services provider that seeks to address customer frustrations while saving them money. Offering banking and insurance services.	Market factors technological advancement, regulation and the internal factors relating to leadership, staff quality and growth aspiration.	Organic process as it was indicated that while focus may be on process and structure in reality things are much different
Case study E Financial Services Provider B	Financial services	Financial services Provider B is a newly established sustainable energy debt fund. Providing services in a market that was previously unserved.	Market factors technological advancement and regulation, Additional drivers include leadership, staff quality and existential crisis.	Organic approach and highlighted as being very nibble and adopts an approach that is quickly implements change when required.
Case study F Financial Services provider C	Financial services	Financial services provider C is one of the leaders in the market providing both financial services and insurance services. Using shared value as the underlying philosophy in its business model.	Technological factors, market factors and regulatory factors. As well as leadership, staff quality, innovation culture and growth aspirations	A structured approach to business model innovation that follows and innovation cycle that is driven by launch dates that are set annually.

In this case study the participants and the length of interviews ranged from 45 minutes to 90 minutes as shown below.

Table 3-2: Participants table

Interviews	**Company**	**Interview Length**
Business executive (CEO)	Case study A Digital Marketing Company	1 hour
ICT Executive (Chief Information Officer)	Case study B Large ICT Company	1 hour 30 minutes
Business executive(General Manager Services)	Case study B Large ICT Company	1 hour
Innovation executive (Group Innovation Officer)	Case study B Large ICT Company	45 minutes
Business executive (CEO)	Case study C Small ICT Company	1 hour
Business executive (CEO)	Case study D Financial Services Provider A	1 hour 30 minutes
Business executive (CEO)	Case study E Financial Services Provider B	1 hour
Business executive (Banking Team Head)	Case study F Financial services provider C	1 hour
Innovation executive (Head Research and Development)	Case study F Financial services provider C	1 hour

3.5 Business model innovation research and complexity

In conducting research in business model innovation one may need to overcome hurdles in terms of the business model abstraction level and confidentiality issues relating to a company's business model innovation projects. As a result conducting research in business models could be beset with complexity as Björkdahl and Holmén (2013) highlight that often large established multidivisional companies often compete on the basis of several different business models. Furthermore the abstraction level of the business model ranges from a very detailed product level, the business level and the company level to the much aggregated industry level (Wirtz et al., 2016). Hence, in addressing these hurdles in this research study, the business model is examined from the company level in understanding the overall business model evolvement and some of the approaches to business model innovation and the drivers of the business model innovation, as well as examining how the

business model components form one of the company products and drivers for that particular business model innovation project.

In addition to abstraction levels, conducting research in business models has additional inherent challenges in terms of confidentiality and privacy issues around analysing companies' business models from a company level. For example a number of companies that were approached declined the invitation to participate despite assurances of confidentiality and privacy. The study does not necessarily look at the specifics of all the business models within a company, but examines overall business model evolvement and approaches to business model innovation and makes a detailed examination of one of the business models that was recently innovated.

Business model innovation complexity is additionally influenced by the scope in terms of the number of components that are innovated. Business model innovation may be either simple or complex, with simple business model innovation involving a change in one of the components of the business model, while complex business model innovation could entail simultaneous changes in the various components of the business model (Yariv et al., 2015b). However, both complex and simple business models are important, with Amit and Zott (2010) suggesting that it is necessary to innovate the business model even if it may not be game-changing for the industry and Yariv et al. (2015b) indicating that change in the business model components may either be radical or incremental. In the current study the focus was on both simple and complex business model innovation.

3.6 Data collection and analysis

There are a number of steps that are involved in a data collection and analysis. In qualitative research the process entails a number of steps that include negotiating access and collecting data and selecting a data analysis technique; and describing, coding and interpreting the data. In the following section that will the actual activities that were undertaken to collect the data and analyse the data are examined starting with negotiating access which forms the basis of data collection as outlined below.

3.6.1 Data collection

The first step in facilitation of data collection is negotiating access to sample case studies. According to Johl and Renganathan (2010) the inability to obtain access is one of the greatest pitfalls in conducting research successfully. Success in gaining access has an effect on the nature and quality of the data that is collected and ultimately on the trustworthiness of the findings (Shenton and Hayter, 2004). Hence Van Maanen and Kolb (1982) highlight that gaining access requires strategic planning, hard work and even some luck. Once the companies that had conducted business model innovation were identified from popular press a number of strategies were used to gain assess namely, the "known sponsor" strategy, and reciprocity strategy. Shenton and Hayter (2004) suggest the 'known sponsor' strategy of using the university where the study was conducted with the invitation letter printed on the official university letter head that was signed by both the researcher and the study leader. As well as a reciprocity strategy is where the researcher agrees to share the findings with the sample companies.

Once access has been secured, according to Hussey and Hussey (1997), the data collection process entails identifying the concepts on which the data was to be collected and selecting the sample and type of data required. In addition, the process included selecting appropriate methods followed by exploratory research and modifying collection methods if necessary and collecting the data. The decisions that are made at each of these phases are briefly discussed. The criteria for data collection were company background information, business model innovation drivers, business model innovation process and the business model components as reflected in the existing business model. The sample in the proposed research was selected from companies that had undertaken business model innovation and the data was qualitative.

In conducting case study research, typical data collection methods include documentary analysis (Bhattacherjee, 2012, Hussey and Hussey, 1997), interviews (Bhattacherjee, 2012, Eisenhardt, 1989, Hussey and Hussey, 1997), observations (Eisenhardt, 1989, Hussey and Hussey, 1997), diaries (Hussey and Hussey, 1997), archival records (Bhattacherjee, 2012, Hussey and Hussey, 1997), questionnaires and observations (Eisenhardt, 1989), as well as

physical artifacts (Bhattacherjee, 2012) and field notes (Bhattacherjee, 2012, Eisenhardt, 1989). According to (Eisenhardt, 1989), in theory-building case study research, typically multiple data collection methods are used and multiple data collection methods provide stronger substantiation of constructs. In addition, (Bhattacherjee, 2012) states that interviews are the most popular method of collecting data in case study research and are supplemented or corroborated with other data collection methods. Consequently unstructured face-to-face interviews were used as the main method to collect the data as interviews permit the researcher to ask complex questions and follow-up questions (Hussey and Hussey, 1997) .

The interviews were recorded using a tape-recorder with consent for the recordings obtained from the participants. The recorded interviews were transcribed by the researcher and research assistants using transcribe software. The research assistants were supervised by the researcher. The interviews were corroborated and supported with documentary analysis such as training materials used for business model innovation workshops, BMI initiatives reports and company information from the sample companies' websites.

The table below gives the sources of data that were used in each case. In addition, field notes were used to collect data. Eisenhardt (1989) describes field notes as an on-going stream of consciousness commentary on what is happening in the research, regarding both observation and analysis, preferably in separation, with the researcher writing down impressions that occur, which may include hunches about relationships, anecdotes and informal observations. Field notes may be enriched by asking 'What am I learning?' and "How does this case differ from the last?" In the use of the field notes a "24-hour rule" was applied and the recording completed within 24 hours following an interview so as to ensure that data and impressions were not lost (Bhattacherjee, 2012) .

Semi structured interviews were recorded and transcribed using Transcribe software. The interviews solicited information using an interview schedule that include introductory questions on the company context such as when it started, growth aspirations, key successes, challenges and company approach to innovation and business model evolvement over time. This was followed by a set of 9 themes that were discussed focusing on one of

the participant's company's business model that was recently innovated where the participant was part of the business model innovation team. The themes covered the business model innovation drivers, approach and process. In addition an existing business model was discussed using the various business model components that are used in the company to communicate and visualise the business model. Furthermore, the business model environment, effective and ineffective practices and rating of the perceived intensity of the business model innovation drivers. Another theme that was of importance in assisting the researcher was looking at aspects that the participants felt were omitted in the discussion that the participants felt were of value in manging business model innovation to compete effectively in a changing environment. Following the interview the data was transcribed.

The transcribed data was spell checked and for ethical reasons to ensure participants' and company's confidentiality and privacy the data was anonymised. The anonymising entailed replacing participant's names with interviewee numbers and company names with pseudonyms. Furthermore, additional information that could be used to identify companies such as company philosophy was anonymised. In ensuring that all the transcribed data was coded to facilitate richness of data analysis a line was inserted after each sentence. These word documents were then saved in rich text format and imported into ATLAS.ti. The use of ATLAS.ti was guided by Introduction to ATLAS.ti basic operations, tips and tricks for coding (Archer,van Vuuren and Van der Walt, 2017). The uploaded transcripts were subsequently analysed using thematic analysis.

Table 3-3: Case studies sources of data

	Sector	Data sources
Case study A Digital Marketing Company	ICT	Interview with CEO, Website, Innovation discussion session how digital is changing education in Africa
Case study B Large ICT Company	ICT	Interviews with CIO, General Manager Services and Group innovation officer, Website, online documents and company business model innovation workshop documents
Small ICT Company	ICT	Interview with CEO, Website, Documentation business case for transformation in South Africa and observation of a presentation of innovation tool to a client.
Financial Services Provider A	Financial services	Interview with CEO and website and online document
Financial Services Provider B	Financial services	Interview with CEO, Website, online documents and email about the company's business model evolvement.
Financial services provider C	Financial services	Interview with Banking Team head and Head of Research and development, Website and online documents

3.6.2 Data analysis technique: thematic analysis

There are a number of approaches for analysing data in qualitative research with data analysis undertaken simultaneously with data collection (Silverman, 2013). Furthermore, Braun and Clarke (2006) highlight that while qualitative research may not be subjected to the same criteria as quantitative research, as a method of analysis qualitative research may be applied rigorously to data. In particular, qualitative research methods are oriented towards understanding meanings and experiences and could provide new insights and knowledge in poorly understood and complex areas (Crowe,Inder and Porter, 2015), such as the complex area of how companies manage business model innovation to compete effectively in a changing environment.

A number of data analysis approaches may be applied in qualitative research. According to Braun and Clarke (2006) qualitative analysis methods may be categorised according to their link to the theoretical or epistemological stance, such as grounded theory, conversational analysis and narrative analysis, or to those that are not linked, such as experiential method, thematic and content analysis. In the current research study data analysis used thematic

analysis due to the flexibility provided by the method not being linked to any epistemological stance. Despite offering ease of use and flexibility, Braun and Clarke (2006) indicate that thematic analysis is poorly demarcated, rarely acknowledged, yet widely used qualitative analysis method both within and beyond psychology research. Hence, using thematic analysis to conduct data analysis would require one to define and demarcate thematic analysis from the other qualitative data analysis techniques.

Thematic analysis may be defined as a data analysis technique that systematically identifies and organises data to draw patterns of meaning referred to as themes across the data set (Braun and Clarke, 2012). Thus thematic analysis, according to Joffe and Yardley (2004), is similar to content analysis in systematically identifying and describing qualitative data features that reoccur across participants, using codes and themes, with thematic analysis concerned with the explicit qualitative analysis of the meaning of data in context. In demarcating thematic analysis from content analysis Crowe et al. (2015) suggest that the two may be delineated by conceptualising their relationship on a continuum with thematic analysis as a more interpretive, inductive approach that does not lend itself to calculation, whereas content analysis is a descriptive, deductive approach that lends itself to calculation. A more or less similar view is presented in Joffe and Yardley (2004), proposing that thematic analysis shares many principles and procedures that are similar to content analysis, but content analysis presents a numerical description of features of a given text or images while thematic analysis pays greater attention to the qualitative aspects of the material being analysed. As a data analysis technique thematic analysis presents some benefits and challenges.

The main benefit of thematic analysis, according to Braun and Clarke (2012), is the ease of use, accessibility and flexibility, teaching one the mechanics of coding and analysing qualitative data systematically and in a manner that analysis can be linked to the theoretical or conceptual framework. Furthermore, thematic analysis presents the researcher with the advantages of flexibility, is relatively easy to use as a method that is quick to learn while enabling researchers to highlight similarities and differences across data sets and generating unanticipated insights (Braun and Clarke, 2006). Thus thematic analysis presents researchers with a systematic way of researching data that would otherwise seem vague,

mystifying and challenging. Data can be analysed and then be linked to a broader theoretical or conceptual framework (Braun and Clarke, 2012). The aspects of ease of use and enabling one to link data analysis to the conceptual frame were the main appeals for using thematic analysis in the current research study, as the aim was to test the relevance of the conceptual framework on managing business model innovation to compete effectively in a changing environment in the sample companies, as well as reviewing the similarities and differences between the sample case studies and generating unanticipated insights.

According to Braun and Clarke (2006), the key challenges of thematic analysis relate mainly to a poorly conducted analysis or inappropriate research question, since data is driven by the research question and thematic analysis has limited interpretative power beyond description if it is not used within an existing theoretical framework to anchor the analytical claims. Thus in providing the anchoring of claims in the research study a conceptual framework that is derived from the literature and presented in Chapter 2 is used. Furthermore, the research study adopts theoretical assumptions underlying interpretive research in terms of multiple realities; hence the data analysis seeks to bring out the multiple realities from the collected data. An additional thematic analysis challenge in comparison to narrative analysis or other biographical approaches is that thematic analysis is unable to generate insights from contradictions and consistencies across individual accounts. Also, in comparison to discourse analysis and conversational analysis, thematic analysis does not allow the researcher to make claims about the language and participants expression (Braun and Clarke, 2006).

A process approach with clearly set out steps to conduct thematic analysis and mitigate the pitfalls in ensuring good thematic analysis was drawn from Braun and Clarke (2006) and Braun and Clarke (2012) and used as a guideline in the research study. The thematic analysis six-step approach is illustrated in Figure 3.1. The process steps include familiarising oneself with the data, generating initial codes, searching for themes, reviewing themes, naming and defining themes and producing the report. Figure 3.1 illustrates the specified steps as well as highlights the activities involved in each step and provides guidelines that will enable one to avoid the common pitfalls

Figure 3-2: Diagrammatic representation of thematic analysis steps with information from (Braun and Clarke, 2006, 2012)

In addition to the discussed process steps and guidelines, Braun and Clarke (2006) suggest that poor data analysis in thematic research emanates from failing to analyse data. But instead stringing data extracts together without any analytic narrative. Due to a mismatch between the data and analytic claims, with a worst case scenario data extracts that are presented actually contradict the claims. A mismatch between theory and analytic claims is a result of failing to ensure that data interpretations are consistent with the theoretical framework (Braun and Clarke, 2006).

Data familiarisation entailed reading the transcribed interviews as well as the documentary analysis that was obtained from sample companies such as the training materials used for business model innovation workshops, BMI initiatives reports, company information from the sample companies websites and the information from the field notes. This enabled the researcher to start developing ideas as regarding the data, for example whether the companies were using a structured approach to business model innovation or an organic approach. The data familiarisation step was followed by generating the initial codes.

In generating the initial codes, Braun and Clarke (2012) highlight that thematic analysis does not prescribe how one segments data as a code but suggests one codes every time one identifies something that is potentially relevant to the research question. Furthermore, there is no prescribed maximum number of codes but codes should capture the diversity and patterns within the data and appear across more than one data item (Braun and Clarke, 2012). In addition, there are various approaches to coding in thematic analysis, according to Braun and Clarke (2006). The two main approaches are an inductive bottom-up approach where the themes are identified from the data and not driven by the researcher's theoretical interest nor fitting the data into a pre-existing coding frame, and a deductive top-down theoretical approach in which coding is driven by the analytic interest and tends to provide less description of the data overall but detailed analysis on some of the aspects of data. In addition to these two approaches a hybrid approach that integrates a data-driven approach with a theory-driven approach may be adopted. In applying a hybrid approach Fereday and Muir-Cochrane (2006) used a codebook that was developed before conducting in-depth analysis from the research question and the theoretical framework and summarised the collected data and identified the initial themes and applied the coding

template to the data. However in this research study while a hybrid approach was adopted the coding was developed from the data a codebook and not developed from the conceptual framework. This was to allow for the findings to be closely related to the data. A detailed coding is discussed in the next paragraph.

The first step in the coding entailed searching for themes from the data across the data set and naming the themes. This initial code generation phase generated a total of 119 codes. In the second step the codes were reviewed and themes that were regarded as similar or having related meaning were merged and this resulted in the codes being reduce from 119 to 65. The third step involved using the 65 codes to derive seven overarching themes. These themes were namely business model innovation process, business model redesign and business model understanding. In addition, the other themes were business model company context, components, innovation drivers and lessons learned. These seven overarching themes and sub-components are downloaded from ATLAS.ti and depicted in Figure 3.2.

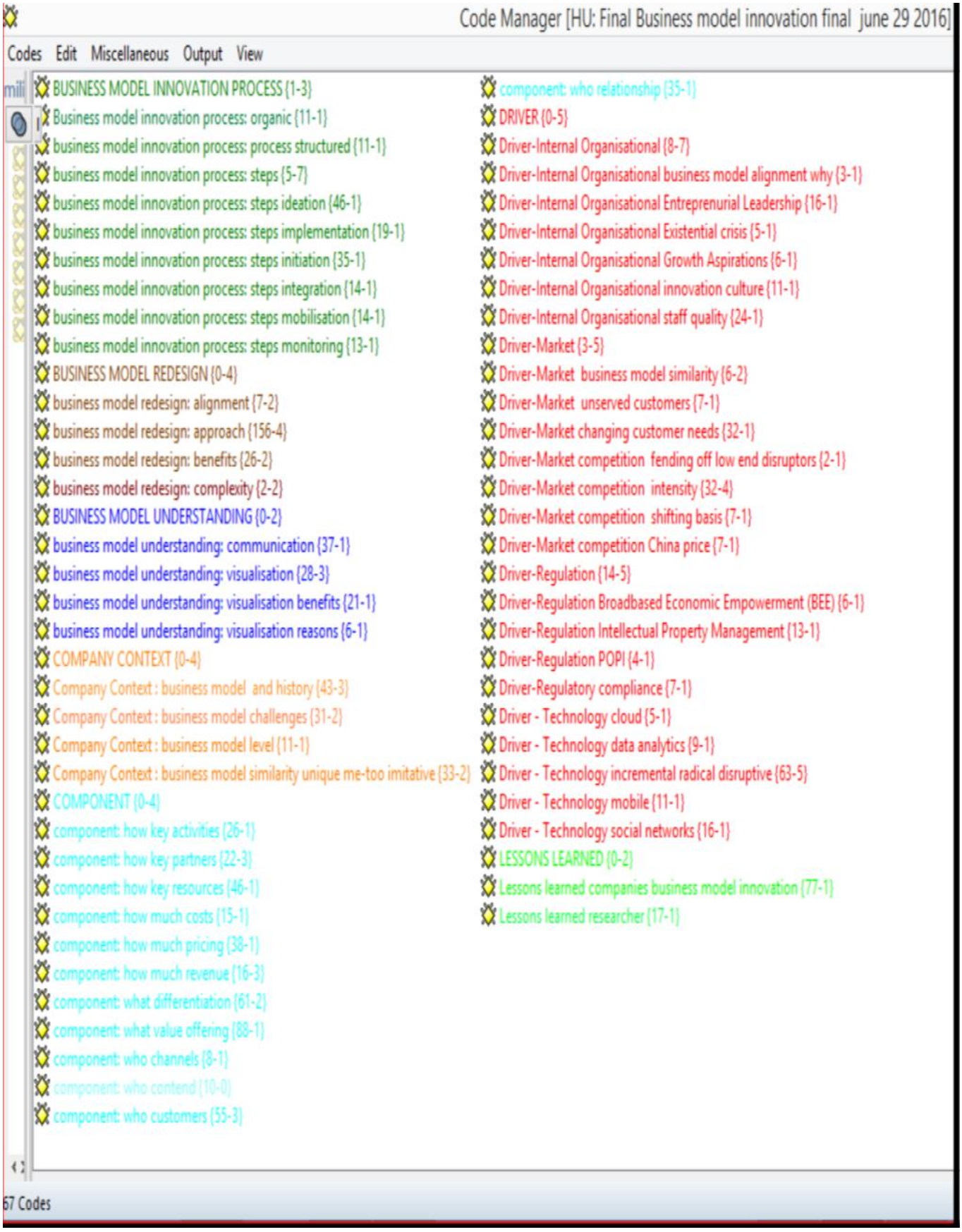

Figure 3-3: Business model innovation data codes

Having inductively identified the codes and overarching theme, the themes were mapped to the conceptual framework. The mapping indicates that that the company history and lessons learnt themes do not map to the conceptual framework but provide a background towards understanding how business model innovation is managed, as well as capturing the lessons learnt by the companies in terms of managing business model innovation. The business model innovation process maps to the 4I-2M business model innovation process, while the drivers theme maps to the business model innovation drivers component in the conceptual framework. Furthermore, business model understanding, redesign and components map to the business model concept in the conceptual framework. Having mapped the overarching themes from the data to the conceptual framework, the research questions were mapped to the conceptual framework. This mapping is supported by mapping research questions to the conceptual framework and mapping the overarching themes to the research questions. This two-level mapping is illustrated in the two diagrams below.

Figure 3.4 depicts the conceptual research model, including research questions, which guided the analysis of data.

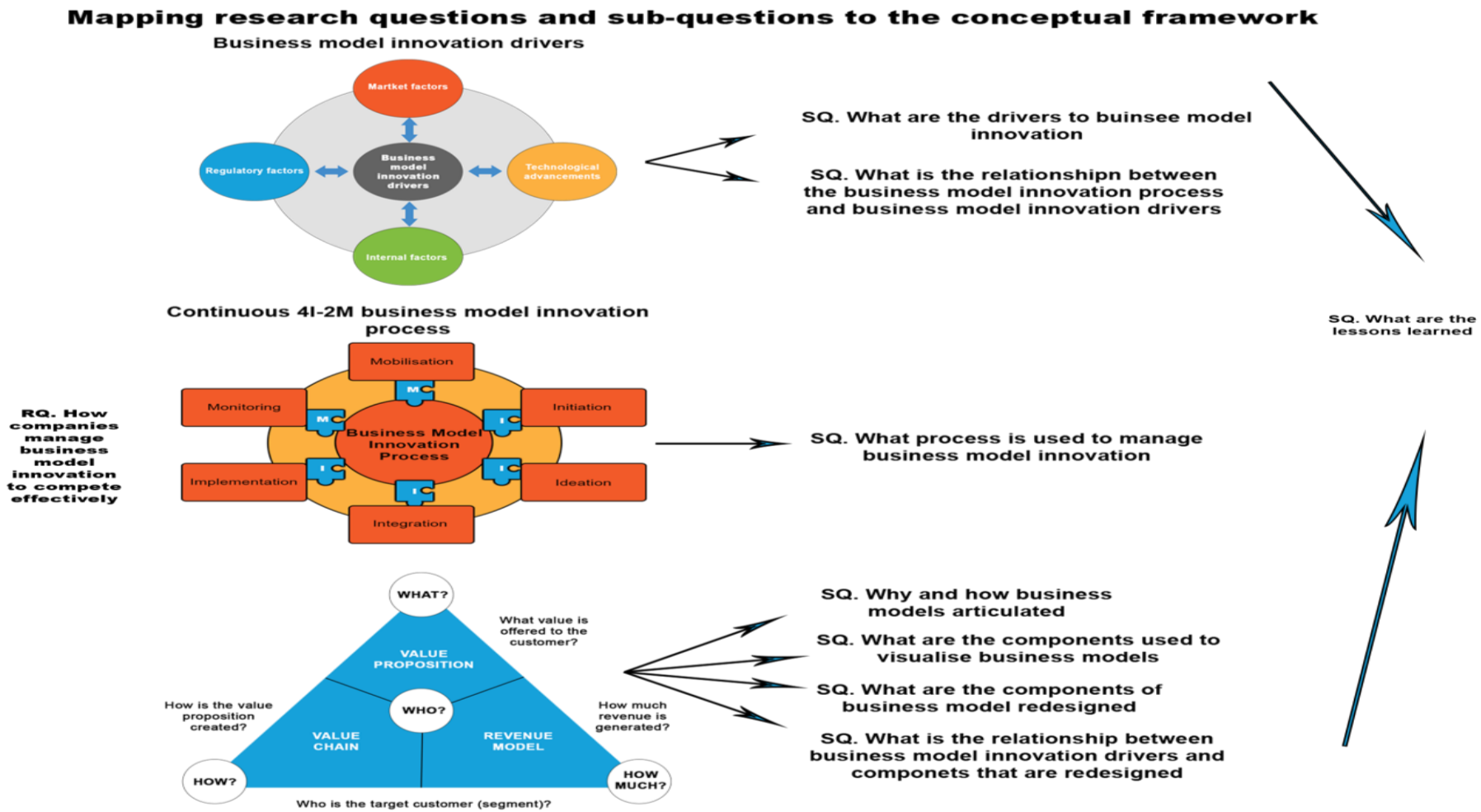

Figure 3-4: Conceptual framework and research questions

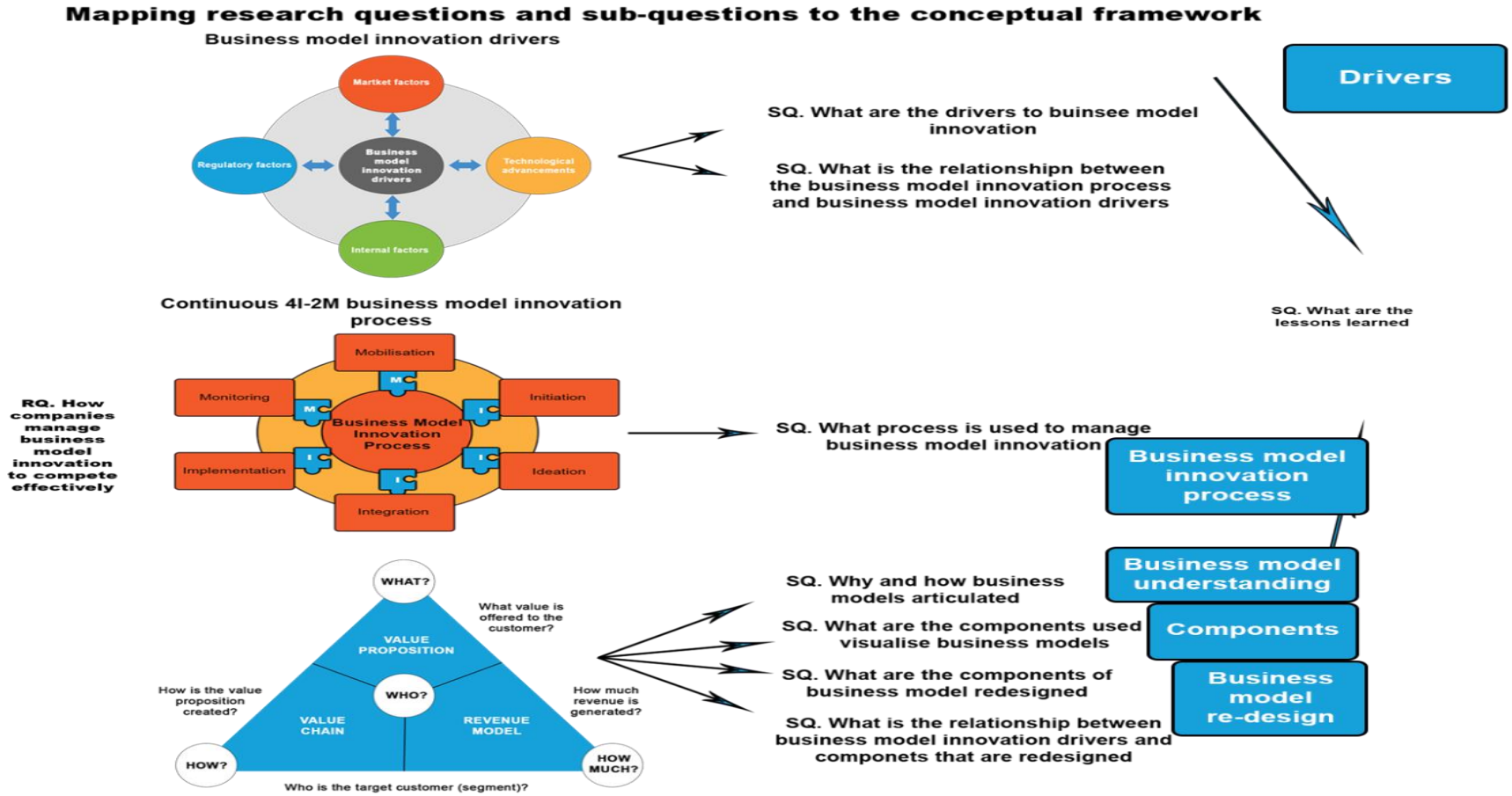

Figure 3-5: Mapping codes research questions and sub questions to conceptual framework:

3.7 Research validity and reliability

Reliability and transferability play an important role when conducting research. Morse, Barret, Mayan, Olson and Spiers (2002) argue that implementing strategies for reliability and validity is an integral part of implementing self-correcting verification strategies during the conduct of the research inquiry to ensure qualitative research rigour and to avoid the risk of missing threats to reliability and validity until it is too late to correct them.

Reliability refers to the extent to which the research results are likely to be repeated while validity is concerned with the extent to which the results accurately reflect the situation being studied (Hussey and Hussey, 1997, Silverman, 2013). Furthermore Yin (2014) adds reliability entails the consistency and repeatability of research procedures used in the case study with external validity concerned with the extent to which findings from the case study maybe generalised to other situations and internal validity pertaining to the strength of a cause and effect link made by a case study. In the proposed research, a number of strategies were adopted to ensure reliability and transferability and thus generalisation of the research results. In terms of external validity, the proposed study does not use statistics to generalise from sample to the population, but seeks to generalise from the case studies to theory. Therefore, it seeks to examine if the patterns, concepts and theories generated in a particular environment may be applied to others (Hussey and Hussey, 1997). In an effort to ensure validity and transferability, a number of strategies were adopted which included investigator responsiveness, methodological coherence, theoretical sampling, sampling adequacy and replicability, generalisation and triangulation. The actual strategies to be adopted are discussed.

Investigator responsiveness was key in ensuring transferability. According Bluhm et al. (2010), researchers enter the situation with all their knowledge of existing theory, their individual biases, and their expectations for the unfolding of the behaviour and allow the data to guide further data collection and analysis rather than remaining committed to their initial plans and expectations. The strategies for ensuring investigator responsiveness during

data collection and analysis included remaining open, sensitivity, creative, using insight and listening to the data rather than relying on previously held assumptions about business model innovation as identified in the conceptual framework and willingness to relinquish any ideas and categorisations that are poorly supported by the data. Data collection and analysis were undertaken concurrently so as to link what is known and what needs to be known to ensure reliability and validity.

Methodological coherence was one of the tools used to ensure research results transferability. According to Morse et al. (2002)methodological coherence ensures that the research methods, data and analytic procedures correspond with the research question and methods and the process may not be linear as the research unfolds hence data may demand to be treated differently, questions may need to be changed, methods modified and sampling plans expanded or changed altogether. Therefore in the proposed research strategies for ensuring methodological coherence were adopted and a reiterative research process practised as opposed to a linear approach. Moreover, coherence between the pragmatist philosophical paradigm and the research methods was maintained by using a qualitative research method that used an abductive approach to theory development, thus ensuring coherence between methods and philosophical stance.

In particular codes were generated from data to ensure that theory is used to inform practice, and codes were mapped to the conceptual framework to ensure theory informed practice. In addition, the focus was not on an objective or subjective reality but on solving a problem with business model innovation moving towards developing best practice on how companies manage business model innovation to compete in a changing environment. Furthermore, a reflective process was undertaken during the data collection process and theoretical sampling, triangulation and data saturation were used to ensure methodological coherence.

Theoretical sampling was used to aid transferability, as Morse et al. (2002) highlight that theoretical thinking requires macro-micro perspectives where ideas emerging from data are reconfirmed in new data, giving rise to new ideas that, in turn, must be verified in data already collected. Theory was developed through both the outcomes of the research

process as opposed to as a framework for data analysis as a template for comparison and further development of the theory. Theoretical saturation occurs when no new or relevant data seems to emerge in a category. Furthermore, theoretical sampling entails selecting cases based on their ability to illuminate the extend relationships and extend the relationships among the constructs (Eisenhardt and Graebner, 2007) In addition, Eisenhardt, Graebner and Soneshein (2016)indicate that theoretical sampling maybe used to adjust the sample as new insights and opportunities emerge . In proposed research theoretical sampling reliability and validity were safeguarded by ensuring that theoretical saturation was reached. As such to ensure theoretical sampling to illuminate the relationships between the business model innovation drivers, business model process and business model components the cases were selected on the basis of done some conducted business model innovation projects. In selecting the case for variance in the ICT sector two large companies were selected whilst in the financial services sector one large financial services provider was selected and two small ones.

Triangulation was one of the strategies used to support research results' transferability. Triangulation refers to the use of two or more independent sources of data or data collection methods (Saunders et al., 2015). In this study data triangulation was used, as the data was collected from multiple sources such as interviews supported by documentary analysis and research notes. In addition, multiple cases were used and data triangulated across the cases.

Sampling adequacy and replication were adopted in order to ensure transferability. According to *Morse* et al. (2002), sample adequacy and appropriateness entail selecting participants who best represent or have knowledge of the research topic to ensure efficient and effective saturation of categories, with optimal quality data and minimum waste. Furthermore, saturating data ensures replication in categories and replication verifies, and ensures comprehension and completeness. Therefore to ensure sampling adequacy and replication only companies that were identified as having conducted business model innovation were selected to participate in the research.

3.8 Ethical considerations

Ethical considerations deal with designing research in a manner in which respondents' rights are safeguarded and protected from physical harm, embarrassment or loss of privacy. This required the researcher to explain the study benefits, explain respondents rights and protection and obtain informed consent (Cooper and Schindler, 2003). In the research study, formal permission and informed consent were sought from participants in the sample companies (the participants were adults). An invitation to participate in the research was printed on the official university letterhead, signed by both the researcher and the supervisor, and hand-delivered to participating companies by the researcher. The sample participants signed a consent form. The consent form clearly described the informants' right to not participate and right to withdraw from the study at any point. The study benefits were clearly explained to the participants and both the procedures and requirements for data collection described. In addition, the participants could refuse to answer any questions should they prefer not to.

The subject's interests and future wellbeing were protected in terms of the dual principles of anonymity and confidentiality as suggested in Bhattacherjee (2012). Information that could lead to the identification of individual participants, such as the company's philosophies and names, was omitted, and all information that was deemed as having the potential to identify individual participants was removed from the report. Furthermore, the respondents' anonymity is assured because the researcher reports data in a summarised form and where quotes were used caution was exercised to ensure the information was not be traceable to the individual respondents. The interview transcripts were treated as confidential and the researcher ensured that the assistants that transcribed the data maintained data confidentiality and safety standards. Upon completion of the research study, the interview tapes and transcripts will be preserved by the researcher in manner that is in line with the initial agreements on the consent form.

3.9 Conclusion

In this chapter the research design and methodology used in the research study were discussed with justifications for the selected research strategies and techniques. In particular the study adopted a pragmatic research paradigm with the ontological assumption departing from the dualism of subjectivism and objectivism, with the research seeking to facilitate human problem solving, specifically focusing on informing future practice with the aim of contributing towards practical solutions. The unit of analysis was a single company in which information was collected from executives involved in the design and implementation of business model innovation, and the sample case studies were selected based on having previously conducted business model innovation. In the case studies the data was collected using unstructured interviews lasting between 45 and 90 minutes. The collected data was analysed using thematic analysis. The chapter outlined the strategies used to ensure research validity and transferability, as well as providing an outline of how thematic analysis was applied to the data. In the next chapter the data analysis and findings are presented.

Chapter 4: Data analysis and findings

4.1 Introduction

In this chapter the data analysis in terms of the case studies' contextual background is presented. This contextual background serves as a foundation for answering the main research question: how companies manage business model innovation to compete in a changing environment. The argument emanating from the literature review's conceptual framework presented in Chapter 2 is that managing a business model to compete effectively in a changing environment entails an understanding the business model innovation drivers, using a continuous 4I-2M business model innovation process to redesign the existing business model components. These case studies were used to explore the relevance of this argument in the sample case studies.

Braun and Clark (2012) suggest that in presenting the research findings and results the reporting needs to provide a compelling story about the data, based on the analysis of such data. Furthermore, Braun and Clarke (2006) recommend that the story about the data should present an interesting account that is convincing to the reader in terms of merit and validity of analysis, providing a concise, coherent, logical and non-repetitive story from both within and across themes, with the report supported with sufficient data extracts. In addition according to Eisenhardt and Graebner (2007) when building theory from case studies the central notion is to develop theory inductively with the theory emerging as patterns and relationships amongst the constructs within and across cases.

In presenting the research results in a manner that is interesting, avoiding repetition, while ensuring that the analysis derives from both the individual case studies as well as from the overall data set, an individual narrative of each case study is presented. Thus following the suggested Eisenhardt and Graebner (Eisenhardt and Graebner, 2007)approach and in Chapter 5 the cross case comparisons are provided.. The narration of sample case studies briefly presents the case study context and highlights some of the reasons why the companies are regarded as good cases for collecting data to answer the research question. The discussion of the company's context outlines the company's history and business model

in relation to business model similarity and its challenges. In addition the contextual background outlines the business model innovation drivers, business model components, redesign approach and lessons learnt from the business model innovation process

4.2 Context Digital Marketing Company

4.2.1 History and business model overview

Digital Marketing Company provides ICT services, and was identified as a viable case for examining business model innovation as the company was branded as one that values innovation and new thinking, according to information published online. Furthermore, Digital Marketing Company identifies itself as one of the leading digital marketing companies in South Africa, having won several awards, and the company identifies itself as a trail blazer in the digital marketing space. The company's history and business model is discussed using the network diagrams extracted from the ATLAS.ti analysis.

Digital Marketing was founded in about 2000, and has evolved into one of the top six digital marketing companies. It offers a business model that is slightly differentiated from those of competitors, and will continue to evolve the business model from a services-based business one to a product-based model with services around the products. The company context is depicted in Figure 4.1, followed by a detailed discussion of the company's history, business model similarity and business model challenges.

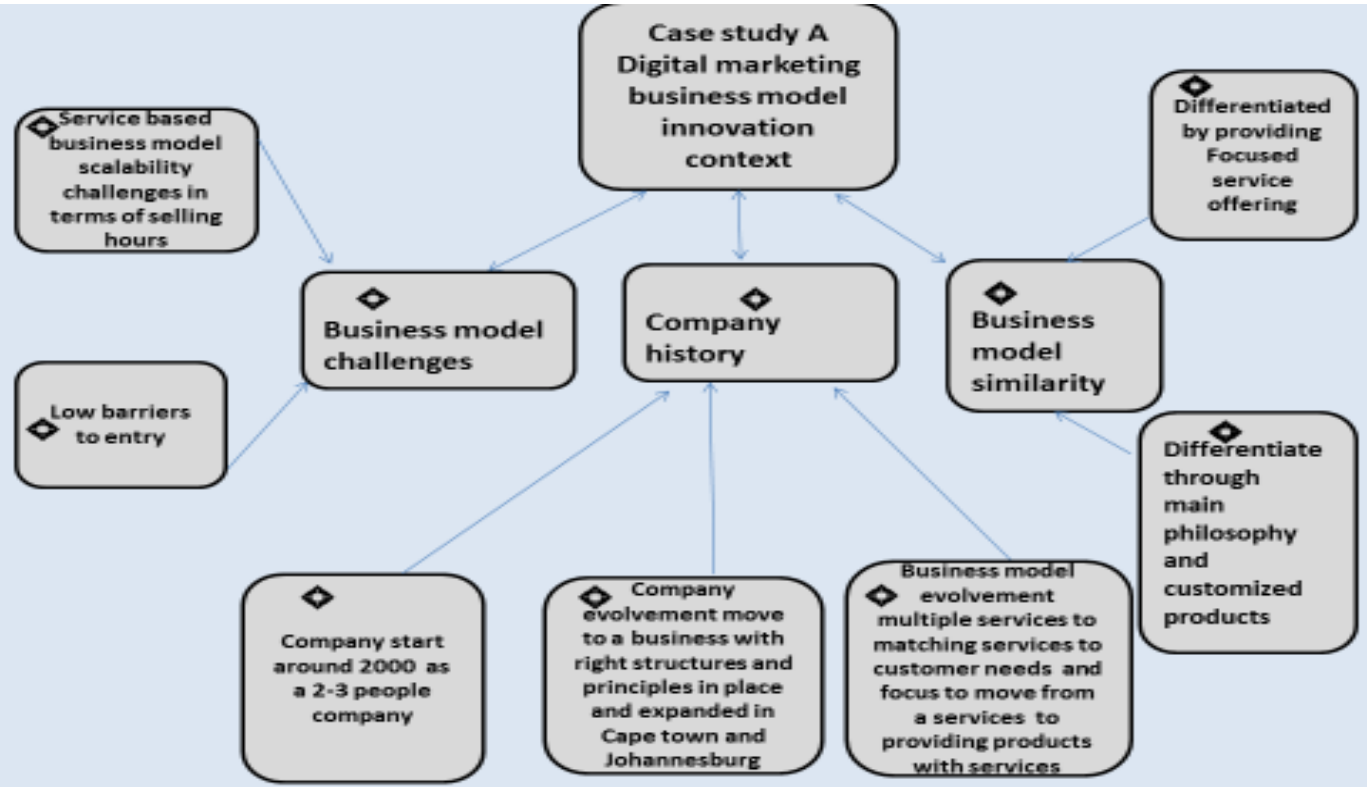

Figure 4-1: Business model context Digital Marketing Company compiled by the researcher

4.2.1.1 History

The Digital Marketing company's history dates back to early in 2000 when the company was started as a loosely coupled two- to three-man show and evolved to a start-up with a proper company structure and focused services and further evolved the business by innovating the 'who' component by growing the target customer base, expanding its offices to be in two of the largest ICT sector hubs, namely Gauteng and Western Cape. It has been five years since the company expanded the market and the company has become one of the top six digital marketing companies in South Africa.

The following quotation from the respondent highlights the company evolution:

> *"The first three years was one-man show type of business two-three people company we did everything. We realised as per quality of our work started to improve people started to become aware of our company we actually need to grow a structure business we just not be offering services without a structure around what we do and that was our first let's call it innovation phase it was evolving the company from*

being loose one-man operation to more of structured entity with structured services that you want to offer."

Moreover in the company's evolution, in addition to the customer base expansion, there was a huge product innovation where the company built products that included the content management system which is the technology behind the websites and the mobile applications, Webcam, mailing systems and an internal CRM systems for managing client relationships and projects. These products are viewed as important in the current phase in the business model innovation phase where the company is evolving from a service-based business to a product-based business that offers services around those products. These views are expressed in this quote:

"So those products are very important but for the next couple of years we need to be clear that we need from shift from a being a purely service-based business with some products to be primarily a product-based business that offers services around those products."

4.2.1.2 Business model similarity

In terms of business model similarity Digital Marketing's business model is perceived to be slightly differentiated from those of competitors by offering a streamlined focused service offering and doing so using the company's main philosophy to deliver customised products and services. The customised differentiation is supported by a strong customer relationship component and the value proposition's ease of use and having a proven track record in the services that are provided. This view is reflected in the following quote

"Where we do differentiate is on two aspects, the first being through our main philosophy and main education initiative is a thread that runs through everything our clients understand that we are not an agency that has all the answers we are an agency that is prepared to unpack all answers and approach problems in a pragmatic results oriented way … So a big differentiator is our focus and we have such a streamlined offering – that doesn't mean we do not have depth, we have the depth but it's just feels easy and it's a big insight."

4.2.1.3 Business model challenges

Despite the business model being slightly differentiated from those of competitors the business model is facing challenges coming from the low barriers to entry that lead to a fast proliferation of new companies in the market, resulting in customers facing challenges when filtering for a service provider for desired services in the digital marketing space. In addition to low barriers to entry scalability is another issue due to the service nature of the business model that results in the company selling hours. In this business model context Digital Marketing is facing a number of factors that are acting as a driver for business model innovation. In the next sections will review the factors that are driving business model innovation.

4.2.2 Business model innovation drivers

Digital Marketing Company is facing both external and internal factors that are motivating the company to innovate the existing business model. The external factors include market factors, technological advancement and regulatory factors. The internal factors include growth aspiration, quality of staff and entrepreneurial leadership. The factors influencing business model innovation are illustrated in Figure 4.2 followed by a discussion of each of these factors.

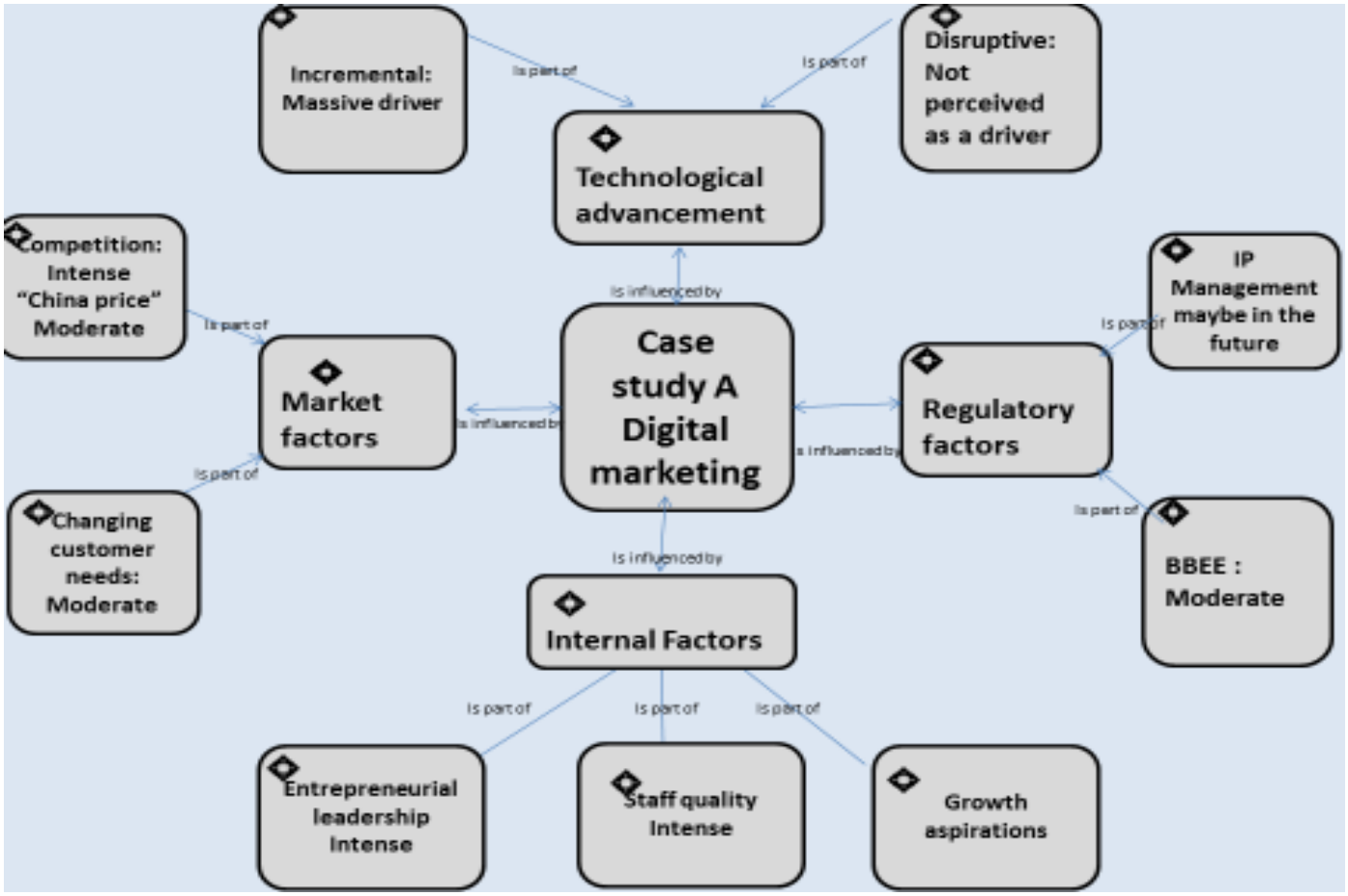

Figure 4-2: Business model innovation drivers Digital marketing Company compiled by the researcher

4.2.2.1 Market factors

Market factors that are driving business model innovation were identified as the changing customer needs and competition facets that include intensifying competition and the "China Price". The competition intensity was illustrated by one of the participants as follows: "*Being in the top six is not being in a comfort zone at all. I can promise you that the market is moving into a space where the top 15 agencies in this country are going to be equally strong in what they do".*

The China price, while a factor driving innovation in the industry, is not regarded as intense in the company as highlighted in the quote below:

> *"In the digital technology space it is interesting because the china price that you refer to isn't necessarily original it's more case of technological in nature … The china price*

is already there in the sense that there are cheaper ways … however, there is a market out there wanting a customised attention that it deserves as opposed to plug and play type of set-up and that's where we play."

The changing customer needs are of importance as understanding and embracing a volatile market is one of the company's core philosophies. This is drawn from the following statement by one of the participants:

"That's is very much part of our main philosophy: you need to understand and embrace that market out there is a volatile market in the sense that technology comes and goes and what is relevant today is not relevant tomorrow there is something that suddenly becomes the next big thing. … So you need to prepare yourself to have very much a taste testing inventive culture that embraces the change but at the same time making sure that your foundation is solid."

Such changes in customer needs are treated on a case-by-case basis and the company has the necessary focus and systems to manage the changes. Hence changing customer needs are a moderate driver to business model innovation with the company being aware of change and considerate in in terms of the way in which the company responds.

"You know for us that any changes in customer needs is we treat that on a case by case and it's hardly a surprise when we see changes and from our side the necessary focus and systems [are] in place to manage the change. It's a moderate driver for business model innovation [but] would be intense if we would be jumping around whenever there is change or being ignorant of the change."

4.2.2.2 Technological advancement

Technological advancement is seen as a massive driver for business model innovation, in particular incremental technological advancement as highlighted in this quote:

"Incremental technological advancement is preferred as far as we are concerned and it's definitely a massive driver for business model innovation. Hence what we always say to ourselves when you look at the top 10 technology trends five years ago it very much still the top 10 technology trends today it is still mobile, cloud a whole bunch

things and people ask funny question its trends but it's always been trends why is it still relevant. And the truth is change in practice, not in theory, in practice change is incremental and conservative for most part and it is actually a long-term process rather than a short-term process.

In this context, looking at this incremental nature of technology one does not necessarily need to innovate their business model drastically every single year but to evolve certain areas. This can be seen in this excerpt:

"If you understand that you will understand that you do not need to innovate your business model drastically every single year. You can evolve in certain key areas as we have but we will never revolutionise our business such that it is something that doesn't have a solid foundation."

4.2.2.3 Regulatory factors

An additional external driver for business model innovation is the regulatory factors. From the point view of IP management, the buying selling of IP is not currently a driver for business model innovation, but it seems could be of relevance in the future as shown by this excerpt:

"We have never bought IP and we have created own IP. We are in the process of registering a number different technologies and methodologies. I think currently it's a weak driver for business model innovation as for now when our clients use our technologies we always make them sign a document not to sell our technologies to other people and it has always worked and yes now we realised there are certain aspects to be managed from IP point of view. We do that now but it has never been a big consideration for us traditionally".

Regulation is seen as a driver for business model innovation from Broad Based Black Economic Empowerment (BBBE) due to the scarcity of skills. This was reflected as follows,

"Where we are struggling as an industry as a whole is regulation around the roll-out of Broad Black Based Economic Empowerment is that the skills base around previously disadvantaged groups as far technology digital space is very very scarce.

We struggle to find talented skilled BB-BBEE specialists in our industry there is a lot of effort being put in running training and uplift the segments but we still struggle to do that. As a company we are a level 3 BBBE accredited which is still good but we need to focus ahead as how we grow that type of skill in our industry and in our business still."

4.2.2.4 Organisational factors

The internal factors are an update on the conceptual framework as growth aspirations were part of the conceptual framework but the issue of entrepreneurial leadership and staff quality were identified from the data. Therefore a new group of internal drivers is created and it will include both the growth aspirations and organisational factors. The key organisational factor that is an intense driver for business model innovation is the company in terms of the quality of staff as illustrated by this extract:

"And the second driving force is the staff we always say we have this bus that we are driving and we need to get the right people on the bus sitting on the right seats on the bus. The driving force is our TEAM – without that we would not have a business"

The leadership drives business model innovation from two aspects, firstly the entrepreneurial leadership that is shared among the company's top management and leadership desire to deliver remarkable work. This view was expressed as follows by one of the participants:

"Leadership, what drives the leadership of the organisation is that there are two aspects. We are all entrepreneurial, we have the desire of being in control of our own destiny and building this business that people can remark on and say these guys know something that is quite good. So there is also a shared value specifically within the leadership and it filters down and the shared value consist of sincerity being humble about what we do but having exceptional work ethic in terms the service you deliver and the quality of the work.

There [are] lots of opportunities that come our way in the disguise of good money and we are cautious of those opportunities because [we] know in the long run they will cause more problems than anything else."

4.2.3 Business model components

The company's business model is visualised using a stickman house as drawn below,

Figure 4-3: Business model visualisation house analogy compiled by the researcher

The house analogy visualisation is mapped back to the business model canvas as depicted below followed by an examination of Digital Marketing Company's business model components. The company's current business model visualisation the stickman house analogy is mapped to the business model canvas, starting with the business model that provides the products and services as depicted in the foundation, and how such products and services are differentiated in the roof. In addition, how the products and services are created is illustrated in the house block in terms of the operations, processes, structure and culture. The visualisation also depicts the 'who' of the business model in terms of the target customers, the relationships that are maintained and the distribution channels. Figure 4.4 shows the potential sample business model for the Digital Marketing Company using the business model canvas.

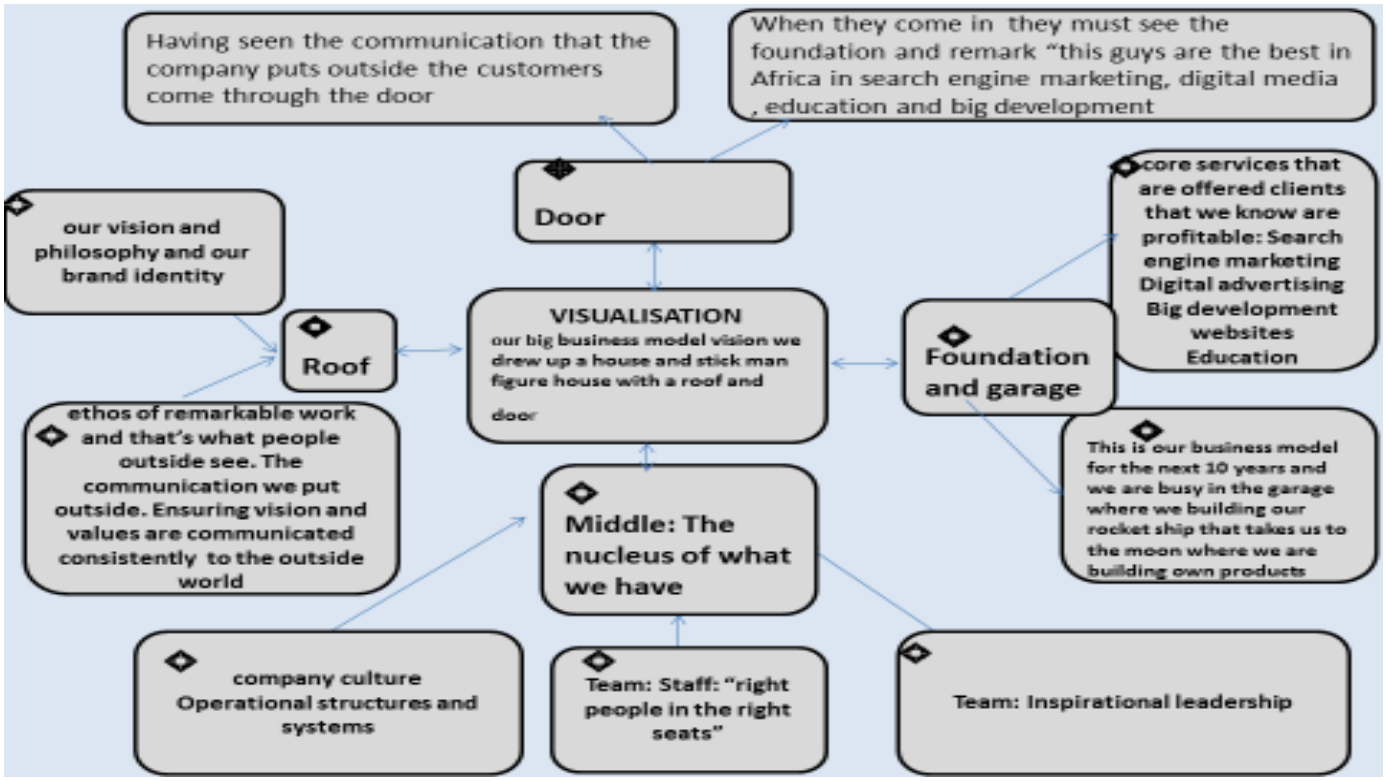

Figure 4-4: Digital Marketing Company business model components compiled by researcher

4.2.3.1 Component 'what': value offering and differentiation

The component 'what' includes the company's core products and services which are regarded as the foundation of the company and are the core services offered by the company. These core services are said to be denoted as the "bread and butter" as these are the services known to be profitable. The services for the Digital Marketing Company include search engine marketing, digital advertising, big website developments and training. The products include the content management systems, webcam, mail systems and CRM systems. Moreover, the company is said to be shifting from a services-based value proposition to product-based one with services. As such the company value proposition could be said to include future products that will be highly scalable and supported with services

The company's key differentiator is retaining focus on what the company does, which is to provide the customer with ease of use. In addition to the focus, the product quality is a key differentiator and the quality of product and services, with one of the company's key philosophies and its ethos being the delivery of remarkable work. The company wants be

perceived as the best in Africa in their core service of search engine marketing, digital advertising, big website developments, and the company has a good record in the delivery of these services.

4.2.3.2 Component 'how': key activities, resources and partners

The company uses an internal services modelling approach to schedule activities and teams. However, the services are perceived not to be scalable to the desired level with future products and services aimed at enhancing scalability.

4.2.3.3 Component 'how much': cost, revenue and pricing

Understanding where all the revenue comes from and the most profitable business areas and those services that are not profitable is regarded to be of strategic importance in innovating the business models. As it was suggested that it is critical that there is clear understanding of financials and management accounts with the "*management team singing from the same hymn sheet".*

4.2.3.4 Component 'who': customers, channels and relationship

The target customers for the company are said to be high level people, under extreme pressure, and usually having had a bad service experience. The main customer needs are marketing needs, sales needs and innovation needs. Digital Marketing adopts a collaborative relationship with customers on how to use the various tools using 'test and taste' and building trust with customers and building communities.

4.2.3.5 Business model visualisation and communication

Business model components are used to depict a company's existing business model and business model understanding is associated with business model visualisation and communication. Digital Marketing Company appears be aware of the company's existing business model and the areas of innovation with the business model having been visualised and communicated throughout the company.

"We are very aware of our business model and our areas of innovation and we communicate this vision of where we are now and where we want to be very quickly to all our staff from junior level right through to senior level."

In line with the company's culture of keeping things simple the business model vision was Communicated in a simple manner using a stick man figure house as illustrated in this quotation:

"Our big business model vision we are drew up a house stick man figure house little block with a roof and a door. Bottom side our foundation and the foundation is our core services that we offer to our clients and that we know are profitable to ourselves. Those include search engine marketing, digital advertising and big developments e.g. website for …. Big developments that is where our bread is buttered that is our services but still not our value proposition those we are the services that we focus on. In the middle is our team the company culture, operations structures and systems we have and it forms the nucleus of what we have. The roof is our vision philosophy the main philosophy so the roof is what people see from the outside see and they see is the main philosophy, the ethos of delivering remarkable work, what they see communication that we put outside. That is our business model for the next 10 years we are busy building the garage is where we built the rocket ship that takes us to the moon and this is where we built our own product …. Where do your customers come in? … They knock on the door they are outside. They have seen the house they have seen the roof and they understand it and they liked the house They come on the door when they come in they must see the foundation and they must say these guys are the best in Africa in search, digital media, education and big development understand that from the outset."

The diagrammatic view of the business model has been communicated to staff members from junior level right through to senior management and there appears to be a shared understanding of the business model as suggested by this statement:

"We have communicated that to all our staff and if you ask them question they will draw you the exact same picture, everybody gets it and everybody is on the very same page. Everybody understands we need to look after our foundation, otherwise the house will fall down and we cannot build the garage without the foundation – we need to make sure the inside is working efficiently the operations."

The visualisation of the business model is perceived to serve as a focus or reference point for the company as well as facilitating shared understanding. As such this benefits may be drawn as follows:

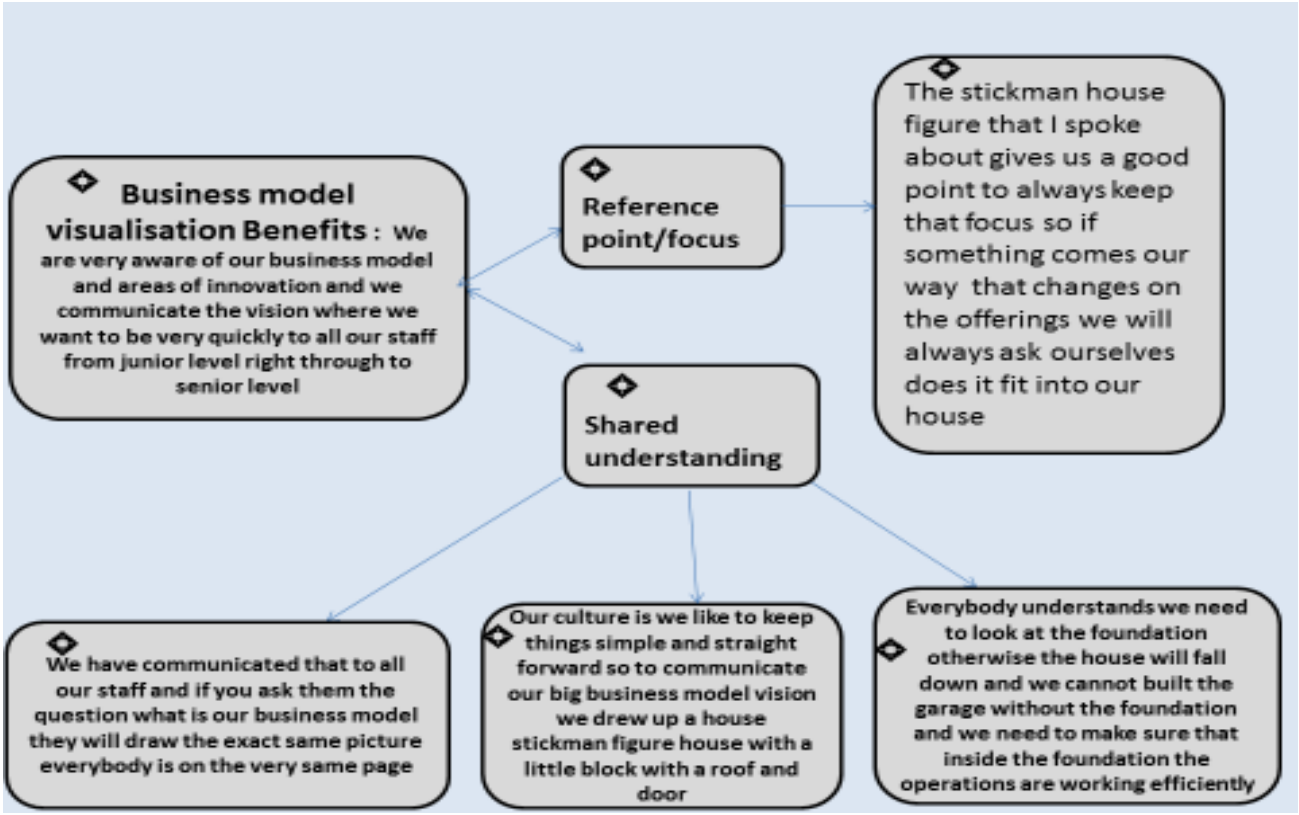

Figure 4-5: Digital Marketing Company benefits business model visualisation compiled by researcher

4.2.3.6 Business model components summary

Based on these discussion and the graphic illustration of business model components from the Digital Marketing Company business model, what is evident is that the 'how much' components of the business model were not mapped in the visualisation of the business model. However, the company does not ignore the financial components, as highlighted by these statements:

"I must say that a big part of this is understanding your financials very very well even if you are not a finance person surround yourself with people that are financially orientated. I cannot tell you the value we get in the summary of our management accounts where we can see where all our revenue comes from what are the most profitable areas of our business are. Where the services are that are not that profitable. we understand that and everyone from the management team point of view sings from the same hymn sheet and in others words everybody says the same thing and understands the same thing and we can make decision on that and those are called hard facts and those cold hard facts to me is a big part of innovating looking and involving your business model."

4.2.4 Business model innovation approach

Digital Marketing has evolved the business model through its growth phase and in the next phase the company aims to evolve from service based business to a product base business that offers services around those products. In so doing the company will retain focus on what it is doing very well but innovate on the technology side. In evolving the company's business model Digital Marketing could be said to have adopted a simple approach to business model innovation, having evolved mainly one component at a time. The simplicity of the approach to business model innovation may be deduced from the following quotation,

"We going to incrementally improve on what we have done. We do not believe in revolutionary but evolution … subtle changes, subtle evolutions that we can make to sharpen our focus and offerings a lot."

4.2.5 Business model innovation process

Digital Marketing Company claims to have an organic approach to business model innovation. This is reflected as follows by a participant:

"It's very organic in nature; we do not have a structured process. We are not interested in applying a structured process, it happens organically by keeping our

fingers on the pulse and seeing how the business is performing and how the financials are doing and what the areas of opportunities are looking ahead. … Our business modelling we do not have a structured approach we find that when there is too much structure it inhibits."

In terms of ideation for generating innovative ideas the company hosts ideation sessions as reflected in this excerpt:

"There are different forums that are conducive to uncover the innovation and roll out innovation and from ideation point of view we use 'Think Tank' Thursday an internal ideation sessions. Basically we look at our existing clients and work we do for them and think of new ideas for our clients we have our own challenges and ask our staff for help us to solve our challenges."

4.2.6 Business model innovation lessons learnt

Digital Marketing Company has learnt three main lessons from business model innovation, namely the importance of focusing on getting basics right; not changing too often; and the prominence of understanding financials. These key lessons learnt may be shown using Figure 4.6.

Getting basics right was seen as key to business model innovation, while in embracing change one must ensure that one gets the basics right and make sure that the foundation in terms of key product and services provide a solid base and managing change in a responsible way, as a lot of companies were said to focus on excitement on the innovation side but forget about doing the basics right. These inferences are drawn from this quote from the network diagram:

"So the house that I spoke about offers gives us a good reference point always to keep that focus so if something comes our way that changes on of the offerings we always ask ourselves does this fit into our house. … To be able to manage the change responsibly that's a big thing in a lot of companies that focus on the innovation side and how exciting that is and it is really exciting and they forget about doing the basics right part"

An additional lesson was that a big part of managing change is not to change too often. Managing that change is greatly supported by the visualised business model as it gives the executives a good barometer when assessing new opportunities in terms of whether such opportunities fit in the company's overall business model. Moreover, business model innovation was said to require doing the right things and focusing on addressing the customers' pains.

The company has recognised that its clients are high level people under pressures of all kinds and typically have had a very bad experience with previous suppliers. This is often the trigger point more than anything else, so it needs to build that trust with clients.

An additional learning on the value proposition and addressing the customers' pains is maintaining a balance between what the company is good at, and the client's needs. Understanding financials very well is perceived by the executives as a big part in business model innovation and serving as a basis to create room for a shared understanding among the management team

> *"I must say that a big part of this is understanding your financials very very well even if you are not a finance person surround yourself with people that are financially orientated. I cannot tell you the value we get in the summary of our management accounts where we can see where all our revenue comes from what are the most profitable areas of our business are. … We understand that and everyone from the management team point of view sings from the same hymn sheet and in other words everybody says the same thing and understands the same thing and we can make decisions on that and those are called hard facts and those cold hard facts to me is a big part of innovating looking and involving your business model."*

4.3 Context Large ICT Company

4.3.1 History and business model overview

Large ICT Company was identified as a viable case for examining business model innovation as the company is an ICT services provider that operates in a business-to-business environment and is branded as having a unique business model. It also provides innovative

ICT solutions while regarding innovation as a differentiator in a successful business. The company provides mission critical systems to some JSE-listed companies as well as public and private companies, including companies in the mining sector.

The Large ICT Company has been in existence for 30 years and is a group of strategic business units each with own business model supporting the overall group strategy. The services unit is the largest unit in terms of the contribution to overall revenue. Furthermore, the services business model has evolved from delivering ICT service as a managed service to hosted services and to the provision of cloud services. Moreover, the company has business models that are unique, as well as those that are 'me-too'. Some of the business model challenges faced by the company include intensive competition and margins being eroded from the service model by Indian companies and margins being eroded from the product model by Chinese companies. There is also risk from some partners becoming competitors. The large ICT Company's contextual background is illustrated in the Figure 4.6, followed by a detailed examination of the company's history, business model similarity and challenges.

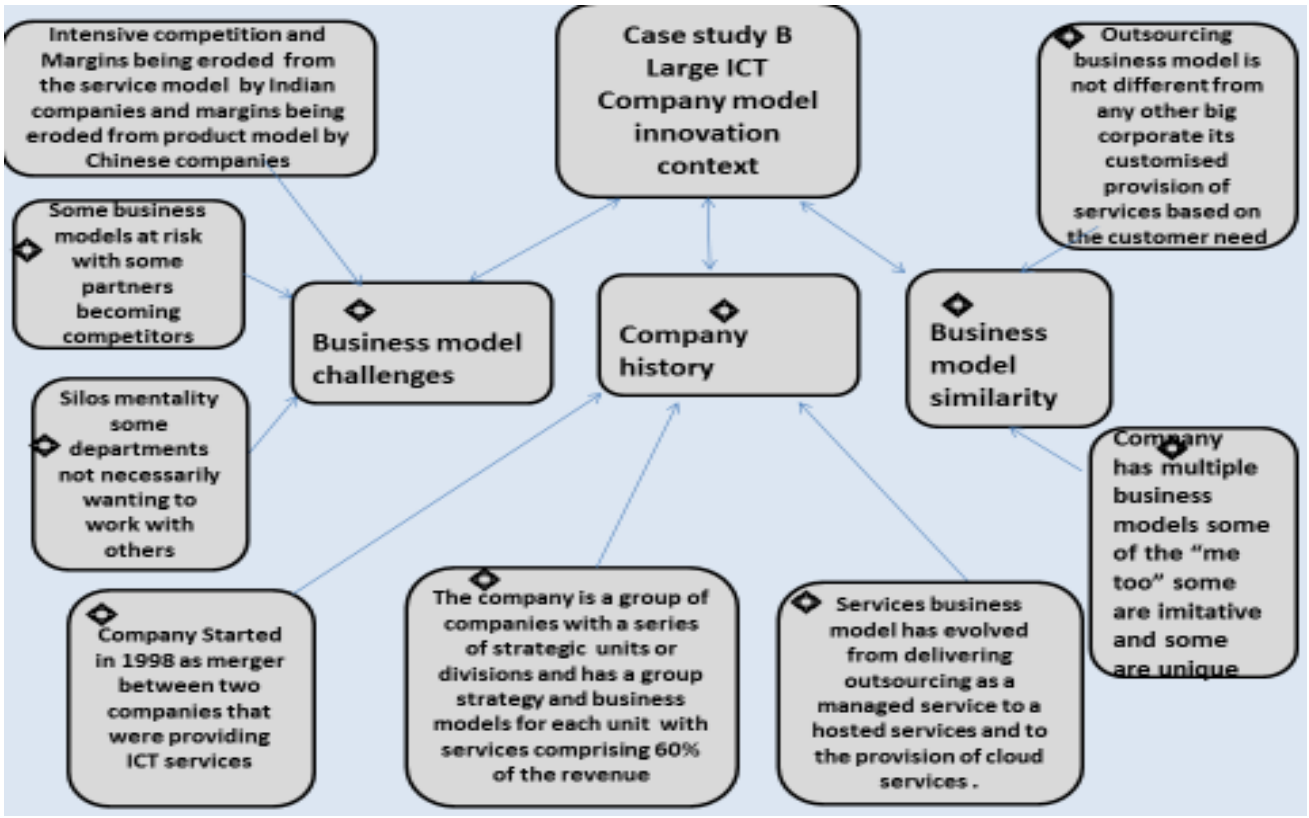

Figure 4-6: Large ICT Company history and business model context compiled by researcher

4.3.1.1 History

Large ICT Company's history dates back to 1998 when the company started as a merger between two companies that were providing ICT services. This is reflected in the following extract:

> *"The company has been around for 30 plus years with all acquisitions it has never been loss making we always manage to make a profit. … We are an ICT player and our model is of a business-to-business enterprise ICT solutions that we provide."*

Since establishment the company has gone through additional acquisitions and merger and the company is a group of companies with a series of strategic units or divisions and has a group strategy and business models for each unit, with services comprising 60% of the revenue as indicated in this statement:

> *"Our biggest division is our services division that brings in 60% of our revenue. … The model is based annuity meaning I do not to resell stuff every month to make more money. Annuity means I have a contract such as your electricity bill – they do not come and sell you electricity every month but you pay every month you pay that's the annuity model. So we have contracts for three or five years, we had some 10 years contracts but they no longer sign 10 year contracts anymore."*

In addition, the company's business model in terms of delivering ICT outsource services has evolved over time as indicated in this quotation:

> *"We might have delivered 10 years ago we delivered outsourcing as a managed service. We then in the last year deliver them as hosted services and today we deliver them as cloud services."*

4.3.1.2 Business model similarity

In terms of comparing the company's business model similarity to those of competitors it was highlighted that the company as a group has multiple business models:

"I think the company is just too big we have multiple business models. Some of our business models are a 'me too' model [but] some of our business models are innovative, some of our business models are followers. … It depends what segments you are playing in, it depends on what market you are playing, and if you are a 'me too' you need to have a differentiator. In each of these categories whether it is imitative, innovative or 'me to'o you need to add something to make it work. Just to be a 'me too' which we have done in some cases you fail."

The provision of outsourcing is perceived as a simple model that is not different from any other big corporate offering outsourcing services. However, the provision of services is customer-driven, thus one meets the customer demand whereas in the customer segments below large to medium enterprise one would find more imitation with some players leading and the others following.

"By and large like I said we are customer demand led. … Large enterprise does not consume a standard offering necessarily and depending on what industry we [are] working in when we outsource a mine is different from a manufacture, FMCG, retailer.

In other segments below you would find more imitation. You tend to have players that are leading the pack and those that are following, imitating, in pure outsourcing it is almost like that's why I asked you which industries you are looking at if you look at large civil engineering contracting companies this industry is very similar in a sense it is outsourcing what the customer demands is how you build your business. So you don't imitate anyone else you just meet the demand of the customer and the technology supports that and more often than not the customer will come and say at a given stage like five years ago when SQL was starting to become a big player for Microsoft in the database market customers were coming to say I need to consolidate on a single database."

In the provision of cloud services the company business model was perceived to be unique due to the challenges that the competitors would face in imitating the business model, as shown by this excerpt:

"The difficulty of imitating the current offering in terms of cloud services probably talks to the technologies that we are currently licensed [for.] We are the sole agent for those technologies in this country and in Africa so this makes us, gives us, a competitive advantage and it is difficult for our competitors to imitate."

4.3.1.3 Business model challenges

Like other companies in the ICT sector in South Africa Large ICT Company's business model is faced with the challenge of having to compete with companies such as Google that are providing ICT services for free and making money on advertising. This challenge is illustrated as follows:

"Because what the confusion in the IT industry today is that you have things like Amazon and Google now Google sells advertising to subsidize Gmail. … They are making money on advertising so now we try to sell Microsoft Exchange to our clients they get for Mahala from Google. Okay if you want to compete in that space you either become come an advertising company or maybe partner with them and exploit them that is a challenge."

In addition the business model has a challenge of partners over time becoming competitors and going directly to the customers. As one of the participants noted:

"The vendors because if I look at what is happening in industry with cloud computing and all these things over time all these partners we have will become our competitors going to our customers directly."

Furthermore, business model margins are being eroded with the 'China price' on the product model while Indian-based companies are eroding margins on the services model. These views were expressed as follows:

"So the areas where margins are being eroded are in the reseller model because it's more than one reseller selling the same stuff so the margins just drop lower and lower so one has to make a choice do you want to shift and become a distribution to the market or get out of it or add the value so have added value on top of that and take it to the market.

So margins are being eroded – in a lot of cases the Indians are eroding the margins in the services model and the Chinese are eroding margins in the product model so the value add has to come over and above the products and services which means differentiation is the answer."

4.3.2 Business model innovation drivers

The main drivers to business model innovation in the Large ICT Company relate to the market factors, technological factors, regulatory and internal organisation factors. The market factors, technological advancement and organisational factors were perceived to be intense drivers to business model innovation while the regulatory factors were seen as weak to moderate drivers to business model innovation. The business model innovation drivers are depicted in Figure 4.7 and then discussed.

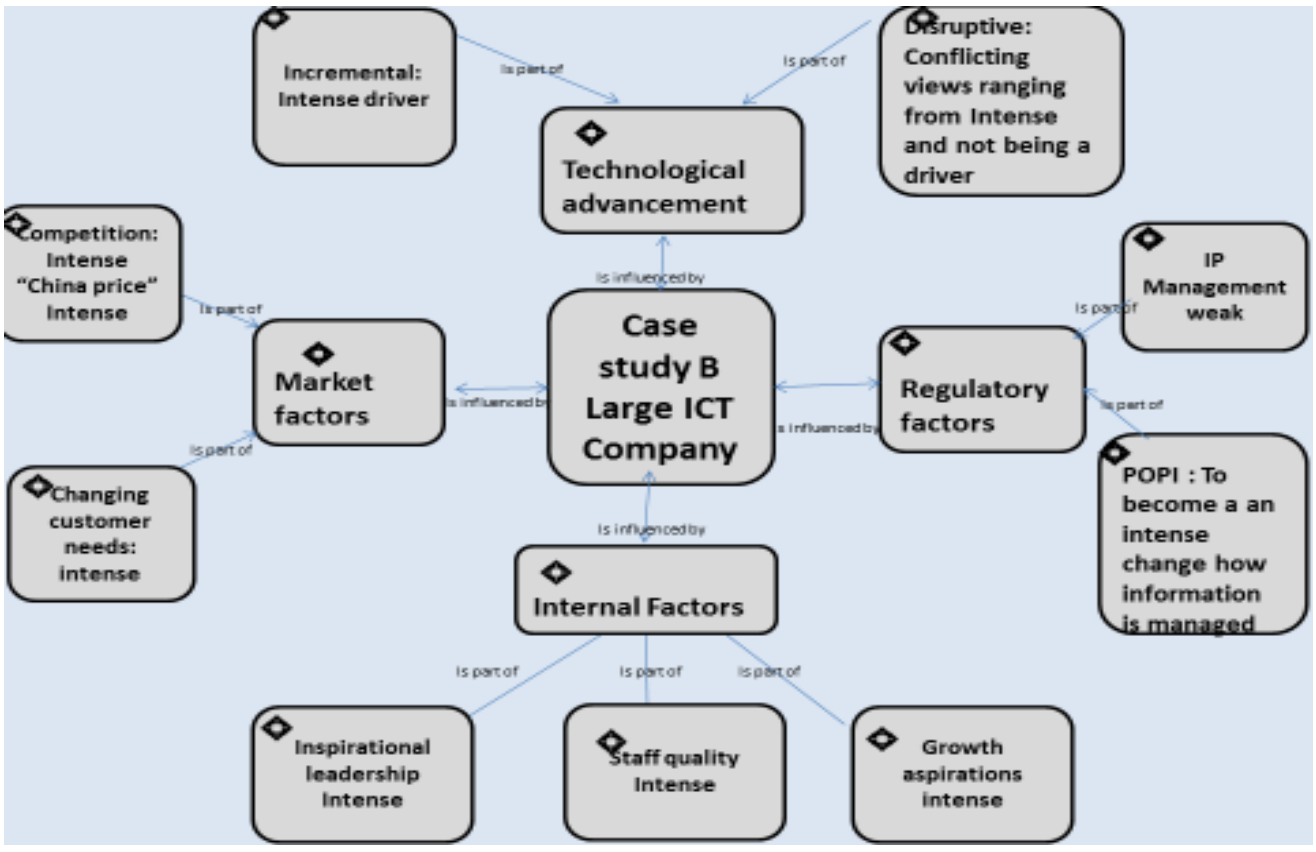

Figure 4-7: Large ICT Company business model innovation drivers compiled by researcher

4.3.2.1 Market factors

Market factors that are driving business model innovation may be categorised into customer needs and competition. The factors that are related to competition include the increasing competition from the new business models such as that of Google that are offering services that are creating hyper-competition and competition is an intense driver for business model innovation in the large ICT company, more so because some partners in the long run become competitors, going directly to clients. Furthermore due to the nature of multiple business models there are different competitors depending on the market segment in which the company is serving. In addition it was highlighted that there are many agile emerging companies in the competitive landscape. Competition in the Large ICT Company is also related to the 'China price' on the product model where the margins are being eroded due to the 'China price effect' with the Indian-based firms eroding margins on the servicer's business model.

The changing customer needs are an intense driver for business model innovation, as the customer as are now more informed. However the changes in customer needs are often related to changes in technology. As such the business model innovation process is led by changes in technology inventions and the customer use of that technology.

> *"The changing customer needs is directly related to technology as the customer adopts technology we will then provide the services so it's an intense driver for business model innovation."*

In addition to changing customer needs there is the need to serve the un-served customers driving business model innovation. In reaching this market the company uses a subsidiary as described in the quotation below.

> *"In terms of unserved customers … for that we have a company called XYZ. We largely support big clients. If we want to support the masses we need a different business model.*
>
> *That business model which I have told them clearly is based on automation and self-service otherwise you need thousands of resources to support that market which is*

not a sustainable model. So our focus for the new market is on self-service and automation."

There is an interrelationship between the changing customer needs, technology and competition as succinctly described by one of the participants as an era of hyper-competition, hyper-connectivity and hyper-choice as in this extract:

"I am talking about an era of hyper-competition, hyper-choice and hyper-connectivity. Mobile phones are giving us this hyper-connectivity, new business models the Google's are offering services that are creating hype- competition. Hyper-competition is giving us what I call hyper-choice."

4.3.2.2 Technology factors

Technological advancement is considered an intense driver for business model innovation. However, there are conflicting views as to whether it is both incremental and disruptive innovation, or just incremental innovation, that is driving business model innovation. These two extracts reflect the two divergent views:

"Disruption in all industries going forward is imminent. Just like Skype destroyed the telephone industry long distance calls. … For example in the financial services Crypto currency, a digital form of currency which is international that I can transfer to you and it is yours and I do not go through a bank and I do not pay any fees. So this has implications for the International Monetary Fund because of cross border transactions and its happening all over the world. 3D is going to disrupt manufacturing like we have never seen it before – they printed a heart last week. … Another technology with immense opportunities is Griffin that is going to replace silicon, it is going to improve battery life, it going to give us more flexible screens and it fantastic for solar panels it's more efficient than what we are currently using."

"The markets that we operate tend to be large enterprise organisations that do not allow that level of disruption they don't you cannot be running a large bank and allow a disruptive technology to start changing, you know what I mean, the way that they are realised into the environment is much slower – there is a place for them

[but] a bank would never allow its security to be compromised for some cutting edge technology; it doesn't happen.

Based on these extracts incremental and radical technological advancement were regarded as moderate to intense drivers to business model innovation with other participants highlighting that disruptive technological innovation is a moderate driver to business model innovation.

4.3.2.3 Regulatory factors

In the current environment regulatory factors in terms of deregulation and intellectual property management were regarded as a business model innovation driver that ranges from a weak to a moderate as it was perceived that technological advancement is so quick that legislation is not necessarily keeping up.

"The interesting part is how ICASA has been battling with … that is technology is so quick that legislation cannot keep up."

Furthermore regulatory factors may act as inhibitors to business model innovation as was the case in mobile banking as in this quote:

"Mobile operators wanted to do the mobile banking long ago. Standard bank and MTN wanted to drive it but legislation in South Africa prevented it that is why Mpesa is successful in Kenya so legislation is a very important aspect and it is clearly part of your model that you need to understand."

Another key piece of legislation that is likely to drive business model innovation is the The Protection of Private Information Act (POPI) and is expected to become an intense driver as could be seen from the extract:

"Regulation I think the regulation of the industry is playing a role the POPI Act, that's the Private and Personal Information Act I think, it is going to change the way that South Africans treat information but what we have not recognised s that there are many other countries that have a similar kind of act. Europe and America has its own version as well so multinational companies … many of these companies that are multinationals whereas before they thought they could centralise that information I

think it will become increasingly difficult. It will change the way that our business work. We will keep the information for the South African operations here for Nigerian operations there for European operations there and how you aggregate it as a multinational group will have its own challenges. So that kind of regulation."

4.3.2.4 Organisational factors

Internal organisational factors include the growth aspirations, leadership and staff. Despite the company having been in existence for over 30 years and being known as a solid ICT player, growth aspirations still play an important part in business model innovation with the company desiring to increase its share price. This view was expressed by one of the participants as follows:

"The industry and shareholders they wanted to see us re-energise ourselves a bit. We have been known for many years as a solid ICT player in the market and they wanted to see a bit of sexiness coming through and hopefully to lift the share price as well".

Furthermore, growth aspirations were also linked to the desire to become more agile, as while the company has been agile for many years, there was feeling that the company was not as agile as some of the competitors.

An additional internal factor that drives business model innovation is the financial cost and revenue matrix where products and services viability will be used to determine whether an adaptation or innovation of the business model is required.

"At the moment is generally driven by financial matrix which decide what depending on the costs pressures that are coming from our customers. We will determine whether any revision, improvement or innovation to a service is determined by how viable it is in terms of those cost matrix."

Staff quality and leadership are regarded as an intense driver for business model innovation as it was highlighted in the quote below:

"Look you can implement the same business model in two different companies [and] have completely different results. The magic happens within, inside the people, and

the belief and the inspirational leadership inside the business model. A business model and the structure do not give you success, people give you success. So as long as your business model has the right people on the right seats and being measured correctly and being fed in terms of incentivising you will have success. But anywhere in your value chain where you have got a weak link it will have a domino effect all across. So if it hasn't got a domino effect it is not a fully integrated business model. So it is one of those things that you have to get right."

In addition the staff drives business model innovation in terms of the digital natives as emphasised in this extract:

"To compete in the new age where there [are] new people entering our business which [are] not from the same generation and these people are digital era natives and have different needs and they want to be managed differently. They want to be treated different and so you look at these things and you look at mobility that comes into play and we have got lots of productivity tools."

4.3.2.5 Business model innovation drivers' summary

In summary, the large ICT Company business model innovation drivers include the external factors of market factors, technological advancement and regulatory factors. They also include internal factors relating to growth aspiration, staff quality and leadership. In particular the market factors relating to both the changing customer needs, competition and 'China price' are intense. In a similar manner the organisational factors in terms of inspirational leadership, staff quality and growth aspirations are intense. However, while incremental innovation is perceived as an intense driver there were conflicting views between some units regarding whether or not disruptive technological advancement is a driver for business model innovation. Furthermore, while regulatory factors involving IP management were seen as weak the POPI was expected to become an intense driver.

4.3.3 Business model components

The Large ICT Company from a services point of view delivers outsourced IT services for the business-to-business consumer. The company's sample business model components are illustrated in Figure 4.8 and discussed.

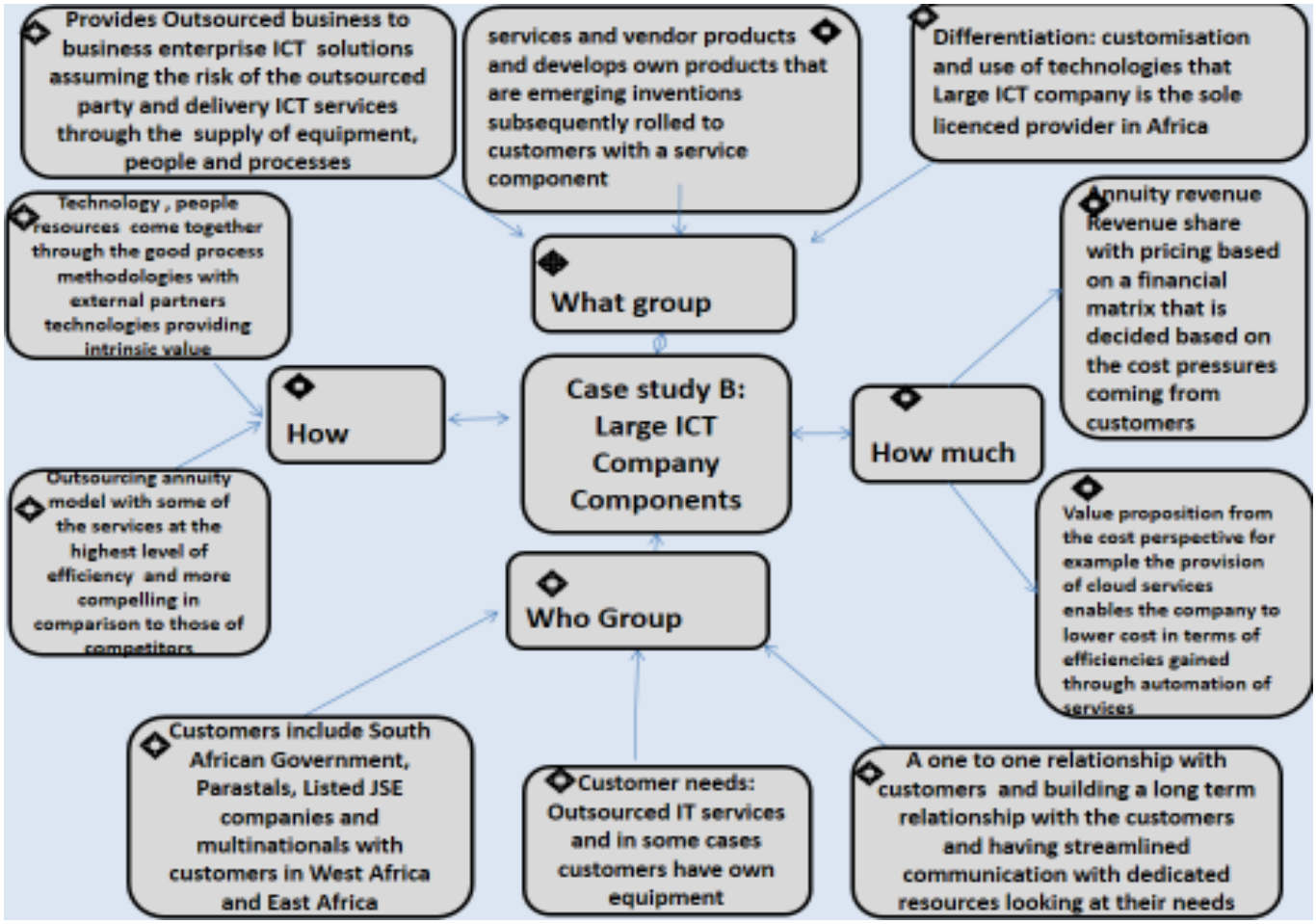

Figure 4-8: Large ICT Company business model components compiled by researcher

4.3.3.1 Component what value proposition and differentiation

The value proposition Large ICT Company offers to the target customers comprises ICT products and services. These services are illustrated as follows by one participant, as products with the company selling vendor products and developing own products that are rolled out to customers with a service component:

> *"What is good about our Large ICT Company group we are not purely services business. Wwe sell vendor products and also develop our own products that are eventually rolled out to customers with a service component … so it is not simply services – the group has many components."*

Specifically, Large ICT Company outsources IT business from large corporate enterprises, assuming the risk of the outsourced party and delivers services through the supply of

people, equipment and processes. However in some cases equipment is owned by the customer. As an illustration, a number of retailers are still using mainframes and Large ICT Company outsources the work and runs the equipment on behalf of the customer. Examples of services offered include video streaming and cloud computing.

In terms of value proposition differentiation Large ICT Company offers customised solutions that are focused on good service delivery. For example, the cloud computing services is run with some of the best technologies in market for which the company is the sole provider in Africa as a whole.

4.3.3.2 Component 'how': key activities, resources and partners

In examining the 'how' component in terms of key activities, resources and partners in the Large ICT Company, key activities follow a very simple model. This is not different from any other big corporate: the key activities entail having account executives that look after certain clients; gather the requirements and needs from the customers; get business from these customers; and wait for request for proposals (RFPs) and responding to such RFPs and securing the business. This view is drawn from this excerpt:

> *"We are an ICT player and our model is of a business-to-business enterprise ICT solutions that we provide. We have got an engagement force of people in our business that we call our account executives that would look after certain clients and gather the requirements and needs from those customers. They will then translate that into the operating units into needs and we would then propose and put commercial documents together to actually … so that we can win that business. Once we have won the business the business gets executed and operated in the operating units and that is the cycle. That is a very simple model; it's not different from any other big corporate."*

Once the company secures the business it is executed and operated in the operating units and the cycle continues. While the key activities model is similar the distinguishing feature is the efficiency of the services. This was noted as follows:

"Key activities cloud services are really about the provision of on-demand computing services that are scalable, flexible, agile, like I said at this stage our key target market is large enterprises and it is what is called private cloud scalable in the sense that they are scalable within the bounds of that enterprise beyond the enterprise. It is not a consumer product so when you talk about scalable it is scalable to the size of the enterprise that is buying it. Efficiency probably some of our services are at the highest level of efficiency that we deliver to date and in terms of competitors we believe ours obviously has … I would say more of compelling in terms of its price offering at this stage."

Furthermore, in terms of key activities, effectiveness, efficiency and scalability in comparison to those of the competitors, it was noted:

"Most definitely we are front runners in that the industry and the energy levels and the innovation levels that we have seen from people going the extra mile being part of something special and something significant and experiencing the customer delight has really got us out of the box quite faster."

The key resources were described from as an example the cloud to be not easy to imitate:

"Any solution consists of people, process and technology. The people part I think we are very fortunate to have the clever minds and the people that drove it. And we have got a very scalable cloud offering from a technology perspective and you know what is nice about this is that those three worlds came together with our good process methodologies of how we implement stuff, cloud services and our good applications team we were able to put up something together but we have [to] use all sorts of resources in Large ICT Company and a very flexible one."

The company's external partners offer an intrinsic value that is inherent to the nature of the technology that enables the delivery of the cloud services. Having reviewed Large ICT Company's key activities, resources and partners the next section looks at the financial aspects as illustrated by the costs, revenue and pricing.

4.3.3.3 Component 'how much': costs, revenue and pricing

The 'how much' component of the business model illustrates the costs and revenue that are closely related to the pricing. In the Large ICT Company's business model innovation has in some cases reduced cost for the customer, for example the delivery of live sport streaming was offered on a revenue sharing basis so that the customers were able to offer the service to their customers at no additional costs.

The delivery of cloud services has also lowered the cost for the customers. In terms of the revenues Large ICT Company is perceived to be ahead of its competitors in some of the areas in which it operates, but there is a constant battle to stay ahead. Furthermore there is the opinion that the group's revenue growth is equal to or better than that of competitors, with the company increasing market share.

4.3.3.4 Component 'who': customers, channels and relationships

Large ICT Company's target market includes midmarket to large enterprise clients, some of which are multinationals, parastatals and government entities. These target customers do not consume a standard offering and this is often dependent on the industry in which the customer is playing. This is illustrated by this excerpt:

> *"Large ICT Company group tends to service mid-market and to enterprise clients we don't service, maybe we have some bit, from below mid-market to small medium market and consumers. … Large enterprise does not consume a standard offering necessarily and depending on what industry we [are] working in when we outsource a mine is different from a manufacture, FMCG, retailer."*

In these markets, due to the nature of the customer, the need for customised and differentiated offerings and the type of competitors, managing customer relationships is of bearing as reflected in this quote:

> *"It's not a supermarket that is why the challenge comes in because now you are competing with the Google's and the Amazon you are competing with the giants so*

you need to focus on relationships, you need to focus on quality service delivery … customers might move for price but if they get bad service they will come back."

Because the company targets midmarket to large enterprise clients, Large ICT Company's business model is regarded as not suitable for their unserved customers, so in addressing the masses a different company with a different business model is used. In this alternative company the business model is based on automation and self-service, as it is suggested that there is a distinct difference between the businesses models that are applicable for the mid-market enterprise customers and the small medium micro consumers. In the midmarket enterprise the relationship tends to be one to one and with the small, medium and micro consumers the relationship is one to many. This relationship is linked to the pricing as shown in this extract:

"I think it is also important for me that business models are applicable to each market segment that you are working in. We tend to segment our market into midmarket enterprise customers and then small medium, micro and consumers. Down there we find that the relationship is one to many whereas in midmarket and up the relationship tends to be one to one. Then your pricing and business model around one to many and one to one are completely different."

4.3.3.5 Business model communication and visualisation

The business model components illustrate the company's existing business so that the model may be communicated and analysed. Business model components are associated with how the business model is visualised and communicated. Large ICT Company is a group of companies with multiple business units and business models and various approaches are used to illustrate the business models in the various units. The business model was depicted either using the business model canvas or the value chain.

"To graphically represent the business model ... we use the business model canvas and we also look at the competitors …"

The key reason for using the business model was ascribed to the business plan's failure as in this quotation:

"I think when [one] takes a step back and looks at the use of business plans globally what is the success rate? The business plans are always over-inflated and inflated – it is never accurate. It is a lot of emotion a lot of times, it's inspiration sometimes. It is good to do that; however if [you] look at the success of business plans it's about 5%."

In addition to the business model canvas the other units use the value chain as per this excerpt:

"Will use eh Porter's value chain, sometimes in accessing that industry we look use Porter's five forces and Ocsy i structures. In describing how the model has been influenced in terms of the people we have previously used what we call the SIM model which is a representation of the way we run the business and it's more of a … I wouldn't say it shows the mechanics [of] how the business works, but it is more of a graphic representation that shows the order of precedence of the different components of our business."

The company was said to derive value from visualising the business model as indicated in this quotation:

"Modelling I think is important I think process modelling and business modelling are very important as without the modelling you do not get to trial run something you are going to do. Models do not always represent the way things are implemented but it gives you an indication of what you can expect the model to produce". In addition, visualising the business model was observed to assist in simplification as in the response provided by one of the participants regarding the value of visualising the business model.

"Well it gives people a visualisation of direction, and gives people a round map to navigate at times a very complicated business."

Furthermore, the business model was said to be of value when communicating with potential new partners, as the business model enables one to map the partnership relationship to show the value that partnership brings to the Large ICT Company as well as the value the new partner will be receiving. This may be inferred from this quote:

"We have got a lot of Indian companies in fact I speak to about 20 Indians companies and these are new companies that want to do business in South Africa, and I know what their motive is. But if [you] start using the canvas model you quickly realise they actually want to take our business away."

4.3.3.6 Business model components summary

In summary, the value proposition for Large ICT Company in terms of the 'what' component is the provision of outsourced business-to-business enterprise ICT solutions, assuming the risk of the outsourced party, selling vendor products and developing own products that are emerging inventions, subsequently rolled to customers with a service component. The company provides differentiated service through customisation and use of technologies of which Large ICT Company is the sole licensed provider in Africa. Regarding the 'how' component, the key resources include technologies and people resources that come together through good process methodologies underlying the key activities, with external partners technologies providing intrinsic value. In relation to the 'how much' component the revenue model has been predominantly annuity revenue with the company also experimenting with revenue share. Moreover, from a cost perspective, for example, the provision of cloud services enables the company to lower costs in terms of efficiencies gained through automation of services. In terms of the 'who' component the target customers include the South African Government, Parastatals, listed JSE companies and multinationals, with customers in West Africa and East Africa, with a one-to-one customer relationship approach. The company's potential business model components are illustrated in the next section.

4.3.4 Business model innovation approach

Large ICT Company appears to be undertaking various approaches to business model innovation such as revision, extension, termination and adaption. However, the complexity of business model innovation initiatives appears to vary among the various units that were examined.

For example, one unit uses subsidiary companies to conduct innovative business model innovation experiments that seek to disrupt the existing business models with the experiments are later re-absorbed.

"We have a company called ABCD solutions as a subsidiary of Large ICT Company working on measuring energy efficiency … as a small innovative experiments that we are doing that we will eventually bring in". An alternate view from another participant was that the other unit mentioned, despite being an IT company, only adapt existing business models rather than innovate the business model:

> *"I hate to say this as an IT organisation but we tend to really lean heavily on existing models so we are not a company that innovates business models per se. We will utilise other tried and tested academic models or PR actioner's models rather than innovate our own."*

There is also an example of business model revision where the approach to revitalise the whole business in terms of services delivery introducing new dimensions to the existing engagement model changing from a vendor vertical approach to cross industry and cross customer approach. This is highlighted here:

> *"We are entering a new business model now from 2015 financial year whereby we will introduce another dimension to our engagement. We have got a vendor vertical now as well, so we will have the likes of big players like the Oracles, IBM looking across business units and across customers to drive a certain technology theme whereas Large ICT Company we call them our customer advocacy they will drive certain business discussions all the way through the operating units and the operating unit is responsible to execute on those jobs."*

This business model innovation initiative served to build bridges between the different organisational silos and broaden accountability at all levels in terms of defining the business model success metrics. The business model innovation project that was aimed at revitalising the whole business and to make it become more agile, and while the project has start and end dates, the approach to business model innovation is going to be continuous. Another approach that was adopted is the adaptation of the business model. There were also cases

where on termination of an existing business model the key issue was determining when to replace the old business model.

4.3.5 Business model innovation process

The process followed when innovating an existing business model in Large ICT Company is structured in some units, while in others it is organic. One participant highlighted that in the company business model innovation is more organic, but rather there is a product development process that that is generally driven by the financial matrix depending on the costs pressures that are coming from the customers. This was indicated as follows by one participant:

> *"We generally do not have an innovation process. Innovation is a bit more organic process in our organisation. Although we have a product development management process which at the moment is generally driven by financial matrix which decide what depending on the costs pressures that are coming from our customers. We will determine whether any revision, improvement or innovation to a service is determined by how viable it is in terms of those cost matrix. So do we have structured innovation, more product development rather than innovation."*

Alternatively, a structured approach is undertaken with training on the business model innovation process as one of the main topics covered in the two-day executive business model design workshops. The process structured approach seeks to adopt a design thinking approach that is interdisciplinary and user centred, while incorporating co-creation, creativity, exploration and strategic fit. In this business model innovation process a number of steps are identified and these steps map on to most of the steps identified in the 4I-2M business model innovation process.

The first step, a mobilisation step, is setting up a multidisciplinary teams. The team set-up step is followed by a framing the problem step, which entails understanding the business environment, and these steps would map to the initiation phase. This focuses on understanding and analysing the company's current business model and the ecosystem. For example, an initiation phase in one of the company's business model innovation projects consisted of a fact-finding exercise in terms of seeing what was built over the years and

identifying redundancies and waste in the business processes. The fact-finding was supported by 300 influential interviews to hear what was working and what was not, thus resulting in redefining key objectives.

The framing problem step is followed by the ideate stage which maps to the ideation stage in 4I-2M process. In terms of the ideation steps, the company has an innovation idea-generating portal that was in some case perceived not to be successful in the Large ICT Company. The ideate step in the Large ICT Company consists of three key actions of ideating by suspending reality, prototyping by bringing back reality and choosing the most suitable design from a cloud of possible business models that are the prototypes with the different degrees of the required change and implementation time.

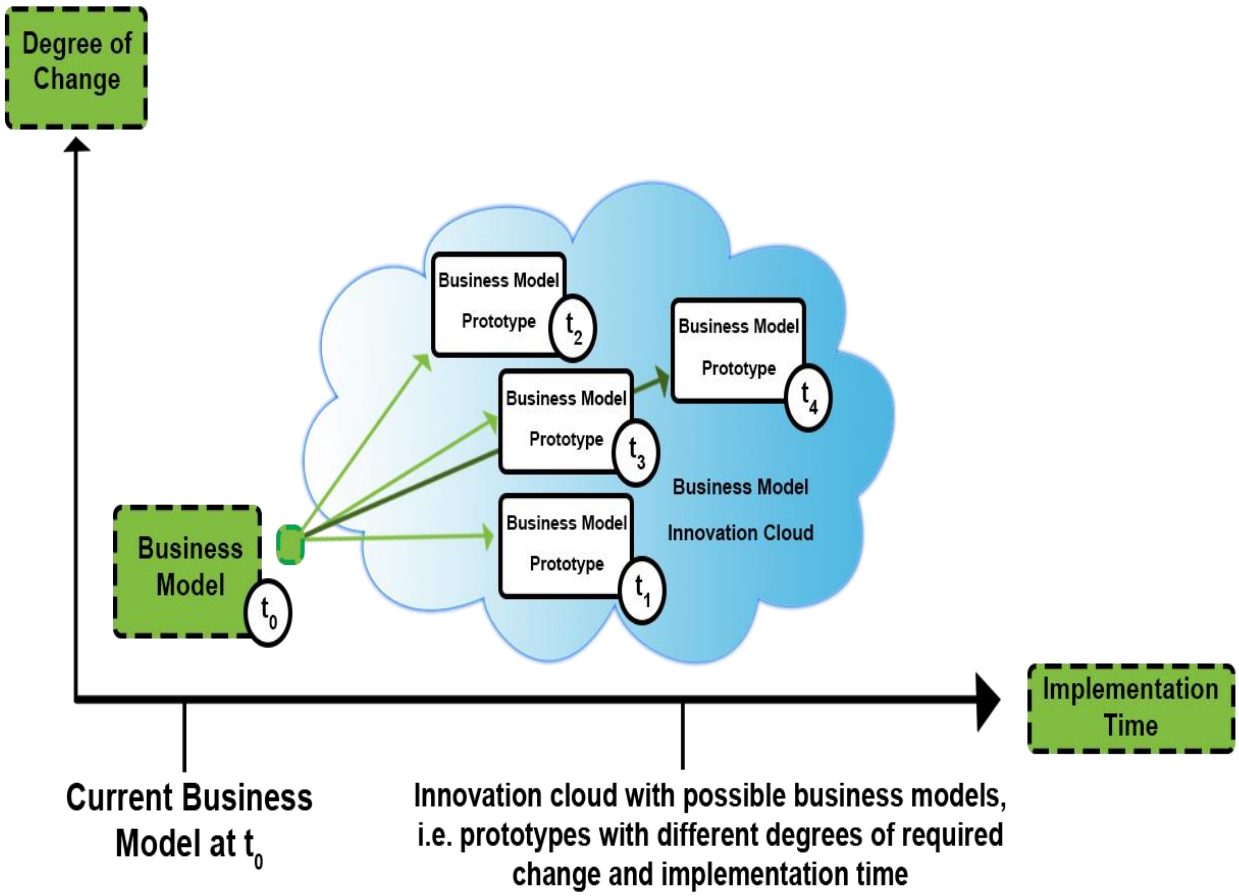

Figure 4-9: Business model cloud information supplied by participant

Once a suitable design has been selected the integrate step is conducted which involves the customers, suppliers and shareholders. The integration stage follows the implementation step. At implementation the company adopts the Stage Gate model that is illustrated in Figure 4.10. The Stage Gate model has the decision points at the end of its stage. The elements of the Stage Gate model include assessing the opportunity and building the business case, as well as developing and testing the solution, commercialisation and launch and learn.

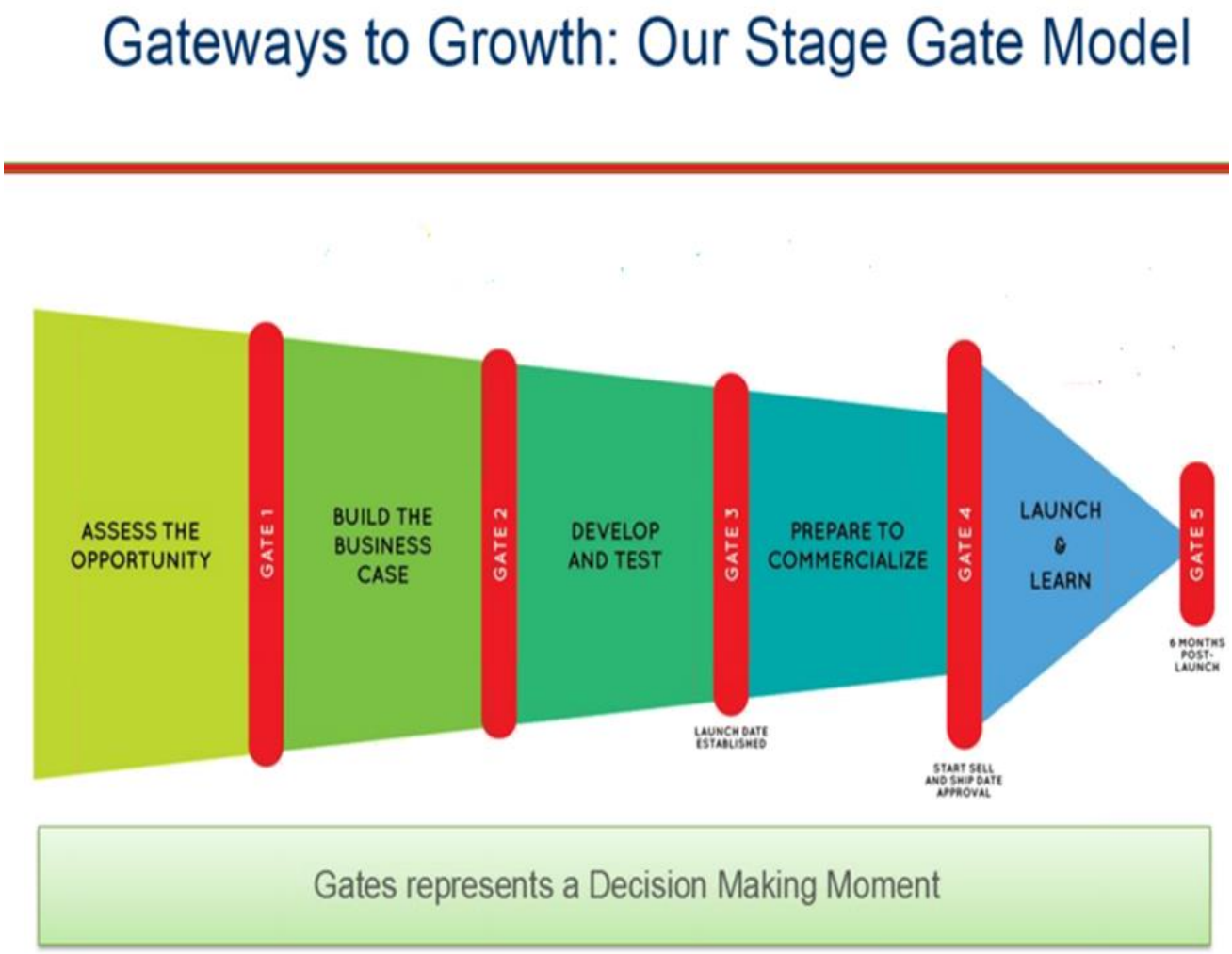

Figure 4-10: Stage gate model (Bonadonna and Pennington, 2014)

The Stage Gate supported implementation step is followed by the management improvement step, which entails evaluating the newly implemented business model, drawing some lessons and redesigning as required. In concluding the examination of the

business model innovation process in the large ICT Company Figure 4.11 illustrates the process and how the process maps to the 4I-2M business model as discussed.

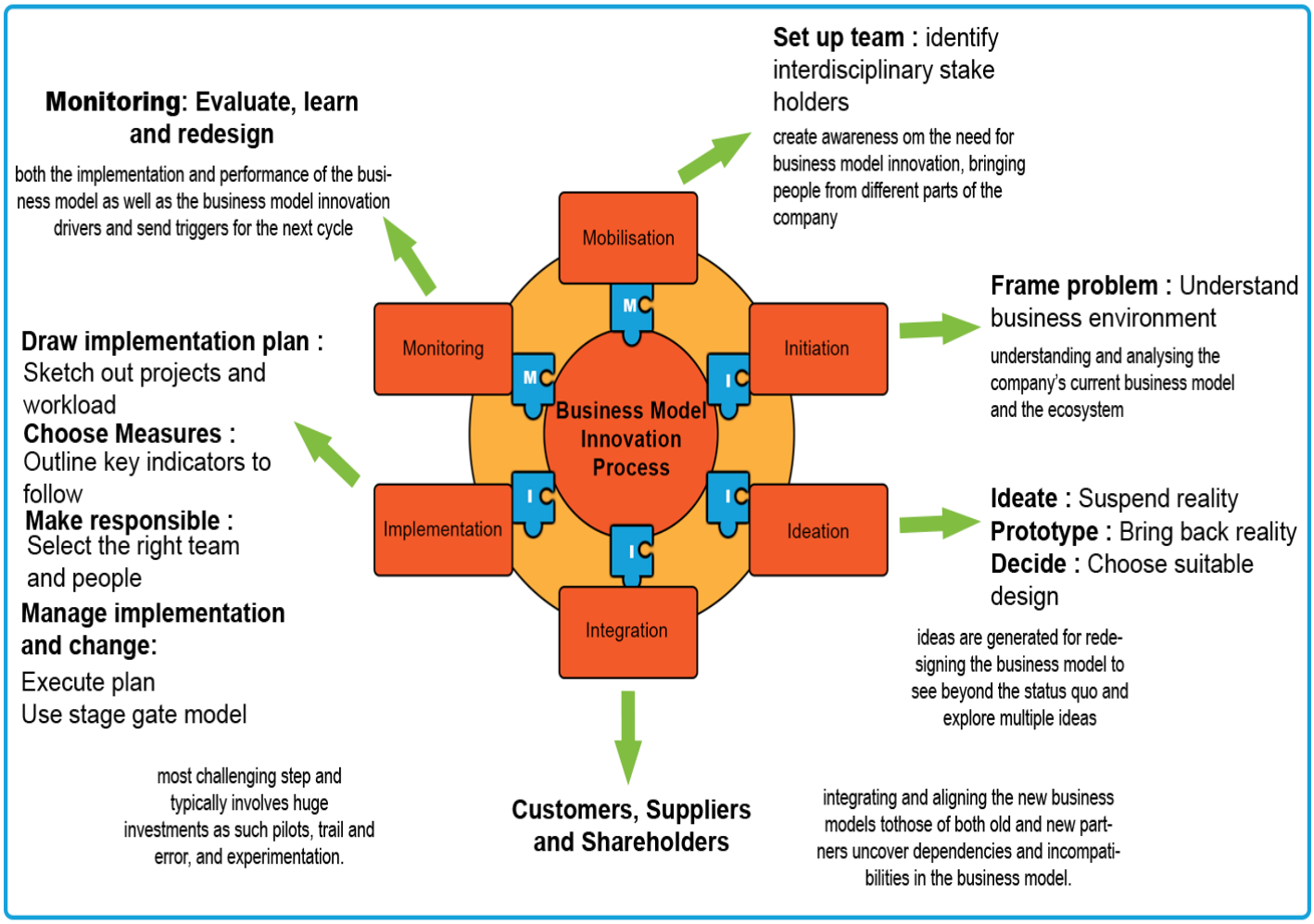

Figure 4-11: Business model innovation process Large ICT Company (compiled by researcher)

4.3.6 Business model innovation lessons learnt

A number of lessons may be drawn from business model innovation in the Large ICT Company. These lessons involve the importance of balancing the business model innovation approach between a disruptive and follower approach; the importance of measuring business model performance, technology acumen and incubating technologies' contribution to business model innovation success; the importance of business model communication to the various stakeholders; and making a distinction between the business model around one-to-many and one-to-one.

Balancing the business model innovation approach was perceived as of value towards the effectiveness of the business model innovation approach as that would require the need to be disruptive at times, while a follower approach would be most effective in some cases.

> *"At times you need to be disruptive an at times you need to be a second adopter look around and see what happens first and I think the skill lies in when to do the pioneering work and when to do the adopting."*

Balance between the disruptive and the follower approach were perceived as tricky as shown in this extract:

> *"That's very tricky sometimes it is past experience, gut, at times it's a black art but where you can do some research that also cements your decisions. There are some good researchers in the market and good surveys that you can go and run before you make a substantial decision. But ultimately if you want to be a front runner there is a level of risk and some assumptions that you must make. And you must just protect those assumptions that they do not turn into risks."*

Measuring the business model is a key towards effective management of business model innovation. Such measurement enables defining and achieving business model success with incentivising employees for innovation as an important factor in achieving business model innovation success. This point is articulated in the extract below:

> *"The structure is now being looked at from a measurement perspective so we will now be looking at so if we are going to do this, how are we going to define success for this level or for that level? So it is about people's behaviour if you really want to get innovation catalysed and going you have to have the right mechanisms for measuring successes, rewarding and incentivising people to certain things because people are behavioural, people are measurement driven behaviour and if you get that right you start getting the right level behaviour"*

The key lessons from the company's business model approach that enable the company to be one of those that are leading was said to be looking at what is happening in the industry and having the technological acumen to understand what technology is coming out, what

technologies have proven themselves and what can reliably be used in certain situations. Technological acumen needs to be complemented by investing in incubating new ideas and innovations, as opposed to waiting for new technologies to emerge.

Business model communication among the various stakeholders was perceived as an important element in the effective management of business model innovation. Such communication was said to be key in buying into and in contributing to business model innovation success. The communication needs to have some key message and all those key messages should converge on the same theme so that all stakeholders buy in. This communication relates to both internal and external stakeholders, as by implementing a new business model one needs to consider the customer's perspective of the change and their engagement with the new business model. These may require changing the people's minds and hearts to buy in to the new business model. If the company has investors or shareholders they need to buy-in to the new business model in terms of yielding a certain level of results.

One of the business model innovation features that may be drawn from the discussions with participants from the Large ICT Company is the distinction that one needs to make between the business models around one-to-many and those for customised products and services as the two are distinctly different from a pricing perspective. The Large ICT Company operates in the large to midmarket companies and such large and medium enterprises do not consume a standard offering. But IT companies that service small medium and consumers tend to create products that are standardised, have pricing schedules with the relationship being one-to-many and the products are consumed in a completely different way from the larger enterprises where the relationship tends to be one-to-one. The pricing and business model around one-to-many and one-to-one are completely different.

4.4 Context Small ICT Company

4.4.1 History and business model evolvement

Small ICT Company provides consulting services, e-learning and software systems to large enterprises and was identified as a viable case in the research as it uses the business model

canvas to support customers, to document business models and to identify BB-BBEE opportunities. They use the business model canvas to help customers to understand the BBEE impact on their business model. As such the company presents an opportunity for the researcher to examine how the company innovates the business model to compete effectively, as well as how the company supports customers to manage business model innovation to achieve BB-BBEE compliance.

Small ICT company dates back to 1998 as a provider of employment equity training and evolved to provide both training and ICT tools for monitoring BB-BBEE compliance; the training has been evolved to facilitation around employment equity and BB-BBEE using innovation games. The company's business model is perceived as being differentiated from those of competitors in terms of providing customised services as opposed to the off-the-shelf products provided by competitors. However, the business model faced challenges such as the need to move from selling training facilitation to tools to become more sustainable, and the limited impact of using exhibitions and print media for marketing. The Small ICT Company's context is demonstrated in the Figure 4.12.

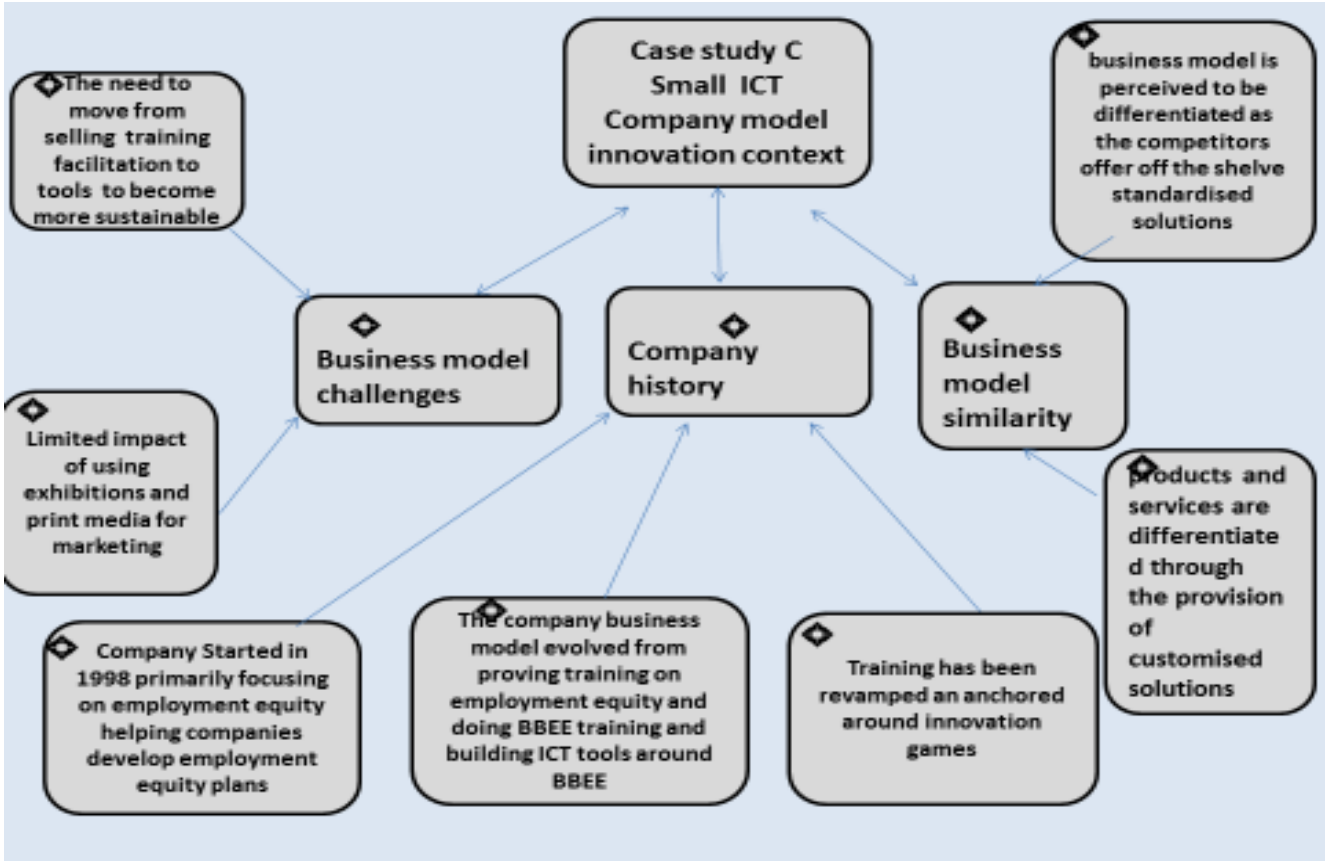

Figure 4-12: Small ICT Company History and business model context compiled by researcher

4.4.1.1 History

Small ICT Company was started in 1998 focusing on employment equity helping companies develop employment equity plans. As reflected in this quote:

> *"In 1998 it was primarily around. We did a lot of work research one of its early key research areas was on affirmative action. … We focused on employment equity for a long time because it was a new area at that time and our strategy was to grow our business by helping companies develop employment equity plans by training employment equity managers, training employment equity committees."*

In addition to providing support for developing employment equity plans, the company's business model evolved from training on employment equity and BB-BBEE training and building ICT tools around BB-BBEE to support benchmarking. This was indicated as follows by a participant:

"… and we are also very good with systems so we built stuff, so we built a tool to monitor compliance with the employment equity act that we call Diversity Manager."

Moreover the business model has evolved, with the training being revamped with tools that are anchored around innovation games. This was noted as follows:

"We are trying to push more tools now, so we have done a lot of training like facilitation, like staff and so on, but we want the business to be more sustainable so if you got tools you are selling IP, selling time is not sustainable approach to business model innovation so you must sell IP."

4.4.1.2 Business model similarity

In terms of business model similarity between Small ICT Company and those of competitors the business model is perceived to differentiate as it was highlighted that:

"Business model similarity ... most of the guys do the off-the-shelf kind of stuff so we are more on customised solutions for clients so we will develop the stuff for whatever but we will actually package a solution based on the need so the needs of the client drive everything. So in the market most of the consultants have got a much standardised solutions so we don't play in that space."

4.4.1.3 Business model challenges

Despite the Small ICT Company business model being differentiated from competitors, the business model is facing some challenges, such as trying to move from a purely services business model to a business model that provides products and services so as to become more sustainable, in terms of selling IP rather than selling hours. In addition, there is need to improve customer engagement with approaches that would have an impact. These business model challenges and the business model innovation drivers will have a bearing on the company business model innovation approach. The next sections will review the factors that are driving business model innovation for the Small ICT Company.

4.4.2 Business model innovation drivers

The Small ICT Company is faced with a number of business model innovation drivers that include technology, market factors in terms of competition and changing customer needs as well as regulation and internal factors, with technology as an intense driver to business model innovation. These business model innovation drivers are presented in Figure 4.13 and then discussed.

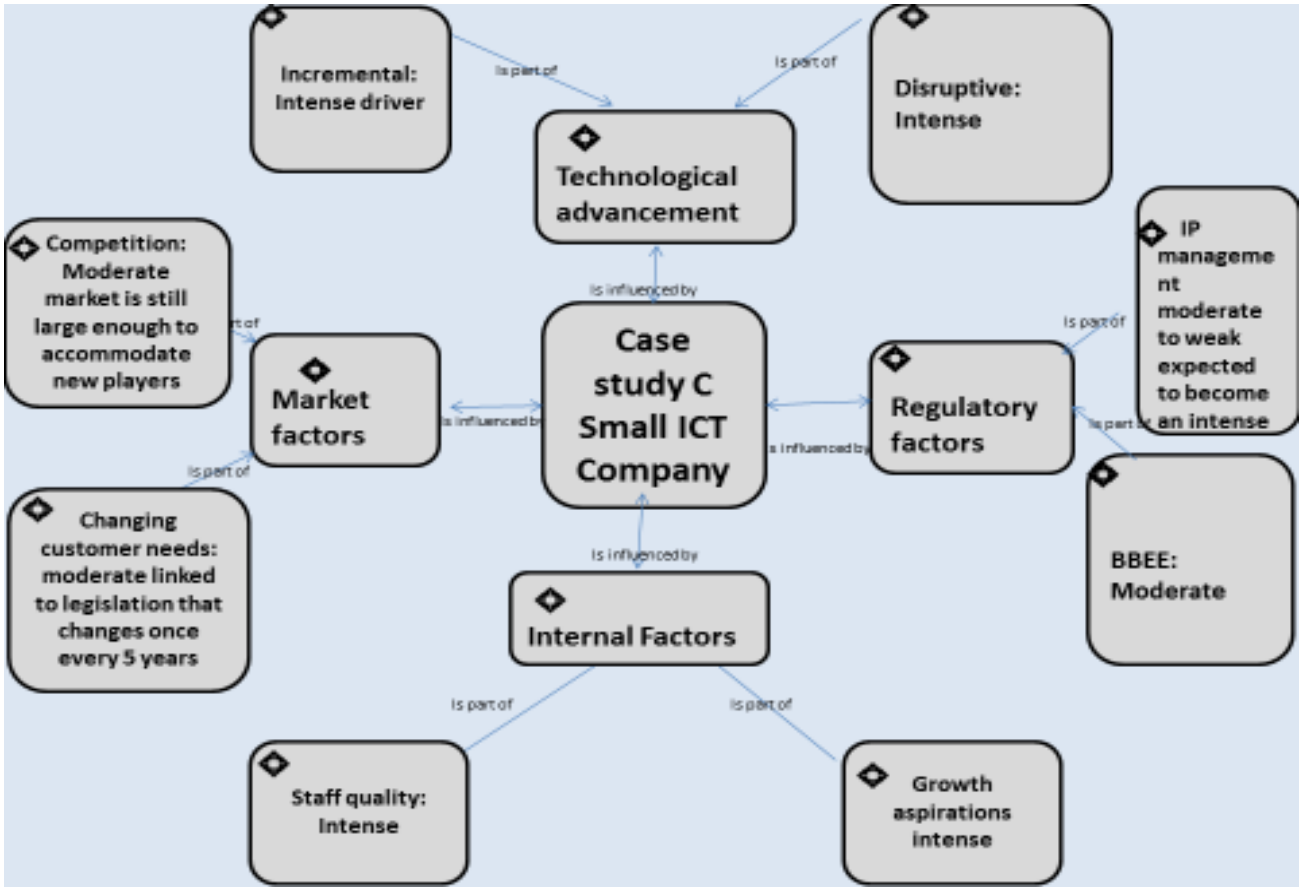

Figure 4-13: Small ICT Company business model innovation drivers compiled by researcher

4.4.2.1 Market drivers

The market factors both in terms of changing customer needs and competition are regarded as being a moderate driver for business model innovation. The moderate impact of changing customer needs is because most of the products and the regulation only change every four years. This is noted in this quote:

"So the changing customer needs is a basically for us for some products they are regulated so the clients' requirements are changed by when the regulator says you shall do this. So we will design around that, but to actually make sure that the customer needs are addressed we will try to run seminars and listen to clients; that way like I was saying that thing of partnering and so on we are trying to move more in that direction to actually understand what is actually happening on the ground so that we can actually understand those changing needs."

Competition was seen as a moderate driver, as one of the participants indicated that while the competition is increasing with new players coming into the market space, others were leaving, and the company was serving a niche market,

"You know yeah I think it is increasing there are some players that I told you about that are coming. So on the competition is very good we are focusing on our niche so the clients must choose but we are not ignoring the competition. We are always watching what are they doing and whateve r… checking, we doing that, but we focus on what we are very good at."

4.4.2.2 Technology drivers

In examining technology as a driver for business model innovation the company examines the impact of technology on the business as well as from the customer. In terms of the business impact the following extract gives perspectives of the company and its impact on the customer. Incremental technological advancement was seen as a key driver for business model innovation as revealed here:

"So from our company perspective, especially software, we have identified matured technologies are very stable, so won't cost, so we develop around [them] so the client does not have to pay for more licence fees, because there are certain new solutions so we are focusing on those, that is around software, so [we use] very matured technologies … to develop our solutions. But on the side of our business to run it efficiently we are always definitely watching, that is why we are followers of such things as cloud so that we can run our business more efficiently … from a product

development aspect the incremental technological advancement is what is influencing business model innovation."

From a customer perspective the company looks at the drivers that are likely to impact customers and disruptive innovation is seen as the key driver. For example the participants said:

"From point of view of our client like say if I had Exclusive Books in my books I would start worrying because everybody is going online. As If I got a client in my books and I see that this client is going to go bust I need to sound an early warning."

In particular the key technological driver for business model innovation from the client' side was seen as social networks as presented as follows:

"For us the key driver was technology and social media because like you know if you look at our business model our channels were primarily we used to do a lot of exhibitions marketing channels where we would doing a lot of exhibitions and we came to a realisation that the exhibitions were not impactful ... so we started doing a lot of work around social media focused around particular segments and it's showing some positive results in terms of acquiring new customers as well as maintaining relationships with the customer. So social media is showing to be an enabler for targeted marketing and a serious growth area for the company."

4.4.2.3 Regulatory drivers

Regulation is one of the moderate drivers as change in regulation is usually after five years according to this extract:

"Regulation affects us. We watch regulation purely on the economic impact on our products like now the BB-BBEE codes were changed last years we have to develop new tools by the way there are errors in those codes and DTI is fixing those and so on. So regulation definitely affects our products as our products still have to be relevant; for example, if they change the measurement basis you have to change your

calculations. Usually they change after every five years so you know when it is coming they Gazette something beforehand for comment so it doesn't surprise you. So you could say it's a moderate driver for business model innovation."

Regulation relating to IP is not necessarily perceived as driving business model innovation in the company at the moment but may be a factor in the future as highlighted by this comment:

"I think we can do much better in that because we are pushing more into like IP space so we have done and we have got a lawyer one of the top legal firms in the country to register our IP, trademarks etc. We have been doing it for a number of years but it can be improved upon in terms of process, because some of these things expire. There is a need to manage these things properly."

Another regulatory factor that is expected to be of impact in the future and become an intense driver for business model innovation is corporate governance as illustrated below:

"I think for us the trend in South Africa and worldwide is around governance – you know we are watching that space with interest. As you saw the new Companies Act the requirements for social and ethics committees for some listed companies have mandated a set of requirements so now the social and ethics committees of the board have got a certain responsibilities around B-BBEE, Employment Equity, around safety, around all these things, so all of those things have got reporting requirements, meaning there are opportunities for us to develop new products to deal with those compliance issues.

These changes have a reporting requirement, so there will be opportunities for the Small ICT Company to develop products to support the companies with compliance issues.

4.4.2.4 Organisational drivers

The internal factors have been key in driving business model innovation in the small ICT Company, in particular the company's growth aspirations and the quality of staff. The growth aspirations are influencing business model innovation. In terms of staff quality the

company has divergent skills sets that are seen as complementary and providing synergy. Furthermore the financial and industrial engineering backgrounds are very strong in modelling and dealing with complex problems so the skills are vital in the market the company plays in as they enable the company to make complex things look simple.

4.4.2.5 Business model innovation drivers summary

In summary, the factors driving the business model innovation in the Small ICT Company include both technological advancement and internal forces as intense drivers to business model innovation. However, both market factors and regulatory factors are regarded as moderate. Regulatory factors pertaining to IP management are expected to become an intense driver in the future.

4.4.3 Business model components

The Small ICT Company delivers both training and ICT solutions. The company's example business model components are shown in Figure 4.14.

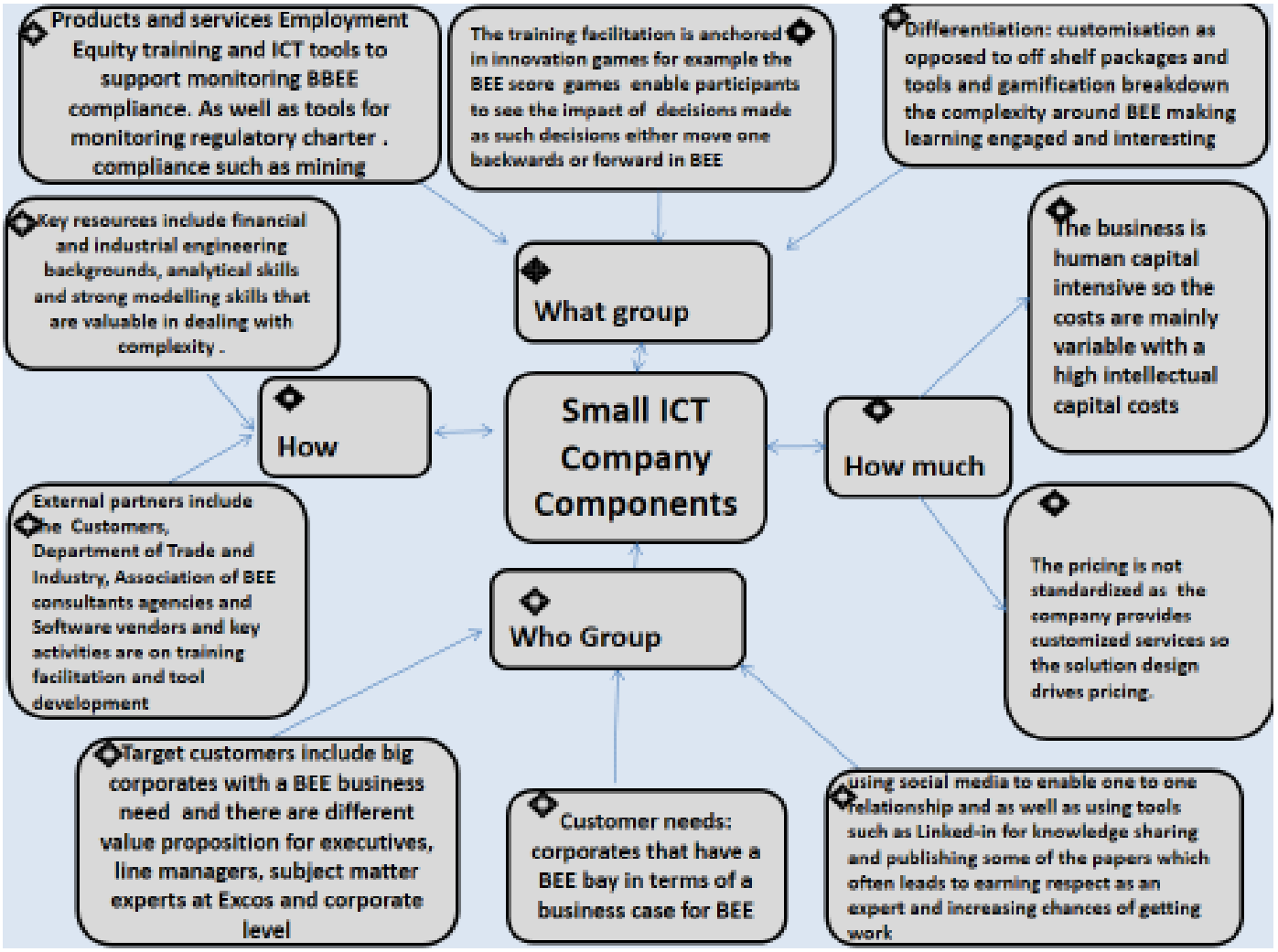

Figure 4-14: Small ICT Company history and business model context

4.4.3.1 Component 'what' value proposition and differentiation

The main anchor product for the company is a software solution that monitors compliance to the Employment Equity Act. In addition, the company provides services to help companies develop employment equity plans by training employment equity managers and employment equity committees. In the provision of training as opposed to a classroom style training, innovation games are used. These have been shown to provide excitement for the participants as well as a higher level of engagement. The key differentiator of the company's products is that the products and services are customised, while most of the competitors provided off-the-shelf packaged solutions.

4.4.3.2 Component how key activities, resources and external partners

The company's key activities, the training tools and systems, are observed to be improving in making them more scalable. For example tools are being developed for one mining company that will now be used by all the other mining companies in the country. The company's external key partners include the government department of Trade and Industry and that of Labour as these are the enforcers of B-BBEE and EE, so the company needs to observe across the development perspective to understand what is happening in these government departments in order for the company to be of service to the customers. In addition, the company associates with B-BBEE consultant agencies. In terms of enhancing the cost efficiencies of the company solutions and flexibility Microsoft is one of the key partners that provides the cloud platform for the company.

4.4.3.3 Components 'how much': costs, revenue and pricing

In examining business model component costs the Small ICT Company's costs are said to be variable cost driven as it was indicated that the business is human capital based and the people's skills are the main variable costs including equipment, technology costs, computers and cell phones. As such the company has high intellectual capital costs. In reviewing the pricing structure it was noted that the products are customised according to clients' needs, which determine the pricing. There is no standard price.

4.4.3.4 Components 'who': customers, channels and relationships

The customer pains that are addressed by the company are around EE and B-BBEE and the target customers are big corporates, and within these corporates the company offers different value propositions for the different segments. These include product design that is targeted to line managers and subject matter experts at EXCOS and at the corporate level. The big corporates that are targeted are those companies that have strong reasons for compliance. For example, from a customer's perspective a company like Pick n Pay may not necessarily have a strong business case for B-BBEE, as normally when the customer buys a loaf of bread they will not necessarily ask for the B-BBEE certificate, in comparison to a company whose customers are government. The Small ICT Company's customers are spread in diverse industries, including mining, construction, financial services, pharmaceutical,

transport, ICT and petroleum. Online channels are the main methods used to acquire customers and maintain relationships with the customers.

4.4.3.5 Business model innovation visualisation and communication

In the Small ICT company there seems to be an understanding of the company's business models with the business model canvas being used to communicate the business model, as one of the executives has attended a course on business models that was offered by the designer of the business model canvas, Alex Osterwalder. The company uses the nine business model components to visualise the business model. Furthermore the business model canvas is used as a tool by the company to support customers to identify B-BBEE and EE opportunities as indicated in the extract.

> *"It is very easy way of communicating we using it for ourselves and we are using it for our clients. So when we do EE-projects or B-BBEE-projects we get the company to understand its business first. So we usually populate the canvas you know then we bring the EE-context to it or the B-BBEE-context to it's basically one of the things that we do for promulgating for B-BBEE. We want the executives to understand basically what the business case for doing B-BBEE and EE.To understand the business case you need to understand your business model that is what we do we integrate the canvass into our projects."*

4.4.3.6 Business model components summary

In summary Small ICT Company's value proposition entails Employment Equity training and ICT tools products and services to support monitoring BB-BBEE compliance and other regulatory aspects such as monitoring regulatory charter compliance. These products and services are differentiated through customisation. In addition, in terms of the 'how' group the company key resources centre on financial and industrial engineering backgrounds, analytical skills and strong modelling skills. These resources are used to deliver the company's value proposition supported by external partners that include the customers, the Department of Trade and Industry, the Association of B-BBEE consultant's agencies and software vendors, and key activities are in training facilitation and tool development. The target customers are big corporates with a B-BBEE business need with a collaborative

relationship maintained with the customers. Moreover, in terms of the 'how much' group a customised pricing approach is used.

4.4.4 Business model innovation approach

Small ICT company's approach to business model innovation may be regarded as complex as it involved redesigning more than one component of the business model. The main innovation in the business model has been around the channels through which the value proposition is delivered and around the key resources, as the costs of intellectual capital were quite high and not highly scalable. The company has re-innovated the business model around the value proposition towards IP development by doing research and development and developing innovative games products for training and software solutions. In addition to innovating on the value proposition the comparing is innovating on the delivery channels as highlighted in this quote:

> *"You know if you look at our business model our channels were primarily … to do a lot of exhibitions, marketing channels where we would do IPM exhibitions. We would do print media. We would do all the stuff and so eventually we would realise that those things were not impactful so now we are on LinkedIn so when someone starts phoning us we tell them we have a platform on LinkedIn so that's how we connect with our market. So basically in terms of reinventing our business model it has been primarily around channels and customer relationships … that is basically these two parts have changed quite a lot in that you know we connect to generate sales via LinkedIn."*

In terms of reinventing the business model the redesign has been around the channels and customer relationships and these two components are seen as having changed quite a lot with the company connecting and generating sales through social networks.

The business model innovation was seen as bearing fruit both from the use of social media to acquire and maintain customers as well as the use of innovation games. The innovation games were seen as having revamped the training offerings, making the learning more exciting and engaging and resulting in people learning more. In addition the company has

grown and is operating from three major ICT hubs in South Africa with a core staff complement of 10 employees.

4.4.5 Business model canvas B-BBEE opportunities

Small ICT Company uses the business model canvas to enable their customers to document and visualise their business models and identify the different types of B-BBEE pressure. The company executives need to understand the business case for B-BBEE and EE, and to comprehend the business case one would need to understand the business model. Thus, the Small ICT Company integrates the business model canvas in their EE and B-BBEE projects. This aspect is illustrated in this quote:

> *"We were doing a product launch of this [and] as part of this we also showed the business model canvas to help people understand the B-BBEE impact on their business model. So they must be able to point out where there is a B-BBEE impact and it is very easy to do. You know you will find like at the demand side of the business model and the supply side and in the middle is your value proposition. So have you got B-BBEE pressure on the demand side or not so those ones on the customer side are pushing us to meet the scale so the business case is very clear: 'If I do not do that I am losing customers hence I am losing [on the] revenue side. So for the other ones the B-BBEE case is around key resources as one of the key resources is a mining licence so you may find that the B-BBEE business case is your licence to operate your business, otherwise you will not have a business model to bring so they need to have a business conversation around B-BBEE not an impromptu conversation [on] what is the impact on your business model."*

4.4.6 Business model innovation process

A very small team is involved in the business model innovation process at Small ICT Company. As the team regularly meets, the business model innovation process is said to be "organic" and develops as things go. The executive team meets once a year for strategy development and in between the business model is revalued as compelled by the business model innovation drivers, and the approach is said to be very flexible.

This was outlined in this extract:

"It's an organic process for us. We must not forget that around your business model is an environment is it basically we are always spotting things and we know when to reinvent ourselves. So basically we [are] always watching as and when we [are] realising that when our business model is too old now and here is a driver coming so by looking at the trends like this social media those drivers are the ones that determine the timing of that action, it is not predetermined but driven by the forces."

4.4.7 Business model innovation lessons learnt

In the small ICT company the two key lessons learnt are around the importance of understanding the B-BBEE and EE impact on the business model, and the prominence of understanding the business and monitoring the business model innovation drivers . The business model canvas is a valuable tool for enabling companies to identify the B-BBEE and EE opportunities, as failure to comply may result in one not having a business model. In consequence companies need conversations around B-BBEE and EE: not impromptu conversations but real discussions as to the impact of B-BBEE and EE on the supply side and demand side of the business model as well as on the value proposition.

Another key lesson from Small ICT Company is that monitoring the business model innovation drivers alone is not sufficient in managing business model innovation to compete in a changing environment. The monitoring of the business model environment should be supported by identifying the opportunity and linking such opportunity to the companies' business model. Hence despite working in the same environment companies some companies may not see the opportunity as illustrated in this extract

"The trick here is that things change so fast you just need to know what is going on around you.That for me is what is key so with technology it is very easy to conduct intelligence of what is happening around your industry forces, key trends, market forces… So all the people playing in our space are affected by the same environment but it is about who is able to see what I think it's about I think everybody cannot see the opportunity the same way the trick is to be able to see the opportunity."

4.5 Context Financial Services Provider A

4.5.1 History and business model evolvement

Financial services provider A is a subsidiary of a global group that provides services such as banking media and mobile phones and launched in South Africa in 2006. The company's initial business model was around providing a full-scale retail banking service in partnership with one of the 'big five' banks in South Africa. In terms of business model similarity, while the banking systems that are used may be similar, the differentiator for financial service A is the way in which the company builds their services. This is perceived to be unique, focusing on how people want to be serviced. However, the business model faced some challenges such as customers defaulting on credit card payments, and the launch having been followed by the global financial services crisis. The company business model context is shown in the Figure 4.15 and each of the elements of the history and business model similarity and challenges outlined.

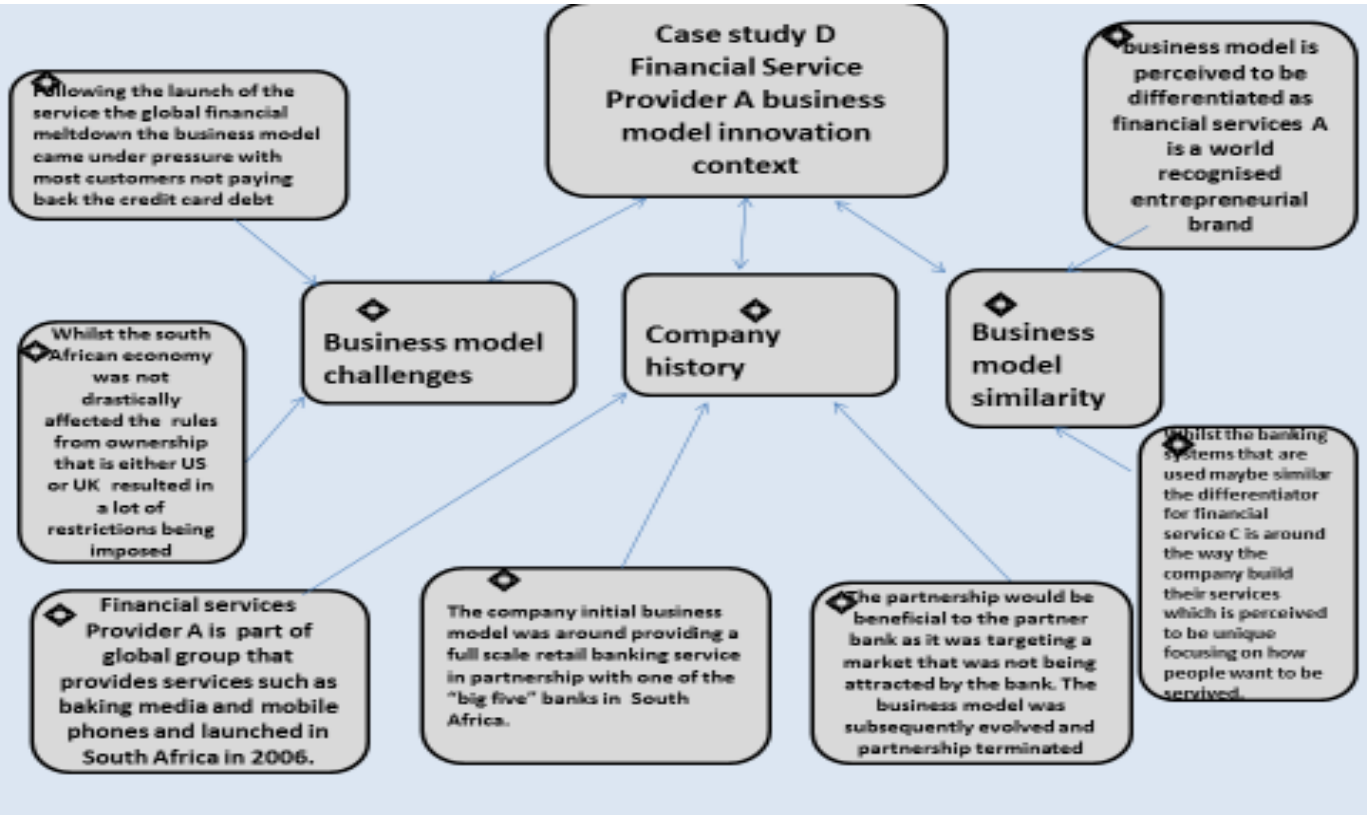

Figure 4-15: Financial Services Provider A history and business model context

4.5.1.1 History

Financial services provider A is one of the many foreign banks and investment institutions operating in South Africa, and the company that provides both banking and insurance services and is one of the world's most recognised innovative and entrepreneurial brands. The company is perceived to offer innovative financial services that address customer frustrations while saving them money.

The company's initial business model was offering financial services with one of the big five banks in South Africa. The service that was launched had a fair amount of product innovation and aimed at attracting a new market that was not being attracted with the current service offerings.

This is drawn from this statement from one of the respondents:

> *"That is how we launched the brand. The primary purpose of that business model was to add a fair amount of product innovation and in a way that it spoke to a market that was not being attracted. So overall, financial services provider A would make tons of money and [its] partner would also make money, but they would not lose it to somebody else in a sense that it would still be there and importantly the learning that came out could be shared."*

4.5.1.2 Business model similarity

The company's business model, while it might have similarities to those of the other players in the market, is unique in terms of how the company has built its services. This is reflected in this quotation:

> *"If there are 10 people providing systems in the banking world really good my system will be as unique as any other bank system going to be all the same we all have got the same system because the pool of people that are there so I need a good type of system that is the first part. But the way I build my service is not like how they build their service."*

4.5.1.3 Business model challenges

The company's business model performed very well in terms of sales, attracting a number of customers. The business the service was launched at a promising time, but was followed by global financial crisis, though the South African banking and regulatory system, being one of the best in the world, and exchange controls, to a very large degree cushioned the extent of losses in the environment. A number of customers defaulted and the partnership did not work and had to be restructured, and the company consolidated and launched a different set of services.

4.5.2 Business model innovation drivers

The external and internal drivers for business model innovation include the market factors in terms of changing customer needs and the shifting basis of competition as well as including technological advances, regulation and internal organisational factors. In the paragraphs that follow a brief outline of how each of the factors are driving business model in the company is presented. These drivers are shown in the Figure 4.16.

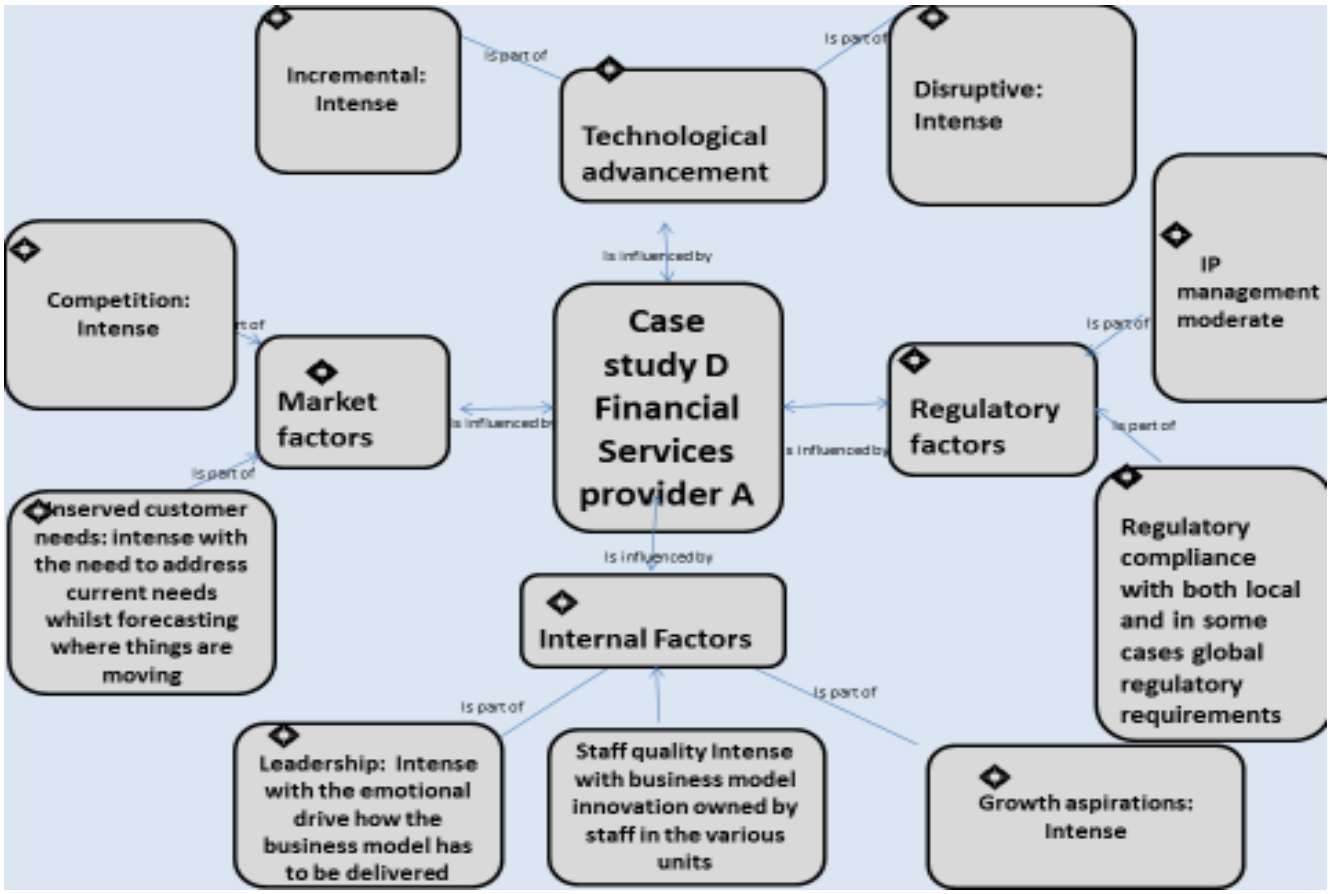

Figure 4-16: Financial Services Provider a business model innovation drivers compiled by researcher

4.5.2.1 Market factors

The market factors in terms of changing customer needs is a driver for business model innovation as one needs to service the current customer needs while forecasting areas of future growth as supported in this extract:

> *"The changing customer needs absolutely, yes, and forecasting where is the world moving to, what happened five years ago, what happened 10 years ago, where are we at today, where do you think we will be in 15 years, are we building at what we will have to change in 15 years or are we building so that we are sustainable for the next 20 years [is] also very very important".*

Hence the business model innovation is driven by addressing the current customer pains and frustrations while aiming at sustainability in the future. An additional market factor is competition and was indicated to be a good starting point in business model innovation to as a basis for determining how to differentiate the company's business model to those of competitors:

> *"Look you have to look at what competition is doing you always start from there … there is a whole component here about just gathering the information."*

The market factors are loosely related to technological advancement as a driver for business model innovation as the customer needs and the technological ability to address the customer pains and frustrations are an enabler to business model innovation.

4.5.2.2 Technological factors

Technological advancement is an intense driver for business model innovation in Financial Services Provider A. However technology as a driver does not mean the company should respond in a reckless manner but one needs to take into account other factors such as the service component of the technology and pricing model as reflected in this quotation:

> *"Technology is a critical part and it doesn't mean the best technology is always first. … Some technologies need to be tested and then it is to say how do we service it so …. [it] doesn't mean the most advanced is the best price point on that technology. [The] service component of that technology is important. What type of pricing model*

does the vendor charge licensing or usage charge etc. and you have to think about volume because the model could work counter-intuitively – that is very very important."

The company to a large extent follows disruptive technological advancement. This was indicated by the participant who said:

"Disruptive technology advancement is very good. To a large extent we follow disruptive technology advancement but more mainly on disruptive product advancement and the reason for that [is that] it shakes the industry, it forces people to say: 'Hang on how are these people doing with this thing that just came in?' So we do a lot of stuff around disruptive technology advancement but not irresponsible disruptive but responsible disruptive technological advancement. So there is a fine line between what you may think is disruptive and what is disruptive and not responsible."

4.5.2.3 Regulatory factors

In terms of regulation as a driver for business model innovation intellectual property management is seen as a weak driver for business model innovation. However, regulatory compliance is intense and regulatory compliance is not necessarily confined to the regulatory framework in South Africa but sometime to additional restrictions due to companies being owned by companies in US or UK. This was shared as follows:

"Because a lot of the rules and ownership of companies are either in the United States or United Kingdom and the rules get imposed on you and you have to comply not only with South African regulatory framework but international requirements from home countries.".

4.5.2.4 Organisational factors

The internal drivers to business model innovation include organisational resources in terms of leadership, staff and both infrastructure and financial resources. Leadership was perceived to be critical in the delivery of the business model.

This is inferred from this extract:

> *"Previously people used to say Pareto's Law the 80%/20% rule … that leadership needs to focus on 20% of the customers that bring in 80% of the money and that 80% of all the complaints come from 20% of the products – it's all nonsense now. Today you have to get both the core correct and the stuff that can go wrong, you have to understand that too, otherwise you are not going to survive in business and you will survive for a period of time and you will get swallowed up. So successful business models for us in the world was understanding where we want to be especially a financial services provider can go wrong and it requires a lot of information."*

Furthermore, leadership within business model innovation is said to be of importance in terms of constructing the business model and the emotional drive to deliver the business model. This was articulated as follows by the participant:

> *"The emotional drive between how you want this thing delivered resides in the people who have constructed this and not necessarily in the people who [are] going to follow this thing through."*

The quality of staff is an important driver for business model innovation as innovation has to be owned by everyone in their environments and staff have to be empowered to change things to address customer frustrations. In addition, for the staff to meaningfully drive business model innovation, not only must they be empowered but the environment must be conducive for innovation with the staff feeling secure and not pressurised to prove themselves, rewarded fairly with non-performance being punished.

4.5.2.5 Business model innovation driver's summary

In summarising the business model innovation drivers for Financial Services Provider D, one may suggest that both the external and internal drivers are influencing business model innovation in the company. Furthermore, the internal factors driving business model innovation consist of market factors relating to competition and changing customer needs. Additional external factors consist of technological advancement with both disruptive and incremental innovation being perceived as intense drivers. Moreover, there are regulatory factors that include compliance to local regulatory framework as well as global regulatory

requirements. The key internal factors influencing business model innovation are leadership, staff quality and growth aspiration.

4.5.3 Business model components

Using the business model canvas, the company's sample business model components are illustrated in Figure 4.17.

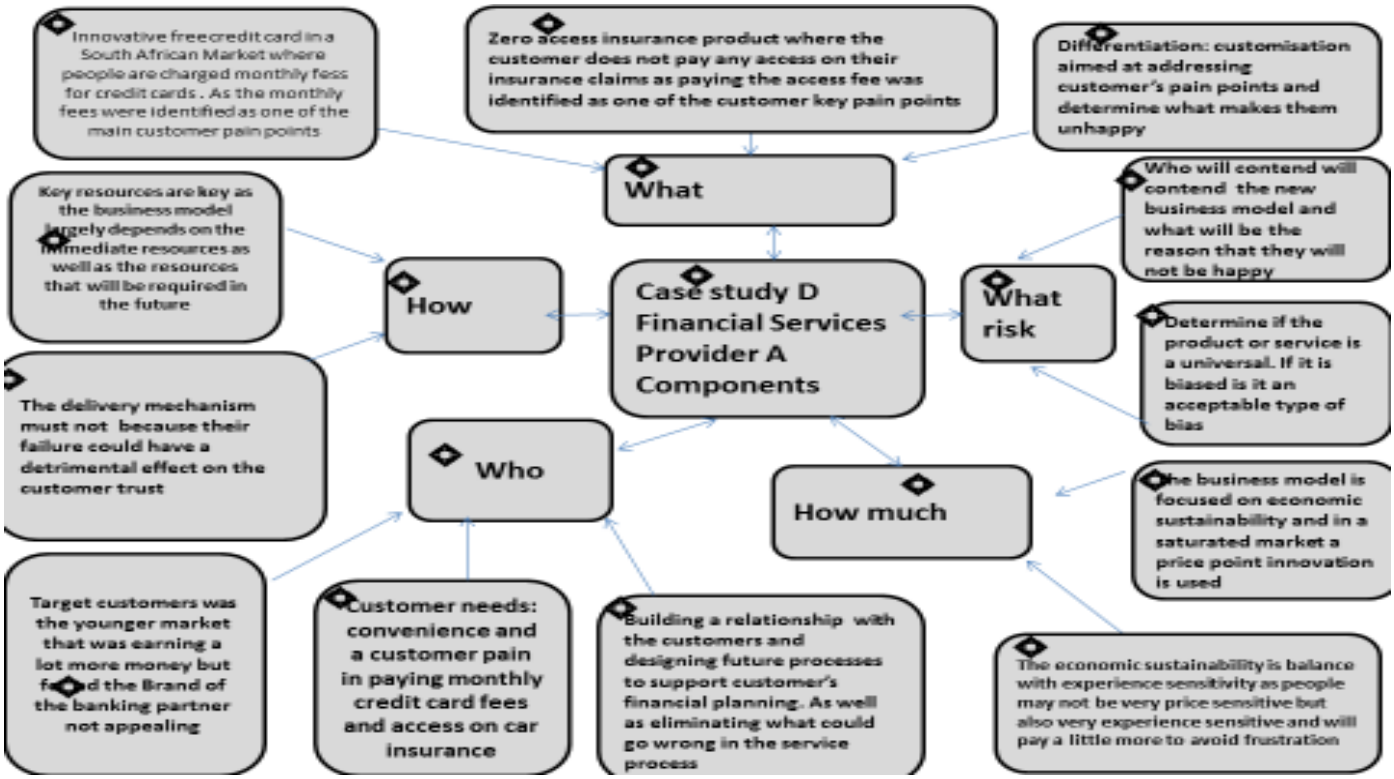

Figure 4-17: Financial Service Provider A business model components compiled by researcher

4.5.3.1 Component 'what': value proposition and differentiation

The value proposition that Financial Services Provider A offers to its customers are banking services and insurance. The key aspect within the company's business model is to determine as to what business the company will be in as well as the current offerings in the market and the customer's frustration points with the current offerings and determine if the company will compete with market share or with innovation to differentiate the service offering.

> *"Various ways to build innovation and normally what you will do is [find out] why are people frustrated, what is frustrating the person. That is a nice way to start. What are the things that frustrate people and then you say to yourself great what are the*

things that people can say about certain things and how can we make money by fore giving those expenses. … Thus when you do business model innovation modelling you start off by saying 'how does somebody use this product, what is the frustration around it? and quite often it's quite common sense that will leave you thinking 'why I didn't think of that'."

The differentiation could be on innovating the product, innovating the process logic which cannot be easily copied as often it takes very long for competitors to revive their resources and mimic the innovation.

"I think the most common innovation understood is product innovation because it is tangible, you can see it, you can feel it and it is the easiest one that is copied. The one that is very difficult and less understood by many business people is business process innovation the model what is different in your delivery strategy because that cannot be copied and that takes very long for an organisation to upturn its resources to be able to mimic that innovation is less understood and is the most effective type of innovation and the hardest to copy. The easiest that most people do is product but we do not know how they went about doing it."

4.5.3.2 Component 'how': key activities, resources and partners

Key activities models the delivery mechanism and the delivery mechanism should be set up in a manner that it should not fail, as such failure could lead to the company losing credibility in the eyes of the customer. Delivery mechanism is of bearing in the business model as while companies may offer similar products but the delivery mechanism could be totally different.

External partnerships are of great value as they have the potential to positively or negatively affect business models as they need to be managed effectively. The key resources are an important element in the business model as the resources, which include money, people and physical infrastructure, will determine the business model that the company will follow. In addressing the resourcing aspect one needs to look at the current resource requirements as well as future requirements and an innovative and dynamic approach has to be adopted.

4.5.3.3 Component 'how much': costs revenue and pricing

The 'how much' component detailing the financial aspects in terms of costs and revenue is another constituent that is taken into account in the Financial Services Provider A business model and the key in determining the best executable solution for the company to gain economic sustainability before moving on to the next step. Sometimes one may launch on a price point innovation if it is felt that there is very little to do in terms of technology innovation. Pricing is another element that may be visualised on the business model, mainly in ensuring that there is no price discrimination.

4.5.3.4 Component 'who': customers, channels and relationship

Financial Services Provider A provides banking services and insurance services to a broad consumer market that includes individuals and small and medium enterprises with the aim of offering to create value for customers by reducing the customer frustrations and saving them money while generating profits.

> *"That is how you go around the design. You say how do you use it, what are the frustrations that they are currently experiencing, where can you save them money, what are the things that they are paying for? Uunderstanding the catch is quite critical. …. What are the things that frustrate people? And then you say to yourself, great, what are the things that people can say about certain things and how can we make money by fore giving those expenses? Then you say what are their frustrations and where can you save them money? And if you want to save them money like this or this is their frustrations where can you go and innovate and what can you do slightly better than the market to introduce something?"*

Thus having understood the problem find new ways to ensure there is shared value and that everyone is better off using the customer pains and the ability of the technology to design viable solutions.

The channels that are used by customers are also very critical to addressing their frustrations in terms of whether they buy the services through a broker network or through

the direct channels. One of the key elements is managing the customer relationships is going beyond addressing customer complaints but determining why things go wrong and trying to minimise the probability of things going wrong by eliminating the variations from the process such that it works 100% of the time. This approach to customer relations was expressed in this quote:

> *"The other mistake that is made is that when we get a lot of complaints. People deal with the complaints, right, that you have to do – you must deal with the complaints.*
>
> *But we always go back and say why this thing is going wrong so many times where we can fix this thing? Why is this thing going wrong so we try and minimise the probability of things occurring wrong and saying how do I eliminate variations from this process it must work a 100 times do you understand."*

Furthermore one needs to ensure that the employees are empowered to address customer's complaints by having one person dealing with the customer complaint, not transferring a customer through several departments to deal with a single complaint. This was supported by this quotation:

> *"You have to great a way that they can be empowered to actually change some things on the spur of the moment. How often do you go somewhere and someone tells you, 'Sir I am not allowed to do this, what you are allowed to do I cannot do this am not allowed to do this.' Nonsense, you have to be empowered to do everything."*

4.5.3.5 Component risk: 'who will contend'

Another aspect relating to the target customer is the 'who will contend' – that is identifying the people who will not be happy with the service I offering and the reasons why they will not be happy. The 'contend' component in the business model was expressed as follows:

> *"So you always have to ask yourself a question even in a business model innovation who will contend this, who will not be happy with this and if they will not be happy is there a reason that they will not be happy. Or should it be universal to everyone or is the product biased. If it is biased is it an acceptable type of bias, do you understand,*

or is it an unacceptable kind of bias. If it is an unacceptable kind of bias then you don't make the product, because you do not want complaints."

4.5.3.6 Business model innovation visualisation and communication

Once the business model has been decided it is communicated to the teams in meetings as generally the entire organisation gets together and discusses where the company is heading, and what needs to be done and the structure that is going to support the delivery of the business model. In communicating the business model one needs to show the end in mind as it is often the 'glory' and the goals, and people like to see the end in mind. The business model is communicated differently within the different groups in the company.

"You must show the end in mind because it is always the glory, it's the goals and people like to see something that is glitz and glamour so you show the end in mind…. So there is different things our business model once is decided gets communicated to the teams in meetings so generally the entire organisation gets together and says this is where we are heading, here is what we have to do and the structure must follow that strategy, so we break down the people's roles according to that, divide the roles and fill it up with people with skills, that is how the model is designed."

In addition the business model is communicated differently within the different groups in the company as shown in this quote:

"You share pieces of the model at a time. We never share the entire picture so you share maybe the end goal, say this is where we going to be and we [are] going to start off with this and this is how we [are] going to do it. Then move up and the reason for that is that the level of understanding and intellect at the different levels varies. Some people say there is no way you going to achieve this and they become despondent and there is negativity inside and the people are talking and that is not what you want."

4.5.3.7 Business model components summary

In summary, the value proposition for Financial Services Provider A in terms of the 'what' component is the provision of an innovative free credit card in a South African market

where people are charged monthly fees for credit cards. The monthly fees were identified as one of the main customer pain points. Another was the zero access insurance product where the customer does not pay any access on their insurance claims, as paying the access fee was identified as one of the customer key pain points. Moreover, the business model was perceived to be differentiated from those of competitors by focusing on addressing customer's pain points in terms of determining and addressing what makes the customers unhappy. The key resources are regarded as being at the core of the business model, as the business model largely depends on the immediate resources as well as the resources that will be required in the future. In addition attention needs to be placed on the delivery mechanism to ensure such mechanisms do not fail because their failure could have a detrimental effect on customer trust. The business model is how much component is focused on economic sustainability and in a saturated market a price point innovation is used. Furthermore, the risk component is added to the business model in relation to who will contend the business model. Business model innovation approach

Financial Services Provider A's business model innovation approach is underpinned by finding ways to do things better for the customer while pushing the boundaries and remaining credible with a brand for which being credible is critical. The business model innovation approach is largely influenced by circumstances ad resources. For example, the primary goal has not changed but the route that is going to be taken to achieve the primary goal has had to be adapted. In terms of the resources that influence the approach it is both the immediate resources and the resources that may be required in the future. Leveraging on the brand the company launched a service that had a fair amount of product innovation and in way that the service attracted the marked that was not being reached by the partnering bank. The company has also had a 'process logic' approach to business model innovation by looking at how the customer would use the service. For example, they designed the service in such a way that it addresses the frustrations that the customer faces when accessing banking services. In some case the financial services provider A has undertaken 'price based' innovation as it was perceived that there was very little that could be done terms of the technology; hence a price point innovation was adopted.

One of the key approaches to business model innovation in the company is related to the S-curve whereby the company starts working on the next cycle of innovations before a plateau is reached, as new innovations could take longer to become dominant and once they finally take off they move faster. Thus rushing through the next cycle without allowing sufficient time for the design testing and subsequently failure of the innovations, which would greatly damage the credibility of the company. The need to start the business model innovation when the business model is still on the growth path was indicated by this quote:

> *"Well it is an evolving thing … and I think the one mistake we always make is that you see business has … this famous term called the S-Curve or the Hockey curve or whatever curve you want to do and the idea of that is saying that you have to take the negative in terms of my investments and then as it starts breaking even at a with certain amount of volume in forecasts I start moving to the top. So your innovation model must already start when your jinker starts moving up not when it plateus then it is too late because you have only two or three years sometimes to roll up the product the technology you need, the infrastructure is not that simple it needs years to come in and you are now caught. In the end you start doing things very irresponsibly and subsequently when it gets launched and tested it fails, your credibility is lost so the business model innovation process innovation must start immediately when you are on the UP ."*

In Financial Services Company A their business model innovation approach seeks to ensure service quality with the call centre structured in a manner that the customers deal with one person as opposed to being moved to through several departments. Service quality was said to be exemplified by Investec as per this extract:

> *"That is why Investec is so good you do not go to 20 departments to deal with your insurance and your whatever it is you do. You deal with one person and he goes to the back and does all the work for you. That is what he does. That is why when people talk about Investec banking and they talk about everything works and it works first time there [are] no frustrations. They do not say the product is fantastic they say the service is great."*

4.5.4 Business model innovation process

The business model innovation approach in Financial Services Provider A is focused on generating shared value and a number of steps were identified in the process. The starting point was perceived to be determining what one wants to do and with the ending in mind work backwards to identify what needs to be done to achieve the goal. One of the main activities would be the initiation stage. There are various ways to build innovation and a good way to start was seen as defining why the people are frustrated with the current products and services and the reasons for such frustrations. Such an initiation should take an in-depth look at the eco-system including the culture. Thus it was highlighted that there are many example in banking where companies tried to bring technology into South Africa, such as Mpesa which worked in Kenya as a mobile payment platform, but failed in South Africa as the cultural aspects were not taken into account. In particular the model was perceived to have worked in Kenya because there was a lack of banking infrastructure while in South Africa the culture is different in that there is no shortage of infrastructure. As highlighted in this extract:

> *"Mpesa as an example and in Kenya it was a mobile payment platform and everybody said 'My God oooh let's go and do this'. All the banks and tons of people tried to understand this model and they came back and they forgot the fundamental principle why did this model work not the technology. The model worked because there was a lack of banking infrastructure in Kenya and people needed the payment mechanism and they built this payment mechanism. So the payment mechanism boomed and many looked at the payment mechanism and said it could be in South Africa, but really do we have a shortage of infrastructure? No we don't have a shortage of infrastructure. And then there is a trust element and technology failure: 'How do I get my money in the bank?' People want to avoid taxes and they do not want to disclose all these."*

Another banking example that was perceived to have failed was the Grameen initiative to promote entrepreneurship which worked in India where the culture was such that the women in India were the sole providers for their families and did not want to default. Entrepreneurs in South Africa had a different culture in terms of mismanagement, resulting

in hundreds of millions lost through micro lending and banking becomes burdened by bad debts. Thus an initiation step should take into account the e-ecosystem that includes not only the existing business model and competitors, but cultural factors as well.

> *"I know banks that went across and tried to understand the model because here we want to promote entrepreneurship, and that is exactly what we want to do but here again culture plays a fundamental success factor. Because the women in India are the sole providers for their families and they do not want to faulted to take away these whereas in South Africa the entrepreneurs that were given the money had some sense of entitlement and mismanaged the money …. great model, a great innovation but the success of it is depended on culture."*

The initiation stage is followed by an ideation. Thus ideation starts with asking a lot questions and Financial Services Provider A has many models that are followed with cues to prompt the right questions. Another key aspect is understanding how the consumers are using the product and service, defining the current frustrations and where one can save them money and understanding the catch is critical. Once the probable design has been selected the design is thoroughly test to ensure that the consumer's frustrations are properly addressed.

4.5.5 Business model innovation lessons learnt

There are a number of lessons drawn from the Financial Services Provider A relating to managing business model innovation to compete effectively. These consist of the importance of leadership that not only focuses on the Pareto 80% and 20%, most appropriate to launch the next innovation cycle and the importance of adapting business model patterns and each of this aspects is briefly deliberated.

> *"In the past one could rely on the Pareto's rule of 80% and 20 % rule today the Pareto's principles doesn't work one needs leadership to be much more vigilant not only getting the core right correct but also what could go wrong as failure to do so would mean the company would survive for only a period of time and eventually be swallowed up."*

Business model adaptation is one of the key lessons learnt in the company with business model innovation being compared to making the spicy South African dish ‘Chakalaka’ as it is a basic dish that most South Africans will understand, but it never tastes exactly the same, as everyone makes theirs to be slightly different. If one wants to make a ‘Chakalaka’ one would go to one of the most recognised ‘Chakalaka’ makers but would need additional research as well to adapt the recipe to potential customers. In a similar manner with the most recognised business model patterns one needs to adapt the business model to the environment, especially taking into account the culture and resources that are required and taking a dynamic and innovative approach to resourcing.

4.6 Context Financial Services Provider B

4.6.1 History and business model evolvement

There are a number of organisations providing funding for renewable energy projects in South Africa. These include financial institutions, private sector companies, and quasi-government and government organisations. For example, Anglo American, a multinational mining house with operations in South Africa, has set aside R100 million for Green Energy projects while the Industrial Development Cooperation, a South African Government national development finance institution, set up in the 1940s to promote economic growth and industrial development in partnership with and the German Development Bank (Kiwi) has set aside R500 million for renewable energy projects (Private Sector Energy Financing, 2015). Financial Services Provider B is a renewable energy funding provider with an innovative product in a niche area that was not being served by the commercial banks, as the market is regarded as too small for commercial banks yet too big to be funded from developer’s balance sheets.

The company history and business model evolvement are illustrated in Figure 4.18.

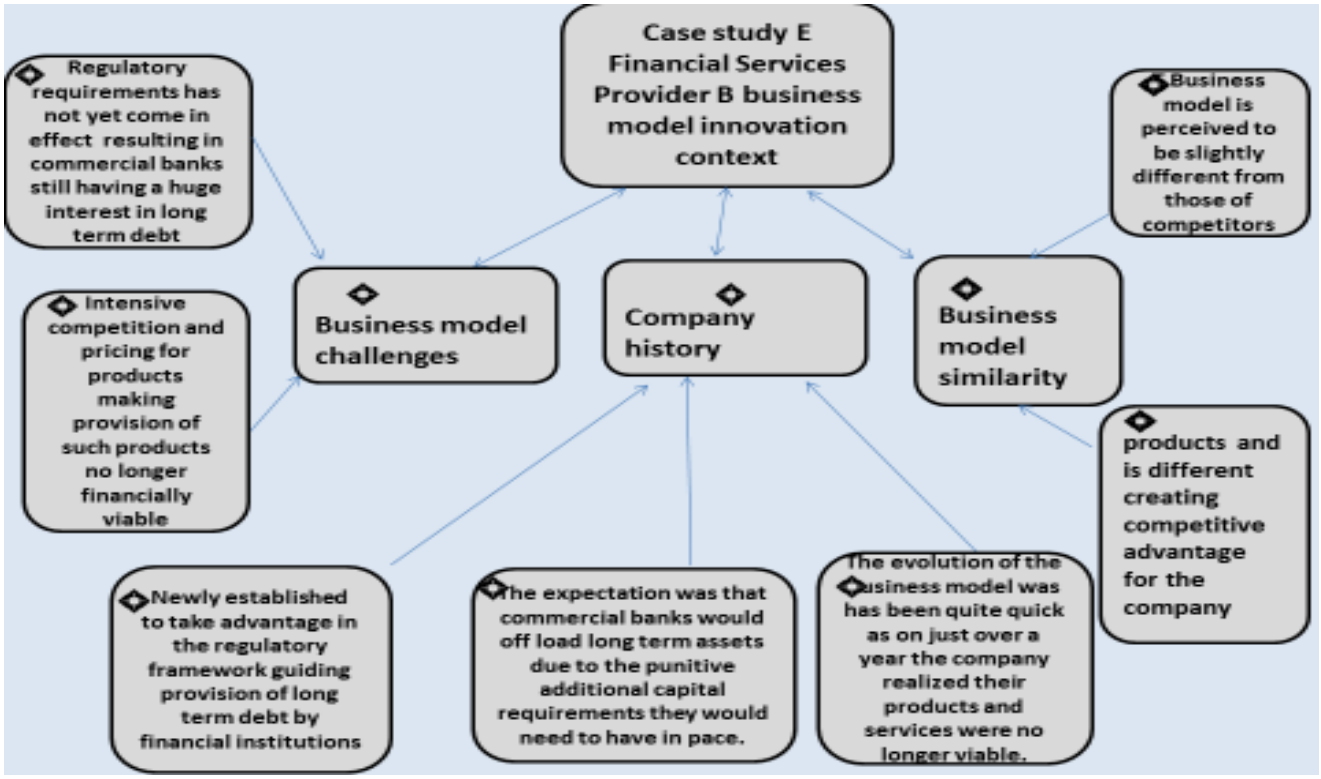

Figure 4-18: Financial Services Provider B history and business model context compiled by researcher

4.6.1.1 History

Financial services Provider B is a newly established sustainable energy debt fund that was created to take an advantage of institutional investors such as pensions and provident funds interested in investing in the renewable IPP programme. In addition the change through Basel III in the regulatory framework that governs the provision of long term debt by financial institutions presented an opportunity for debt funds. This view is supported by this quote:

> *"Basel III effectively was going to make it very difficult for banks to provide long-term funding primarily because of the substantial additional capital requirements that long-term funding would have necessitated, so the fund that we created is not governed by Basel III, Basel III is a voluntary mechanism and as a result we wouldn't have had to set aside a substantial amount of capital."*

Basel III would effectively make it a challenge for banks to provide long term funding, as this would require substantial additional capital requirement. Since Basel III would be a voluntary mechanism Financial Services Provider B would not be mandated to set aside

large amount of capital when providing long term debt. So the initial company business model hypothesis was that commercial banks would effectively off-load a substantial amount of their long term assets due to the additional capital that would be required. As indicated by one of the participants:

> *"So the theory was that the commercial banks would effectively off-load a whole lot of their long-term assets given the punitive additional capital requirements that they would have to put in place. …. First thing that happened was that Basel III has not come into effect and as a result there's still a huge amount of interest from commercial banks. The other thing that certainly we simply didn't expect is the REIPPP [Renewable Energy Independent Power Producer Procurement Programme] would be such a commercial success."*

As a result commercial success banks have a huge interest in the renewable energy debt, so instead of writing the debt and selling it, commercial banks are now very keen to participate, so they are even writing more debt than they ever did in the past. The changes in the business environment have intensified the competition and the reduced lending margins increased competition in such a way that the company's business model was no longer viable.

This may be inferred from this extract:

> *"And as a result the commercial banks are now instead of looking to write and then sell the debt, they're now very keen to participate so they are even writing more debt than they ever did in the past. And with that has come quite a lot of competition and margins that these organisations have typically charged for lending have come down quite considerably as the competition has increased and so much so that we have found that the pricing within our business model is no longer financially viable."*

Thus the business model had to evolve quite quickly as the company came to a realisation that the company could not play in an economically viable manner with the initial product. It had to evolve the business model to offer a product that is slightly differentiated from

those of competitors, giving the company a competitive advantage; in addition the company innovated in their key activities.

> *"The evolution of the business model has been quite quick. First thing that happened was that Basel III has not come into effect and as a result there's still a huge amount of interest from commercial banks. … So we've effectively been priced out of the market, so it forced a very quick re-think on our side and we quickly realised that we were no longer able to play in JIBAR [Johannesburg Interbank Agreed Rate] but that investors [that is] the pension funds wanted to see inflation linked products or inflation tracking products that enabled them to provide a yield to one above inflation yield to their pension and provident fund holders."*

The participant further stated that:

> *"Over the last two years I have effectively had to completely reinvent the business model as the market has changed significantly and the original 'business model' has very quickly become redundant."*

Having briefly discussed the company's history and how the business model evolved, the next section deals with the business model innovation drivers.

4.6.1.2 Business model similarity

In terms of business model similarity Financial Services Provider B's business model may be perceived to differentiate from the commercial banks who are the main competitors in the Green Energy funding as it was highlighted that:

> *"Instead of trying to compete with commercial banks who provide Jibar-plus debt, we are now offering a CPI-plus debt product … hence the CPI product as a result is a different product as result creates a competitive advantage."*

In addition the business model is differentiated in regard to the key activities that are related to the company's unique ability to transact as shown by the following extract,

> *"Some of our competitors are just simply asset managers. They do not negotiate the deals nor close them so it is really a question of purchasing that debt in the secondary*

market. While we took a conscious decision to go and try and secure mandates where we are a financial close lender, because this means we get in the deal earlier and negotiate better terms for our investors."

4.6.1.3 Business model challenges

Financial Services Provider B has had to overcome challenges with Basel III regulation having not necessarily having had the expected outcome of commercial banks selling off long-term debt. But Basel III has not come into effect, and as a result commercial banks continue to participate in funding long-term renewable energy funding. Moreover, the company's initial business model was priced out of the market as may be seen from the following quotation:

"We were faced with an existential crisis and a need to come up with a competitive product that couldn't be taken away from us because the bank had out-priced us".

In summary, Financial Services Provider B is a newly established Green Energy fund established to take advantage of the regulatory framework guiding the provision of long term debt by a financial institution. This regulatory framework led to the expectation that commercial banks would off-load long-term assets due to the punitive additional capital that commercial banks would need to put in place. However, the regulatory requirements have not yet come into effect, resulting in the company having had to quite quickly realise that the products and services were no longer viable. An additional challenge to the business, besides Basel III having not yet come to effect, was the intensive competition from the commercial banks and the pricing for products, making the products and services not financially viable. This motivated the company to evolve the business model, with the current business model perceived to be differentiated from those of the competitors offering differentiated products and creating a competitive advantage and enabling the company to collaborate with the commercial banks to provide the services rather than competing with the commercial banks.

4.6.2 Business model innovation drivers

The key factors driving business model innovation at Financial Services Provider B include market, technological advancement and internal organisational factors. The regulatory factors are perceived as not being substantial in driving business model innovation. These

business model innovation drivers are illustrated in Figure 4.19. In the paragraphs that follow the business model innovation drivers are presented, starting with the market factors. The business model innovation drivers are depicted in Figure 4.19.

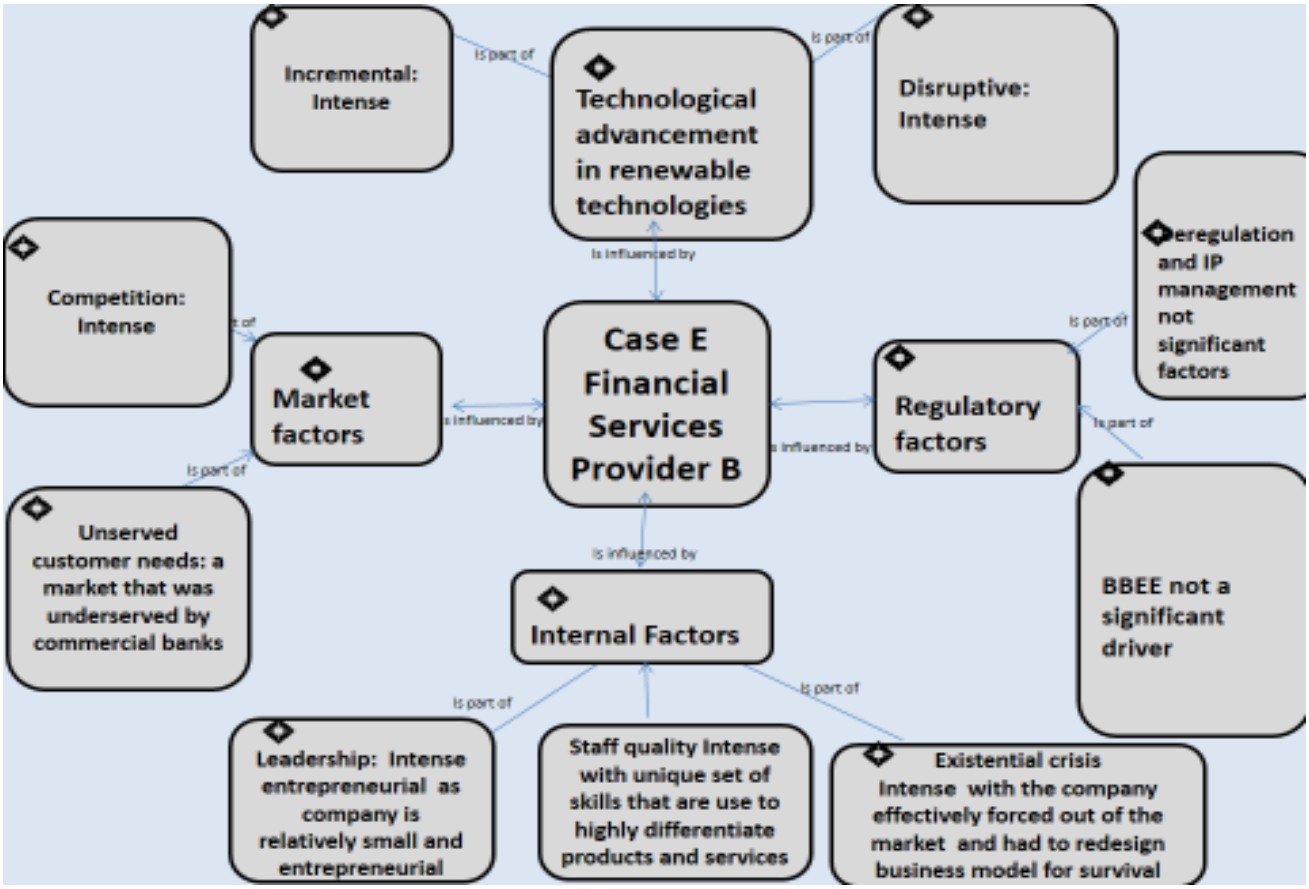

Figure 4-19: Financial Services Provider B business model innovation drivers compiled by researcher

4.6.2.1 Market factors

In relation to market factors competition is an intense driver that was primary for the last business model innovation, as Financial Services provider B was effectively forced out of the market by the commercial banks that were aggressively pursuing the Green Energy debt market at what the company perceived as a sub-optimal margin.

In addition to the intense competition there has also been a slight shift in the primary basis for competition, as whereas instead of trying to compete with commercial banks that provide Jibar-plus debt, the company offers CPI-plus debt product. This product is seen as more preferable to the investors as investors get an inflation linked asset which is preferred

from Jibar-plus debt. Furthermore, the CPI Product is preferable to borrowers as CPI loans have a back ended repayment profile which is better for a borrower who is trying to win a bid which is evaluated primarily on price.
In addition to the competition, there is also an expectation of the need to serve the unserved customers, as the company has identified a market that is not necessarily being served by commercial banks. This is because it is a niche area where the projects are too small for commercial banks to fund, while on the other hand they are too big to be funded by the developers using their own balance sheets.

The market factors in terms of the customer needs are changing and driving business model innovation, since while in the past renewable energy attracted most people who had a green conscience and environmentally friendly orientation, the situation has changed, with Green Energy moving towards main-stream customers as electricity /power costs are increasing tremendously, while the actual cost of Green Energy systems has come down considerably. Thus technological advancement is directly linked to the changing customer needs. The next section will discuss how technological advancement is driving business model innovation.

4.6.2.2 Technological advancement

Technological advancement is an intense driver for business model innovation, as disruptive technological advancement was seen as forcing the market into a smaller space as technologies like battery technology change are resulting in new products such as Elon Musk's electric cars. This open new opportunities for providing debt funding services. In the last five years the cost of renewable solutions has come down tremendously. For example, the cost of putting a rooftop solar solution has reduced from three million dollars a megawatt to slightly less than one million dollars a megawatt. Green Energy alternatives are becoming much cheaper, and this trend is expected to be one of the main drivers in the business model innovation in future, as more and more projects are likely to be launched that will require to be funded.

While this technological advancement is not necessarily financial, technological advancement the market for the Financial Services Provider B is opening up as a result of

technology changes. Technologies such as social networks, cloud computing and mobile technologies were not originally regarded as key drivers for business model innovation in the company with data analytics also perceived to be a moderate driver.

> *"Disruptive technological advancement is forcing us into the smaller space, so … things like battery technology is changing which means there's a completely new product out there. So if you look at Elon Musk that will open up a huge number of opportunities. While things like cloud computing, social networks, mobile technologies and data analytics to a degree are all moderate."*

4.6.2.3 Organisational factors

There are four main internal organisational factors driving business model innovation. These are growth aspirations, existential crisis, entrepreneurial leadership and staff quality.

The company is newly established, having been started in 2013, and growth aspirations have been an intense driver for business model innovation. In addition, according to statistics, newly established companies tend to fail in the first three years. The company in a similar manner was faced with existential crisis and this became an intense driver for business model innovation, as the first business model was priced out of the market by competition.

According to the participant the company had something of a 'print newspaper situation' whereby if one is has a print newspaper without an electronic platform one would not survive. The participant highlighted that if the company had sat and waited for the second renewable energy fund to close the company would have gone out of business. Like the newspapers the company had a business model that had quickly been priced out of the market, and the company products were not competitive; as a result the company was no longer relevant to the market.

Staff is another intense driver for business model innovation both in terms of entrepreneurial leadership and staff quality. As was described, the company is a relatively small business, entrepreneurial in nature.

The leadership team meets regularly for feedback session on how the business is performing, the existing assets and then and on an ad hoc basis discussing where the company needs to go and what needs to be done. This serves as a useful sounding board, having ideas shot down to ensure filtering, and to get to an ultimate solution that works. The staff quality is an intense driver for business model innovation as the staff in combination with the leadership as the team has unique set of skills that are used to differentiate the company product and services from those of competitors.

4.6.2.4 Business model innovation drivers summary

The factors driving business model innovation in Financial Services Provider B are both internal and external. The main external factors motivating the company to innovate the business model include intense incremental and disruptive technological advancement. More especially disruptive technological advancements in the Green Energy space around technologies like battery technology change is resulting in new products. Market factors are driving business model innovation, in particular the intense competition and the need to serve the market that is unserved by the commercial banks. In terms of regulatory factors, BBEE and deregulation and the need to buy and sell IP were not regarded as key factors. The internal factors driving business model innovation relate to entrepreneurial leadership, staff quality in terms of the unique skills as well as the existential crisis with the company effectively forced out of the market and having to redesign its business model for survival.

4.6.2.5 Business model innovation process

Financial Services Provider B is highlighted as being very nimble and adopting an approach that quickly implements change when required. In terms of the mobilisation step an interdisciplinary team with specialist knowledge in the power sector, engineering and running equity is involved, that includes the fund manager and another executive who are the key players with a simple approach to business model innovation that allows them to modify strategy daily if necessary. In addition to the two executives there are additional three senior executives. Regular meetings are held to provide feedback sessions on how the business is performing, the existing assets and on an ad hoc basis to discuss where the company needs to go and what needs to be done to get there. The company undertakes the

ideation where a brain storming approach is adopted. As an example, in the last business model innovation cycle, following iterative brainstorming sessions, three to four different business models structures were discussed and assessed for risk and the most viable solution was selected and tested. Following a number of reiterations the solution is now been implemented and yielding substantial benefits for the company.

4.6.3 Business model components

The value proposition that is offered by Financial Services Provider B is a funding solution for Developers in the renewable energy space. The product is differentiated by simplifying the funding solution by cutting a layer of complexity, resulting in a competitive advantage and providing competitive rates for the customers, while increasing value for the investors.

The product is linked the electricity tariff, which is indexed using the CPI, and the product has a natural hedge with inflation. Financial Services Provider B's business model components are illustrated in Figure 4.20.

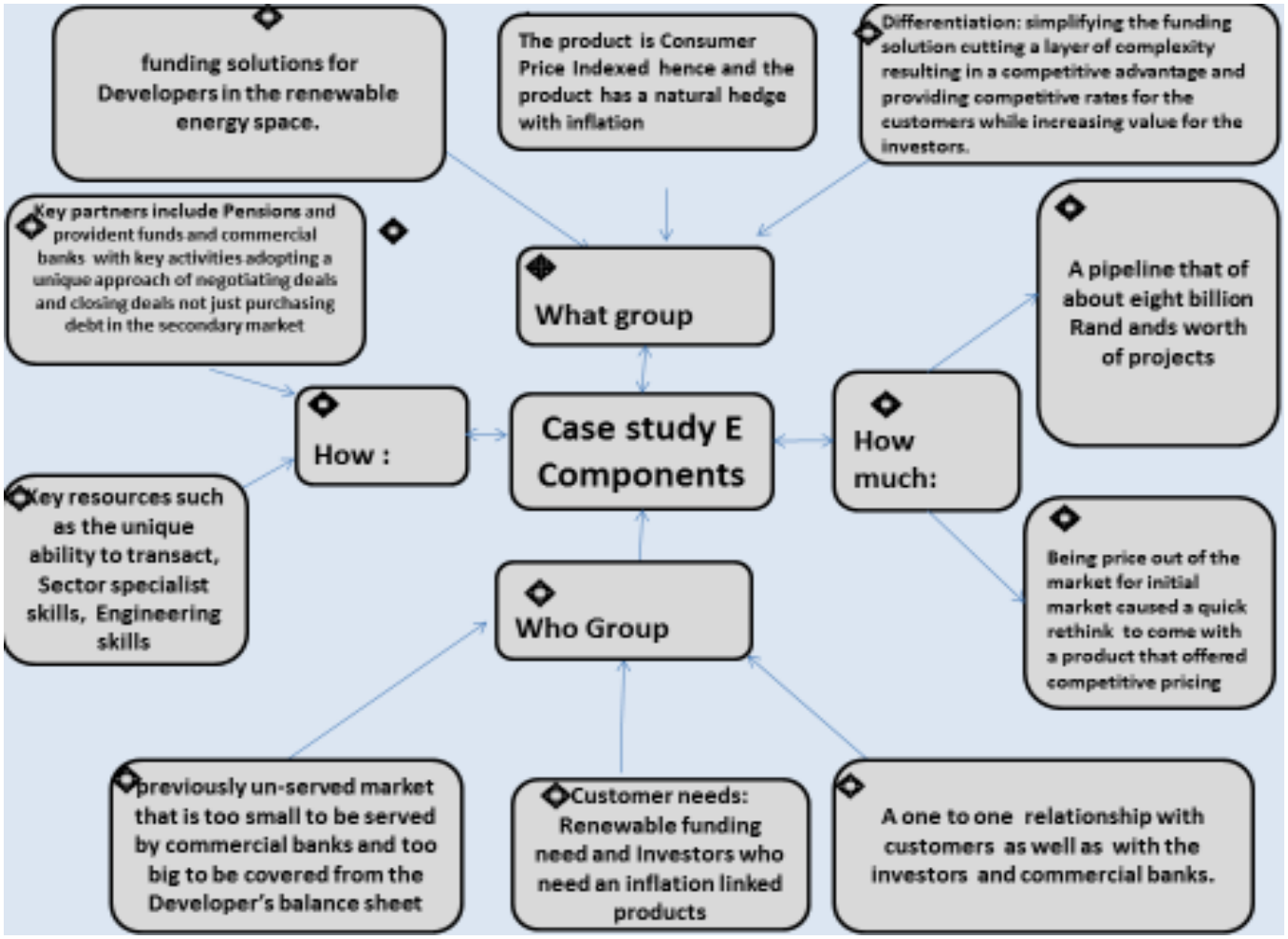

Figure 4-20: Financial Services Provider B business model components compiled by the researcher

4.6.3.1 Component 'what' value proposition and differentiation

The product is offered in a niche area that could be said to be too small for commercial banks to participate in. It is a niche product that effectively complements the commercial banks as opposed to competing with commercial banks. The target customers are the developers in the renewable energy projects whose projects are too small to be funded by the commercial banks yet their projects are too big to be funded from the developer's balance sheets. The market is such that there is a huge pool of developers that are trying to close renewable energy projects who need funding.

4.6.3.2 Component 'how' key activities, resources and partners

In terms of the 'how' component the key activity of the company is providing financial close lending services that include negotiating and closing funding loans. The key partners are the

institutional investors in terms of pensions and provident funds that want to invest in the REIPPP, and the commercial banks.

4.6.3.3 Component 'how much': costs revenue and pricing

In reviewing the 'how much' component of the business model in terms of the revenue, the company is offering a product that is attractive and competitive in that the investors who provide capital are benefitting as they are able to take dividends out earlier, due to the nature of the new value proposition that the company is offering; and the product is inflation linked. This is drawn from the following excerpt:

> *"We're able to offer a product that is attractive and competitive, our investors who give us the capital … so [we] removed a layer of risk from our investors, we have preserved our ability to compete in the market … because CPI debt has a slightly back-ended repayment profile. It's just the nature of the debt repayment structuring – these bidders who are competing in a bidding process were able to offer a slightly lower tariff because of the time value of money. So they were able to take dividends out earlier because of the back-ended nature of the repayment profile on the CPI debt."*

4.6.3.4 Component 'who': customers, channels and relationships

The target customers are in niche market that was not being serviced by commercial banks as highlighted in this quotation from the participant:

> *"The other thing that we have realised is that there is a niche area where projects are too small for commercial banks to be funded and are too big to be funded by developers on their balance sheet. So this niche area is something that it's too small for banks to look at it and they come and walk away from that business on that front, but I think with a bit of careful deal structuring we will be able to offer a debt product and effectively facilitate commercial bank involvement in the space whereby they effectively outsource the deal-screening, due diligence, negotiations and closing processes to a fund manager like ourselves, and in return they get to put their debt in that niche space, which up until now has not been banked."*

Moreover customer acquisition seems not be a challenge for the company, as indicated in the following extract:

> *"I've found it's a very effective way of building a pipeline, it doesn't require much. It's the unique set of circumstances in that there are hundreds of developers running around trying to close projects in this country, and the banks, the funds, the lawyers, the contractors, they all run off their feet. It's a unique set of circumstances and it's the one aspect of the business I haven't really had to work too hard at."*

However, the company maintains a very close relationship with its customers using what is affectionately referred as the 'little black book' as suggested in this quotation:

> *"I have been approached by magazines, people looking for sponsorship for things; easiest way to market this fund is through my little black book of contacts and to preserve a relationship with commercial banks. It's quite a small community and network and then to go and take up speaking slots at conferences where all you have to do is drop in a couple of words about what you're doing and people will come and find you afterwards."*

4.6.3.5 Business model innovation visualisation and communication

Financial Services Provider B has a very small team and the business model is not necessarily visualised but often in the mind of the executive as reflected in this quote:

> *"It's up here and I don't need to put a strategy document out [for] me [to] discuss it with my colleagues. They sometimes accuse me of internalising too much information but no, not really."*

However, the loan profile is visualised which could be interpreted as the component value proposition of the business model is, as indicated by this extract:

> *"I have increasingly started representing the loan repayment profile graphically but that's not a business model. It's really to try and demonstrate to various people that don't understand the product just how, what it looks like."*

4.6.3.6 Business model components summary

In summary the company provides funding solutions for developers operating in the renewable energy space with products that are CPI related and hence have a natural hedge against inflation. Furthermore, the business model is perceived to be differentiated both in terms of providing services in a niche market, as well by providing a simplified funding solution by cutting a layer of complexity of swapping the Jibar-plus debt product with a CPI-linked product, resulting in a competitive advantage for the customers, while increasing value for the company and its investors. In addition the company's key activities are differentiated using the unique set of skills the company has. The target customers for the company are a previously un-served market that is too small to be served by the commercial banks, while the projects are too big to be funded from the developer's balance sheet. Moreover the company maintains a one to one approach in managing the customer relationships using what is referred to as "the small black book."

4.6.4 Business model innovation approach

The company's approach to business model innovation could be said to be slightly complex as components that were affected spanned the three categories of the business model components. These were the 'who' in terms of the target customers, the 'what' in terms of the value proposition offered and the differentiation as well as the 'how' in the terms of the key activities. The innovation in terms of target customers entailed targeting a niche area, which was a grey area of unbanked market, and the approach was that rather than going head to head with commercial banks the company offers a product that allows commercial banks to participate, effectively complementing commercial banks, but does not competing with commercial banks.

Thus commercial banks are able to offer debt in a niche area that was unbanked. In relation to the 'what' value offering, the company brought to market a simplified product or service that created a shared value in that risk for the investors was reduced and a slightly lower tariff was offered to the customers, who could choose a product that has a back-end repayment profile. The company's ability to compete was preserved by providing a product that is differentiated from those of competitors. The company was a first mover in the space, thus accruing first mover advantages.

4.6.5 Business model innovation Lessons learnt

Three main lessons may be drawn from Financial Services Provider B. These include the technological advancement drivers that come beyond the financial services sector, the use of complementary and unique skills to change the way the value proposition is delivered, and the importance of realising existential challenges in the business model and taking the corrective action.

The main technological driver for business model innovation in the company was not necessarily financial services technological advancement but rather technological advancement in the market they are servicing. In particular, the took advantage of the renewable energy sector solutions becoming cheaper and opening new markets for funding and creating a market that was not serviced by the current commercial banks offerings as the market was too small for them. Hence the company is able to enable the commercial banks to participate in the space without having to go through the rigour of hiring a whole new team and setting up all the structures within their organisations. Thus they have created a niche product or service that effectively complements commercial banks but does not compete with them.

Financial Service Provider B recognises its in-house capacity and its unique complementary skills set, and uses this to shift the way value is created by the company, not only differentiating the product but enabling the company to be involved earlier in the debt fund supply chain. It has become what is called a ‘covenant maker’ as opposed to being a ‘covenant taker’. As a covenant-maker the company gains more in control by getting involved and seeing a project in the right direction as opposed to simply having to live with the consequences of purchasing debt that somebody else has negotiated.

Another key lesson that could be drawn from the company is the realisation of existential risk and taking appropriate action that has led to the company coming up with a new product that has a ‘win’ for all the parties that are concerned. One of the key factors that contributed to the new business model success was said to be the fact that the company is

very nimble in the sense that unlike large financial institutions which in many cases take a long time to innovate and change product offerings, the company could very quickly go through the change process. Being nimble enabled the company to have a first mover advantage which is perceived to be of importance in the highly competitive debt market. In this change process three or four different alternative structures were considered and assessed for risk. For example, offering an exclusive product was perceived as being too narrow and specific, and hence rejected, as was the offering that would constantly rely on a dividend stream upwards, while the option that was accepted offered better returns and less risk.

4.7 Context Financial Services provider C

4.7.1 History and business model evolvement

This company's history and business model evolution is illustrated in Figure 4.20.

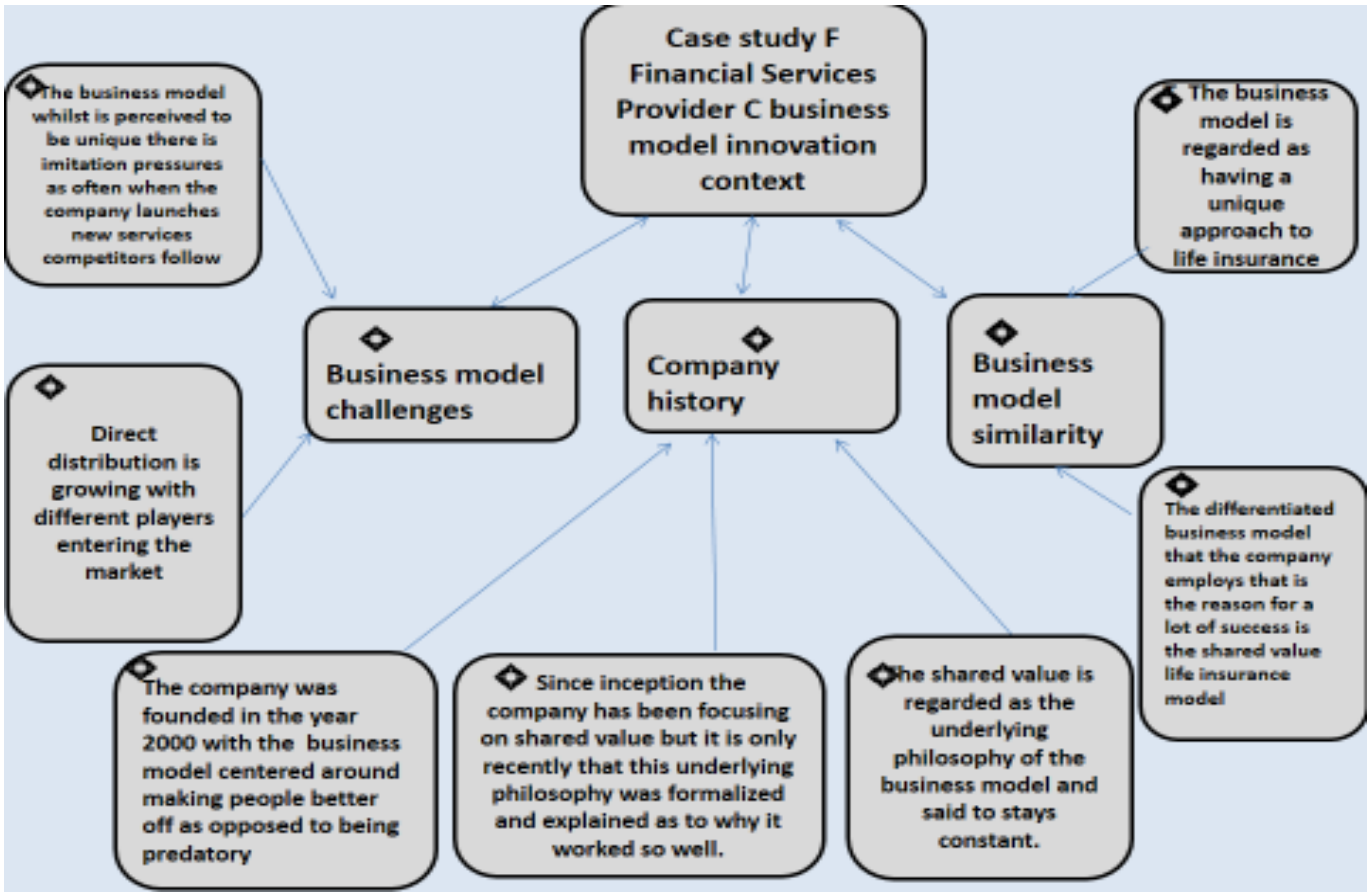

Figure 4-21: Financial Services Provider C history and business model context compiled by researcher

4.7.1.1 History

In a financial services sector where there is a high degree of concentration and interconnectedness with the top five banks, Financial Services Provider C is one of the leaders in the market, providing both financial services and insurance services. In addition the company is perceived as a first mover and disrupter in its market, a view supported by some of the executives in the competitor companies that participated in the study. This segment will briefly discuss the company's history and how the company's business model has evolved as well as the similarity of the company's business models to those of other companies in the market. The segment also highlights the company's approach to business model innovation.

The company has been in existence for over 10 years and the company's business model is centred on making people and society better off as opposed to being predatory, as indicated in this quote:

> *"As a result of our model the client is healthier, and has a better proposition. Therefore Financial services Provider C is more profitable and because people are healthier society is better off so everybody wins."*

The business model's guiding philosophy has been in use from the beginning but was not necessarily formalised. It has been recently been formalised and explained, and why it worked is reflected in the following quote:

> *"It is a social business model designed to make people better off … it has always been a value share, we just formalised it and explained why it worked so well."*

Hence the business model is the guiding philosophy has stayed constant and the company is not innovating the business model per se but how the business model is delivered, as reflected in this extract:

> *"But you see I wouldn't call us – our business model is our business model. So I wouldn't say we're innovating a business model per se. But given that business model that sort of is the guiding light, now you are constantly relaunching new value*

proposition to the market and how such value propositions are delivered and monetised."

4.7.1.2 Business model similarity

The company's underlying business model philosophy is regarded as unique and thus the business model is seen as having a unique approach to insurance and the differentiated business model is said to have brought the company a lot of success while having generated value for the customers. As such the company's approach is focused at new opportunities for creating value with the products and services that go beyond being novel in terms of being 'smart'.

In addition to the unique underlying philosophy the company's business model seeks to be disruptive in the sense of having a deeper understanding of the customer's problem and offering products and services that are aimed at creating value in an inspiring and disruptive manner. It created new value that did not exist, while in addition revolutionising the products and processes with the fundamental principle being that each stakeholder in the business model derives value. This quotation reflects an example where value was created for the customer instead of offering customer a lower premium.

"No, we are not creating new market by finding opportunity no one is going for, it's disrupting an existing model of the market. Everyone's writing insurance, we disrupted it by … instead of saying we'll give you the cheapest possible premium."

4.7.1.3 Business model challenges

Although the business model is perceived to be unique, there are imitation pressures, as often when the company launches new services competitors follow, as reflected in this quotation:

"The people are competing with the core products but not the business model it's what I mean for example when one of our competitors tried to launch a program similar to ours everyone calls it the Company ABC and our product name." In addition to the imitation challenge direct distribution is growing with different players entering the market as indicated in this extract:

"There's a growing direct distribution play which I guess is different and different players I think you know, many different types of companies are doing insurance now

compared to how it used to be. It used to just be insurance companies, but now banks sell insurance … Mobile companies sell insurance, retailers sell insurance. So while it's not necessarily direct competition it still competes for a share of a wallet of the receivers."

In summary, Financial Services Provider C has been in existence for over 15 years with a business model centred on creating shared value, which serves as the underlying business model philosophy for the company. This model takes a unique approach to life insurance and disrupting an existing highly contested marked by creating new value propositions for customers. Despite the business model's uniqueness the company faces challenges with value proposition imitations as well as the increasing competition with direct distribution growing and new players such as banks, mobile companies and retailers, such as Checkers, a fast consumer goods company.

4.7.2 Business model innovation drivers

There are number of factors that are driving business model innovation, including technological advancement and the market factors in terms of competition that are both regarded as intense drivers as well as some internal organisation factors that are also intense. Furthermore, market factors in terms of changing customer needs and the regulatory factors are also moderate drivers.

These factors are illustrated in Figure 4.22.

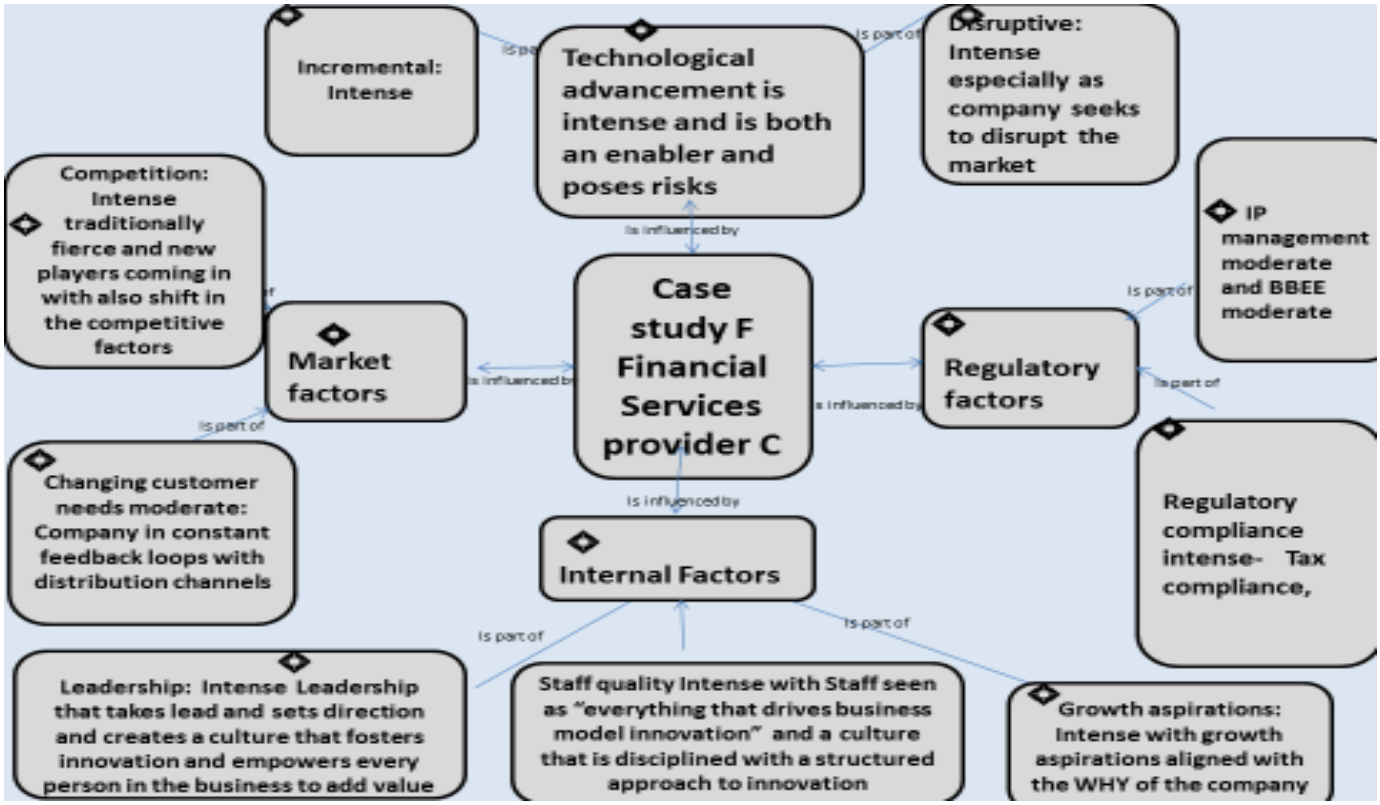

Figure 4-22: Financial Services Provider C business model innovation drivers compiled by researcher

4.7.2.1 Market factors

The changing customer needs are perceived as a moderate driver to business model innovation as highlighted in this quote:

> *"Changing customer needs [are] a moderate driver relative to others … externally we are in constant feedback loops with our distribution force so we get feedback on a daily basis from our advisors saying what works and what doesn't and how can we fix this."*

In terms of competition one may suggest that competition is an intense driver for business model innovation as one the participants noted:

> *"If you look at our core business there is always fierce competition as traditionally the industry is fierce with a lot of competitors with some shifts in terms of new entrants from the dominant intermediate distribution channels … but as far as the business model there is no competition in the world."*

Despite there being no competition in terms of the business model the market is highly competitive as reflected in the following quote:

> *"The market itself is something that is highly competitive and is constantly pushing the boundaries, so each time we launch a competitor will launch and we will look at their product and try and make it better."*

The other participant expanded on the shifting basis of competition using the following extract:

> *"There is a growing direct distribution at play which I guess is a different I think you know many different types of companies are now doing insurance compared to how it used to be. It used to be just insurance companies, but now banks sell insurance, mobile companies sell insurance. So while not necessarily competition it still competes for a share of the wallet of the receivers; so it is shifting."*

4.7.2.2 Technological advancement

Technological advancement is identified as a massive driver for business model innovation as supported by this extract:

> *"So technology is a hugely powerful enabler for our product design number one, and secondly, for your product service. So you know in terms of how you get information from clients, how you service your clients, how you communicate to your clients, how you process claims and service customers creating a digitised experience for clients."*

The importance of technology as a driver for business model innovation was further substantiated as follows and also highlights the risk factor in technological advancement,

> *"Technology is a huge enabler in everything we do, allowing us access to information that you never previously had, which is crucially important in our business model … At the same time technology poses risks to the business … when you get something wrong due to technology the risk is bigger too."*

Based on the importance of technology for Financial Services Provider C both incremental and disruptive technological advancement were regarded as massive drivers for business model innovation, specifically technologies around mobile technologies, social networks and data analytics as intense drivers. But cloud computing, despite providing efficiencies and capabilities that are important, was not perceived as a driver for business model innovation. The intensity of data analytics is reflected in this quote:

> *"Data analytics is the biggest driver, it is everything, it's what we are from the top to the bottom, at the core of understanding risk the more data we have about behaviour, about how all the various factors impact their risk more accurately we can assess risk and price and … that generates value"*

Mobile is also another technological advancement feature that is regarded core as reflected in this extract:

> *"Mobile is core to everything we do. So we are giving real-time feedback … we have seen how that changes behaviour. It enables us to track data on a whole new level; wearable devices as well as mobile so this whole trend towards wearables is very exciting and you know gives us access to even more data."*

4.7.2.3 Regulatory factors

Regulatory compliance is perceived as huge driver for business model innovation and with regulation impacting both the design and delivery of products and services is highlighted below:

> *"It genuinely impacts the entire business from … the compliance of everything you do, tax implications of all the products, the different licences that you need and it impacts your marketing. It impacts your distribution channels. The design of everything."*

An additional factor that has an influence on business model innovation is BB-BBEE in terms of being a challenge to the business model when the company fails to meet BB-BBEE targets due to the limited availability of the specialised skills that are required by the company.

4.7.2.4 Organisational factor

The internal organisational factors include growth aspirations, which are a huge driver for business model innovation. The alignment of the company's business model to the company's 'why' is reflected in this extract:

> *"It is about changing society, having a positive impact that aligns with our business model of shared value. I think when you can achieve that financials fall into place, so, it's never going into a brainstorming session saying 'how we can increase profitability?'"*

An additional key organisational factor that is perceived as an intense driver for business model innovation in the company is leadership as reflected below:

> *"There is a huge premium on leadership – a CEO who takes the lead and sets direction and is part of the process. Creating an environment and culture that fosters innovation, that collaborates, that empowers and enables every single person in the business to add value."*

Staff quality is another factor driving business model innovation at the Financial Services Provider C as indicated by this excerpt:

> *"The quality of staff is an intense driver, the culture, its people are everything and it is what drives business model innovation … the discipline of having a very high-paced dynamic environment that kind of takes no prisoners … so we are launching in March, so this year it will be brilliant … working towards some sort of end goal and being able to witness the fruits of labour with some kind of rock star launch."*

Thus the company is said to have created a culture and environment that is supportive to blue sky innovation in brain storming and thinking that successfully integrates the people performing business functions as well as the R&D functions. The people are said to be everything that drives the business model innovation. The innovation culture of having a disciplined and structured approach to business model innovation with a launch date set even before the products and services are designed, and working towards some end goal and witnessing 'rock star' type of launch that happens annually, are regarded as some of the

factors contributing to the company's success in their business model innovation endeavours.

4.7.2.5 Business model innovation drivers summary

In summary, both external and internal factors are motivating the company to innovate the existing business model. The business model is perceived as being constant from the philosophy point of view with the innovation being around how the business model is delivered and on the products and services that are delivered and how value is captured for the company in these products. External factors include market factors as moderate drivers while competition is an intense driver. Furthermore, technological advancement in terms of incremental and disruptive advancement are seen as intense with the technologies around social networking, mobile and data analytics perceived as intense while cloud technologies are seen as moderate drivers for business model innovation. Regulatory compliance is seen as an intense driver that affects all the components of the business model, with BB-BBEE posing challenges to business model innovation in terms of the limited availability of the required specialist skills. Internal factors driving business model innovation include growth aspirations, aligning the company's business model to the company's underlying philosophy, as well as leadership, staff quality and the company's supportive culture to business model innovation.

4.7.2.6 Component what value proposition and differentiation

In terms of the group the value proposition that is offered is basically insurance and financial services. The company products and services serve to create value while providing enhanced actuarial dynamics, making the company more profitable and as a result creating a kind of virtuous cycle.

4.7.2.7 Component 'how': key activities, resources and partners

The company innovates in the 'how' group in terms of the key activities that, while hidden from the customer, the company strives for excellence, developing actuarial models that drive efficiencies while enhancing the customer experience. In addition key resources supporting the business model are highly skilled and unique with resources regarded as a key driver for business model.

4.7.2.8 Component 'how much': costs, revenue and pricing

Regarding the 'how much' category, pricing plays a key role, with the company adopting a dynamic pricing approach whereby pricing is used as both a behavioural change tool and an acquisition tool, as opposed to using the normal approach that uses statistics to work out how long people live, when one is likely to get sick and when one is likely to lapse and derive a standard premium based on these inputs.

4.7.2.9 Component 'who': customers, channels and relationship

The company's target customers are in a number of segments as the company has various services but in each of the markets the company operates in effort is applied in understanding the issues both in terms of what the challenges are, and the reasons that may be attributed to the challenges. Thus value propositions are offered to create value for the customers using dynamic pricing to influence the customer behaviour. More often than not these are existing markets where the company strives to revolutionise the way the market operates. The fundamental belief within their insurance services business model is that people may be incentivised to behave and this will result in the company saving money on the claims and such money may be used to fund customer incentives.

4.7.2.10 Business model visualisation and communication

The business model components may be divided into the four categories of the 'what', the 'how', the 'how much' and the 'who'. The business model is communicated in various ways, depending on the audience using different methods to communicate the business model. . One of the key audiences to whom the business model is communicated is the international partners where the business model is communicated through white papers that explain the business model and how it works as well as the science behind the business model and how it could be morphed to suit the contextual background.

The second group of audience is the distribution channel partners who need to understand the business model as the distribution partners are the ones who will answer to the clients as to why the products and services work and why it is not just a 'too good to be true' kind of product and service. The third audience are the customers where the company has to

communicate to the customers and make them aware of the company's business model and what the company is trying to achieve and how the customers will benefit.

4.7.2.11 Business model components summary

In summary, the company provides insurance solutions aiming at creating shared value and annually launching new products and services with innovation focusing on behavioural change and creating unique value for the customer and reciprocal links between the company services. Thus the company differentiation is around shared value, generating value by giving customers incentives to behave better, which creates value, and some of that value is passed back to the customer. Furthermore, the company strives for excellence in its key activities in excellence in developing actuarial models to drive efficiency and enhance the customer's experience. In addition the company targets an existing market with the aim of revolutionising the way the market operates and using dynamic pricing as an acquisition and behavioural change tool. This company business model components are reflect in Figure 4.23.

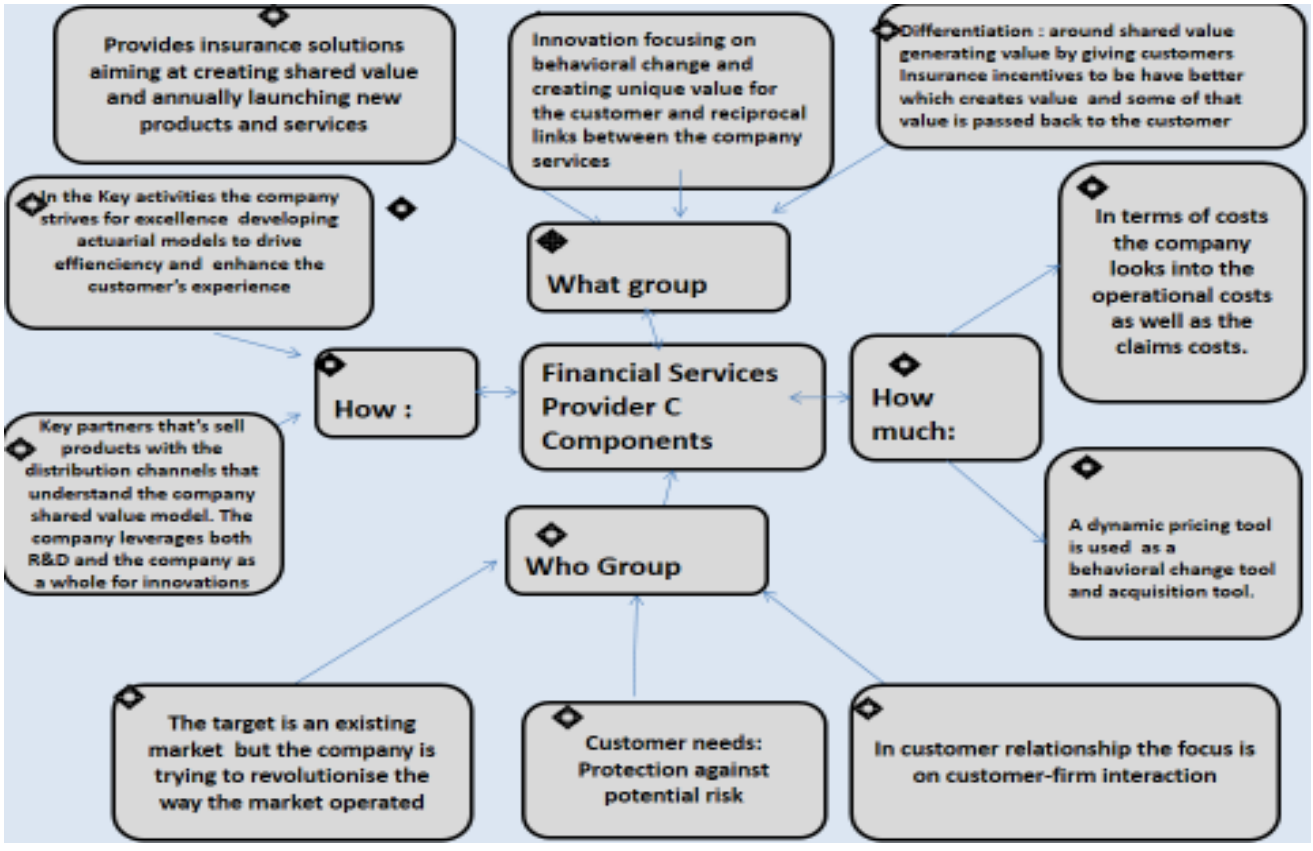

Figure 4-23: Financial Services Provider C business model components compiled by the researcher

4.7.3 Business model innovation approach

Financial Services Provider C's approach to business model innovation is towards disrupting the market, while the traditional life insurance approach is to simply quantify risk and determine price using a number of inputs. The key question that the company asked was:

> *"Why should we treat everyone the same in terms of life expectancy when everyone has different life expectancies?"*

Thus the company a took a different approach not to just quantifying risk and using it as a pricing input but quantifies risk and in addition shapes the risk using behavioural economics and incentives to change behaviour. In so doing it uses incentives in the short and medium term to change behaviour using tools such as dynamic pricing.

This has resulted in creating new value for the customers and in the company. The company's approach to business model innovation is centred on creating new value and in some cases has undertaken simple business model innovation in terms of changing only one component within the business model offering new value propositions that are 'smart'. The company has taken complex business model innovation that involves customer-facing innovations and internal-facing innovations. Furthermore, the company has a structured discipline approach to business model innovation that is said could be deviating from theory in that that the launch date is set even before the ideas are generated, thus setting the launch date and working backwards.

4.7.4 Business model innovation process

Financial Services Provider C adopts a structured approach to business model innovation that follows an innovation cycle that is driven by launch dates that are set annually. In the business model innovation cycle the company is continuously working towards having new products for the launches working in cycles and has a dedicated R&D team that is constantly undertaking research on current customer behaviour in both local and global markets.

In addition to the research and development there are other streams that are used to uncover innovation such as in-house competition that involves the entire organisation, such

as the challenge that is put out to all staff to come up with the next ground-breaking ideas. This mobilisation entails bringing in an inter-disciplinary team, which will often include having regular meetings with the senior executives in the business; the meetings are not necessarily for approval but for contribution.

The mobilisation steps are followed by an initiation stage that is supported by the fact that the company is constantly trying to improve and looking for the latest trends and technologies to ensure that appropriate technologies and trends are incorporated as quickly as possible, as well as providing research that supports a better understanding of customer needs, both understanding the shortfalls and the gaps in the market.

The information from the initiation supports the ideation as there is a lot of research and a lot of blue sky brainstorming, really getting ideas to complete the ideation, getting the different stakeholders in the different areas of the business to collaboratively solve the big challenges. The benefit of involving the entire organisation in the innovation process is regarded as leveraging expertise in the business that R&D may not necessarily have. Thus linking both the R&D and business areas, and more so the best people to solve the problems, often involves individual staff members working in the specific areas. In addition, this exercise serves to identify creative and innovative talent that may not necessarily be working in R&D to showcase their creativity and skill. This, according to one of the participants, has been a great approach to identifying great talent.

Once the cloud of potential business models have been assessed and prototyped and the most suitable prototype has been selected for implementation there will be integration. Integration into existing systems and processes as well as the multiple streams of work with the various stakeholders that takes place is documented to get to product implementation and launch.

Business model monitoring is one of the key activities that is undertaken, with the participants suggesting that monitoring is so crucial that there would be no point in launching if the exercise will not be monitored. Such monitoring would entail setting up the

dashboards that are going to be used to receive the feedback and the loopbacks in terms of if the business model is working as expected, or if it is not working how it will be fixed.

4.7.5 Business model innovation lessons learnt

A number of lessons may be learnt in terms of business model innovation in the company's context. These lessons relate to the importance of using a collaborative approach that links the company's R&D with business expertise, adopting a structured approach to business model innovation with annual launch dates and using dynamic pricing to change customer behaviour. Additional lessons involve the value of managing relationships in a multi stake-holder business model to ensure business model sustainability. As well as the prominence of innovation culture in contributing to business model innovation success in the preceding paragraphs, these lessons are briefly outlined starting with the collaborative approach.

Using a collaborative approach that links R&D and business expertise was perceived as one of the factors that have contributed to business model innovation success. In this collaborative approach the R&D department undertakes researches on best Practice, and new ways of doing things so as to generate ideas out of the box in how the company could can we meet needs in a new and exciting way or generate value in a different way. Linking R&D with business expertise enhances the solutions that are generated and kind of leverage expertise in the business that R&D don't necessarily have and experience in the business,

Linking R&D expertise and business expertise has been very beneficial for the company. As there is a dedicated R&D area that is constantly doing research, researching current behaviour, global behaviour, and the local markets as well. While in the process created a culture and an environment that is completely supportive of blue sky innovation in brainstorming and thinking where the entire organisation is involved in the business model innovation process. .As at the end of the day the best people to solve problems are the individual staff members who are working in their specific spaces. Thus leveraging expertise in the business that R&D do not necessarily have, and experience in the business.

Another effective lesson that one may draw from Financial Services Provider C is the structured and disciplined approach to business model innovation with cycles and timelines

and having a complementary collaborative culture and environment that fosters innovation in an effective way. Such collaboration could come with enormous challenges in terms of an infinite feedback cycle where things never get done. Hence collaboration needs to be done in an effective manner that creates an optimised balance between effective decision making and allowing space for getting blue sky ideas and real kind of novelty innovations coming through. The discipline for Financial Service Provider C is supported with the uncommon practice of setting the launch date even prior to having a product idea. However in some case the structured disciplined approach to continuous business model innovation could lead to complicated product offerings as such companies should always be striving for simplicity, ensuring that while new offerings are innovative they are still simple for the user.

A key lesson that may be drawn from the company's approach to business model innovation is the use of a dynamic approach to pricing in such a manner that pricing is used as both a behavioural change tool and as an acquisition tool. For example, as opposed to offering customers a standardised price, it uses pricing as a behavioural change tool by offering a client a discount upfront and adjusting the premium up or down based on associated positive or negative behaviours.

An additional lesson that one may draw from the company's approach to business model innovation relates to the importance of stakeholder relationship management in a multi-stakeholder business model. This is said to be one of the fundamental factors that contributes to success. This view is reflected in the following quote:

> *"Essentially if one stakeholder is losing that model eventually collapses because for something to be sustainable you need all your key stakeholders in the model to derive value from the model and in life insurance our key stakeholders are obviously us as a company, our clients, our advisors [that is] the intermediaries who sell the products and society at large. So that's why it's very important for us in this model that every single stakeholder derives value."*

4.8 Conclusion

In conclusion in this chapter the context within which the research questions will be answered was presented. In so doing a detailed discussion of each of the case studies is offered. The discussion is based on the collected data using actual participant quotations to support the dialog. Moreover in each of the sample companies the company history and business model context overview is presented. In addition the business model innovation drivers and business model components are sketched. These examination of the case studies concludes by outlining the business model innovation and approach and the lessons learned in each case. Based on this discussion one may argue that there are some similarities and difference between the sample companies in the ICT and those in the financial services sector. Hence this presents an opportunity to make some comparisons between the sample companies in these sectors in continuing to set the scene for answering the research questions. The next chapter will present a cross case comparisons of the sample companies.

Chapter 5: Cross case comparing ICT and Financial Services

5.1 Introduction

A comparison between the cases studies in the ICT services and Financial services sectors presents an interesting view, but the discussion on the comparisons needs to be treated with caution as the sample was small and the findings may not necessarily be true regarding all the companies in these sectors. However, it points to areas of interest that could be investigated further. The case studies comparisons are provided around the areas of the business model innovation process and redesign, business model components and business model innovation drivers. As this a key element in building theory from case studies with Eisenhardt and Graebner (2007) suggesting that theory development processes need to be reported with transparent description, particularly regarding how the theory was inducted from the data including the description of cross-case comparison and techniques.

The comparisons are based on the density of codes on a particular theme, as the large number of quotations associated with a code may indicate the strong evidence found for the code. Thus code density is used as a proxy for measuring importance. The companies are examined on the business model context, business model innovation drivers, business model innovation process, business model components and business model redesign approach.

5.2 Business model context

In reviewing the business model context, the business models of the sample companies are perceived to be differentiated from those of competitors to varying degrees. The ICT services providers' differentiation appears to focus on provision of customised products and services, while financial services focused on the uniqueness of products and services. This may be attributed to the fact that while the companies in the ICT sector were providing products that are supported by services and mostly focusing on the business-to-business area, those in the financial sector provided a variety of services ranging from different banking products and insurances services in a business-to consumer-environment. The business model challenges faced by the ICT companies included scalability of services and

the low barriers to entry and the intensifying competition with some case partners becoming competitors and the 'China price' eroding margins from the product business models while Indian companies were eroding the margins on the services business models. In the financial services case studies the business model challenges included the global financial meltdown having resulted in some of the case studies to increased regulatory compliance requirements, especially for those companies that are owned by foreign companies. Competitive pressure are also said to be increasing with new players such as retailers entering the market and the growth of direct distribution in the insurance companies. Furthermore, challenges regarding existential crisis leading to business model innovation and changes in the global markets were discussed only in some case financial services case studies. The abstraction level of the business model ranges from a very detailed product level, the business level and the company level to the much aggregated industry level (Wirtz et al., 2016). The business model level discussions indicated that in both sectors there was focus at product level, company level as well as in the industry specific business model level.

5.3 Business model innovation drivers

Both the external and internal drivers were having an impact in the ICT and financial services companies. These are market, technology, regulatory and organisational factors. In particular, technological advancement was regarded as an intense driver in all the case studies, and specifically incremental technological advancement. In the ICT services companies the market factors in terms of competition were regarded as most intense, though in one of the case studies the perception was that while the company monitors completion, competitive pressure were not as intense as the market was big enough to accommodate additional players. The erosion of margins by the 'China price' and the erosion or margins by the companies from India was of concern to the ICT sector, though one of the participants pointed out that despite the presence of the "china price" in their case they were focusing for a market that requires customised services as reflect in this quote:

> *"In the technology space it is interesting because the China price that you refer to isn't necessarily original; it's more case of technological in nature. For example, we as*

an agency offer the service to build big websites we charge a premium price for that service, but if you want to you can and go and build your website for free … [write] your own blog or go can go to WordPress and setup your own blog or go to Google blogger … [or] you can set your own site with tools like wikis the tools are there that make it free. The China price is already there in the sense that there are cheaper ways. But there is big premium being put just on methodologically customising your platforms and technologies to suit your needs [or] copy a cookie cutter setup."

In some of the ICT case studies the changing customer needs were perceived as moderate. This was either because the customer needs were changing slowly as the products and services were linked to legislation that changes only once in five years, or because the company was providing services to customers whose needs do not change radically with change reviewed on a case-by-case basis. However, in the other case study, despite providing services in a business-to-business environment the changing customer needs were seen as intense. In contrast, factors relating to competition were perceived to be intense in the three sample financial services companies, with the contributing factors being new players coming into an industry that is already has intense competition, and a shifting basis of competition. The market needs in terms of changing customer needs were said to be intense in the two financial services companies and this was attributed to the need to serve the unserved customers in both cases and the need to address the current consumer needs while forecasting where things were moving in the other case.

In reviewing the technological factors, while one noted the incremental technological driver for business model innovation in all the case studies, the effect of disruptive technological advancement was seen as important in only one of the ICT sector companies, with the other case reflecting that disruptive technology was not a driver, as technological advancement occurs over a period with the trends for the past 10 years in ICT having remained slightly incremental. In the other case study there were conflicting perspectives in the different divisions with the participant from one unit viewing the disruptive technological driver as an intense driver and the other unit participant suggesting the company works in a business-to-business environment that would not take a risk on disruptive untested technologies but would prefer stable technologies.

Regulatory factors are an additional driver for business model innovation in the case studies. In particular, regulatory factors concerning BB-BBEE, IP management, POPI and regulatory compliance in general. The overall regulatory factors appear to have been more of a driver in the financial services case studies, In particular BB-BBEE and IP management being more intense and regulatory compliance being major only in the financial services sector. The regulatory compliance importance for financials services may be attributed to the fact that regulation in the financial services, specifically insurance, affects the products and services directly as indicated by this extract from one of the participants:

> *"It genuinely impacts the entire business from you know the compliance of everything you do, tax implications of all the products, the different licences that you need and it impacts your marketing. It impacts your distribution channels. The design of everything."*

In contrast the prominence of POPI was particularly relevant for the ICT sector as shown by the following extract:

> *"Regulation I think the regulation of the industry is playing a role … I think [POPI] is going to change the way that South Africans treat information but what we have not recognised s that there are many other countries that have a similar kind of act. Europe and America has its own version as well so multinational companies …. many of these companies that are multinationals whereas before they thought they could centralise that information"*

Organisational drivers present a view on those internal organisational factors driving business model innovation. These consist of staff quality, entrepreneurial leadership, innovation culture, growth aspirations, existential crisis and aligning the business model to the company's reasons for existence. Staff quality, entrepreneurial leadership and growth aspirations were substantial in driving business model innovation in both the ICT and financial services sectors. However, there were additional factors in the financial sector that were indicated to be key, including innovation culture, existential crisis and aligning the business model to the companies' reasons for existence.

5.4 Business model innovation process

The business model innovation processes examined form the main steps of the 4I-2M business model innovation process steps. The main steps in the process include mobilisation, initiation, ideation, integration and monitoring. The sample case studies in both sectors may be said to dedicate more or less the same effort to business model innovation implementation steps. This could signify the importance that both sectors place on the implementation of business model innovation projects. In examining the other steps one may suggest that while there is a move towards a structured process with one of the sample companies having a structured process and an annual launch of business model innovation projects, and another company in the ICT sector going through the training of executives towards moving to a structured process and in addition the company having business model innovation experiments that are undertaken in a subsidiary companies and later brought into the mainstream.

5.5 Business model components and communication

The business models in both sectors may be visualised in terms of the four categories of ‘what’, ‘how’, ‘how much’ and ‘who’. ‘What’ covers the value proposition, and how such value is differentiated. The ‘how’ consists of the key partners, resource and activities. The ‘how much’ covers the costs, revenue and pricing and the ‘who’ deals with the target customer and relationships. The business model components appear to offer value in visualising the companies’ business models. However, one of the companies in the financial sectors articulated the need to visualise risk, in particular the ‘who’ could affect the intended value proposition.

5.6 Business model redesign approach

In the business model redesign approach the key aspects are the complexity of the approach, which looks into whether or not one or more components of the business model were innovated. Additional issues with the business model redesign approach are the approach that was followed by the company regarding the complexity in relation to the number of components that were redesigned and the nature of change as to whether the focus was to incrementally change or disrupt existing business model. The approach in

addition deals with the focus that is placed on business model alignment following redesign. The importance of alignment was articulated succinctly by one of the participants as follows:

> *So if it hasn't got a domino effect it is not a fully integrated business model. So it is one of those things that you have to get right."*

The focus on business model re-alignment and complexity appears to be similar in both the financial services and ICT sectors, while there is marked variability the design approaches. There appears to have been marked difference between the sectors and such difference may be attributed to the fact that in the financial services case studies one was already adopting a structured approach to business model innovation with annul launches, while all the other case studies were using an organic approach to business model innovation. One of the sample cases in the ICT sector, however, was moving towards having a structured approach. Another potential factor that may be contributing is the extent of the business model change in terms of whether the approach was to incrementally evolve or disrupt existing business models.

5.7 Conclusion

This chapter compares the ICT and financial services sector case studies. Caution must be exercised due to the very small number of case studies that were used. However, the comparisons may be of value in terms of providing a foundation for undertaking a more in-depth study to examine the potential similarities and differences in how companies in these sectors manage business model innovation to compete in a changing environment. The next chapter presents the research study's results.

Chapter 6: Research results and discussions

6.1 Introduction

The research objectives are achieved by answering the research questions and the data are organised according to the conceptual research model. Accordingly, the data analysis investigates the research questions, which correlate to aspects of the conceptual model, namely business model components, visualisation, and communication and redesign articulation, understanding, communication and redesign as well as business model innovation drivers and business model innovation process. The research objectives are answered using the thematic analysis approach that was presented in Chapter 3.

The table below depicts an over view of the results as discussed in the findings and cross case comparisons and followed by a detailed presentation of how the research objectives were achieved and the research questions answered.

Table 6-1: Case study results and conceptual framework

	Case study A	Case study B	Case study C	Case study D	Case study E	Case study F
Why and how business models are articulated	Modelling is done to create shared understanding and support focusing the business and using the busines model as reference point and stick m house anology is used	Business model iis graphically depicted to visualised direction and give a road map for navigation and map the relationship when communicating with new partners. Some units use business model canvas others use value chain	Communicate the business model and assist custommers to identify Broad Based Economic Empoerment opportunities and the business model canvas is used	Communicated with presentations as a knowledge sharing sessions regarding where the company is moving	Depending on the auidience different methods are used to communicate the business model	Depending on the auidience different methods are used to communicate the business model
Components that are used to visualise the business model	What: value offering and differentiantion, how: key activities, resources and partners whilst how much, cost, revenue and pricing was not modelledin the house anology it was regarded as an important basis for business model innovation	What value proposition anddifferentiation, How key activities.partners and resources. As well as how much revenue, cost and pricing. Who customer segments, relationships and channels	What value proposition anddifferentiation, How key activities.partners and resources. As well as how much revenue, cost and pricing. Who customer segments, relationships and channels	What value proposition anddifferentiation, How key activities.partners and resources. As well as how much revenue, cost and pricing. Who customer segments, relationships and channels and **component who will content**	What value proposition anddifferentiation, How key activities.partners and resources. As well as how much revenue, cost and pricing. Who customer segments, relationships and channels and **component who will content**	What value proposition anddifferentiation, How key activities.partners and resources. As well as how much revenue, cost and pricing. Who customer segments, relationships and channels and **component who will content**
Business model innovation drive	Market:intense competition, moderate china price, moderate changing customer needs, Technological: massive incremental innovation and disruptive not a driver, regulatory: BBEE moderate and IP mangment maybe in the future, Internal: Intense Entrepreunuria leadership,Intense staff quality intense growth aspirations	**Market:** intense "china price" and intense changing customer needs. **Technological**:intense incremental, conflicting views on disruptive as a driver,**regulatory factors:** weak IP management, POPI to become inense Internal: Intense Inspirational leadership, intense Staff quality.	**Market:moderate** competition and moderate changing customer needs. **Technological**:intense incremental, intense disruptive as a driver,**regulatory factors:** moderate to weak IP management, Moderate BBEE: Intense growth aspirations , intense Staff quality.	**Market:** intense competition and intense un-served customer needs. **Technological**:intense incremental, intense disruptive ,**regulatory factors:** moderate IP management, intense regulatory compliance with both local and in some cases global regulatory requirement **Internal** : Intense leadership, Intense growth aspirations , intense Staff quality.	**Market:** intense competition and moderate changing customer needs. **Technological**:intense incremental, intense disruptive ,**regulatory factors:** moderate IP management moderate B-BBEE :Intense leadership, Intense growth aspirations , intense Staff quality.	**Market:** intense competition and moderate changing customer needs. **Technological**:intense incremental, intense disruptive ,**regulatory factors:** moderate IP management moderate B-BBEE :Intense leadership, Intense growth aspirations , intense Staff quality.
Process used to mange business model innovation	Organic, ideation sessions	Organic in some units and structured in some units along Mobilisation,initiation, ideation, integration,implementation and monitoring	"Organic " and develops as things go as the executive meets regurlalrly and once a year for strategy development	Starts with determining the customers frustrations with existing value proposition following the inititiaon and ideation and implementation and monitoring	Seeks to disrupt the market and follows a structured appeoach to business model innoavtion, mobilisation, initation, ideation, implementation and monitoring	Seeks to disrupt the market and follows a structured appeoach to business model innoavtion, mobilisation, initation, ideation, implementation and monitoring
Components of the business model that are redesigned	Value proposition component by having focused value proposition and client segments and value proposition customisation	Value proposition customised ba	Value proposition customised ba	How component key activities ar	Creating shared value with the value proposition	Creating shared value with the value proposition
Lesssons learned	Focusing on getting basics right, not changing too often, and understanding financials and maintaining a balnce between customer needs and the goods and services offere by the company	Balancing business model innovation between a follower and a disruptive approach, measuring business model innovation performance,having a technology acumen, importance of communicating the business to various stakeholders and making a distiction between business	The importance of understanding Broad Based Economic Economic and Economic Empoerment impact on the business model and the prominennce of understanding the compan's business model and monitoring business model innovation drivers	Communicating the business model differently to different groups, importance of leadership, value of business model adaptation	using a collaborative approach that links the company's R&D with business expertise, adopting a structured approach to business model innovation with annual launch dates, using dynamic pricing to change customer behaviour. Managing relationships in a multi stake-holder business model to	using a collaborative approach that links the company's R&D with business expertise, adopting a structured approach to business model innovation with annual launch dates, using dynamic pricing to change customer behaviour. Managing relationships in a multi stake-holder business model to

6.2 Research objective 1: Explore why and how business models articulated are.

The reasons for articulating the business models, according to Schmitt et al. (2004), is to represent business models formally so that business models may be compared and evaluated to reveal strengths and weaknesses that would serve as input in subsequent business simulations. Furthermore, such articulation and visualisation with ontologies facilitates business model communication within an organisation (Borch and Stefansen, 2004). In some of the case studies, the business model was articulated so as to facilitate communicating with staff enabling shared understanding of the employees at all levels as indicated by this excerpt from participant one:

> *"Our big business model vision we are drew a stick man figure house [with a] little block, a roof and a door … We have communicated that to all our staff and if you ask them[the] question about [what is] our business model they will draw you the exact same picture, everybody gets it and everybody is on the very same page."*

Participant five highlighted the importance of communicating the business model with employees as follows:

> *"Once were had been able to populate our business model canvas it was very easy. When we interview people our induction program we usually induct them on the business model on the one pag,e so basically communication of the business model is at entry."*

The business model was seen as a valuable tool when communicating with potential business partners and assessing the business value that they would bring to a company. In terms of clarifying the business value that each partner would be bringing to the business model as well as how the partner will be compensated for such the value... This benefit of visualisation of the business model when communicating with external partners is reflected in the following quotation from participant two:

"In fact I speak to about 20 companies a month. These are new companies from India that want to do business in South Africa. Using the business model canvas,you quickly realise they actually want to take our business away … because [when you]exactly map the partnership relationship to see who is bringing what and who is getting what in the relationship you see that what they want is just to take our business awayfrom us."

The articulation of the business model with the business model canvas was perceived to be of importance in enabling customers to document and visualise their own business models and identify the different types of B-BBEE pressure. Such that the customers understand the business case for B-BBEE and EE and fully comprehend the business case. This is supported in the illustration below from participant five:

"We also showed the business model canvas to [the customers to] help the customers understand the B-BBEE impact on their business model so they must be able to point out where there is a B-BBEE impact and it is very easy. you will find the B-BBEE impact either on the demand side of the business model or on the supply side. For example you got B-BBEE pressure on the demand side with the customer side are pushing for B-BBEE compliance failure to meet the B-BBEE presssure could result in the company losing customers hence losing [on the] revenue side. Another example is a B-BBEE impact around key resources. For example in the mining industry B-BBEE could have an impact on the renewal of the licence which is as one of the key resources is a mining. Failure to have a business case could reslut in loss of the licence which could collapse the entire business model … so companies could use the business model to have a business conversation around B-BBEE not an impromptu but conversations [about] what is the impact of B-BBEE and EE on the business model."

Visualising business models was seen as way to achieve simplification as shown by this quote from participant three:

"Well it gives people a visualisation of direction, and gives people a round map to navigate at times a very complicated business ..hence modelling I think process modelling and business modelling are very important as without the modelling you

do not get to trial run something you are going to do, as much as models do not always represent the way things are implemented but gives you an indication of what you can expect the model to produce"

Articulating the business model also presents an opportunity to focus and define itself more precisely as indicated by this quote from participant five:

"Basically you know until like 2010 we knew that we had to have a business model we didn't have a proper tool we just used our common sense to come up with the model of our business, but since we were exposed to the work of Alex Ostewalder we started then applying it to our business so that we can define ourselves much better … The benefit of using the business model canvas providing is very short succinct picture of our business model on which it is very easy to connect the dots."

An important point when communicating the business model is taking into account the various audiences to whom the business model is communicated, so the methods used to communicate the business model should be suited to the audience. These views are expressed in the following extract from participant six when the question was asked how the business model is communicated in the company:

"So we've I guess the question is to which audience? So you communicate the business model in various ways depending on who you're communicating to and we've got various audiences"

In terms of how a business model is articulated a number of approaches have been identified for visualising business models using a literature review. The most common approaches for visualising business models were the overlapping ontologies of REA, e3Value, Business Resource Event Agent (REA), e3 value and Business Model Ontology, referred to as BMO (Andersson et al., 2006, Decreus and Poels, 2008, Edirisuriya and Johannesson, 2008, Pijpers and Gordijin, 2007, Samavi et al., 2009) or business model canvas, with the business model canvas as the most commonly used for visualizing business models (Almedia and Frias, 2009). Furthermore, the use of Archimate with business model canvas has been proposed to link business models to enterprise architecture with business

models representing strategic aspects while architecture models capture operational aspects (Iacob et al., 2012), as well as modelling risk with an enterprise architecture tool to extend e-3 value for probabilistic setting in assessing the collaborations under consideration within the business model (Johnson et al., 2013).

In the case study results seem to support the view that the business model canvas is the most common tool for visualising business models as it was used in some of the case studies while REA, e3Value and Reference Ontology were not used. However, in the case studies the other approaches that were used by some participants include the value chain and the house analogy. In addition, using the business model canvas as a communication tool has some challenges as there are various stakeholders to whom the business model is communicated and the business model viability in the various audiences may need to be tested to determine its suitability.

In terms of examining business model levels, Wirtz et al (2016) suggest that the abstraction level of the business model ranges from a very detailed product level, the business level and the company level to the much aggregated industry level. It seems there might be potential of another level or integrating philosophy aspects at the company level, as business models are in some cases perceived as a philosophy guiding the business model, ensuring that the company's core purpose and mission align to the business model and are key aspects when approaching business model innovation, as illustrated in the following quote drawn from participant eight:

> *"But you see I wouldn't call us- our business model is our business model-So I wouldn't say we're innovating a business model per say. So everyone who joins the company goes through a week induction where the business model is explained given that business model that sort of is the guiding light."*

In addition at the product model or the service model the business model was not perceived as the business model but rather as the service model, reflecting the different perceptions of what exactly is a business model, as illustrated here by participant three:

"We see the whole business of services as a business model and within that business model there are different types of delivery of services and the model of delivery is different in each instance but that is not the business model but the operational model for delivering that part of the business"

In summary based on the research results business models are visualised to support communicating the business model to the various stakeholders. In some cases such communication is supported with the business model canvas or a housing analogy as well as any other diagrams that companies and viable for communication business models. In addition visualising business models assists in assessing the value the potential new partners may contribute to the company.

6.3 Research objective 2: Determine the components that are used to visualise the business model.

According to Chandrasekhar (2008) previous research has ended with confusing business model components. In this paper the business model components are identified from previous studies on business models and business model ontologies. According to Anderson et al. (2007) a number of ontologies have been developed to state precisely what to include in business models. Almedia and Frias (Almedia and Frias, 2009) highlight that Osterwalder's (2004) specification is the most complete and comprehensive work that builds the components from strategy literature and goes through all the other scholars' component lists and synthesises the different conceptualisations to reveal the nine components (Almedia and Frias, 2009). These nine component were grouped into the four categories and reviewed for relevance in the case studies.

These four main groupings of components ('what', 'how', 'how much' and 'who') were used to visualise the business model. However, in one of the case studies the 'how much' component was not used when visualising the business model but understanding financials was regarded as a key factor that contributed to company's business model innovation success. While it was not included in the business model visualisation it was taken into account to effectively manage business model innovation. Furthermore, based on the sample case studies one may argue that in visualising the business the four groupings of

business model components illustrated below may be of value. The 'how' components might depict the key activities, key partners and the resources that are involved in creating the value. The 'how much' component might possibly show the cost aspects, revenue aspects as well as the pricing, and thus will indirectly indicate the profit aspects. Although the current four categories seem to have potential in visualising the business model, another aspect that might be of interest that seems to be overlooked is the contention aspect regarding the new business model. Contention was regarded as one of the key components that must be addressed with a business model as reflected in the following participant six quote:

> *"So you always have to ask yourself a question even in a business model innovation who will contend this, who will not be happy with this and if they will not be happy is there a reason that they will not be happy. Or should it be universal to everyone or is the product biased? If it is biased is it an acceptable type of bias*

In summary, the business model components that are used in the sample companies closely resemble those that are identified in the Osterwalder's (Osterwalder, 2004) BMC. In visualising the business models some of the sample companies are using the BMC and those that are not BMC are using diagrams such as the house ontology, value chain and other diagrammatic representation and all these may be mapped on some of the components of the BMC. An interesting point in terms of visualising business models was highlighted in one of the sample case studies that suggested the need to include as a component who would contend the value proposition as part of risk management in the business model.

In concluding business model components that are used to visualise the business model are inclusive of the group in terms of the value proposition that is offered to the customer as well as how such value is differentiated. Furthermore the how part of the business model relating to the key activities, resources and partners as well as the how much component that covers the cost, revenue with the modelling of pricing as an additional component that could be added on the how much group as pricing has a great bearing on the business model. The other group of business model components that are visualised are the who in terms of the target customer, channels, relationships within the various target market segments with an additional component identified from the research as who could content

as this may negatively affect the business model as is the case between Uber and meter taxis in South Africa currently.

6.4 Research objective 3: Examine the drivers of business model innovation?

According to Sosna et al. (2010) business model innovation drivers are mostly external and in the current study the internal drivers were identified as important. The external drivers in the case studies included market, technological and regulatory, with the internal factors comprising growth aspirations quality of staff and leadership. The influence of each of these drivers is briefly discussed in the paragraphs that follow.

Market factors in terms of customer needs are identified as driving business model innovation as the changing customer needs are a result of the increased access to information and commoditisation (Chesbrough, 2007, Johnson et al., 2008a, Teece, 2010) and the opportunities to serve the un-served customers (Johnson et al., 2008a). In the sample case studies the market factors driving business model innovation were competition, the need to serve unserved customers and changing customer needs. In the next paragraphs I briefly discuss how each of these factors drive business model innovation, starting with competition.

Johnson et.al (2008b) identify the need to respond to intensifying competition, the shifting basis of competition and fending off low-end disruptors. Some of the sample companies were front runners in their market but were still faced with fierce competition driving the companies to innovate their business models as shown by these extracts:

> **Partcipant one:** *"In our industry there are a lot of competitors but specifically if we are in the top six digital agencies. [as] the market is moving into a space where the top 15 agencies in this country are going to be equally strong in what they do."*

> **Partcipant four:** *"Yeah I think we are ahead of the game but there is competition in the game and there is a constant battle of staying ahead and it is the battle of*

winning the customers over to your platform but there is definitely clear competition and we certainly pride ourselves as being a front runner in some of those areas."

Participant two*: "I am talking about an era of hyper-competition, hyper-choice and hyper-connectivity. Mobile phones are giving us this hyper-connectivity, new business models the Google's are offering services that are creating hyper-competition. Hyper-competition is giving us what I call hyper-choice."*

Partcipant seven: "*And with that has come quite a lot of competition and margins that these organizations have typically charged for lending have come down quite considerably as the competition has increased and so much so that we have found that the pricing is no longer financially viable … So we were effectively forced out of the market by the banks who were falling over themselves to do the debts, in my view, at sub-optimal margin."*

Participant one :"*In the technology space it is interesting because the China price that you refer to isn't necessarily original, it's more case of technological in nature. The China price is already there in the sense that there are cheaper ways. But there is big premium being put just on methodologically customising your platforms and technologies as opposed to having a cookie cutter setup. There is a market out needs a customised attention"*

Participant eight *"So if you look at our core businesses there's always that competition in the insurance space …fierce competition in the life insurance space and in the financial services space"*

"I mean competition is always fierce, it's a traditionally fierce industry, there's a lot of competitors. Mobile companies sell insurance, retailers sell insurance. So while it's not necessarily direct competition it still competes for a share of a wallet of the receivers; so it is shifting, I wouldn't say it's intensifying because it's always been intense but it definitely shifts and it's about staying ahead of the curve."

"I guess you might say there are some shifts in terms of new entrants, a little bit more you know it's been dominated by intermediated distribution channels.here's a

growing direct distribution play which I guess is different and different players I think you know, many different types of companies are doing insurance now compared to how it used to be."

The 'China price' is indicated as one of the key reasons companies undertake business model innovation. In so doing companies move from commodity producing areas of an assembly and outsourcing crisis generators to specialist services and creativity-based products and services (Keen and Qureshi, 2006). The presence of the 'China price' in outsourcing was not major but rather an erosion from the Indian-based companies as reflected by the two extracts that follow:

Partcipant three: *"The China price its outsourcing is not significant about so we supply South African people to run large South African companies systems and more than that we run South African companies that are based on the African continent but we run them we supply the bodies that run their IT services. So it doesn't really matter.*

Participant two :"*So margins are being eroded in a lot of cases the Indians are eroding the margins in the services model and the Chinese are eroding margins in the product model so the value add has to come over and above the products and services which means differentiation is the answer".*

Having examined how competition is driving business model innovation I will examine how the changing customer needs are driving business model innovation. The intensity of the changing customer needs was shared as follows by one participant:

Participant two *"The intense drivers are the changing customer needs ... The business model is very much what is the problem you are looking at so biggest challenge today is addressing the client needs because of the Hyper choice it is the hyper choice but even with this hyper choice there are some problems in terms of addressing the customers biggest problem and addressing the customers biggest problemcorrectly.*

Furthermore, there was a perceived relationship between the market factors in terms of the changing customer needs and technology. Changing customer needs and technological advancement are perceived to be interlinked with competition as customers adopt new technologies, as illustrated by these quotations:

> ***Partcipant two****: "I am talking about an era of hyper-competition, hyper-choice and hyper-connectivity. Mobile phones are giving customers hyper-connectivity, the Googles are offering services that are creating hyper-competition and customers are faced with hyper-choice."*

> **Participant three:** *"The changing customer needs are related directly to technology as the customer adopts technology we will then provide services so it is an intense driver of business model innovation… I think our models change based on changes in technology … The changes to the operational processes are based on how technology has allowed the change to happen and because we are a service business we are in support of technologies that are there and the take-up and demand of those technologies"*

Technological advancement has been identified as a driver for business model innovation (Casedesus-Masanell and Ricart, 2010, Teece, 2010, Wirtz, 2011). In addition PwC (PwC 2012) identifies four key technologies that have converged to drive innovation, namely social networking, mobile computing, analytics, and cloud computing.

In a similar manner the case studies identified technological advancement as a driver and examined how the four key technologies that were driving business model innovation in the case studies. Christensen (1997) classifies technological advancement as either sustaining in which includes incremental and radical advancements that seek to enhance existing value proposition or as disruptive by initially underperform. Of particular interest to the research study were the differing views regarding the potential impact of disruptive technological advancement that drives business model innovation in the company as shown in the quotations below?

> ***Participant two:*** *"Disruption in all industries going forward is imminent. Just like Skype destroyed the telephone industry."*

The opposing view was that:

> **Partcipant three:"***Disruptive technological advancement is not likely as we operate in an area of large enterprise organisations that would not allow that level of disruption,"*

> ***Partcipant one*** *"Just note on the disruptive side number one disruption is very it can be misleading the word disruption speaks to uncontrolled chaos disruption is if the economy suddenly blows up tomorrow there is going to be a lot of disruption in this country if this happens. Disruption very seldom actually happens it is a consequence of 30 to 40 years of all kinds of issues and ultimately it ended up in the disruptive sort of state."*

Technological advancement was seen as even more an intense driver for business model innovation in the provision of ICT services as illustrated by this quote from another interview:

> **Participant three:"***So generally because we are a service business we find out that we tend to follow the lead inventors in the IT industry so as an example most services are spin-offs from new inventions in terms of technology so you cannot create cloud services without the technology being an enabler to the creation of those services. So the changes to the operational process is based on how the technology has allowed that change to happen because we are a service business we are in support of technologies that are there and the take up or demand of those technologies."*

While technology was seen as a driver for business model innovation it was highlighted that technology may pose risks using as an example social media as highlighted in the excerpt below:

> **Partcipant nine** *: "So technology is absolutely empowering, it really is an enormous enabler of business model innovation across product process everything that we do. At the same time technology is also poses risks to the business you know then at the end of the day when you get something wrong you due to technology the risk is bigger too. Social media that type of thing, puts a massive spotlight in everything that you do and so it holds you to higher standards, it brings that spotlight and*

microscope on every single piece of the business more so than it used to be in the past. So it pushes you harder at the same time."

Social media has been used in some cases to reinvent the channels that were used to acquire customers and building customer relationship as indicated by the quote:

> **Participant 5:** *"For us the key driver was technology and social media because like you know if you look at our business model our channels were primarily we used to do a lot of exhibitions marketing channels where we would do IPM exhibitions. We would do print media. We would do all the stuff and so eventually we would realise that those things were not impact full so now we are on linked-in so when someone starts phoning us we tell them we have a platform on Linked-in so that's how we connect with our market. So basically in terms of reinventing our business model it has been primarily around channels and customer relationships you know that is basically these two parts have changed quite a lot in that you know we connect to generate sales via LinkedIn. "*

In addition to social media mobile was another technology that was perceived to drive business model innovation in the case studies:

> **Participant 5** *"I mean mobile – everything is mobile these days so we're trying to move in that direction… mobile is core to everything we do. So we're giving a real - time feedback is we've seen dramatic impact on how that changes behaviour and drives behaviour.It enables you to track data on a whole new level; wearable devices as well as mobile so this whole trend towards wearables is very exciting and you know it gives us access to even more data."*

Another technology that was regarded as a key driver for business model innovation in some case studies was data analytics:

> ***Partcipant eight****: "Data analytics is what we are, we're as a company, from the top like right at the top. Data analytics plays a big part into your business model, it is everything."*

The cloud was perceived as an intense driver in the ICT services as illustrated by the following extract:

> **Partcipant three:** *"The big change in IT industry at the moment is cloud computing that has enabled the delivery of ICT services to be on demand, highly scalable and billable on demand basis"*

However, in the financial services provider cloud computing is perceived as a moderate driver for business model innovation as highlighted in the next quote as while it is important in terms of providing efficiencies for the company it is not necessarily a driver for business model innovation.

> **Partcipant eight** *"I'd say moderate in terms of big data, cloud computing does provide efficiencies and capabilities that is important but I wouldn't say it's important."*

Sosa et al. (2010) suggest that the business model innovation drivers were mostly external. In the current research study the internal drivers were found to be meaningfully driving business model innovation and in some cases were found to be the key drivers for business model innovation, with their impact even more intense than external drivers. For example in one of the cases the main driver was existential crisis as illustrated in this participant seven quote:

> *"I mean we actually had no choice, if we hadn't it's a bit like newspapers you know, you can't just carry on just like a broadsheet if you don't have an electronic platform you'll never survive. Likewise with us we had a product that very quickly became priced out of the market that was not competitive as a result and which no longer made us relevant. So at the risk of standing on the street corner with a cardboard sign giving handouts, we had to come up with a solution but that's the nature of our business, which considering is a relatively small business and it's an entrepreneurial business."*

Another organisational factor perceived to be driving business model innovation across the case studies was the company's aspirations for growth. This is in line with the finding of

Morris et al. (2005) that companies that aim to generate income, grow or speculate business models are most likely to pursue business model innovation to support their growth aspirations. The sample companies in the research were aiming to grow and the growth aspirations were identified as being key to innovating the existing business models.

Leadership was identified as another internal organisational factor driving business model innovation as indicated by these extracts from different participants:

> **Partcipant one:** *"The leadership of the organisation is that there are two aspects. We are all entrepreneurial, we have the desire of being in control of our own destiny and building this businesses that people can remark on and say these guys know something that is quite good. So there is also a shared value specifically within the leadership and it filters down. And the shared value consist of sincerity being humble about what we do but having exceptional work ethic in terms the service you deliver and the quality of the work."*
>
> **Partcipant four: "***The magic happens within inside the people and the believe and the inspirational leadership inside the business model."*
>
> **Participant six:** *"And I think the biggest problem today in strategy and specifically business models is that leadership what it comes down to is if you've got CEO's you are there to put out fires and get involved right at the end like to approve things. You don't get that sort of innovation coming out whereas if you have got a CEO who takes the lead on it, sets the direction is part of the process you end up with a different culture in an organisation. … There's a huge premium on leadership. Yeah, so its an intense driver."*

In addition to the leadership the quality of staff was perceived as an intense driver with the quality of staff being regarded as the key to business model success as the same business model may be implemented in different companies and yield different result based on the people driving the business model as illustrated in the quote below:

> **Partcipant four:** *"You can implement the same business model in two different companies and have completely different results. The magic happens within inside*

the people and the belief and the inspirational leadership inside the business model. A business model and the structure do not give you success, people give you success. So as long as your business model has the right people on the right seats and being measured correctly and being fed in terms of incentivising you will have success."

A similar view regarding the importance of quality staff is illustrated in this extract:

> **Partcipant one:** *"And the second driving force is the staff. We always say we have this bus that we are driving and we need to get the right people on the bus sitting on the right seats on the bus. The driving force is our team without that we would not have a business model."*

The importance of regulatory factors in driving business model innovation is highlighted in Bouwman and MacInness (2006) with Wang *et al.* (2009) suggesting that besides trade liberalisation due to deregulation IP issues are driving business model innovation with companies. In the case studies, however, IP management was not regarded as an intense driver but rather general compliance and legislation around POPI as discussed in the next paragraph.

The "POPI" Act that was passed on 27th November 2013 is expected to have an impact on the way information for multinational companies will be managed as indicated by this participant three's quote:

> *" I think it is going to change the way that South Africans treat information but what we have not recognised is that there are many other countries that have a similar kind of act in Europe and America has its own version as well so multinational companies like some of our customer that could centralise information I think it will become increasingly difficult and it will change the way that our business work we will keep the information for the South African operations here for Nigerian operations there for European operations there and how you aggregate it as a multinational group will have its own challenges."*

Based on the discussion business model innovation drivers in the case studies may be categorised into four main groups of market factors, technological advancement, regulatory

factors and internal organisational factors. These drivers and the elements of each driver are illustrated in Figure 6.1.

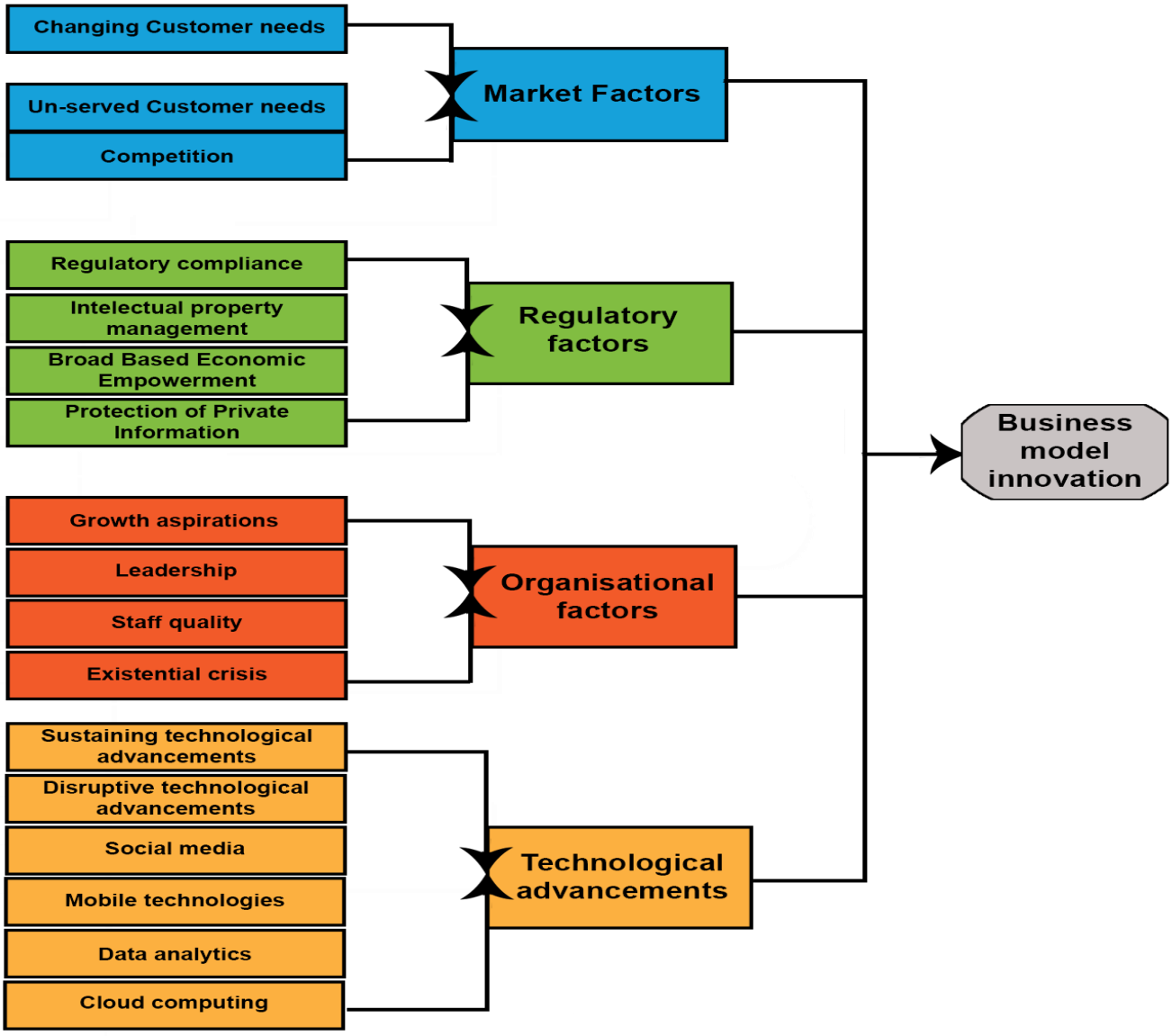

Figure 6-1: Business model innovation drivers

In concluding and providing an answer to how this objective was achieved one may suggest that business model innovation is driven by both external and internal factors that may either be intense or weak. In the case studies in particular, technological advancement was regarded as an intense driver in all the case studies, and specifically incremental technological advancement. In the ICT services companies the market factors in terms of competition were regarded as most intense, though in one of the case studies the perception was that while the company monitors competition, competitive pressure were not intense as the market was big enough to accommodate additional players. The erosion

of margins by the 'China price' and the erosion or margins by the companies from India was significant of concern to the ICT sector. In addition in the ICT sector in some of the ICT case studies the changing customer needs were perceived as moderate in others the changing customer needs were seen as intense. In contrast, factors relating to competition were perceived to be intense in the three sample financial services companies, with the contributing factors being new players coming into an industry that is already has intense competition, and a shifting basis of competition. The market needs in terms of changing customer needs were said to be intense in the two financial services companies and this was attributed to the need to serve the unserved customers in both cases and the need to address the current consumer needs while forecasting where things were moving in the other case.

6.5 Research objective 4: Determine process is used to manage business model innovation.

A process for managing business model innovation to compete effectively is continuous, because over time, business models diffuse and business models become homogeneous; therefore to compete effectively companies need to continuously innovate and sustain the business model (Chesbrough, 2007, Mahadevan, 2004) . In a similar manner the case study companies were adopting a continuous approach to business model innovation. The companies adopted either an organic or structure approach: The following extract from participant one reflects the organic approach that was used:

> *"It's very organic in nature we do not have a structured process. We are not interested in applying a structured process it happens organically by keeping our fingers on the pulse and seeing how the business is performing and how the financials are doing .What the areas of opportunities are looking ahead. … Our business modelling we do not have a structured approach we find that when there is too much structure it inhibits."*

However, there were some companies that were striving to move from an organic to a structured approach with training on the business model innovation process as one of the

main topics covered in the two-day executive business model design workshops. These business model innovation processes may be mapped directly to the 4I-2M business model innovation framework.

Chesbrough suggested business model maturity levels in conjunction with Moore's (2014) suggestion of the introduction of organisational practices and improvements in following the five-level Capability Maturity Model Integration (CMMI) with the varying levels of process control, management, documentation and standardisation, quantitative management and optimisation could serve as valuable in understanding the organic and the structured approach to business model innovation. One may argue that at the initial stages of company introducing business model innovation practice while their business model may be differentiated the processes that are followed may be less structured.

According to Osterwalder's & Pigneur (2010) the mobilisation phase serves to create awareness on the need for business model innovation, bringing people from different parts of the company, motivates for business model innovation and presents an opportunity for sharing knowledge on business models The multi-disciplinary aspect mobilising for business model innovation seems to be a theme that was echoed in the sample companies as illustrated by this excerpt from participant nine:

> *"You're bringing in as many people as possible so it's very much an R&D process; it's not like one person in front of a computer, it's more collaborative, we wrap the various skills."*

The mobilisation stage is followed by the initiation stage, according Frankenberger et al. (2013) to the initiation phase focuses on understanding and analysing the company's current business model and the ecosystem that comprises customers, suppliers, competitors, universities and government. In some of the case studies an extensive initiation exercises were undertaken as shown in this extract: from participant four:

> *"Yes we have taken the steps as I alluded earlier the first step was a to fact find it was quite an onerous process. So what happened was we have gone through that exercise we have adopted six sigma, lean, a couple of this processes to help us guide*

us through the process. And after the fact find we ha interviews with a substantial amount of people and I think we did 300 influential interviews just to hear what is working and what is not working an matched that up

Another key aspect in the initiation step was the understanding the culture when bring technologies from elsewhere into the financial services market where the perceived failure of Mpesa and Grameen model in the South African financial services were attributed to failure to understand the cultural context as shown by this quote:

"In banking there is tons of examples where they tried to bring technology into South Africa and Mpesa as an example and in Kenya it was a mobile payment platform and everybody liked it. The model worked because there was a lack of banking infrastructure in Kenya …. And people needed the payment mechanism … South Africa there is no shortage of [banking] infrastructure. Hence culture played a fundamental success factor." Another example is that of the Grameen model of promoting entrepreneurship with hundreds and hundreds of millions in micro lending people do not pay back so banking gets ladled with impediments as in bad debts and there again a great model, a great innovation but the success of it is depended on culture."

The initiation stage as suggested by Frankenberger et al (2013) needs to focus on developing an understanding of the current business model ecosystem that is inclusive of customers, suppliers, competitors, as well as universities and government institutions. Moreover developing an understanding of the business model ecosystem should take into account understanding the culture within which the business model will operate as suggested by the empirical data. Understanding the customer may be achieved by adopting Zott and Amit's (2015) approach of understanding how the customer uses the products and services and the problems customers face when buying or consuming the services. Another key activity within the initiation step is understanding the current business model (Frankenberger et al., 2013) and the evaluation of the current business model's strengths and weaknesses (Wirtz, 2011), In addition, a stakeholder analysis needs to be undertaken(Elbers, 2010, Meertens et al., 2011, Zott and Amit, 2015). Meertens et al (2011) suggest using a stakeholder analysis method supported with relationship mapping, specification of activities and quantifying the

existing business model. As a final initiation activity the synthesis of the collected information including the information from customer observations may be synthesised to generate a comprehensive and holistic understanding of design challenges and market gaps as highlighted in Zott and Amit (2015).

Once the initiation step has been completed one may start with ideation. Osterwalder's & Pigneur (2010) suggest that in idea generation, one needs to see beyond the status quo and explore multiple ideas. In some of the case studies ideation used brainstorming session or tools such as the 'think tank Thursdays' and competitions as illustrate in the quotations,

> *"There are different forums that are conducive to uncover the innovation and roll out innovation ideation point of view we use 'Think Tank' Thursday an internal ideation sessions basically we look at our existing clients and work we do for them and think of new ideas for our clients we have our own challenges and ask our staff for help us to solve our challenges".*

> *"So a lot of research and then a lot of blue-sky brainstorming really getting ideas complete ideation, getting various, getting different stakeholders in different areas of the business together to try and solve big challenges. Start with Blue Sky ideas and whittle them down eventually you kind of move to a more focused kind of concept and then you iterate the prototype and take it to the various levels of executives for sign-off and that's the process. In addition to that, there's other streams that happen so for example you know there's, there are competitions that we hold all the time."*

Ideation in some of the case studies was perceived as to comprising of three key actions of ideating by suspending reality, prototyping by bringing back reality and choosing the most suitable design from a cloud of possible business models that are the prototypes with the different degrees of the required change and implementation time. One of the key consideration for the ideation phase was the importance of rapid iteration.

> *"And it's a rapid iteration where every two weeks we're trying to iterate the product, stretch it, make it better, debate it with the most senior guys of the company. An*

*interesting example of the kind of this rapid prototyping was the Google Glass where the guy who invented it said that they came up with the idea in 15 minutes. They took a coat hanger, wrapped it around his head, took his phone, stuck it on, pressed play and there was his prototype. So the first prototype of *Google Glass, so it wasn't like after six months of R&D"*

The idea generation phase will include going beyond the status quo and exploring multiple ideas as suggested by Osterwalder's & Pigneur (2010) and the assessment of multiple ideas to identify how such the changes might affect the other business model components (Cavalcante, 2014, Gunzel and Holm, 2013). In addition the multiple alternatives would need to be analysed and quantified using techniques such as sensitivity analysis , technology assessment and interpolation using best and worst case scenarios (Meertens et al., 2011). The analysis of the business model alternatives would include effects analysis of both positive and negative impacts and undertaking a risk analysis linked to both worst and best case scenarios and analysing both the expected investments, expected profit and the expected break-even point(Meertens et al., 2013).

In the generation and analysis of alternatives both rough and detailed partial business model be developed with potential business model structures (Wirtz, 2011). In addition Blank's (2004) 'lean approach' for experimentation, and gaining customer feedback and an iterative design approach that builds on a 'minimum viable product' using the business model canvas to sketch out the hypothesis for the potential business models may be adopted. This a similar approach to that proposed by Zott and Amit (2015) of refining and consolidating the various alternative business models and evaluating the alternatives and adopting rapid prototyping to narrow down the fundamental choices for the new business model and selecting of a new business model which would then go through an integration phase.

Once ideation has been completed of next step would be the integration with business partners. The integration phase is adapted from Frankenberger et al. (2013) and will focus on integrating and aligning the new business models to those of both old and new partners. Such an integration would need to be supported with stakeholders analysis with the

relationships recognition and mapping suggested by Meeterns (2011). Frankenberger et al (2013) argue that integrating with the partners' business models is challenging and requires the management of partners and complexity arises with substantial time and resources needed to get buy-in.

Implementation of the redesigned business model is identified by Frankenberger et al. as one of the main steps in a continuous business model innovation with Sosna, Trevinyo-Rodrı´guez and Velamuri (2010) adding that in reality new business models rarely work the first time around, uncertainty regarding viability and changes in market conditions requires an experiential "trial and error". In line with the trial and error approach one of the sample companies was running business model experiments using a subsidiary. In supporting business model innovation implementation Sosna, Trevinyo-Rodrı´guez and Velamuri (2010) This suggests that metrics for success as well as to facilitate continuous improvement could be of value. In the case studies this was illustrated by some of the participants who indicated the importance of setting metrics.

> *"The business model is now derived into a structure. The structure is now being looked at from a measurement perspective so we will now be looking at so if we are going to do this how are we going to define success for this level or for that level? So it is about people's behaviour if you really want to get innovation catalysed and going you have to have the right mechanisms for measuring successes, rewarding an incentivising people to certain things because people are behavioural, people are measurement rive behaviour and if you get that right you start getting the right level behaviour."*

The monitoring phase aims to use appropriate tools to monitor both the implementation and performance of the business model (Wirtz, 2011) as well as the business model innovation drivers. In the case studies the importance of monitoring the new business model was highlighted as shown by the following quotation:

> *"I mean every single time we launch something part of the launch specification is how often do you want to monitor it? How do you want to monitor it? How do you want the feedback? What are the dashboards that you're going to receive and it*

loops you back in – is it working properly? Isn't it working? And if it isn't working you're going to fix it – how? And it starts the whole process again. So monitoring is actually crucial there's no point in launching something if you aren't monitoring it."

Thus to conclude a continuous 4I-2M has a potential for supporting companies to mage business model innovation to compete in a changing environment. The main steps in the process include mobilisation, initiation, ideation, integration and monitoring. Such a process could be either structured as in the case of one of the case studies that sets an annual launch date for the new business model innovation projects launch or organic in case where structuring the process appears to stifle creativity. However additional research would be needed to identify conditions that are best suited for the structured process and those favoring an organic approach.

6.6 Research objective 5: study the components of the business model that are redesigned

Business models may be classified as simple or complex with Yariv et al. (2015b) suggesting that simple business model innovation may involve a change in one of the components while complex business model innovation could entail simultaneous changes in the various components of the business model. In the sample case studies while in some instances simple business model innovations were undertaken, in others s complex approach was adopted as reflected in the following different excerpts:

"So basically in terms of reinventing our business model it has been primarily around channels and customer relationships you know that is basically these two parts have changed quite a lot in that you know we connect to generate sales via Linked-in.

We use LinkedIn to maintain the love so we publish some of our papers through Linked-in".

"When we launched it was a price point innovation because there is very little you can do in terms of the technology so it's a price point innovation."

"Revenue share is one thing we did for one company if you want to check …. Yes so every time an agent or someone uses this we get one cent for the transaction. We are now part of the value. This has been so successful that the company now wants to buy the whole thing from us now."

"We do a lot of innovation but it's not customer-faced and stuff. So we wouldn't launch it every year, its just stuff we would do so the culture of the company is to apply actuarial minds to every problem and just constantly look for excellence in every aspect. So the annual launch of products that's the customer-facing piece; the How is almost hidden but we strive for excellence. So we develop sort of these actuarial models from Call Centre to drive efficiency to get us better customer experience for example."

Large ICT company revenue generation is based on an annuity model as discussed in this extract:

"The model is based on annuity meaning we do not resell stuff every month to make more money. Annuity means you have a contract ND pay every month, so we have contracts for 3 to 5 years we had some 10 year contacts but customers no monger sign 10 year contracts any more. So our revenue model is based on attracting annuity."

In addition to the annuity model there are innovative approaches to revenue generation such as shown below:

"We have a product with one client on which we did not sell the product but get a share of the revenue generated around 1 cent every time their clients use the service and this has been very successful and the client actually wants to buy as out."

The revenue share may also enhance the customer relationship as supported by this quote,

"Life from the customer is very spectacular as we are able to offer the video streaming service at no cost but we are sharing in the revenue that they will make out of it. So they have not expended money to buy the product but any new money we create we can share … it is a 'win win' for both parties instead of a grudge sale."

In deciding on whether or not to sell the service often entails looking at the numbers to determine the value that Large ICT Company:

> *"We are going into Rev Share as we looked at the numbers and realised we could make more money if we go the revenue share route"*

In terms as to explaining the components of the business model components that are designed with companies either adopting simple or complex approach to business model innovation the components will differ. However, approach that maybe followed companies will take into account the complexity in relation to the number of components that were redesigned and the nature of change as to whether the focus was to incrementally change or disrupt existing business model. The approach in addition will need to address the potential business model alignment challenges following redesign.

6.7 Research objective 6: Review the effective and in effective practices in managing business model innovation

A number of effective and ineffective practices in managing business model innovation may be drawn from lessons learnt from the case study. One such practice is using a continuous approach to business model innovation that advocates for a tipping point approach to retire the old business model. Such an approach would require running the old business model and the new business models concurrently until a tipping point is reached. That is a point where the new business model is generating more money than the old one and at this point you retire the old business model and switch over to the new business model by closing off the old business model. As switch overnight would result in destroying value.

> *"A continuous business model innovation process with the old and new business models running concurrently until a tipping point is reached. That is a point where the new business model is generating more money than the old one and at this point you retire the old business model and switch offer to the new business model as such closing off the old business model. And you don't switch overnight and say this is our new model because you are going to destroy value."*

The use of subsidiary companies in implementing business model innovation projects was suggested as one of the effective practices for managing business model innovation to compete. In such an instance the business model innovation project would be implemented by the subsidiary company on a "trial and error" basis, with the project eventually being brought into the company. This was illustrated be the following extract:

> *"We put outside with our subsidiaries small innovative experiments that we will eventually bring in."*

Furthermore, the use of subsidiary companies was regarded as an effective practice for providing services to the unserved customers. For example Large ICT Company is a provider of ICT services in the business to business consumer market thus in targeting unserved market a subsidiary with a business model that is different from that of the parent company is used. This is illustrated by the following quotation:

> *"For the unserved customers we have a company called XYZ as we largely support big clients. If we want to support the masses we need a different business model. That business model which I have told them clearly is based on automation and self-service otherwise you need thousands of resources to support that market which is not a sustainable model. So our focus new market is on self-service and automation."*

In relation to the different types of business model approaches in the target market segments the identification of the type of relationship the company has with the target customer segment was one key issue for manging business model innovation to compete effectively as business models for one to one and those that are aimed at one to many are different. As business models are applicable to each segment would be different as the relationship is due to this relationship dynamics and the pricing and business models around one-to-many and one-to-one are completely different. This view was expressed as follows:

> *" I think it is also important for me that business models are applicable to each segment that you are working we tend to segment our market in two mid-market enterprise customers and the small medium micro customers. Done there we find that the relationship is one to many whereas in mid-market and up the relationship*

tends to be one to one. Then you your pricing and business models around one to many and one to one are completely different"

The effective management of business model innovation to compete would entails a continuous business model innovation approach in which the company business model is being evolved on an ongoing basis. This was illustrated as follows by one of the participants:

"The core business model for our company is to make money using technologies as … I think that is the view that the business model is bringing in that you might be making shoes today but you are not in the shoe making business but what you are trying to do is to solve a customer problem as such I see the core business of Large ICT company as making money using technologies."

An additional effective practice in managing business model innovation to compete entails using business model innovation as a theme to bridge the gaps between the various organisational units as illustrated as follows:

"We have been a bit unfortunate in that with all this accountability and measurement that have been in our company for so many years people have built some islands they have been so proud of what they not necessarily want to share or work with other people and that is true for many many other organisations we have now build bridges between all those silos where there is joint benefit for the guys to work together and this is the whole theme of our business model innovation project bring people together … First time it seems like our data centre infrastructure people joined forces with the application people so we were able to write an application run it on our data centre that uses our communication network team to be able to deliver video over mobile We see a converged solution pulling all the necessary different silos together at one offering as such building bridges between those silos where there is joint benefit for the guys to work together."

Risk management is an effective practice in managing business model innovation to compete effectively as failure to manage risk in business model innovation in business model innovation could have a "domino" effect as shown by this extract:

"In a business model innovation project anywhere you have a got a weak link it will have a domino effect all cross. So if it is hasn't got a domino effect it is not fully integrated business model. So it is one of those things that you need to get right"

Pricing influences business model innovation as such the lessons regarding the effective management of business model innovation is the use of customised pricing as shown in this extract:

"Pricing is not always the same ... as we tend to work on demand type basis and the minute you are selling customized offerings … so it is very difficult to compare this offering to another because each offering is customized for that enterprise … However the company uses sophisticated pricing and guidelines for deviations from the set price. We using different models as to what we are selling to whom. It is not always the same and one of the pricing is based on what is being specified by the customer and we do have guidelines for the deviations from the set price"

In conclusion some of the effective approaches in managing business model innovation include using a continuous approach to business model innovation that advocates for a tipping point approach to retire the old business model. Such an approach would require running the old business model and the new business models concurrently until a tipping point is reached. That is a point where the new business model is generating more money than the old one and at this point you retire the old business model and switch over to the new business model by closing off. As well as a risk management is practice as failure to manage risk in business model innovation in business model innovation could have a "domino" effect.

6.8 Research objective 7: Explore the relationship between business model innovation drivers and re-designed business model components?

There seems to be a perceived relationship between business model innovation drivers and the business model components that are designed as Bouwman & MacIness (2006) suggest that technological factors drive innovation in the first phase, while regulatory factors are dominant in the second phase with market factors driving innovation in the third phase. Such a relationship could not be established using the current case study sample as this

would require a longitudinal study that would allow the researcher to identify the factors that drive business model innovation. Having identified the factors the researcher would conduct a longitudinal study to see how these drivers are influencing business model innovation and the components that are redesigned in relation to the drivers. An additional challenge is that there is an interrelationship between the drivers. For example, there is a relationship between technological advancement and changing customer needs. Hence it may be of interest to see how in concluding from a longitudinal case of business model from 1999 to 2004 De Reuver, Bouwman & Maclnnes (2009) were able to conclude that technological and market-related drivers are most relevant in the early stages of service conceptualisation. In addition in these sectional case studies it may seem that while with market factors driving innovation in the third phase in one of the case studies this was not the case as while the funding of renewable energy may be regarded as a new market in South Africa's Renewable Energy Independent Power Producer Procurement Programme first bidding in 2011 and within the first year of the company participating in this space as such the market phase could have been very close to each other as the market factors in terms of competition was the key factors that led to business model innovation as illustrated in the quote below:

> *"That has come quite a lot of competition and margins that these organizations have typically charged for lending have come down quite considerably as the competition has increased and so much so that we have found that the pricing is no longer financially viable … So we've effectively been priced out of the market, so it forced a very quick re-think …. I mean the reality is that if we had just sat back and waited for a second fund to close on the same basis as the first, I would be out of business now."*

6.9 Conclusion

This chapter presented the results from the analysis of collected data thus reviewing the relevance of the conceptual model in the case studies. Qualitative software ATLAS.ti was used to support data analysis with data networks generated and used to provide case study descriptions as well as answer the research questions. In doing so the collected data was used to present the case study contexts. Such discussions highlighted in each case study the company's history and business mode evolvement, the business model innovation drivers as

well as presenting the business model innovation approach and process in the case studies and lessons learnt. This was followed by answering the research questions using quotations from the interviews to support the analysis. The following chapter will present the research study's conclusions and implications.

Chapter 7: Conclusions and implications

7.1 Introduction

In this chapter the conclusion on the research question how companies manage business models to compete is discussed. The preceding chapter presented the data analysis in relation to the research questions highlighting how the data analysis responds to the research questions as well as how the findings from the research study relate to previous research, thus providing theoretical generalisations of the current research study to previous studies. The research study conclusions are drawn and presented and a conceptual framework for managing business model innovation based on the data analysis results is proposed. This will be followed by a brief discussion of the theoretical and practical implications of the research study. Furthermore, research study limitations will be outlined and recommendations made for future research.

7.2 Main findings

The main conclusion from the research study, supported by both the theoretical and empirical findings, is that managing business model innovation to compete effectively is a complex activity with interrelated concepts.

Firstly, managing business model innovation to compete entails having a clear understanding of the factors that are driving business model innovation as these triggers have the potential to make the existing business model irrelevant in the market. Thus the companies need to monitor business model innovation triggers that are continuously changing. These triggers in the current study deviate from Sosna et al.'s (2010) suggestion that triggers are mostly external but rather supports Bucherer (2012) et al.'s views that triggers may be internal opportunities or threats as well as external opportunities or threats. However, an additional insight generated from empirical data suggests there is an interrelationship between the drivers that brings in additional complexity. Thus companies often have to respond to the complex interrelated triggers to either adapt or revolutionise the existing business model, and in the process thus redesign the business model components.

Secondly, as a response to the triggers companies adopt a continuous business model innovation process that is either organic or structured. Those companies that adopt an organic process perceive that a structured business model innovation process could stifle creativity while those that choose a structured process view such structure as guide to ensuring the business model innovation process steps are complete as each step is supposed to be part of an effective management of the business model innovation. The size and proximity of the business model design team could be a factors that had a bearing on the adoption of either an organic or structured approach with the case where the team is small an organic approach having been adopted as reflected in the following extract:

> *"It is not many of us board meeting happens very quickly like let's say we need to spend the whole day somewhere or whatever like now in Durban we are going to work on our business."*

> *"The nice thing of having a small kind of operation... the fund that I manage is run by myself and a colleague in Cape town, so it's nimble and we're able to actually to modify our strategy and process by the day if necessary and I then meet once a week with my colleagues. Three of them are the senior guys within this business, and once a week we have a feedback session on how the business is performing, the existing assets and then and on ad hoc basis we discuss where we need to go and what needs to be done."*

In both a structured and an organic approach a continuous business model innovation process is adopted as Chesbrough (2007) and Mahadevan (2004) have shown that over time business models diffuse and become homogeneous, resulting in the renewed need for business model innovation to enable companies to differentiate their offerings. In a structured approach the 4I-2M business model innovation process adapted from Frankenberger et al. (2013) and Zott and Amit (2015) as well as Meeterns et al. (2011) supported by with contributions from (Bucherer et al., 2012, Osterwalder and Pigneur, 2010, Wirtz, 2011) could be a relevant framework. The main steps in such a process are mobilisation, initiation, ideation, integration, implementation and monitoring.

Thirdly, the business model components are redesigned in response to the business model innovation drivers. Such a redesign as highlighted in Yariv et al. (2015b) could either be simple business model innovation in terms of only one component of the business model being redesigned, or complex where two or more components are simultaneously innovated. In the sample case studies both simple and complex approaches were adopted with simple approaches focusing on innovating value propositions while complex approaches include redesigning value propositions in tandem with delivery channels of revenue sources where a revenue share strategy with customers was adopted. These business model innovation process, according to Schmitt et al. (2004), could be supported with business model visualisation to aid communication and enable business models to be compared and evaluated to reveal strengths and weakness that would serve as input in subsequent business simulations. In the sample case studies business model visualisation was not only used to support communication but in addition to support the assessment of value potential partners would be bringing in.

Therefore, based on these arguments around business model innovation drivers, process and business model components the research study propose a conceptual framework for managing business model innovation to compete in a changing environment. This conceptual framework has been conceptualised using previous research, specifically the business model innovation drivers drawn from authors such as (Alt and Zimmerman, 2001, Bouwman and MacInness, 2006, Bucherer et al., 2012, Casedesus-Masanell and Ricart, 2010, Mahadevan, 2004, Marolt et al., 2016, Morris et al., 2005, Sosna et al., 2010, Teece, 2010, Wirtz, 2011) and business model innovation process 4I-2M synthesised from Frankenberger et al.'s (2013) 4I-framework supported by the Zott and Amit (2015) design process model to elaborate on the key activities undertaken in each step and adapted with contributions from Osterwalder's and Pigneur (2010); Wirtz (2011) and Bucherer et al. (2012). The business model components conceptualisation is informed by Osterwalder's and Pigneur (2010) supported with scholars such as Johnson et al.(2008b), Stähler (2002) and Chesbrough and Rosenbloom (2002). Moreover, the conceptual framework has been reviewed for relevance in the sample case studies in the ICT and financial services sectors in South Africa. This conceptual framework for managing business model innovation and its elements is now briefly presented.

7.3 Proposed conceptual framework and theoretical and empirical findings

The argument in this research study is that managing business model to compete effectively in a changing environment comprises three main concepts that are interlinked. These concepts are business model innovation drivers, process and business model components. .

The research study contributes to the body of knowledge in managing business model innovation to compete effectively in a changing environment. In particular the study uses theoretical comprehensions and empirical data to generate insights on three interrelated concepts of business model innovation drivers, process and business model components. Thus the study provides a theoretical basis for further exploration how these elements contribute to managing business model innovation to compete effectively in a changing environment. Furthermore, the theoretical contribution on the business model components extends to both the communication of the business model and the companies' approaches to business model innovation. Hence the research study, by examining the three interrelated concepts of drivers, process and components with the business model communication and approaches to business model innovation presents a foundation for the identification of additional elements that are core to a comprehensive understanding of how companies manage business model innovation to compete. A graphical representation of the conceptual framework is depicted below followed by a brief outline of the particular contributions of the study in each of these elements, starting with the business model innovation drivers. This conceptual framework has been revised and takes into account external and internal business model innovation drivers that do not only include growth aspirations but internal factors of leadership quality staff and existential crisis. These proposed conceptual framework with the three interrelated concepts of business model innovation drivers, 4I-2M business model innovation process and the business model components is illustrated below.

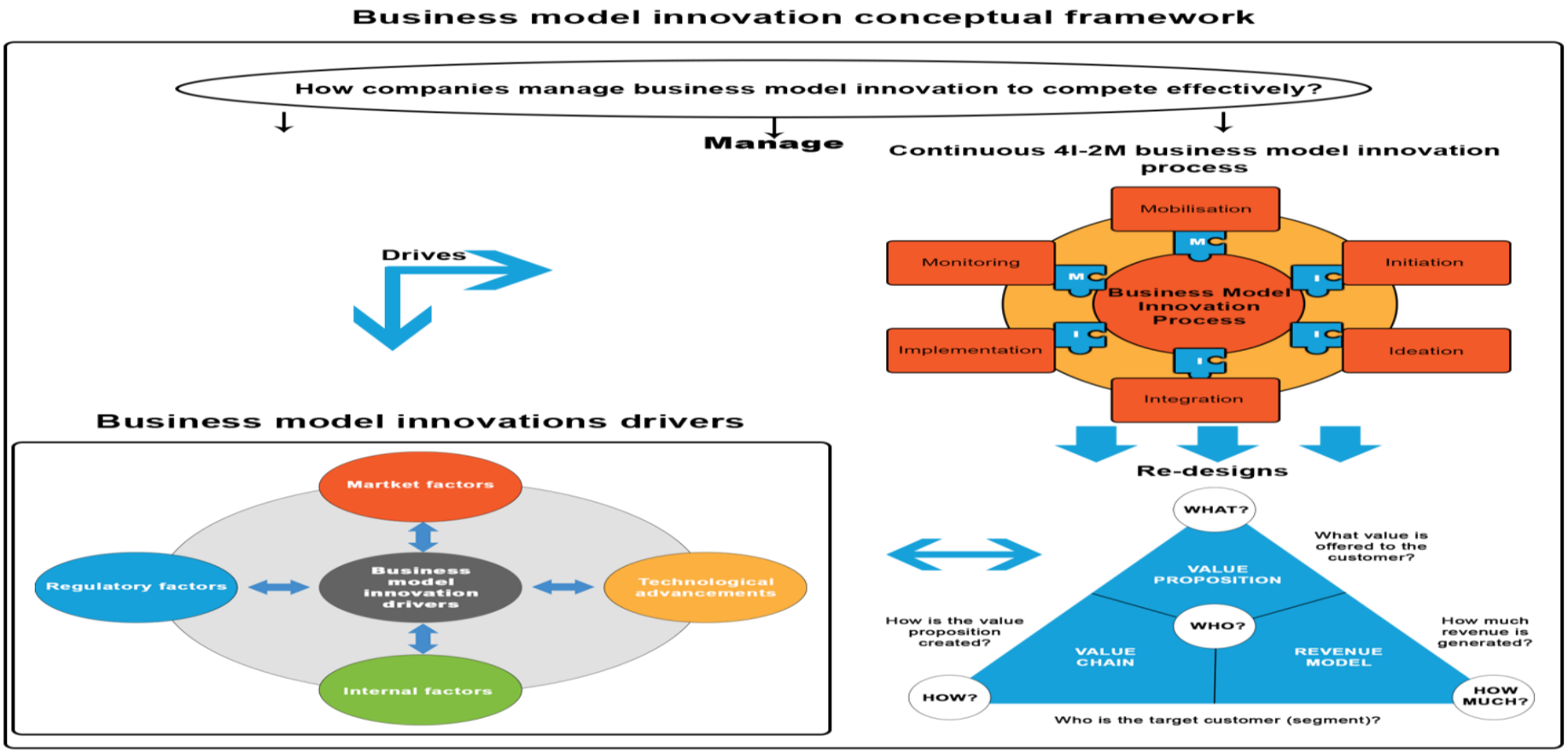

Figure 7-1: Business model innovation conceptual framework compiled by the researcher

7.3.1 Business model innovation drivers

Business model innovation or triggers may be subdivided into either external or internal (Bucherer et al., 2012, Sosna et al., 2010) and such drivers may be divided into internal opportunities and threats or external opportunities and threats (Bucherer et al., 2012). The existing literature from (Alt and Zimmerman, 2001, Bouwman and MacInness, 2006, Casedesus-Masanell and Ricart, 2010, Mahadevan, 2004, Teece, 2010, Wirtz, 2011) on business model innovation drivers focuses on the external drivers. However, there are some studies highlighting the importance of internal factors relating to growth aspirations (Morris et al., 2005) and resources (Bucherer et al., 2012) which are supported by the empirical results and in addition the empirical results identify importance of both leadership and staff quality as echoing themes in the sample case studies regarding contribution to business model innovation success. Inspirational leadership inside the business model is regarded to be key. Such entrepreneurial and inspirational leadership creates a culture that fosters innovation, while empowering each and every person in the business to add value. In addition the leadership should create an environment that supports blue sky innovation and successfully integrates business functions and R&D functions.

In conjunction with leadership, staff quality emerged as a noteworthy driver with the view that the same business model may be implemented in different companies and different results. As there is a need to have the 'right' people in the 'rights seats' within the business models, which implies the importance of mapping the requisite skills and resources in business model innovation. This entails having the right kind of quality staff in the right positions, measured and incentivised correctly. In addition, such quality staff should be empowered to change things to address customers' frustrations and must feel secure and not pressured to prove self-while non-performance is punishable. Furthermore, consideration needs to be given to 'digital natives' that need to be managed differently.

These are market, technology, regulatory and organisational factors. In particular technological advancement was a driver that was regarded as an intense driver in all the case studies, and specifically incremental technological advancement. Another internal

driver that has been identified from the empirical data is existential crisis, as in the case of one sample company whose original business very quickly become redundant with the competitors having effectively forcing the company out of the market. The company completely reinvented the business model to provide a product that was slightly differentiated and allowed the company to collaborate with competitors to meet the market that was unserved.

In terms of the external regulatory drivers the study contributes to the identification of BB-BBEE as one of the regulatory factors that is unique to the South African context. As a driver BB-BBEE affects pressure in terms of the 'who' component on the demand side, with the customers pushing companies to meet the BB-BBEE scale, as well as the 'how' component in terms of key resources such as in the case of a mining licence where the mining companies have to meet specific BB-BBEE requirements.

Bouwman & MacIness(2006) suggest that technological factors drive innovation in the first phase, while regulatory factors are dominant in the second phase with market factors driving innovation in the third phase. In the research study the relationship between the business model and the components is not necessarily linear as suggested. Based on the empirical data one may conclude that the relationship is not linear with the drivers being important in all the phases as the drivers have an interrelationship with each other. Thus, the research study contributes empirical results on the interrelationship between the market drivers and technology resulting a complex relationship between the drivers and the components that are innovated. These inter relationship between the changing customer needs, technology and competition is succinctly illustrated by one of the participants in this extract:

> *"I am talking about an era of hyper-competition, hyper-choice and hyper-connectivity. Mobile phones are giving us this hyper-connectivity, new business models the Google's are offering services that are creating hyper-competition. Hyper-competition is giving us what I call hyper-choice."*

An additional insight into technology as a driver for business model innovation is that technology as a driver needs to be examined from the customer's perspective in terms of how

the company's customer needs are changing as well as how the technology is changing the key activities, resources and partners. Furthermore, technology should be examined both from both the opportunities and risk the technology presents for the business model.

Market factors are an external aspect that relates mainly to changing customer needs and the need to serve the un-served customers and competition. The market needs in terms of changing customer needs were perceived as a driver that ranges from moderate to intense in the sample case studies. The intensity was fuelled by the need to address the current customer pains while thinking about how they might change thus building for sustainability in addressing the changing customer needs. In addition the customer intensity was linked to the customer being informed with changing customer needs interrelated with technological advancement and competition. This interconnectedness was said to bring in an era of hyper-connectivity, hyper-competition and hyper-choice.

Market factors associated with competition were generally observed to be an intense driver for business model innovation. Despite some of the companies in the sample being leaders in the market and having business models that could be said to be differentiated, competition was regarded as intense driver for business model innovation with the intensity related to an increasing number of players, with long-term partners who were becoming competitors going directly to the customers.

In the sample companies there was an increasing number of players such as Google offering ICT services for free and in the financial services sectors there was an increase in the number of new players such as mobile companies, commercial banks, fast moving consumer goods retailers that were selling insurance. These new players, while not being regarded as direct competitors, were said to be bringing in some low-end disruption in terms of competing for the customer's share of the wallet. In addition to the growing number of players there are players that are shifting from the industry-dominated intermediate distribution channels use to direct channels. Furthermore, the intensity of competition was associated in some case studies with the China price effect eroding margins on the product model with the Chinese based companies eroding margins on the service model as evidenced by this quote:

"So margins are being eroded in a lot of cases the Indians are eroding the margins in the services model and the Chinese are eroding margins in the product model so the value add has to come over and above the products and services which means differentiation is the answer."

Technological advancement as an external factor in the sample case studies was regarded as an intense driver to business model innovation. While there was a general agreement on the intensity of incremental technological advancement in driving business model innovation there were conflicting views on the role of disruptive technological advancement. The opinion was that what is often regarded as disruption is usually an outcome of over a period of time and that in the medium to large market segments disruption rarely occurs as the companies do not allow that level of such disruption into their operations. The opposing view was that disruption in all industries going forward was imminent with examples like 3D printing which was going to disrupt the manufacturing industries while crypto currency, likely to displace the dollar as an International currency, was going to disrupt the financial services. In companies striving to disrupt the market both incremental and disruptive technological advancement were regarded as intense drivers for business model innovation.

Technological advancement was perceived as presenting opportunities as well as risks. For example, social media was seen as a main driver to business model innovation in terms of how some sample companies acquired customers and maintained customer relationships. However, social media was seen as having a huge potential to do great reputational damage if things go wrong. Other technologies that were regarded as intense drivers to business model innovation include data analytics in terms of enabling companies to understand customer behaviour and mobile technologies were said to generate real-time feedback that has a huge impact on changing behaviour. Cloud computing was seen as providing efficiencies and capabilities and was categorised as a moderate driver to business model innovation.

Regulatory factors are an external driver to business model innovation. In the sample case studies IP management was regarded as a moderate driver to business model innovation.

The potential reasons could be that in most of the companies were not actively engaged in open innovation although some participants highlighted that IP management intensity is likely to increase in the future. Other regulatory factors that were expected to become intense drivers to business model innovation were the POPI Act and governance. The POPI Act was expected to fundamentally change how IT services are provided to companies that have multinational operations with regard to how the information will be stored to ensure compliance. Governance was expected to play an increasing role in business model innovation as globally there was an increasing emphasis on governance.

The Internal organisational drivers in terms of growth aspirations, existential crisis, leadership and staff quality were highlighted as being intense drivers to business model innovation. Overall growth aspirations were an intense driver for business model companies even in sample companies that have been in existence for over 30 years. Existential crisis was an intense driver for business model innovation in one of the sample case studies. As the company's business model being priced out of the market. Leadership and staff quality were regarded as key contributors to business model innovation success as the same business model could be implemented two different companies and yield completely different results. As the magic within the business model was said to happen between the inspirational leadership within the business model and the people within the business model. Thus the following quote sums up the importance of quality staff and leadership within the business model.

> *"You can implement the same business model in two different companies have completely different results. The magic happens within inside the people and the believe and the inspirational leadership inside the business model. A business model and the structure do not give you success people give you success. So as long as your business model has the right people on the right seats and being measured correctly and being fed in terms of incentivising you will have success."*

In concluding the discussion on the internal and external drivers to business model innovation two main propositions are proposed as follows:

Part A business model innovation driver's propositions:

Theoretical proposition 1: Managing business model innovation to compete effectively will be influence by the external factors. These external factors include market factors relating to changing customer needs, un-served customer needs and competitions. As well regulatory factors around compliance, intellectual property management, Broad Based Economic Empowerment, Protection of Private Information. Additional external factors include technological advancement which comprises both sustaining and disruptive technological advancement, social media, mobile technologies, data analytics and cloud computing.

Theoretical proposition 2: Managing business model to compete effectively will be influenced by internal factors that are mainly organisational. These internal l factors encompass growth aspirations, leadership, staff quality and existential crisis.

7.3.2 4I-2M Business model innovation process

One of the key challenges for managing business model innovation to differentiate business models, according to Chesbrough (2007), is that there is no process for managing business model innovation specifically in companies that are using business models that are not differentiated. The findings indicated that in the sample case studies the companies were either having an organic or a structured approach. In the in case where the process was said to be organic it appears that steps depicted in the structured approach were used despite the expressed adversity to using structure as the structure was seen as counter innovation as stifling innovation. This is reflected in this extract which indicates the lack of interest in using a structured approach but had ideation and implementations activities which is part of a structured process:

> *"It's very organic in nature we do not have a structured process. We are not interested in applying a structured process it happens organically by keeping our fingers on the pulse and seeing how the business is performing and how the financials are doing …. What the areas of opportunities are looking ahead ….. Our business modelling we do not have a structured approach we find that when there is too much structure it inhibits … We do know there are different forums that are*

conducive to uncover the innovation and roll out innovation ideation point of view we use 'Think Tank Thursday' as an internal ideation". At the same time we have a very efficient production unit and if any execution and implementation [are] needed to roll out a specific innovations or ideas we have production systems we have in place supports that quite well."

A structured 4I-2M could be of value even in cases where the company has an organic approach to business model innovation. Chesbrough suggested business model maturity levels in conjunction with Moore's (2014) suggestion of the introduction of organisational practices and improvements in following the five-level Capability Maturity Model Integration (CMMI) with the varying levels of process control, management, documentation and standardisation, quantitative management and optimisation which could be valuable in understanding the organic and the structured approach to business model innovation. One may argue that at the sample cases using an organic process are initial stages of a company introducing business model innovation practice. While their business model may be differentiated the processes that are followed may be less structured. However, the necessary measures would need to be put in place to ensure that the structure does not stifle innovation as empirically highlighted by the data from one of the case studies that a structured process was perceived to inhibit creativity.

The innovation process is not necessarily linear but is iterative; however, a phase-based approach serves as a useful guideline in undertaking a business model innovation (Frankenberger et al., 2013). While there is general agreement that innovation is not linear but complex and dynamic, the normative process model helps to reduce complexity and derive the required activities and decision points (Bucherer et al., 2012). Furthermore, Zott and Amit (2015) highlight that while companies jump back and forth through the steps a generalised process model provides normative implications for researchers and useful guidance for practitioners. As such the 4I-2M business model innovation process with its detailed activities in each phase could serve as a valuable guideline for managing the business model innovation. These key phases include mobilisation, initiation, ideation, integration, implementation and monitoring and each of these steps are briefly presented.

The mobilisation phase according to Osterwalder's & Pigneur (2010) serves to create awareness of the need for business model innovation, bringing in people from different parts of the company, motivates for business model innovation and presents an opportunity for sharing knowledge on business models, creating awareness for the need for the new business model. The need to set up multi-disciplinary stakeholders was supported by the empirical case study data. Such an awareness could serve as a corner-stone in securing top management and employee commitment to the business model innovation process by involving them at the start of the process. Securing expressed top management commitment through the business model innovation process is identified by Elbers (2010) as essential for business model innovation success. Furthermore, early involvement of top management and employees at the mobilisation phase contributes to overcoming internal resistance which is identified by Frankenberger et al. (2013) as the most common challenge in successful business model innovation. The mobilisation phase is followed by the initiation phase.

The initiation stage, as suggested by Frankenberger et al. (2013), needs to focus on developing an understanding of the current business model ecosystem that is inclusive of customers, suppliers, competitors, as well as universities and government institutions. Moreover, developing an understanding of the business model ecosystem should take into account understanding the culture within which the business model will operate as suggested by the empirical data. Understanding the customer may be achieved by adopting Zott and Amit's (2015) approach of understanding how the customer uses the products and services and the problems customers face when buying or consuming the services. Another key activity within the initiation step is understanding the current business model (Frankenberger et al., 2013) and the evaluation of the current business model's strengths and weaknesses (Wirtz, 2011). In addition, a stakeholder analysis needs to be undertaken (Elbers, 2010, Meertens et al., 2011, Zott and Amit, 2015). Meertens et al (2011) suggest using a stakeholder analysis method supported with relationship mapping, specification of activities and quantifying the existing business model. As a final initiation activity the synthesis of the collected information including the information from customer observations may be synthesised to generate a comprehensive and holistic understanding of design challenges and market gaps as highlighted in Zott and Amit (2015).

The idea generation phase will include going beyond the status quo and exploring multiple ideas as suggested by Osterwalder's & Pigneur (2010) and the assessment of multiple ideas to identify how the changes might affect the other business model components (Cavalcante, 2014, Gunzel and Holm, 2013). In addition the multiple alternatives would need to be analysed and quantified using techniques such as sensitivity analysis, technology assessment and interpolation using best and worst case scenarios (Meertens et al., 2011). The analysis of the business model alternatives would include effects analysis of both positive and negative impacts and undertaking a risk analysis linked to both worst and best case scenarios and analysing both the expected investments, expected profit and the expected break-even point (Meertens et al., 2013).

In the generation and analysis of alternatives both rough and detailed partial business models should be developed with potential business model structures (Wirtz, 2011). In addition Blank's (2004) 'lean approach' for experimentation, and gaining customer feedback and an iterative design approach that builds on a 'minimum viable product' using the business model canvas to sketch out the hypothesis for the potential business models may be adopted. This is a similar approach to that proposed by Zott and Amit (2015) of refining and consolidating the various alternative business models and evaluating the alternatives and adopting rapid prototyping to narrow down the fundamental choices for the new business model and selecting of a new business model which would then go through an integration phase.

The integration phase adapted from Frankenberger et al. (2013) focuses on integrating and aligning the new business models to those of both old and new partners. Such an integration would be supported with stakeholder analysis and relationships recognition and mapping suggested by Meeterns (2011). According to Frankenberger et al. (2013), integrating with the partners' business models is challenging and requires the management of partners and complexity arises with a lot of time and resources needed to get buy-in.

Implementation of the redesigned business model is identified by Frankenberger et al. as one of the main steps in a continuous business model innovation with Sosna, Trevinyo-Rodrı´guez and Velamuri (2010) adding that in reality new business models rarely work the

first time around, and uncertainty regarding viability and changes in market conditions requires an experiential 'trial and error'. In line with the trial and error approach one of the sample companies was running business model experiments using a subsidiary. In adopting this 'trial and error' approach one may argue that success metrics would be vital in judging the business model innovation experiments. The use of success metrics for business model innovation was supported by the empirical data drawn from some of the case studies.

The monitoring phase aims to use appropriate tools to serves monitor both the implementation and performance of the business model (Wirtz, 2011) as well as the business model innovation drivers. Furthermore, such monitoring is a continuous process that includes monitoring for success and business model innovation drivers(Bucherer et al., 2012). A business model performance audit is applied to assess the fulfilment of the service commitment, satisfaction of customer demands and profitability, while the techniques used in the monitoring of the drivers should continually monitor the business model environment and send triggers for the start of the next business model innovation cycle(Wirtz, 2011). The empirical data supported the importance of monitoring the new business model within the monitoring phase. This was illustrated by this extract:

> *"I mean every single time we launch something part of the launch specification is how often do you want to monitor it? How do you want to monitor it? How do you want the feedback? What are the dashboards that you're going to receive and it loops you back in – is it working properly? Isn't it working? And if it isn't working you're going to fix it – how? And it starts the whole process again. So monitoring is actually crucial there's no point in launching something if you aren't monitoring it."*

Another key empirical finding related to monitoring is making the decision to retire an old business model. Based on the empirical data one would suggest using a tipping ppoint approach. Such a tipping point approach advocates running the old business model and the new business models concurrently until a tipping point is reached. This is a point where the new business model is generating more money than the old one and at this point you retire the old business model and switch over to the new business model, closing off the old business model. An overnight switch would result in destroying value.

In conclusion the steps in the structured 4I-2M business model innovation framework support companies to manage business model innovation to compete effectively in a changing environment. As such empirical proposition may be generated as follows for further development and in-depth analysis.

PART B: Process Propositions

Theoretical proposition 3: Mobilisation step will influence the process for managing business model innovation to compete effectively. These mobilisation creates awareness on the need for business model innovation using a multi-disciplinary team b that brings together people from the different parts of the organisation.

Theoretical proposition 4: Initiation will influence the process for managing business model innovation to compete effectively. The focus of the initiation is to develop an understanding of the company's existing business model as well as ecosystem in terms of customers, suppliers, competitors and government.

Theoretical proposition 5: Ideation will influence the process for managing business model innovation to compete effectively. So as to be of value idea generation should focus on going beyond the existing status quo and generate a cloud of potential business models.

Theoretical proposition 6: Integration will influence the process for managing business model innovation to compete effectively' Integration is both an external and internal process with integrating and aligning new business model with existing business model to those of old and new partners .

Theoretical proposition 7: Implementation will influence managing business model innovation to compete effectively. Moreso implementation is the most challenging phase that typically involve huge investments that may need a pilots, trial and error and experimentation.

Theoretical proposition 8: Monitoring business model performance and business model innovation drivers which will influence managing business model innovation to compete effectively. Monitoring is a continuous loop as business model diffuse and become homogeneous necessitation a new business model innovation or the business model innovation driver's change triggering a new business model innovation cycle.

7.3.3 Business model components and communication

The lack of consensus as to what is a business model is, is widely acknowledged (Al-Debei et al., 2008a, b, Alt and Zimmerman, 2001, Johnson et al., 2008a, Johnson et al., 2008b, Morris et al., 2005, Osterwalder, 2004, Petrovic et al., 2001, Schmitt et al., 2004, Shafer et al., 2005, Teece, 2010, Timmers, 1998, Wirtz et al., 2016). The various definitions were compared and a holistic approach adopted in defining what a business model is in the current research study. In comparing these sample definitions, those of Magretta (2001). Osterwalder's (2004), Chesbrough (2007), Johnson et.al (2008), Osterwalder's and Pigneur (2010) and Teece (2010) are perceived as specifying the goal of the business model and the components of a business model; hence, these definitions are adapted in the research study and a business model is defined *as the* ***underlying economic logic of how a business makes money and creates value in serving the target customer, taking into account key activities, resources and partnerships as well as the value exchanges between the company and its partners.***

Thus a company business model is an activity system that specifies the value offered, target customers, key activities, internal core competencies, partnerships and the economic logic for sustainable revenue streams (Zott and Amit, 2009). As such a business model answers key questions pertaining to the underlying economic logic in a company. According to Osterwalder's and Pigneur (2002) a business model identifies what value is offered by the company; to whom the company offers value in terms of one or more customer segments; how the value is created, taking into account company architecture and partners and relating this to how much profit is made (Osterwalder and Pigneur, 2002). These four questions and their sub-components were used as a basis for examining the business models in the sample companies. In addition Johnson et al. (2013) highlight that visualising business models

provides an overview between the actors involved in a business collaboration and the manner in which the actors benefit financially and otherwise. Furthermore, such visualisation with ontologies facilitates business model communication within an organisation as ontologies are primarily used to communicate between people, and as a basis for communication between computers (Borch and Stefansen, 2004). The empirical findings suggest that business model components appear to offer value in visualising the companies' business models such as facilitating communication and shared understanding. The research study concludes that the business model canvas has the potential to visualise and communicate business models of the sample companies. However the issue of what a business model is still remains as a challenge and the levels of focus between product, company and industry and company philosophy need to be given attention such that communication and visualisation of business model become more concrete.

An additional challenge with the visualization of business models is that the ontologies that are said to be most common, namely REA, e3value, BMC and reference ontology are criticised as failing to link business models with enterprise architecture and Archimate has been proposed to link business models to enterprise architecture (Iacob et al., 2012). Furthermore, another key limitation of the ontologies identified by Johnson et al.(2013) is the ontologies' failure to model risk in terms of the uncertainty relating to the considered business collaboration for which the authors recommend Enterprise Architecture Analysis (EAAT) to add a probabilistic setting. The empirical results from the components that are used to visualise the business model highlight that while the nine components of the business model may be of value in communicating and visualising the sample companies' business there may be need for a risk component of the business model such as modelling who would contend the business model. The modelling of risk is of importance especially when one takes into account that in managing business model to compete effectively in a changing environment requires a business model is tightly coupled as per the following extract:

> *"But anywhere in your value chain where you have got a weak link it will have a domino effect all across. So if it hasn't got a domino effect it is not a fully integrated business model."*

Hinterhuber and Lizoiu (2012) illustrate the value of pricing on the business model, suggesting that companies need to acquire sophisticated pricing skills, as the varying price realisation capabilities have an impact on the revenue model. A traditional approach to business model components caters for both costs and revenue, but the issue of pricing is not directly modelled but properly implied in the revenue. However, pricing is of key importance to the business model that requires ensuring that the product and service differentiation is matched with the supportive strategic pricing that could either be based on the customer value, competition or cost.

A number of questions remain regarding the value of the business model canvas as a viable tool for communicating business models. For example there is the fact that there are various stakeholders to whom the business model is communicated and the question that needs to be answered is to which audience is the business model canvas tool, as a communication tool, targeted at. Furthermore, using the business model canvas to evaluate the value of potential partners does not explicitly quantify the value and may be further enhanced by the use of the business model canvas with 3e value, which further quantifies such value. As Andersson et al(2006) suggest e3value supports profitability analysis of business cases with Pijpers and Gordijn (2007) adding that e3 value may be used to calculate net profit per actor over different periods. Thus e3value shows the net cash flow of each actor involved in the value creation to give an indication whether the business model at hand is commercially successful for each actor (Gordijin and Akkermans, 2006).

The research study makes a theoretical contribution to business model visualisation and communication in terms of reviewing, business model canvas suitability and sufficiency to model sample South African companies' business models. The research study concludes that visualising business models offers potential benefits to companies that include creating a shared understanding of the business model, identifying the BE and EE pressures on the business models and examining the value of potential new business partners. In addition, the empirical results from the visualisation indicated that the business model is seen as a valuable tool in communicating the business model, creating shared understanding of the business model among employees at the various levels of the organisation. In addition, business model visualisation is perceived as of importance when communicating with potential partners so

as to assess the value that they would bring in, with the theoretical comprehensions indicating that supporting the business model canvas with e3Value may generate additional worth in terms of quantifying the value that each partnership would bring that is supported with Archimate and Enterprise Architecture Analysis to add a probabilistic setting to the analysis of collaborations under consideration. However, the aspect of how business model communication varies among the different groups in the organisation would need to be explored further. While there is growing body of theory on business model innovation and the use of the business model canvas in practice empirical research as to the benefits of visualising the business model with BMC or any other tools is missing.

Based on the discussion on the business model components re-designed the following empirical propositions are proposed to gain additional insights on manging business model innovation to compete effectively in a changing environment:

Part C: Proposition business model redesign approach and re-alignment

Empirical proposition 9: In managing business model innovation to compete effectively there are factors that influence a simple business model innovation approach. The factors that influence business model innovation may be said to be less risky but also contribute to least gains in enabling the company to compete effectively in a changing environment and are most likely to be sustaining innovations.

Empirical proposition 10: In managing business model innovation to compete effectively there are factors that influence a complex business model innovation approach. The factors that trigger a complex business model innovation maybe internal to the company or external within industry or cross industry.

Empirical proposition 11: In managing business model innovation to compete effectively there are factors that influence business model re-alignment following a business model innovation process. In both a simple and complex business model innovation the business

model may need to be realigned with realignment more of a challenge with a complex business model innovation approach.

7.3.4 Business model redesign approach

In managing business model innovation to compete effectively in a changing environment business models may be are re-configured in a way that generates value for the stakeholder using approaches such as Kim and Mauborgne (2005), red oceans or blue oceans strategy, design themes (Amit and Zott, 2001) and business model patterns (Osterwalder's and Pigneur, 2010). Moreover, the scope of the business model business model innovation may be either simple or complex with simple business model innovation involving a change in one of the components of the business model, while complex business model innovation could entail simultaneous changes in the various components of the business model (Yariv et al., 2015b). However, both complex and simple business models are important with Amit and Zott (2010) suggesting that it is necessary to innovate the business model even if it may not be game-changing for the industry and Yariv et al (2015b) indicating the change in the business model components may either be radical or incremental. In the current study the focus was on both simple and complex business model innovation. The business model complexity in terms of the number of components redesigned is supported in the empirical results which suggest that sample companies are adopting both a simple approach to business model innovation where only one of the business model components is innovated. However, there are also anecdotes where companies are undertaking complex business model innovation and innovating more than one component at a time.

The literature reviewed on business model redesign (Amit and Zott, 2001, Kim and Mauborgne, 2005, Osterwalder and Pigneur, 2010) does not distinguish between business models around one-to-many and one-to-one; however, the empirical results suggest that there is need to distinguish between the two and examine if the business model innovation approach in these two types of markets will be similar. In redesigning the business model the empirical data indicates an interlink between resources and business model redesign. Highlighting the importance of resources in business model innovation as the same business model may be applied in two different companies and yield different results:

"You can implement the same business model in two different companies [and] have completely different results. The magic happens within inside the people and the belief and the inspirational leadership inside the business model. A business model and the structure do not give you success people give you success. So as long as your business model has the right people on the right seats and being measured correctly and being fed in terms of incentivising you will have success. "

7.3.5 Theoretical contribution and summary

The main theoretical contribution relates to conceptualising business model innovation as a multi-dimensional aspect that includes a business model innovation process. An understanding of the business model components and visualising such as a business model as visualising the business model is the first step towards business model innovation. In addition to these two dimensions the research study suggests that the business model innovation drivers need to be taken into account, as the business model innovation process is triggered by these external and internal drivers. Moreover, the study contributes theoretically by suggesting that in addition to the 4I business model innovation process steps, business model innovation process should be a 4I-2M process, adding both the mobilisation steps and monitoring steps. The main theoretical contribution relates to the importance of the internal factors in driving business model innovation. Business model innovation is triggered by both internal and external drivers confirming the importance of growth aspirations and resources and identifying entrepreneurial leadership and staff quality as some of the key factors that are motivating the sample case studies to innovate the existing business models.

From a design based approach proposed by Gregor and Jones (2007) by the business model innovation framework presents design artifacts in terms of business model innovation drivers, components and process. These artifacts maybe specified along the eight dimension of an Information Systems Design theory as illustrated in the table below.

Table 7-1: Potential business model innovation artifacts

	Components of a design theory for manging business model innovation to compete effectively in a changing environment	
	Type	Component example
1	Purpose and scope	The aim is to develop an approach for understanding how to manage business model innovation
2	Constructs	Examples are :Drivers, Process and business model components
3	Principles of form and function	A business model innovation framework is given to support the identification of drivers and a process with six steps is given to be followed when innovating a business model and the components that may be innovated
4	Artifact mutability	Suggestions for improving the approach are given for further work
5	Testable propositions	The approach is adaptable to organisations settings and is general approach rather than a procedure
6	Justificatory knowledge	The approach is derived from business models and business model innovation literature
7	Principles of implementation	Inspirational leadership, and quality staff
8	Exploratory instantiation	No instantiation has been conducted

Theoretical this conceptual framework may be of relevance in investigating the classic business model cases in recent history such as Uber and Airbnb that one may argue revolutionised their industries with Airbnb connecting travellers with local hosts with the popular press such as Forbes estimating the company's net worth in billions and Uber in particular used the customer increased connectivity and GPS technology to offer an affordable and reliable service. One may speculate that in both these case there were drivers that triggered business models as conceptualised in the framework. In a response to this triggers a case of a complex business model approach was adopted where more than one component in the business model is innovated and the business model innovation process in the initiation and ideation process having included analysis not only the existing business models and the business model ecosystem within one industry but having included industry level business model the focus of the business model innovation on disrupting the existing service norms and targeting un-served customer.

7.4 Practical contribution

The research study offers some practical contribution to companies that aspire to manage business model innovation to compete in a changing environment. In particular the proposed conceptual framework with the detailed analysis of the business model innovation drivers, process and business model components may a useful guideline in undertaking a business model innovation. One of the main suggestions that could that companies current assess the business model stages maturity as presented in Chesbrough (2007) who highlights that majority of companies operating today do not articulate a distinct business model, and lack a process for managing business model innovation. Hence the company's business model innovation maturity ranges from having an undifferentiated business model and at the risk of failure and becoming commoditised, while at the second level the companies' business model is differentiated around products and services. As companies move along the third level on the maturity path they develop a segmented business model with the company competing in different segments simultaneously. Moving to having an externally aware business model opens the company to external ideas and technologies in the development, finally being at level 5 where the company integrates its innovation process with its business model. Having assessed the company's desired business model

maturity, it may then use Moore's (2014) suggestion of the introduction of organisational practices and improvements in following the five-level CMMI, with the varying levels of process control, management, documentation and standardisation, quantitative management and optimisation which could be valuable in understanding the organic and the structured approach to business model innovation. One may argue that at the initial stages of a company introducing business model innovation practice while their business model may be differentiated, the processes that are followed may be less structured.

As companies move along the business model innovation maturity path the presented 4I-2M business model innovation serves as a valuable tool in guiding business model innovation process. The proposed process presents a holistic approach, outlining the key activities at each of the business model phases by integrating Frankenberger et al.'s (2013) 4I-framework that was empirically tested through 14 exploratory cases with Zott and Amit (2015) design process model and Meertens et al. (2011) developing a business modelling method to elaborate on the key activities undertaken in each step. In addition the process specification is supported with contributions from (Bucherer et al., 2012, Osterwalder and Pigneur, 2010, Wirtz, 2011). Furthermore, the business model innovation process is supported with contributions from the empirical data. More importantly, the proposed process suggests the linking of BMC with Archimate with business model to link business models to enterprise architecture (Iacob et al., 2012) such that future systems that will be developed fit with the market needs (Meertens et al., 2012). In addition, the process that is proposed in adopts Johnson et al. (2013) approach in modelling risk and adding the probability setting to Gordjin et al.'s (2006)e-3 value for assessing the collaborations under consideration within the business model.

The proposed conceptual framework may appear to have relevance in sample case studies based on the collected data and the theoretical generalisation may be of some relevance to sample companies and companies that aspire to manage business model innovation to compete in a changing environment. This conceptual framework is not a 'fit-all' for companies that seek to undertake business model innovation. However, the conceptual framework identifies some of the elements that may be of importance in managing business model innovation. In particular, interesting new sights on the business model innovation

drivers, process and components are generated and serve as a basis for the theoretical contribution. Despite the relevance of the conceptual framework in managing business model innovation to compete effectively; however, the issues around leadership and quality staff and creating an environment that is conducive for innovation would need to be addressed.

7.5 Limitations and future research

This research study, like previous studies, has several limitations. Given the sectoral and geographic delimitations and number of cases considered in the study, the findings of this research may not necessarily be representative of the all the companies in the ICT and financial service sectors in South Africa. The findings are based on data collected from interviews with sample participants in only six case studies that were identified as having undertaken business model innovation. An additional limitation is that each interview examines only one value proposition and one instance of the business model innovation process.

As such the proposed conceptual framework could serve as a basis for further empirical research that is both qualitative and quantitative. Such future work could assist in evolving and validating theoretical coherence, practical relevance and applicability of the conceptual framework elements in manging business model innovation to compete effectively in a changing environment. In addition these future studies would examine the conceptual framework's main concepts as well as the sub-elements of these concepts for theoretical consistency of the conceptual framework's structure and elements. A longitudinal study using a larger number of case studies that are adopting a continuous approach to business model innovation may serve as a valuable opportunity to validate the framework and the interactive relationship between the multidimensional aspects of the framework. Furthermore, leadership and staff quality within the business model are an area that warrants further research, as these factors have been identified in the current research study as the main factors that contribute to business model innovation success when managing business model innovation to compete effectively in a changing environment.

An additional limitation in the research is that while business model components re-alignment following business model innovation would positively contribute to business model innovation success, such a re-alignment was not examined in the current research study. Future research could examine the relationship, if any, between each of steps of the 4I-2M business model innovation framework in contributing to the re-alignment or if there are additional steps that are required in the framework to assure business model re-alignment. In so doing techniques and mechanisms could be identified to maintain internal consistency between the business model components as companies continually innovate the existing business models.

The use of the business model canvas as a visualisation and communication tool does not specify the audience to whom the tool is targeted. While the business model is communicated to various internal and external stakeholders, future research could look into the various audiences to whom the business model is communicated and specify how the business model canvas could be adapted to suit the various audiences. The potential of supporting the business model canvas with e3value in assessing the potential value of new business partners could be examined.

7.6 Conclusion

Managing business model innovation to compete remains a topic of vast importance to both researchers and practitioners and a growing area of research. The study contributes valuable lessons to practitioners in the area drawing from the literature and data collected from sample companies in South Africa. The proposed conceptual framework and the conditions that are necessary for the conceptual framework could serve as valuable guidelines to those companies that are aspiring to innovate business models to compete effectively in a changing environment. Furthermore, the study makes a theoretical contribution to the body of knowledge in business model innovation highlighting the research limitations and proposing avenues for future research in the area. The limitations and implications of the research were highlighted and suggestions made for future research.

7.7 Reflexivity

Reflecting on the research study one may suggest that the researcher has a strong belief in the value of business model innovation for companies to compete effectively in a changing environment. Taking this into account the researcher could have done more in the interactions towards finding the negative aspects of business model innovation, thus including the discussions of failed business model innovation projects and the lessons that were learnt from those failed projects. Such lessons could be of value in enhancing the potential value of the proposed conceptual framework in supporting companies to manage business model innovation to compete effectively in a changing environment. Furthermore, business model innovation is an evolving area of research with still no consensus as to what a business model is, and thus what business model innovation is. Hence, looking at business model innovation from the position where two or more components of the business model were innovated would differentiate what is perceived as business model innovation projects from pure product development or process improvement initiatives.

In an ideal situation it would have been preferable to collect evidence from more than one participant in each of the sample case studies. However, this was not always possible, as for triangulation purposes other sources of evidence were used. These included the company's websites and other documents. In addition gaining access to sample case studies was quite challenging with some participant companies withdrawing and in some cases the key informants with the company moving to other companies. This also led to the withdrawal of the participant company. However, the research has benefited greatly from informants who were executives who had an insightful high level overview on business model innovation in the sample case studies.

The research study may be said to have been a journey of continuous growth and knowledge discovery not only about business model innovation and research methodology but personal growth for the researcher. The research study serves as a beginning of a continuous development and growth in a research journey. Business model innovation as a navigator in a rapidly changing environment represents potential for company survival and growth. The research study has begun exploring this potential, serving as a platform for continuous exploration.

References

Abraham, S. 2013. Will business model replace strategic analysis. *Strategy & Leadeship,* 41**,** 31 -38.

Abrahams, L. & Goldstuck, A. 2010. National strategies to harness information technology : Seeeking transformation in Singapore, Finland, the Philippines and South Africa. *In:* Hanna, N. & Knight, P. (eds.). Washington DC, USA: Springer.

Al-Debei, M. M., El-Haddadeh, R. & Avison, D. 2008a. Defining the business model in the new world of digital business. *Fourteenth Americas Conference on Information Systems*, August 17-18 Toronto, Canada.

Al-Debei, M. M., El-Haddadeh, R. & Avison, D. 2008b. Towards a business model for cellular network and telecommunications operators: A theoretical framework. *U.K. Academy for Information Systems (UKAIS) 13th Annual Conference*, April 10 - 11 Bournemouth University - United Kingdom.

Alba, M., Diez, L., Olmos, E. & Rodriguez, R. 2005. Global performance management for small and medium sized enterprises. *In:* Camarinha-Matos L.M., Afsarmanesh H. & A., O., eds. *Collaborative Networks and Their Breeding Environments IFIP International Federation for Information Processing*, 26-28 September Valencia, Spain. Federation for Information Processing, 313 - 320.

Alberts, B. T., Meertens, L. O., Iacob, M. E. & Nieuwenhuis, L. J. M. 2012. A meta-model perspective on business models. *In:* B., S., ed. *Second International Symposium on Business Modeling and Software Design*, 4-6 July Geneva, Switzerland. Springer, 64-81.

Almedia, F. & Frias, R. 2009. Paths to innovate business models in an economic downturn. *International Journal of Business Management,* 4**,** 29 - 37.

Alt, R. & Zimmerman, H. 2001. Preface: Introduction to special section business models. *Electronic Markets,* 11**,** 3-9.

Amit, R. & Zott, C. 2001. Value creation in e-business. *Strategic Management Journal,* 22**,** 493 -520.

Amit, R. & Zott, C. 2012. Creating value through business model innovation. *MIT Sloan Management Review,* 53**,** 41 -49.

Andersson, B., Bergholtz, M., Edirisuriya, A., Ilayperuma, T., Johannesson, P., Gregoire, B., Schmitt, M., Dubois, E., Abels, S., Hahn, A., Gordijn, J., Wigand, H. & Wangler, B. 2006. Towards a reference ontology for business models. *25th International Conference on Conceptual Modeling.* Tucson, Arizona, USA.

Andersson, B., Johannesson, P. & Zdravkovic, J. 2009. Aligning goals and services through goal and business modelling. *Information Systems E-Business Management,,* 7**,** 143-169.

Andrejic, M. & Kilibarda, M. 2016. A framework for measuring and improving efficciency in distribution channels. *International Journal for Traffic and Transport Engineering,* 6**,** 137-138.

Archer, E., Van Vuuren, H. H. & Van Der Walt, H. D. 2017. Introduction to Atlas Ti. Basic operations tips and tricks for coding.

Aversa, P., Haefliger, S., Rossi, A. & Baden-Fuller, C. 2015. From business model to business modelling: Modularity and manipulation. business models and modelling. *In:* Baden-Fuller C. And Mangematin, V. (ed.) *Business Models and Modelling.*

Babbie, E. 2017 *The basics of social research,* Boston. United Staes, Cengage Learning.

Babbie, E. & Mouton, J. 2004. *The practices of social research,* Oxford, Oxford University Press.

Badenhorst, C. 2008. *Dissertation Writing,* Pretoria, Van Schaik.

Balocco, R., Ghezzi, A., Rangone, A. & Toletti, G. 2012. A strategic analysis of the European Companies in the ICT sales channel. *International Journal of Engineering Business Management,* 4**,** 1-10.

Bhatnagar, N., Maryott, K. & Bejou, D. 2007. Customer selection and prioritisation: The optimal resource allocation approach to maximizing customer value. *Journal of Relationship Marketing,* 6**,** 117-130.

Bhattacherjee, A. 2012. Social science research: Principles, methods, and practices. Scholar Commons: Open Access Textbooks.

Biesta, G. 2010. Pragmatism and the philosophical foundations of mixed methods. *In:* Tashakkori, A. & Teddlie, C. (eds.) *Mixed methods in social science and behavioral research.* 2nd ed. Los Angeles: SAGE.

Björkdahl, J. & Holmén, M. 2013. Business model innovation – the challenges ahead. *International Journal of Product Development,* 18**,** 213-225.

Bluhm, D. J., Harman, W., Lee, T. W. & Mitchell, T. R. 2010. Qualitative research in management: A decade of progress. *Journal of Management Studies,* 48**,** 1866-1891.

Bonadonna, G. & Pennington, R. 2014. Improving decision making in gate meetings. Available: http://www.slideshare.net/sopheon/improving-decisionmaking-in-gate-meetings [Accessed 14 July 2014].

Borch, S. E. & Stefansen, C. 2004. Evaluating the REA enterprise ontology from an operational perspective. Paper presented at the Enterprise Modelling and Ontologies for Interoperability. *Enterprise Modelling and Ontologies for Interoperability EMOI - INTEROP 2004 CAiSE'04.*

Bouwman, H. & Macinness, I. 2006. Dynamic business model framework for value webs. *In:* Sprague, R. H., ed. *Proceedings of the 39th Hawaii International Conference on System Scienes*, January 04 - 07 Hawaii, USA,. IEEE.

Brand South Africa. 2016. South Africa's financial sector. Available: http://www.southafrica.info/business/economy/sectors/financial.htm#.VuZpS_l97nB.

Braun, V. & Clarke, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology,* 3**,** 77 -101.

Braun, V. & Clarke, V. 2012. Thematic analyis. *In:* Cooper, H., Camic, P. M., Long, D. L., Panter, A. T., Rindskopf, D. & Sher, K. J. (eds.) *APA handbook of research methods in psychology,Vol. 2. Research designs: Quantitative, qualitative, neuropsychological,and biological* Washington, DC: American Psychological Association.

Breu, K. & Peppard, J. 2003. Useful knowledge for information systems practice: the contribution of the participatory paradigm. *Journal of Information Technology,* 18**,** 177-193.

Brinckman, S. & Govender, S. 2015. What does digital transformation mean. *The future shape of financial services in Africa* [Online]. Available: https://www.pwc.co.za/en/assets/pdf/fs-journal-2015.pdf [Accessed 10/12/2015].

Bryant, R. E., Katz, R. H. & Lazowka, E. D. 2008. Big data computing: Creating revolutionary breakthroughs in comeerce, science and society. Available:

http://www.datascienceassn.org/sites/default/files/Big%20Data%20Computing%202008%20Paper.pdf [Accessed 10/06/2016].
Bucherer, E., Eisert, U. & Gassmann, O. 2012. Towards systematic business model innovation: lessons from product innovation management. *Creativity and Innovation Management,* 21**,** 183 -198.
Businesstech. 2016. South African bank ranked best in the world. Available: http://businesstech.co.za/news/banking/117058/south-african-bank-ranked-best-in-the-world/ [Accessed 17/3/2016].
Casedesus-Masanell, R. & Ricart, E. J. 2010. From strategy to business models and to tactics. *Long Range Planning,* 43**,** 195 - 215.
Casedesus-Masanell, R. & Ricart, E. J. 2011. How to design a winning business model. *Harvard Business Review,* 89**,** 100 - 107.
Casedesus-Masanell, R. & Zhu, F. 2011. Business model innovation and competitive imitation: The case of sponsor-based business model. *Strategic Management Journal,,* 34**,** 464-482.
Cavalcante, S. 2014. Designing business model change. *International Journal of Innovation Management,* 18**,** 1450018-1450040.
Cavaleri, S. A. 2008. The learning organisation Are learning organisations pragmatic ? . *The Learning Organisation,* 15**,** 474 -485.
Chesbrough, H. 2007. Business model innovation :Its not just about technology anymore. *Strategy & Leadeship,* 35**,** 12 - 17.
Chesbrough, H. 2010. Business model innovation opportunities and barriers. *Long Range Planning,* 43**,** 354-363.
Chesbrough, H. & Brunswicker, S. 2014. A fad or a phenomenon ? The adoption of open innovation practices in large firms. *Research Technology Management,* 57**,** 16-25.
Chesbrough, H. & Rosenbloom, R., S. 2002. The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. *Industrial and corporate change,* 11**,** 529-555.
Ching, H. Y. & Fauvel, C. 2013. Criticisms, variations and experiences with business model canvas. *International Journal of Small Business and Entrepreneurship Research,* 1**,** 18-24.
Christensen, C. M. 1997. *The innovator's dilemma when new technologies cause great firms to fail,* Boston, Massachusetts, Harvard Business School Press
Clohessy, T., Acton, T., Morgan, L. & Conboy, K. 2016. The times they are a-chchanging for ICT service provision. *Twenty-fourth European Conference on Information Systems (ECIS),* Istanbul, Turkey. AIS Electronic Library (AISeL).
Comes, S. & Berniker, L. 2008. Business model innovation. *In:* Pantaleo, D., & Nirmal, P. (ed.) *From strategy to Execution: Turning accelerated global change into opportunity.* Berlin, Heidelberg: Springer.
Cooper, D. R. & Schindler, P. S. 2003. *Business research methods,* Boston, McGraw Hill.
Creswell, J. W. 2014. Research design qualitative, quantitative and mixed methods approaches. 4th ed. Los Angeles.
Crighton, T. 2015. What's the bother about Bitcoin. *BankerSA Continent of posibilities : Banking opportunities in Africa* [Online], Edition 13. Available: http://www.banking.org.za/docs/default-source/publication/banker-sa/banker-sa-14.pdf?sfvrsn=8.

Crowe, M., Inder, M. L. & Porter, R. J. 2015. Conducting qualitative research in mental health: Thematic and content analysis. *Australian & New Zealand Journal of Psychiatry*, 1-8.

D'souza, A., Van Beest, N. R. T. P., Huitema, G. B., Wortmann, F. & Velthuijsen, H. 2014. An assessment framework for business model ontologies to ensure the viability of business models. *16th International Conference on Enterprise Information Systems.* Lisbon, Portugal.

Dasilva, C. M. & Trkman, P. 2014. Business model: What it is and what it is not. *Long Range Planning,* 47, 379 - 389.

De Reuver, M., Bouwman, H. & Macinnes, I. 2009. Business model dynamics : a case survey. *Journal of Theoretical and Applied Electronic Commerce Research,* 4, 1-11.

Decreus, K. & Poels, G. 2008. Putting business into business process models. *32nd Annual IEEE International Computer Software and Applications Conference.*

Denzin, N. K. & Lincoln, Y. S. (eds.) 2011. *The SAGE handbook of qualitative research,* Los Angeles: Sage.

Dewulf, S. & Mann, D. 2002. Paradigm-breaking business concept innovation using Triz and other prediction tools. Available: http://www.systematic-innovation.com/Articles/Missing/Dec01-Paradigm-Breaking%20Business%20Concept%20Innovation%20Using%20TRIZ%20and%20Other%20Trend%20Prediction%20Tools.pdf [Accessed 22 June 2012].

Du Plessis, L. 2012. *Developing a business model framework for support services to small and medium enterprises in the services industry in South Africa.* Master of Business Administration, University of Stellenbosch.

Dubosson-Torbay, M., Ostewalder, A. & Pigneur, Y. 2001. ebusiness model design, classification and measurement. *Thunderbird International Business Review,* 44, 5 - 23.

Edirisuriya, A. & Johannesson, P. 2008. On the alignment of business process models and process models. *In:* Dumas, M., Reichert, M. & Shan, M. (eds.) *International Conference on Business Process Management.* Milan, Italy: Springer.

Eisenhardt, K. M. 1989. Building theories from case study research. *The Academy of Management Review,* 14, 532 - 550.

Eisenhardt, K. M. & Graebner, M. E. 2007. Theory building from cases opportunities and challenges. *Academy of Management Journal,* 50.

Eisenhardt, K. M., Graebner, M. E. & Soneshein, S. 2016. Grand challnges and inductive methods: Rigor without rigor mortis. *Academy of Management Journal,* 59, 1113-1123.

Elbers, F. A. 2010. *Designing innovative business models: A methodology for structured business model innovation.* Master of Science in Innovation Management, Eindhoven University of Technology.

Elia, G., Lerro, A., Passiante, G. & Schuima, G. 2017. An intellectual capital perspective for business model innovation in technology intensive industries: empirical evidence from Italian spin-offs. *Knowlege Management Research* 15, 155-168.

Evans, J. D. & Johnson, O. 2013. Tools for managing early stage business model innovation. *Research Technology Management,* 56, 52-56.

Feilzer, M. Y. 2010. Doing mixed methods research pragmatically:Implications for rediscovery of pragmatism as a research paradigm. *Journal of Mixed Methods Research,* 4, 6-16.

Fereday, J. & Muir-Cochrane, E. 2006. Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal Of Qualitative Methods,* 5**,** 80-92.

Fielt, E. 2011. Business service management volume 3. Understanding business models 31st March 2011.

Fleisch, E. & Wortmann, F. 2015. Business model definition the magic triangle. Available: https://www1.ethz.ch/entrepreneurship/education/lectures/dm/DM_ST15/MIS.pdf [Accessed 23 July 2016].

Foedermayr, E., K., & Diamontopoulos, A. 2008. Market segmentation in practice: A review of empirical studies, methodological assessment, and agenda for future research. *Journal of Strategic Marketing,* 16**,** 223 - 265.

Foss, N. J. & Saebei, T. 2017. Fifteen years of research on business model innovation: How far have we come,and where should we go? *Journal of Management,* 43**,** 200-227.

Fourie, P. 2015. Banks forced to change business models and strategies in response to regulatory pressures, according to a KPMG report. Available: http://www.kpmg.com/za/en/issuesandinsights/articlespublications/financial-services/pages/banks-forced-to-change-business-models.aspx [Accessed 22/2/2016].

Frankenberger, K., Weiblen, T., Csik, M. & Gassmann, O. 2013. The 4I-framework of business model innovation: an analysis of the process phases and challenges. *International Journal Of Product Development,* 18.

Garrrison, G., Wakefield, R. L. & Kim, S. 2015. The effects of IT capabilities and delivery model on cloud computing success and firm performance for cloud supported processes and operations. *International Journal of Information Management,* 35**,** 377-393.

Gassmann, O., Enkel, E. & Chesbrough, H. 2010. The future of open innovation. *R&d Management* 40**,** 213-221.

Geerts, G. L. & Mccarthy, W. E. 2002. An ontological analysis of the economic primitives of the extended- REA enterprise information architecture. *International journal of Accounting Information Systems,* 3**,** 1-16.

Giesen, E., Berman, S. J., Bell, R. & Blitz, A. 2007. Paths to success :Three ways to innovate your business model. *Strategy & Leadeship,* 35**,** 27 - 33.

Gillwald, A., Moyo, M. & Stork, C. 2012. Understanding what is happening in ICT in South Africa a supply and demand side analysis of the ICT sector. Available: http://www.researchictafrica.net/publications/Evidence_for_ICT_Policy_Action/Policy_Paper_7_-_Understanding_what_is_happening_in_ICT_in_South_Africa.pdf [Accessed 20/02/2016].

Gordijin, J. & Akkermans, H. 2006. Early requirement determination for networked value constellations: A business model ontology approach. Amsterdam:The Netherlands: Free University Amsterdam VUA.

Gordijin, J., Akkermans, H. & Vliet, H. V. 2000a. Business modelling is not process modelling. *In:* S.W., L., H.C., M. & B., T. (eds.) *International Conference on Conceptual Modeling.* Salt Lake City, USA: Springer.

Gordijin, J., Akkermans, H. & Vliet, H. V. 2000b. Value based requirements creation for electronic commerce applications. . *33rd Hawaii International Conference on Systems Science (HICSS-33)*, January 4 - 7 Maui, Hawaii. IEEE.

Gordijin, J., Petit, M. & Wieringa, R. 2006. Understanding business strategies of networked value constellations using goal and value modeling. *Requirements Engineering, 14th IEEE International Conference.*

Gordijn, J. & Akkermans, H. 2001. Designing and evaluating e-business models. *IEEE Intelligent Systems,* 16**,** 11-17.

Gordijn, J., Ostewalder, A. & Pigneur, Y. 2005. Comparing two business model ontologies for designing e-Business models and value constellations. *18th Bled eConference eIntegration in Action.* Bled, Slovenia.

Green, J., C. & Hall, J. N. 2010. Dialectics and pragmatism. *In:* Tashakkori, A. & Teddlie, C. (eds.) *SAGE handbook of mixed methods in social and behavioral research.* Los Angeles: SAGE.

Gregoire, B. & Schmitt, M. 2006. Business models state of art. Public Research Centre Henri Tudor.

Gregor, S. & Jones, D. 2007. The Anatomy of a design theory. *Journal of the Association for Information Systems,* 8**,** 312-335.

Grobbelaar, S., Tijssen, R. & Dijksterhuis, M. 2017. University-driven inclusive innovations in the Western Cape of South Africa: Towards a research framework of innovation regimes. *African Journal of Science, Technology, Innovation and Development,* 9**,** 7-19.

Guarino, N. 1998. Formal Ontology in Information Systems. . *Proceedings of FOIS'98,* , 6-8 June 1998. Trento, Italy,. Amsterdam, IOS Press.

Guba, E. G. & Lincoln, Y. S. 1994. Competing paradigms in qualiatative research. *In:* Denzin, N. K. & Lincoln, Y. S. (eds.) *The SAGE handbook of Qualitative research.* Los Angeles: Sage.

Guba, E. G. & Lincoln, Y. S. 2005. Paradigmatic controversies contradictions, and emerging confluences. *In:* Denzin, N. K. & Lincoln, Y. S. (eds.) *The SAGE handbook of qualitative research.* 3rd ed. Los Angeles: SAGE.

Gunzel, F. & Holm, A. 2013. One size does not fit all - understanding the front-end and back-end of business model innovation. *International Journal of Innovation Management,* 17**,** 1340002-1340036.

Habtay, R. S. 2012. A firm-level analysis on the relative difference between technology driven and market driven disruptive business model innovation. *Creativity and Innovation Management,* 21**,** 290-203.

Habtay, R. S. & Holmén, M. 2014. Incumbents' responses to disruptive business model innovation: the moderating role of technology vs.market-driven innovation *International Journal Entrepreneurship and Innovation Management,* 18**,** 289 -309.

Habtay, R. S. & Ojah, K. 2010. Introduction of disruptive business model innovation: Examples from services industry firms. *Innovation for Development : Frontiers of Research, Policy, and Practice symposium*, 24-26 February 2010 Johannesburg, South Africa. University of Witwatersrand.

Halia, F., Hoveskog, M., Danilovic, M. & Olofssson, S. 2017 Managing business model innovation : The case of a social enerprise in the electricity market. *In:* Rauter, R., Zimek, M., Kiesnere, A. L. & Baumgartner, R. J., eds. *2nd International Conference on New Business Models,* , June 21-23 Graz, Austria. Institute of Systems Sciences, Innovation and Sustainability, University of Graz.

Hamel, G. & Breen, B. 2007. *The future of management,* Boston, Massachusetts, Harvard Business School Press.

Hedman, J. & Kalling, T. 2003. The business model concept: theoretical underpinnings and empirical illustrations. *European Journal of Information Systems,* 12**,** 49-59.
Heikkilä, J. & Heikkilä, M. 2017 Innovation in micro, small and medium sized enterprises: new product Development, business model innovation and effectuation. *30th Bled eConference Digital Transformation – from Connecting Things to Transforming Our Lives.* Bled, Slovenia.
Hevner, A. R. 2007. A three Cycle view of design science research. *Journal of Information Systems* 19**,** 87-92.
Hevner, A. R., March, S. T., Park, J. & Ram, S. 2004. Dessign science research in Information Systems. *MIS Quartely,* 28**,** 75-105.
Hinterhuber, A. & Liozu, S. 2012. Is it time to rethink your pricing strategy. *MIT Sloan Management Review,* 53**,** 69-78.
Hoffman, D. L. & Novak, P. T. 2003. Conceptual framework for considering web based business models and potential revenue streams. *Journal of Marketing Education,,* 1**,** 7-34.
Hofstee, E. 2006. *Constructing a good dissertation* Johannesburg, South Africa, EPE.
Hussey, J. & Hussey, R. 1997. *Business research : A pratical guide for undergraduate and postgraduate students,* Houndsmill, Great britain, Palgrave.
Iacob, M. E., Meertens, L. O., Jonkers, H., Quartel, D. A., Nieuwenhuis, L. J. & Van Sinderen, M. J. 2012. From enterprise architecture to business models and back. *Software & Systems Modeling,* 13**,** 1059-1083.
Ibm. 2008. Global CEO study. Available: www-03.ibm.com/industries/ca/en/healthcare/files/2008_ibm_global_ceo_study.pdf [Accessed 02/03/2014].
Independent Communications Authority of South Africa 2017. 2
nd Report on the state of the ICT sector in South Africa. Independent Communications Authority of South Africa.
Industrial Development Corporation. 2016 Recent developments in the global and South African economies. Available: http://www.idc.co.za/images/download-files/research-reports/IDC-R-I-publication-EconomicOverview-March2016.pdf [Accessed 25/05/2016].
International Monetary Fund. 2014 South Africa financial system stability assessment. Available: https://www.imf.org/external/pubs/ft/scr/2014/cr14340.pdf [Accessed 14/03/2016].
James, T., Esselaar, P. & Miller, J. 2001. Towards a better understanding of the ICT Sector in South Africa: Problems and opportunities for strengthening the existing knowledge base. Available: http://www.tips.org.za/files/498.pdf [Accessed 10/02/2014].
Joffe, H. & Yardley, L. 2004. Content and thematic analysis. *In:* Marks, D. E. & Yardley, L. (eds.) *Research methods for clinical and health psychology.* London: Sage publications.
Johl, S. K. & Renganathan, S. 2010. Strategies for gaining access in doing fieldwork refelction for researchers. *The Electronic Journal of Business Research Methods,* 8**,** 42-50.
Johnson, B. & Gray, R. 2010. A history of philosophical and theoretical issues for mixed methods research. *In:* Tashakkori, A. & Teddlie, C. (eds.) *SAGE handbook of mixed methods in social research and behavioral research.* 2nd ed. Los Angeles: SAGE.
Johnson, M. W. 2010. The time has come for business model innovation. *Leader to Leader,* 57**,** 6-10.

Johnson, M. W., Christensen, M. C. & Kagermann, H. 2008a. Reinventing your business model. *Harvard Business Review*, 59 -67.

Johnson, P., Iacob, M. E., Valija, M., Van Sinderen, M., Magnusson, C. & Ladhe, T. 2013. Business model risk analysis: Predicting the profitability of busoness network profitability. *5th International IFIP Working Conference on Enterprise Interoperability*, March 27–28 Enschede, The Netherlands. Springer, 118-130.

Johnson, R. B. & Onwuegbuzie, A. J. 2004. Mixed methods research: A research paradigm whose time has come. *Educational Researcher,* 33, 14-26.

Johnson, W. M., Christensen, M. C. & Kagermann, H. 2008b. Reinventing your business model. *Harvard Business Review,* 86, 59-67.

Johnson, W. M., Christensen, M. C. & Kagermann, H. 2008c. Reinventing your business model. *Harvard Business Review*, 59 -67.

Keen, P. & Qureshi, S. 2006. Organizational transformation through business models: A framework for business model design. *The Prooceeding of the 39th Hawaii International Conference on ystems Sciences*. IEEE.

Kelle, U. 1997. Theory building in qualitative research and computer programs for the management of textual data. *Sociological Research Online* [Online], 2. Available: http://www.socresonline.org.uk/2/2/1 [Accessed 10/05/2016].

Kim, W. C. & Mauborgne, R. 2005. *Blue oceans strategy: How to create market space and make competition irrelevant*, Harvard business press.

Kok, B. & Baets, W. 2016. The capacity of information technology for business model innovation and holistic value creation: a formulative study within the financial services sector in South Africa. *International Journal Complexity in Leadership and Management* 3, 22-67.

Kpmg. 2012. KPMG Survey: Organisations altering business models to take advantage of changing market conditions Available: http://www.kpmg.com/za/en/issuesandinsights/articlespublications/press-releases/pages/organisations-altering-business-models.aspx [Accessed 18/12/2013].

Krcmar, H., BöHm, M., Friesike, S. & Schildhauer, T. 2011. Innovation, Society and business: Internet-based business Models and their Implications. *1st Berlin Symposium on Internet and Society.*

Kruger, I. 2010. Da Vinci institute innovation Survey pilot results. *The burning platform.* Sandton, Johannesburg.

Lagha, S. B., Ostewalder, A. & Pigneur, Y. 2001. Modeling e-Business with eBMl. *5th International Conference on the Management of Networked Enterprises (CIMRE'2001),* , October 25-27 Mahdia, Tunisia,.

Lee, J. H., Shin, D. I., Hong, S. Y. & Kim, S. Y. 2011. A structured approach to business modellinf for strategic planning of innovative product service system. *Proceedings of the 41st International Conference on Computers & Industrial Engineering*.

Lee, S. D. & Trimi, S. 2012. Co-innovation; convergenomics, collaboration and co creation for organisational values. *Management Decision,* 50, 817-831.

Leminen, S., Tinnila, M. & Miikulainen, K. 2007. Strategic pricing in business relationships - Do not miss the opportunity to create value for customers. *Industrial Marketing and Purchasing (IMP).* Manchester, United Kingdom.

Leshem, S. & Trafford, V. 2007. Overlooking the conceptual framework. *Innovations in Education and Teaching International,* 44, 93 - 105.

Lincoln, Y. S., Lynham, S. A. & Guba, E. G. 2011. Paradigmatic controversies, contradictions and emerging confluences, revisited. *In:* Denzin, N. K. & Lincoln, Y. S. (eds.) *The SAGE handbook of qualitative research.* 4th ed. Los Angeles: Sage.

Lufteneger, E., Angelov, S. & Grefen, P. 2011. A framework for business model innovation directions. *Beta working paper series 351.* Eindhoven, Netherlands: Eidenhoven University of Technology.

Magretta, A. 2002. Why business models matter. *Harvard Business Review,* 80**,** 86-92.

Mahadevan, B. 2004. A framework for business model innovation. *IMRC conference.* Bangalore, India.

Markides, C., C. 2013. What can ambidexterity literature teach us. *Academy of Management Perspective* 27**,** 313-323.

Markides, C., C. & Charitou, C. D. 2004. Competing with dual business models: A contigency approach. *Academy of Management Perspective,* 18**,** 22-36.

Marolt, M., Lenart, G., Maletic, M., Borstnar, M. K. & Pucihar, A. 2016. Business model innovation insights from a multiple case study in Slovenian SMEs. *Organizacija,* 49**,** 161-171.

Matzler, K., Vieder, V. & Kathan, W. 2015. Adapting to the sharing economy. *MITSloan Management Review,* 56**,** 71 - 77.

Maxwell 2013. *Qualitative research design. An interactive approach. Applied social research methods series,* London, United Kingdom., SAGE.

Mayer, H. 2012. Organisational innovation management approaches in South Africa. Available: http://www.innocentrix.co.za/articles/41-organisational-innovation-management-approaches-spring-survey-sept-2011t/download. [Accessed June 20 2012].

Media Club South Africa. 2016. South Africa's economy key sectors. Available: http://www.mediaclubsouthafrica.com/africa/37-economy/economy-bg/111-sa-economy-key-sectors [Accessed 3/11/2016].

Meertens, L. O., Iacob, M. E. & Nieuwenhuis, L. J. M. 2011. Developing a business modelling method. *First International Symposium on Business Modeling and Software Design,*, Sofia, Bulgaria. 88-95), 88-95.

Meertens, L. O., Iacob, M. E., Nieuwenhuis, L. J. M., Van Sinderen, M. J., Jonkers, H. & Quartle, D. 2012. Mapping the business model canvas to Archimate. *Proceedings of the 27th Annual ACM Symposium on Applied Computing*, 25-29 March Riva del Garda, Italy. ACM, 1694-1701.

Meertens, L. O., Strarreveld, M. E., Iacob, M. E. & Nieuwenhuis, L. J. M. 2013. A business case method for business models. *Third International Symposium on Business Modeling and Software Design,*, 8-10 July 2013 Noordwijkerhout, The Netherlands. University of Twente.

Mitchell, D. W. & Coles, C. B. 2004. Establishing a continuing business model innovation process. *Journal of Business Strategy,* 25**,** 39-49.

Moore, D. T. 2014. Roadmaps and maturity models : Pathways toward adopting big data. *Conference for Information Systems Applied Research*, Baltimore, Maryland. Education Special Interest Group of the AITP, 1-8.

Morgan, D. L. 2014. Pragmatism as a paradigm for social research.
Qualitative Inquiry, 20**,** 1045-1053.

Morris, M., Schindehutte, M. & Allen, J. 2005. The entrepreneur's business model: Towards a unified perspective. *Journal of Business Research,* 58**,** 726-735.

Morse, J. M., Barrett, M., Mayan, M., Olson, K. & Spiers, J. 2002. Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods,* 1**,** 13-22.

Mosala, T. 2012. Trio of considerationss draws the blue print. *The Wits Business School Journal.* Johannesburg: Wits Business School.

Mustafa, R. 2015. Business model innovation pervasiveness of mobile banking ecosystem and activity system - an illustrative case of Telenor Easypaisa. *Journal of Strategy and Management,* 8**,** 342-367.

Muyengwa, G., Dube, P. & Battle, K. 2012. Development and analysis of business models in the South African motor body repair sector. *The 42nd International Conference on Computers and Industrial Engineering (CIE42)* 16-18 July 2012 Cape Town, South Africa. CIE & SAIIE.

Myers, M., D. 2009. *Qualitative research in business management,* Los Angeles, Sage.

Nagy, D., Schuessler, J. & Dubinsky , A. 2016. Defining and identifying disruptive innovations. *Industrial Marketing Management,* in Press.

Niehaves, B. 2007. On epistemological diversity in design science new vista for design oriented IS research. *Twenty Eigth International Conference on Information Systems.* Montreal, Canada.

Norman, D., A. & Verganti, R. 2014. Incremental and radical innovation: Design research vs technology and meaning change. *Design Issues,* 30**,** 78-96.

Obehholzer, S. M. 2007. *A business model for SMMEs in the telecommunication sector in the border region.* MBA, Nelson Mandela metropolitan University.

Onwuegbuzie, A. J. & Leech, N., L. 2007. A call for qualitative power analyses . *Quality & Quantity* 41**,** 105-121.

Osterwalder, A. 2004. *The business model ontology a proposition in a design science approach.* Phd Lausanne.

Osterwalder, A. & Pigneur, Y. 2002. An e-Business model ontology for modelling e-Business. *15th Bled Electronic Commerce Conference e-Reality:Constructing the e-Economy.* Bled, Slovenia.

Osterwalder, A. & Pigneur, Y. 2010. *Business model generation,* New Jersey, John Wiley & Sons.

Osterwalder, A., Pigneur, Y. & Tucci, L. C. 2005. Clarifying business models: Origins, present, and future of the concept. *Communications of the Association for Information Systems,* 16**,** 1 - 25.

Pateli, A., G. & Giaglis, G., M. 2004. A research framework for analysing e-business models. *European Journal of Information Systems,* 13**,** 302 - 314.

Pateli, A., G., & Giaglis, G., M. 2003. A framework for understanding and analysing e-business models. *16th Bled Electronic Commerce Conference eTransformation.* Bled, Slovenia.

Petrovic, O., Kittl, C. & Teksen, R., D. 2001. Developing business models for ebusiness. *International Conference of Electronic Commerce.* Vienna. Austria.

Pienaar, C. 2016. *Using business model canvas to explore how independent South African musicians do music as a business.* Magister of Philosophy, Stellenbosch.

Pigneur, Y. 2006. Internet + business = e-business. Available: http://www.docstoc.com/?doc_id=19664283&download=1 [Accessed 5 May 2012].

Pijpers, V. & Gordijin, J. 2007. Bridging business value and process models in aviation value webs via possession rights. *40th Hawaii International Conference on Systems Science (HICSS-40 2007).* Waikoloa, Big Island, HI, USA.
Porter, M. E. 1979. How competitive forces shape strategy. *Harvard Business Reveiw,* 57**,** 137-145.
Porter, M. E. 1980. *Competitive strategy techniques for analysing industries and competitors,* New York, The free press a division of Macmillan, Inc.
Porter, M. E. 1985. Technology and competitive advantage. *Journal of Business Strategy,* 5**,** 60-78.
Powell, T. C. 2001. Competititive advantage:logical and philosophical considerations. *Strategic Management Journal,* 22**,** 875-888.
Private Sector Energy Financing. 2015. Guide to energy efficiency finance in South Africa. Available: http://www.psee.org.za/downloads/publications/FPP9315_NBI_PSEE_Finance_Publication.pdf [Accessed 10/03/2016].
Rangan, K., V.,, Moriarty, R., T., & Swartz, G., S. 1992. Segmenting customers in mature industrial markets. *Journal of Marketing,* 56**,** 72-82.
Remenyi, D. 2012. *Case study research ; The quick guide seris,* Reading, Academic conferences and publishing international limited.
Republic of South Africa 2015. Information and Communication Technology satellite account for South Africa, 2012. *In:* Statistics (ed.). Statistics South Africa.
Richardson, J. 2008. The business model: an integrative framework for strategy execution. . *Strategic change,* 17**,** 133-144.
Rijkers-Defrasne, S. 2004. South African Benchmark 2020. Available: http://www.vditz.de/fileadmin/media/publications/pdf/efmn_63.pdf [Accessed 10 May 2016].
Ritchey, T. 2006. Problem structuring using computer-aided morphological analysis. *Journal of the Operational Research Society,* 57**,** 792–801.
Sakelladris, K. & Stiakakis, E. 2011. Business model change due to ICT integration: An application to the entertainment industry. *International Journal of Computer Information Systems & Industrial Management Applications,* 3**,** 539 - 551.
Sale, J. E. M., Lohfeld, L. H. & Brazil, K. 2002. Revisiting the quantitative-qualitative debate: Implications for mixed-methods research. *Qualitative Quantitative,* 36**,** 43-53.
Samavi, R., Yu, E. & Topaloglou, T. 2009. Strategic reasoning about business models: a conceptual modeling approach. *Information Systems E-Business Management,* 7**,** 171-198.
Sanlam. 2014. Sanlam's socio-economic impact in South Africa and beyond Available: https://www.sanlam.com/Sanlam%20Shared%20Documents/Sanlam+booklet_7342_FINAL_15Aug_1415_NVD_WEB.pdf.
Santos, J., Spector, B. & Van Der Heyden, L. 2009. Toward a theory of business model innovation within incumbent firms. Fontainebleau, France: INSEAD
Sarasini, S. & Linder, M. 2017. Integrating a business model perspective into transition theory: . *Environmental Innovation and Societal Transition,* In press.
Saunders, M., Lewis, T. & Thornhill, A. 2015 *Research Methods for Business Students,* India, Pearson Education.
Schmitt, M., Gregoire, B., Incoul, C., Ramel, S., Brimont, P. & Dubois, E. 2004. If business models could speak ! Efficient: a framework for appraisal, design and simulation of

electronic business transactions. *International Conference on Enterprise Integration and Modelling Technology (ICEIMT'04).* Toronto, Canadada.
Schneider, S. & Spieth, P. 2013. Business model innovation: towards an integrated future research agenda. *International Journal of Innovation Management,* 17**,** 1-34.
Shafer, S. M., Smith, J. H. & Linder, J. C. 2005. The power of business models. *Business Horizons,* 48**,** 199-207.
Shenton, A. K. & Hayter, S. 2004. Strategies for gaining access to organisations and informats in qualitative studies. *Education for Information,* 22**,** 223-231.
Silverman, D. 2013. *Doing qualitatative research,* London, Sage.
Simatele, M. 2015. Market structure and competition in the South African banking sector. *Procedia Economics and Finance,* 30**,** 825-835.
Sinfield, J. V., Calder, E., Mcconnell, B. & Colson, S. 2012. How to identify new business models. *MIT Sloan Management Review,* 53**,** 84-92.
Sosna, M., Trevinyo-Rodrı´Guez, R. N. & Velamuri, R. S. 2010. Business model innovation through trial-and-error learning: The Naturhouse case. *Long Range Planning,* 43**,** 383 - 407.
Sousa, M. J. 2015. Emerging technologies as drivers for developing organisational innovation competencies. *Economics World,* 3**,** 97-107.
South Africa 2017. Information and Communication Technology satellite account for South Africa, 2013 and 2014. Statistics South Africa
Stähler, P. 2002. Business models as an unit of analysis for strategizing. Available: http://www.hec.unil.ch/aosterwa/Documents/workshop/Draft_Staehler.pdf [Accessed 10/05/2014].
Sun, S. 2009. An analysis on the conditions and methods of market segmentation. *International Journal of Business Management,* 4**,** 63-70.
Taran, Y., Boer, H. & Lindgren, P. 2009. Theory building - towards an understanding of business model innovation process. *DRUID-DIME Academy Winter 2009 PhD Conference- Economics management of innovation, technology and organisational change.* Aalborg, Denmark
Taran, Y., Rene, C. G. & Boer, H. 2015. Managing business model innovation risks - lessons for theory and practice. *16th International CINet conference on Pursuing Innovation Leadership*, 13-15 September 2015 Stockholm, Sweden.
Tashakkori, A. & Teddlie, C. 2010. Epilogue current developments and emerging trends in integrated research methodology. *In:* Tashakkori, A. & Teddlie, C. (eds.) *SAGE handbook of mixed methods in social and behavioral rsearch.* Los Angeles: SAGE.
Teece, D. J. 2010. Business models, business strategy and innovation. *Long Range Planning,* 43**,** 172-194.
Teece, D. J. 2017. Business models and dynamic capabilities. *Long Range Planning,* in Press**,** 1-10.
Tesch, J. & Brillinger, A. 2017 The evaluation aspect of digital business model innovation: a literature review on tools and methodologies. *Proceedings of the 25th European Conference on Information Systems (ECIS)*, June 5-10 Guimarães, Portugal,.
Timmers, P. 1998. Business models for electronic commerce. Electronic Markets. *Business models for electronic commerce. Electronic Markets,* 8**,** 3 - 8.
Tongur, S. & Engwal, M. 2014. The business model dilemma of technology shifts. *Technovation,* 34**,** 525-535.

Treacy, M. & Wiersema, F. 1993. Customer intimacy and other value disciplines. *Harvard business review,* 71**,** 84 - 93.
Van Assen, M., Van Den Berg, G. & Pietersma, P. 2009. *Key management models the 60+ models every manager needs to know,* Great Britain, FT Prentice Hall.
Van Maanen, J. & Kolb, D. 1982. The professional apprentice : observations on fieldwork roles in two organizational settings. *In:* Management, S. S. O. (ed.) Working Paper ed.
Veit, D., Clemons, E., Benlian, A., Buxmann, P., Hess, T., Kundisch, D., Leimeister, J. M., Loos, P. & Spann, M. 2014. Business models: An Information Systems Research Agenda. *Business & Information Systems Engineering,,* 6**,** 45-53.
Venkatraman, N. & Henderson, C. H. 2008. Four vectors business model innovation: Value capture in a network era. *In:* Pantaleo, D., & Nirmal, P. (ed.) *From strategy to execution : Turning accelerated gloabl change into opportunity.* Berlin, Heidelberg: Springer.
Verhoeven, B. & Johnson, L. W. 2017. N+business modelinnovation portfolio strategy for growth uner product and market configuarations. *Journal of Business Models,* 5**,** 35-50.
Vorbach, S., Wipfler, H. & Schimpf, S. 2017. Business model innovation vs. business model inertia: the role of disruptive technologies *BMH,* 162**,** 382-385.
Wang, L., Jaring, P. & Wallin, A. 2009. Developing a conceptual framework for business model innovation in the context of open innovation. *Third IEEE International Conference on Digital Ecosystems and Technologies (IEEE DEST 2009).* Istanbul, Turkey: IEEE.
Weller, C., Kleer, R. & Piller, F. T. 2015. Economic implications of 3D printing: Market structure models in light of additive manufacturing revisited. *International Journal Production Economics,* 164**,** 43-56.
Wesgro. 2014. 2014 Western Cape and South Africa ICT sector. Available: http://wesgro.co.za/publications/publications/2014-western-cape-and-south-africa-ict-sector [Accessed 10/10/2015].
Winer, R. S. 2001. A framework for customer relationship management. *California Management Review* 43**,** 89-105.
Wirtz, B., Pistoia, A., Ullrich, S. & Gottel, V. 2016. Business models: origin, development and future research perspectives. *Long Range Planning,* 49**,** 36-54.
Wirtz, B. W. 2011. *Business model management: Design - Instruments - Success factors,* Heidelberg, Germany, Gabler Verlag |.
Yariv, T., Boer, H. & Lindgren, P. 2015a. A business model innovation typology. *Decision Sciences,* 46**,** 301-331.
Yariv, T., Rene, C. G. & Harry, B. 2015b. Managing business model innovation risks lessons for theory and practice. *The 16th international CINet conference on pursuing innovation leadership*. 912-929.
Yin, R. K. 2014. *Cases study reseach: Design and methods,* Los Angeles, Sage.
Young, J. 2013. South Africa plans for an expanded ICT sector. Available: http://www.frontiermarketnetwork.com/article/2369-south-africa-plans-for-an-expanded-ict-sector#.VIMJF9KUfM4 [Accessed 01/01/2016].
Zott, C. & Amit, R. 2009. Business model design: An activity system perspective. *Long Range Planning,* 43**,** 216-226.

Zott, C. & Amit, R. 2015. Business model innovation: Towards a process perspective. *In:* Shaley, C. E., Hitt, M. A. & Zhou, J. (eds.) *The Oxford handbook of creativity, innovation and entrepreneurship.* Oxford: Oxford University Press.
Zott, C., Amit, R. & Massa, L. 2011. The business model: Recent developments and future research. *Journal of Management,* 37**,** 1019-1042.

Other academic outputs resulting from this research

Conference

- Motjolopane, I. (2014). *"Managing Business Model Innovation in an Era of Change and Networks".* Paper presented at the Strategic Management Society (SMS) 34th International Annual Conference: Strategy in an Era of Networks Conference, Madrid (Spain), September 19-23.

Postgraduate Research Symposium

- Motjolopane, I. (2012). *") Business model innovation in small enterprises in South Africa"* Paper presented at 4th Cross-Faculty Postgraduate Symposium Motjolopane, Showcasing Postgraduate Research @ Wits: Wits

Appendix I: Consent form

Agreement:

I have read the invitation to participate in the research described above. I voluntarily agree to participate in the research study and I am aware I am free to withdraw my consent and discontinue participation in the study at any time without consequence. Participation in the study will involve semi-structured face-to-face interviews that would take between 1 hour and 1.30 hours with business model designers and implementers'. My company's interests and future well-being will be protected in terms of both anonymity and confidentiality as no information that may lead to the identification of the company and individual participants will be used. At all times, my identity and the company's identity will be kept confidential.

Name (Printed) _____

Signature: _____

Date: _____

I agree to allow the interviews to be tape recorded. I understand that I can request that the recording be stopped at any time.

Signature: _____

Researcher: _____ Date: _____

Appendix II: Interview schedule business model innovation

(**Business model** is used to refer to the underlying economic logic how a business makes money and captures value in serving the target customer taking into account key activities, resources and partnerships as well as the value exchanges between the company and its partners.)

1. Introduction and context

Question: Kindly give a brief introduction of the company and how the business model is communicated?

Prompts:

- When it started, growth aspirations, key successes, challenges and company approach to innovation.
- Business model has evolvement over time and business model specific challenges and metrics used to measure business model
- Business model communication if graphical please explain why the company decided to illustrated the business model graphically and benefits of visualising the business model .
- Components used to articulate the business model.

2. Business model innovation drivers

Question: Please provide an overview of the drivers of the last business model innovation process, components that were the focus of the business model innovation?

Prompts:

- Overall goal, driving factors, and the components innovated
- Component that was the main focus of the re-design, other components affected how they were affected and how was the internal fit amongst the components maintained.
- Factors most likely to trigger the next business model innovation cycle, goal likely to be pursued and components likely to be innovated.
- Is business model innovation driven by incremental, radical or disruptive innovation
- In terms of technology could you kindly elaborate how each of these technologies are driving business model innovation in the company; social networking, mobile computing, data analytics, and cloud computing.
- How changing customer needs and the need to serve the un-served customers are driving business model innovation

- How competition is driving innovation is the intensifying competition, shifting basis in competition, need to fend of low-end disruptors or the China price

3. Business model innovation approach

Question: Elaborate on the approach that was adopted for new business model would you say it was based on **novelty**, **enhancing efficiencies, providing complimentary services**, **customer lock-ins** or any other approach as well as on the industry norms that was challenged .

Prompts:

- Blue oceans approach of creating uncontested market or a read ocean approach of competing in an existing market.
- Unbundling existing business models to focus on product leadership, customer intimacy or operational excellence, Long tail, multi-sided, free or open
- What industry norms were challenged in this exercise?
- Benefits of the new business model and its contribution to the company in terms sales growth, market share, productivity and profitability elaborate on the judgement.

4. Business model innovation process

Question: Briefly discuss the process that is followed when undertaking business model innovation identifying if it is organic or structured and expanding on the steps that would be taken?

Prompts:

- Is a structured process or an organic process followed to innovate the business model reasons for having a structured or organic process and benefits from these type of approach
- Is the process followed continuous loop and if so examples of inexpensive low risk experiments company is doing to test new business model ideas.
- Besides the interviewee, who are the other people encouraged to propose and deliver business model innovation in the company?
- Elaborate how the company would approach mobilisation, initiation, ideation, integration, implementation and monitoring steps in a business model innovation process and some of the key challenges in each step

5. Existing Business model

Question: Give an overview of the business model of the product or service that was innovated in the last business model innovation process?

Prompts:

- Product or service innovated and how its differentiated from competitors product leadership, operational efficiency, customer intimacy, or any other approach
- Who is the target customer mass, niche, segmented, diversified or multi-platform and need/pain being addressed and the channels used to serve the customer are the owned direct/indirect channels or partner channels
- The relationship maintained with the customers is it acquisition, retention, upselling, customisation, trust & security or community
- The key activities are thy base on production, problem solving, Platform or network, procurement of either information or resources and key activities effectiveness, efficiency and scalability in comparison to those of the competitor, briefly elaborate on the answer and how this achieved.
- The key alliance motive economies of scale, risk reduction, acquisition of resources activities

- Would you describe the company resources used in the new business model difficult for competition to imitate/hire/acquire and kindly expand on the answer.
- The revenue streams on the new business model are they one-time asset sale, recurrent subscription, transaction based use or revenue sharing
- In terms of costs structures would you say they driven by value, fixed costs, variable costs, economies of scale or economies of scope
- Do costs of the new business model lower costs for the customer in a way that changing the game with the cost structure or just cut costs significantly and how is this being achieved?
- Pricing approach used is it cost based approach with or without strict guidelines to minimise deviations from set price a sophisticated pricing tool.

6. Business model environment

Question: In comparison to competitors how would you describe the company's existing business model?

Prompts:

- Unique, imitative or me-too, and elaborate on choice.
- Rate the service fulfilment in terms of cost/performance; is it as best in class, average performer or weak (customer gain) and expand?
- Aspects the customer is over-served by the current value proposition in the market and new value attributes that would make the value proposition attractive to un-served customers.
- The two main competitors and we can use code A and B if you don't feel comfortable in revealing their names and what is your impression of each of the competitor's business models in terms of being unique, imitative or me-too and elaborate on judgement for each?

7. Effective practices and those that are not effective

Question: Having participated in business model innovation in the company kindly discuss in your opinion practices that in your opinion that were effective and those that were not effective.

8. Rating of business model innovation drivers

Question: Please rate the intensity of the various business model innovation drivers in your business environment in terms of being weak moderate and intense?

Prompts:

- Incremental or radical technological advancement
- Disruptive technological advancement
- Cloud computing
- Social networks
- Mobile technologies
- Data analytics
- The change in customer needs

- Meeting the needs of unserved customers
- Competition intensity
- Competition fending off low end disruptors
- Shifting basis of competition
- Business model homogeneity
- Competition “China” price
- Deregulation
- Intellectual property management
- Black economic empowerment
- Internal factors Growth aspirations
- Internal Factors leadership and staff

9. Omissions

Question: In terms of our discussion what other elements have I left which in your opinion are key in managing business model innovation to compete effectively in a changing environment.