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Business model innovation in South African companies under the changing post-COVID-19 world of work

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Business model innovation in South African companies under the changing post-COVID-19 world of work

RESEARCH REPORT

Katekani Hlabathi

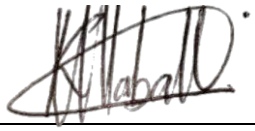
Wits Business School

Research report presented in partial fulfilment for the degree of Master of Business Administration to the Faculty of Commerce, Law, and Management, University of the Witwatersrand

August 2021

DECLARATION

I Katekani Hlabathi declare that this research report entitled 'Business model innovation in South African companies under the changing post-COVID-19 world of work' is my own unaided work. I have acknowledged, attributed, and referenced all ideas sourced elsewhere. I am hereby submitting it in partial fulfilment of the requirements of the degree of Master of Business Administration at the University of the Witwatersrand, Johannesburg. I have not submitted this report before for any other degree or examination to any other institution.



Katekani Hlabathi

Signed at Johannesburg on 20 August 2021

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ABSTRACT

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Report title: **Business model innovation in South African companies under the changing post-COVID-19 world of work**

Businesses that have survived pandemics and other major global disruptions have demonstrated the importance of continually re-evaluating their business models. Implementing business model innovation has been shown to significantly enhance a business's chances of surviving major global disruptions. This study aims to determine how the application of business model innovation, particularly in South African enterprises, has enabled these businesses to survive and remain profitable in a changing work environment, especially during the COVID-19 pandemic. In this context, business model innovation refers to the creative introduction of new ways of the business providing value to their customers through the products they sell or services they provide.

A qualitative study with ten (10) respondents from South African enterprises was conducted to test the proposition that businesses who apply business model innovation in pandemics, such as the COVID-19 pandemic, will survive and become even more profitable. The study was conducted in several enterprises from different industries, using interviews and questionnaires. The study aims to provide a possible framework to be used by businesses during pandemics and to provide a basis for further research on the subject.

The study's key findings show that there are both internal and external factors that influence the implementation of an innovative business model. COVID-19 was rated highly as an influence that is top of mind, affecting how firms conducted their businesses today. The study also revealed that customers and stakeholders are key to developing an innovative business model. The limitations of the study relate to the number of respondents and their location. This was a direct effect of the qualitative nature of the study and the physical and other restrictions due to COVID-19; thus, the results may not be widely representative or fully replicable. Nevertheless, overall, the study indicates that business model innovation could give businesses the competitive advantage and the differentiation needed to succeed during times of uncertainty.

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LIST OF ABBREVIATIONS AND ACRONYMS

4IR	Fourth Industrial Revolution
AI	Artificial Intelligence
BMB	Business Model Builder
BMI	Business Model Innovation
CDC	Centers for Disease Control and Prevention
COVID	Coronavirus Disease
DAS	Distributed Antenna System
ECT Act	Electronic Communications and Transactions Act
ESG	Environmental, Social and Governance
NICD	National Institute for Communicable Diseases
PKI	Public Key Infrastructure
SARS	Severe Acute Respiratory Syndrome
TERS	Temporary Employee Relief Scheme
WHO	World Health Organisation

DEFINITION OF KEY TERMS AND CONCEPTS

Artificial Intelligence	The ability of machines or computers to learn from experience, adjust to new inputs and perform human-like tasks.
Business Model	This is how an organisation structures itself for operations in order to generate revenue. At the core of it is how the business creates, captures and delivers value to its customers.
Business Model Canvas	This is a strategic management tool proposed by Alexander Osterwalder that is used to document business models (new or existing).
Business Model Innovation	Business model innovation is the building and use of resources to generate value in novel (new) ways. It describes the process by which an organisation adjusts its business model.
Competitive Advantage	These are factors that allow a business to produce goods or services better and at a lower cost than its competition, these factors allow the business in question to generate more revenue and margins compared to the market rivals.
COVID-19	The novel coronavirus disease 2019 is caused by the SARS-CoV-2 virus, a respiratory pathogen. The first reported case was in December of 2019 and the disease was first reported in China.
Digitalization	Digitalization is the improvement or enablement of business processes using digital technologies.
Machine Learning	Machine learning is an aspect of artificial intelligence, specifically concerned with a computer learning and adapting how it processes information using algorithms and statistical models from patterns of data.
Pandemic	A disease that affects the whole country or world, not limited to a specific locality.

1 INTRODUCTION TO THE RESEARCH

1.1 Background and context

This research investigates the application of Business Model Innovation under a changing work environment, and specifically during the COVID-19 within companies in South Africa, more specifically for those based in and around the Gauteng Province.

One of the influences within the changing environment is the COVID-19 pandemic. The COVID-19 pandemic has affected businesses in a different but still fundamental way. In formulating the context of this research, it was essential to look at the South African economic situation before and during the COVID-19 pandemic. Although it is known that the economy was not doing exceptionally well, there could be no doubt of the devastation of the COVID-19 pandemic. This research focuses on whether the application of business model innovation helped organisations survive the pandemic or not.

However, before getting to the research conceptualisation (Section 1.2), the terms and concepts that have been used in conceptualising this research are briefly introduced in Section 1.1, generally and broadly—while Chapter 2 has a more specific and detailed discussion on the research context. The research conceptualisation section provides for the research problem statement (Section 1.2.1) and, consequently, the purpose of this research (Section 1.2.2) as well as the research questions (Section 1.2.3). The delimitations and assumptions of the research study are in Section 1.3, while the significance of the research study is discussed in Section 1.4, and a preface to the research report is provided in Section 1.5.

1.1.1 A brief introduction to the COVID-19 pandemic

The COVID-19 pandemic started in Wuhan, China, with the first case reported in December 2019 (WHO, 2020). The disease rapidly spread across the world, prompting many governments to shut down services specifically related to travel and the hospitality sector. Most other economic activities and, in general, human contact was curtailed.

In South Africa, the first case was reported on March 05, 2020 (NICD, 2020). Three weeks later, the South African government implemented a state of national disaster provisions referred to as "Lockdown". The Lockdown started on March 26, 2020, under regulations implementing

restrictions aimed at slowing down the spread of the infections. These restrictions were catastrophic, with lots of businesses affected and many shutting their doors.

1.1.2 Factors that drive business model innovation

Advancement in technology

Companies that have used technology, especially information technology, have leapfrogged their counterparts in revenue. Afuah (2019) gives an example of Alphabet (Google's parent company), Apple, Amazon, etc., who have used the platforms they created to change their business models (Afuah, 2019). They have used technology in a disruptive way. Other examples also cited are those of Uber and Airbnb.

Market Conditions

Market conditions under which the business finds itself can have a significant impact in driving business model innovation. Market conditions such as competition, financial crisis, stock market crashes, and customers' changing demands are factors.

Customers want better experiences, have access to more information (due to internet access etc.) and access to different products. Teece (2010) suggest opportunities also arise where customers are underserved as a result of expensive, complicated or time-consuming value propositions they are being offered (Teece, 2010).

Pandemics as a driver to business model innovation

Pandemics, in general, create unusual conditions where the normal environment for conducting business is no longer viable. This is due to the restrictions in personnel movement to limit the transmission of the disease. These restrictions affect value chains, such as business and suppliers, business with clients and business with other businesses.

Human resources are also negatively affected, with those that have limited means to make an income working from home (e.g., those who worked in restaurants) unable to make a living.

However, the pandemics have a positive effect on others, with the drive towards digitalisation becoming increasingly urgent. This, in turn, enables the companies to eliminate processes that relied on manual processes and thus reduce waste. This also forces businesses to seek new markets or new ways to deliver existing products or services.

The Regulatory Environment

The regulatory environment can force innovation due to deregulation, for example, thereby increasing competition in the market, forcing existing companies to innovate their existing business models. New regulations can also be introduced (such as the ECT Act in South Africa) that creates an environment that recognises electronic transactions, thereby creating opportunities for innovation.

Internal Factors

The factors described above can be classified as external factors, as they are not directly linked to the operation of the business itself. Internal factors are those related to the function and operation of the business itself. This could be staff, the structure of the organisation and operational setup.

It is the desire of every organisation to grow and perform better each subsequent year. Growth involves realising more revenue, expanding products and services while reducing the cost of doing business. This desire to see the organisation grows can lead to the implementation of innovative business models.

1.2 Research conceptualisation

1.2.1 The research problem statement

Business model innovation (BMI) is about innovating the value creation, delivery, and capture mechanisms of firms to entice customers to pay for value and convert this into profits (Buliga et al., 2016). Companies that have survived or even performed better during the COVID-19 pandemic have implemented a successful and Innovative Business Model. Companies that are disruptive in the market do so through the application of Business Model Innovation (Bocken,2019). Research also suggests that sustained growth is possible where business model innovation is applied, especially where Information technology is at the centre of the innovation.

In General, Business Model Innovation is a critical factor in ensuring companies succeed under any economic situation. Companies that have succeeded or even performed better during the COVID-19 pandemic have implemented a successful and innovative business model. Research has shown that companies who have been reluctant or unwilling to change their current business models have failed to succeed during market shocks and pandemics (Kaplan, 2011). Companies that have been disruptive in the market have done so through the application of business model

innovation; however, some companies failed to recognise this as key due to their belief that products are key, and nothing else matters (Kaplan, 2011).

Specifically, the research investigates how companies within South Africa are implementing Business model innovation, especially looking post the COVI-19 pandemic and the changing world of work. The research looks at the factors that are affecting the current working landscape and environment, and how these shape the business models of companies in South Africa.
In addition, this research report aims to investigate the correlation between company performance and business model innovation in the context of COVID-19.

1.2.2 The research purpose (aim and objectives) statement

The aim of this research is to understand the application of Business Model Innovation within the context of a changing operating environment. There are several factors affecting this environment, these being pandemics such as COVID-19, technological innovation, and others. The study aimed to establish how the COVID-19 pandemic affected the current business models in organisation. Questions such as what influences the businesses see affecting their environment in relation to their current business models were asked. Broadly, the research aim was to:

- Establish how businesses reacted to COVID-19 in their quest to deliver value to customers
- Whether there were deliberate steps towards business model innovation within the business. If so, where was this limited to (one component or the entire business model)?
- Propose a framework to be used during pandemics to enable businesses to respond quicker to pandemics. This could be used in academics as a base for further research, by policy makers and business leaders.

The research was conducted using a semi-structured interview questionnaire.

1.2.3 The research questions

This research was aimed at answering the following questions:

1.2.3.1 Question 1: What are the major current influences of business operation and sustainability within South African companies?

This question seeks to understand the respondents understanding of what influences their current business operations. Sub-questions here include whether these influences are external or internal to the business. A further sub-problem is what effect these have on the long-term sustainability of the busines. This question also seeks to understand if COVID-

19 (although not explicitly stated) will come out as a major influence in the current business operations.

1.2.3.2 Question 2: What are the critical factors required to develop an innovative business operating model with these influences in the companies?

This question is designed to understand the respondent's understanding of what a business model is and what it takes to develop an innovative model. The subproblem is finding out what the respondent's view on why they consider these factors to be critical. Another subproblem is finding out from the respondents how these will affect their businesses going into the future.

1.2.3.3 Question 3: What are the hindrances to effective implementation of the optimum innovative business models by South African companies?

The last research question is aimed at understanding what respondents consider to be hampering the effective implementation of business models. A subproblem to this is finding out if any of these factors are linked or not.

1.3 Delimitations and assumptions of the research study

Delimitations are boundaries within which the study will take place or operate, including conscious inclusionary and exclusionary decisions made about the limitations (Marilyn K & Goes, 2013). The limitations of this research were due to time and place constraints. Due to insufficient time, it was not possible to sample a larger percentage of companies across South Africa. The COVID-19 pandemic also made it impossible to have face to face conversations with the interviewees. The research was mainly limited to South African companies in Gauteng, with one in Cape Town. The Gauteng province is the economic hub of South Africa, and as such, many of the companies are based in this province. The companies chosen were across multiple sectors, representing technology, retail, telecommunications, legal firms, and the pharmaceutical industries.

It was assumed that for the study to be effective:

- Respondents are knowledgeable in the field of business models and business model innovation
- They were directly involved in the design or implementation of such business models.
- All responses gathered were answered correctly and truthfully

- All technology required to effectively perform interviews were functional, and data collected was easily transcribed.

1.4 Significance of the research study

This research focuses on an important subject of business model innovation, especially where economic or industry shocks are prevalent. The current studies focus on a wide definition of what Business Models and Business Model innovation is (Teece, 2010), (Afuah, 2019) without taking into context pandemics, especially Corona virus-based ones.

There is also very little research focusing on South African companies and what these companies are doing to sustain their businesses during this crisis. The consequence of not attending to this research problem is that companies in South Africa will have no home-based research data to base their strategic decisions on, in so far as business model innovation (and a sustainable one at that) is concerned. South Africa has unique problems in that the skillset of its human resources to implement meaningful technological innovation is limited. Thus, it is not only sufficient to change products or processes, but innovation at the business level is required to create sustainable companies.

1.5 Preface to the research report

This research report has six chapters, with Chapter 1 providing the introductory context. Chapter 2 discusses the literature review, while Chapter 3 discusses the research methodology and design employed to answer the research questions. Chapter 4 presents the research findings, Chapter 5 discusses the research findings, and the last chapter, Chapter 6, provides the conclusion component.

2 LITERATURE REVIEW

This chapter discusses the theory relevant for the understanding of our research area and context. This literature review is organised as different sections. Section 2.1 provides context on business models and business model innovation. The changing operating and work environment is dealt with in Section 2.2, with Section 2.3 dedicated to the research problem analysis. Section 2.3 looks at the theory that grounds this research study while the knowledge gap analysis is handled in Section 2.4

This chapter has three broad objectives; namely to understand the research problem, to identify the knowledge gap, and to develop a framework for interpreting the research findings.

2.1 Business Models and Business Model Innovation

This section discusses the findings from the literature review on the concept of Business Models and Business Model Innovation.

2.1.1 Business Models

According to the literature, the term "Business Model" was first used in literature in 1957 by Bellman et al. (Bellman & Clark, 1957). Since then, it was not widely used until the 1990s, when research into the concept started to gain wide appeal (Osterwalder, Pigneur, & Tucci, 2005). From the research conducted, there does not seem to be a uniform or widely accepted definition of a business model. The views differ based on prevailing research fields and perspectives. As an example, one such view considers a business model from a revenue and cost perspective, while another looks at a business model from a resource perspective. This assertion that business models (and their associated business model innovation) is ill-defined and still marred by vague construct is further discussed by Gronum et al. (Gronum, Steen, & Verrynne, 2016).

Teece and Linden (2017) provide the following suggestion as a definition: "a Business Model is a structure through which a business creates and delivers value to its clients" (Teece & Linden, 2017). Osterwalder and Pigneur define a Business Model as the rationale of how an organisation creates, delivers and captures value (Osterwalder & Pigneur, 2010). Teece and Linden contend there is a direct and deliberate design (architecture) through which the company sells its products or services to its customers.

Teece and Linden (2017), Afuah (2019) and others bring in the importance of capturing value as part of the strategy. The authors assert that this is more important when a new idea is launched as part of an existing or even new enterprise. Business models thus involve the creation of the value, delivering this to customers and, more importantly, generate a profit.

The differing views on exactly how to define a business model can be seen with the different ways to represent this model. Osterwalder & Pigneur (2010), in their handbook of Business model generation (Osterwalder & Pigneur, 2010), use the concept of a business model canvas. The canvas is represented by nine (9) blocks, these being (i) customer segments, (ii) value propositions, (iii) channels, (iv) customer relationships, (v)revenue streams, (vi) key resources, (vii) key activities, (viii) key partnerships and (ix) cost structure (Osterwalder & Pigneur, 2010). According to the authors, these blocks represent the main functions of a business enterprise, namely, customers, offer, infrastructure and financial viability (Osterwalder & Pigneur, 2010)

Afua (2019) uses the concept of a Business Model Builder (BMB) Framework in an attempt to distinguish it from Osterwalder & Pigneur's business model canvas (Osterwalder & Pigneur, 2010). Figure 1 is a pictorial representation of the BMB framework.

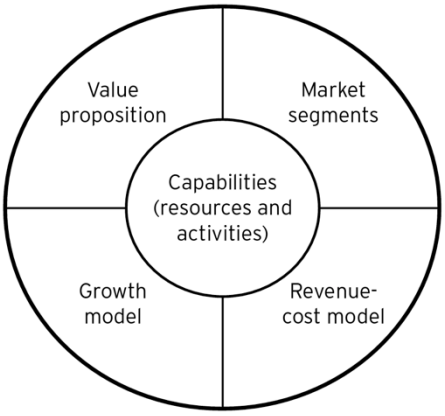


Figure 1. Components of the business model builder framework. Adapted from (Afuah, 2019)

The BMB starts with recognising that businesses need to offer customers the correct value proposition in a particular market segment. To make money, the organisation has a particular revenue-cost model that it applies. The growth model component is to ensure the organisation grows its profitability. The author points out that all this is achieved using the Capabilities at the business's disposal (Afuah, 2019).

Another take on the Business model representation is offered by Ritter (Ritter, 2014), which considers a business as an arrangement of a Business Objective Square (answering the **why** question at the centre of the square, i.e. why does the business exist?) and a Business Model Square, which looks at the **what** (the value propositions), **who** (customers), **how** (demonstration of value – how they serve customers) and **which** (capabilities used to generate the value) components. Figure 2 depicts this representation of a business model.

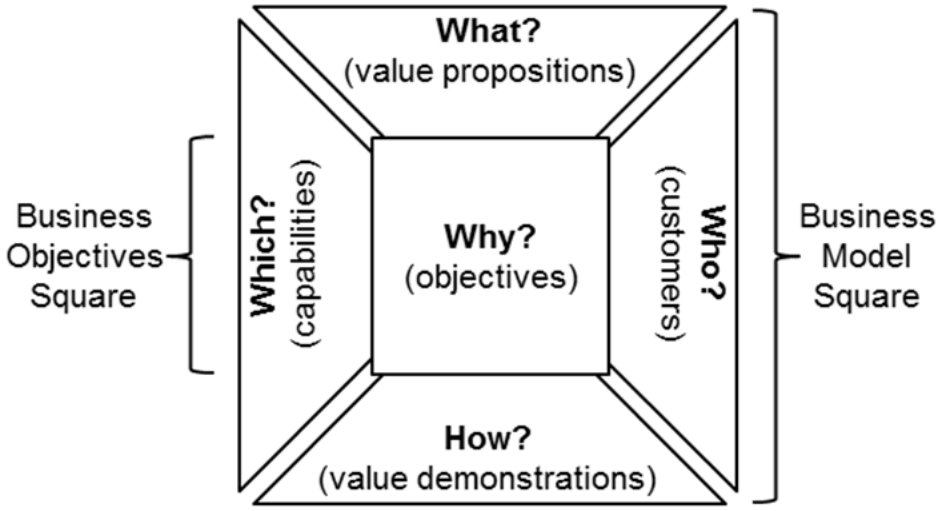


Figure 2. Business Objectives and Business Model Squares. Adapted from (Ritter, 2014)

Many of the authors agree that the business model should be considered as a strategic concept, with an intersection of ideas around who the customers are (market segments), what value they are looking for (value proposition), how this value will be demonstrated using the capabilities existing in the organisation.

2.1.2 (Sustainable) Business Model Innovation

Business model innovation involves the adaptation of an existing business model in a novel way to create a completely new business model or components of a business model (Afuah, 2019). The new innovated business model seeks to enable the business to gain a competitive advantage in the market.

It is important to highlight the difference between regular or normal innovation while doing business. This type of innovation would entail innovating on processes, products and services. Authors agree that this is different to business model innovation that looks at innovation from a business-wide and hence strategic perspective (Amit & Zott, 2010); (Stoilkovska, Ristovska, & Gramatnikovski, 2016)

In their working paper, Zott and Amit (2010) illustrate the importance of business model innovation as a way of creating new value (Amit & Zott, 2010). Evans et al. (2017) contends that due to the lack of agreement and theoretical grounding (Magretta, 2002; Osterwalder and Pigneur, 2005; Boons and Lüdeke-Freund,2013; Teece, 2010), there are not enough case studies that would have enabled firms to understand how to innovate on their business models (Evans, et al., 2017)

Business model innovation must be implemented in such a way that it changes the economics of an industry and is difficult to replicate, thereby creating a strong competitive advantage (Magretta, 2002). In order to do this, several authors contend that innovation needs to happen at more than one of the business model components, irrespective of how the business model is defined. Gassmann et al. (2019) presents an approach to the implementation of the business model innovation, dubbed the St. Gallen Business Model Navigator (Gassmann, Frankenberger, & Csik, 2019). This is one of a few of the attempts that we came across that seeks to implement an actual methodology for implementing a business model innovation strategy, even though this is still at an infancy stage.

Velter et al. (2020) argue the concept of a sustainable business model innovation (SBMI), which applies innovation to business models in a sustainable way. The authors argue that companies are challenged to include social and environmental objectives as core to doing business (Velter, Bitzer, Bocken, & Kemp, 2020). This approach is in congruence with stakeholder theory. Harrison and Wicks (2013) (referencing Freeman (1984)) contend that the stakeholder theory is where firms take on the interests of all stakeholders who are party to creating the value within the firm or business (Harrrison & Wicks, 2013). Thus firms can derive more benefit by including all stakeholders, and this, according to Harrison & Wicks (2013), is part of why some firms survive for much longer than others.

Afuah (2019) describes how business model innovation has changed the fortunes of companies such as Xerox (they realised more money is made by selling the toner for the copiers than the machines themselves, so they designed machines that printed faster), Apple (with the crowd-sourcing of apps, i.e. the Apple App Store), Google (with Play Store and open operating systems) and many others (Afuah, 2019).

2.2 The changing operating and work environment

This section is intended to provide the reader with sufficient information regarding the changing working and operating environment. The operating and working environment are evolving at a rapid pace. This change affects both the actual place of work and the workforce. Lord (2020) asserts that technological developments, economic situation and political, ideological shifts have reconfigured the working world and challenged traditional employment structures on a global scale (Lord, 2020).

Some of the factors driving this change are technological innovations, competition and crisis events (e.g. financial, environmental, pandemics, etc.).

2.2.1 Pandemics as a driver of change

Pandemics have affected the livelihoods of people throughout time. The most severe pandemic in recent memory is the 1918 Pandemic, caused by the H1N1 virus. The pandemic killed over 50 million people worldwide (CDC, 2019). The world is currently facing another pandemic, the COVID-19, which has affected businesses and consumers alike.

Dr Jeurgen Braunstein of the *Economist* provides one aspect where COVID-19 is accelerating the use of Digital Payments. With cash and banknotes especially has proven to carry viruses for a prolonged period, digital currency is a very attractive alternative. Braunstein gives an example of China (the origin of the COVID-19 pandemic) actively promoting internet banking infrastructure and the use of blockchain – a digital ledger technology – as a technology on which transactions can be made (Braunstein, 2020).

Gallagher and Palmer (2020) also point out how the COVID-19 pandemic has pushed universities online (Gallagher & Palmer, 2020). The pandemic was just a catalyst in a business model that was already showing that it is dated. In an article referenced by Gallagher and Palmer (2020), the authors listed six reasons why higher education needed to be disrupted. The reasons listed range from employers needing skilled students to the actual costs of fees at the institutions becoming unrealistically too expensive, giving credence to the rethinking of the current business model on higher education (Chamorro-Premuzic & Frankiewicz, 2019).

Some of the trends that already existed but will be accelerated by the COVID-19 pandemic are as follows (Industry Week, 2020):

- Increase in Remote Work – This has an impact on finding employees that are digital savvy and have digital collaboration skills. The article further states that Gartner estimates that about 48% of the workforce will continue to work remotely post the COVID-19 pandemic
- Expansion of contingent workers – the same Gartner study reveals 32% of full-time employees are being replaced by contingent workers. This is in line with the Gig economy, where a lot of people prefer to have a lot of other temporary or contract side jobs instead of permanent employment.

2.2.2 Technological Innovation

Technological innovation is the use of technology in a novel way to fundamentally change or enhance a previous process.

Teece (2010) argues that the benefits a business can realise with technological innovation are highly dependent on the business model, go to market and value capture strategies that are employed. Baden-Fuller and Haefliger (2013) describe the important link that business models and technological innovation have, though fundamentally separate. They argue that cognitive business models are the precursor to choosing the right technology or even designing products. They further assert that a technology choice is determined by the business model employed, but also this is seen as a two-way relationship in that technology also plays a role in the business model that can be realised.

Artificial Intelligence (AI) and its variant, Machine Learning, has been used in different companies such as Uber, Tesla, Google, Alibaba and others in an attempt to innovate on their business models (Lee, Suh, Roy, & Baucus, 2019). Machine Learning is defined as a form of artificial intelligence that uses algorithms to analyse large data sets in order to make predictions (Pozen & Ruane, 2019). The study revealed the need for companies to build an AI-based Business Model. This needs to be a deliberate effort in which teams are put in place and trained to use AI in an innovative way in the company to build competitive advantages based on AI.

The higher education sectors also benefit from the innovation that AI, with applications such as chatbots to assist students or pattern recognition systems to help students during the admission and enrolment processes (Gallagher & Palmer, 2020).

2.3 Research problem analysis

Business model innovation has been shown to be a field that is still under intense research, evidenced by the lack of a universal definition of what it is. The research has shown that pockets of research based on a specific field or application tend to yield specific results and local to the problem at hand. (Teece, 2010) (Afuah, 2019).

In the South African context, companies are struggling with just surviving and growing their business. The problem is made worse by the current COVID-19 pandemic. This situation requires Business Model Innovation to be implemented. Business models, in general, were designed under normal business operating conditions (though with external factors taken into consideration). Environmental shocks (such as pandemics, financial crisis and so on.) are usually not taken into consideration when business model innovation is implemented.

Dynamic Nature of Business Models

Another factor that contributes to the problem under investigation is the dynamic nature of business models, and by extension, business model innovation (Achtenhagen, Melin, & Naldi, 2013). The authors conducted a study and found out that to successfully develop a business model, companies need to have an entrepreneurial approach and continuously experiment with different business models. While this is a common approach of companies implementing business models, it brings in management challenges and a lack of support. Management may not be able to support these experimentation methods without realising value in the short term.

Resistance to change

Established companies have been shown to resist changing their business models. This is the case of sticking with the familiar models that have always brought in money. Ucaktürk et al. found that 95% of new business models were introduced by new entrants to the market (Ucaktürk, Bekmezci, & Ucaktürk, 2011). CEOs and their senior leadership have been found not to support or explore new business models (Kaplan, 2011).

The intervention that this study will provide is to conduct an assessment on the current state of business model innovation in the South African context, with the aim of proposing a model to be used that considers changes in the operating environment and especially pandemics.

2.4 Research knowledge gap analysis

The literature concentrates on the definition of business models and business model innovation, and even this is not consistent across the spectrum. There are indeed limited frameworks for analysing business model innovation, and none looking at how pandemics affect these business models, what to do to innovate during a crisis such as a pandemic.

This research builds on the work of other authors who attempted frameworks to describe business model innovation and its components. The research also adds value in enumerating influences that are prevalent in the South African context, their relationships with each other and the impact on business model innovation.

The COVID-19 pandemic is the most major influence in current business operations, and there has not been a pandemic of this magnitude since the Spanish Flu of 1918. Current frameworks looking at business model innovation does not take major pandemics of this scale in their implementation, especially within the South African context. This research also looks at the changing world of work with specific emphasis on the South African environment post-COVID-19.

2.5 Summary and conclusion

Teece (2010), Amit and Zott (2010), Afuah (2019), and others identified and attempted to describe a business model and business model innovation. Bocken & Geradts (2020) emphasised the need for firms to possess dynamic capabilities in order to quickly respond to changing operating conditions. The literature review points out that firms that have high entrepreneurial management are likely to succeed in changing their current business models and thus more likely to implement innovative business models that will help them sustain and even grow their business.

Other challenges related to the innovative changes companies need to make to stay relevant were discussed. The opportunities presented by AI and Machine Learning are enormous, and those companies that can use technology to innovate their business models will grow much faster.

3 RESEARCH STRATEGY, DESIGN, PROCEDURE AND METHODS

In Section 1.2.3, three research questions that this research report intends to answer were posed —that is, 'What are the major current influences of business operation and sustainability within South African companies?', 'What are the critical factors required to develop an innovative business operating model with these influences in the companies', and What are the hindrances to effective implementation of the optimum innovative business models by South African companies? The researcher has since reviewed literature and developed an interpretative as well as a conceptual framework that will guide the choices of techniques that will be used. This chapter is concerned with the research strategy, design and methodology used to answer the research questions.

3.1 Research strategy

Bell, Bryman and Harley (2019) defines a research strategy as "the overall approach that is taken during the course of a research, it includes philosophical assumptions that inform the research design, the choice of questions and the choice of methods employed to answer these questions" (Bell, Bryman, & Harley, 2019); Creswell calls these research approaches and defines these as "plans and procedures for research that spans the steps from broad assumptions to detailed methods of data collection, data analysis and interpretation" (Creswell, 2013). In business and marketing research, there are three most common strategies or approaches that are used for investigation or research; these are qualitative, quantitative and mixed.

The research strategy chosen for this is the Qualitative Approach. The reason this strategy was chosen is that the topic is exploratory in nature and is also a developing topic with the attributes that information is constantly changing due to other factors, as compared to quantitative research strategy, which uses descriptive statistics inferred from quantitative data. The other reason is that this study is concerned with an area that is revolving around the operating environment and influences, which has changed in light of several aspects such as technological advances, COVID-19 and other influences. It is thus important for this study to be qualitative in nature in order to get an in-depth analysis of the research questions since this is exploratory in nature. Babbie indicates that this is an ideal strategy that ought to be followed in research if there is the "What"

question is to be answered (Babbie, 2008). This particular study looks at what is the influence, what the hindrances to influences are and what the critical influences are to the successful implementation of innovative business models.

Achtenhagen et al. (2013) used a similar qualitative approach to their study, which was about doing an in-depth analysis of a sample of 25 companies that have managed to create value over a sustained period of time using business model innovation (Achtenhagen, Melin, & Naldi, 2013). They chose this strategy as the questions they had were qualitative in nature, these being determining the value created and for how long this was sustained. The benefit to this is that they were able to study this complex, longitudinal aspect that is the sustained value creation. The major benefit of using this approach in the research is that it provides a building block for developing an optimal conceptual model. Although the optimal model will be the outcome of the study, its validation will be outside the scope of the study and will thus be included for future research.

3.2 Research design

Bryman (2012) describes a research design as "a framework for collecting and analysing data, indicating the decisions about the priority given to a range of dimensions of the research process" (Bryman, 2012). The author mentions the five different research design approaches, these being (i) experimental, (ii) cross-sectional (surveys), (iii) longitudinal, (iv) case study and (v) comparative designs.

This study will follow a cross-sectional or survey design approach. This is based on the view that the analysis is being done at a certain point in time, even though other factors might influence the interviewees as time goes; because it is an in-depth design, having a cross-sectional design is still very relevant. The data is flexible as both qualitative and quantitative strategy can be used. In our case, the cross-sectional with the qualitative method will be used. This design is grounded on an interpretivism paradigm, where the investigation will be subjective, meaning it will be based on people's experience, and those experiences will shape the empirical data (Scotland, 2012). Within the interpretative paradigm, the study will have both ontology (study of being, that is, the 'what is') and epistemology (nature and form of knowledge). The ontological aspect is based on what constitutes the information and how it is developed, and the epistemology aspect is based on the structure of the surveys and how the data is collected.

Bocken and Gerhadts (2020) use a cross-sectional design method in their empirical research on how organisation design affects dynamic capabilities needed for sustainable business model innovation. They used this approach as they considered the grounded theory approach to be suitable in answering the research inductively based on answers they gathered over time. They conducted 53 respondents who were top management of the companies they sampled using a semi-structured survey.

This approach is also suitable for this study as it will also be best performed using the cross-sectional design approach, also with a sample of management that are involved with the business model design or implementation in their companies.

3.3 Research procedure and methods

Procedures and methods to be used for the collection, processing and analysing of the research data are discussed in this section. The collection instruments, as well as the target population and the sample selected from this population, is also detailed. Aspects related to the ethical considerations, data and information collection and the protection thereof is detailed in Sections 3.3.3 to 3.3.5. the background of the respondents to be interviewed for this research study is described in Section 3.3.6.

3.3.1 Research data and information collection instrument(s)

A Research data collection instrument is a measurement tool that is used to gather data for later analysis. There are several data collection instruments, e.g. survey, interview schedule and observations. For in-depth analysis, an interview is ideal as it will allow for the interaction between the interviewer and interviewee. This method also allows for the observation of body cues necessary for empirical data collection.

The research data collection instrument structure determines how well the instrument is arranged or pre-planned. There are three common structures, these being unstructured, semi-structured, and fully structured. This research will follow a semi-structured interview schedule. This is chosen as it allows interviewees to provide in-depth information but is still structured to guide the interviewee to prevent digression to ensure the quality of data collection, all this without leading the interviewee.

A Structured interview schedule is excluded because it is mainly used in quantitative studies where the numbers are mainly required, and no insights are sought from the respondents, e.g., a questionnaire.

Bocken and Geradts (2020) used a semi-structured interview schedule in their study to determine drivers of sustainable business models. They chose this combination because it lends itself to soliciting information about the research topic without leading respondents in any particular direction (quoting Gioia et al., 2013). They also combined this with open-ended and probing questions to allow themes and patterns to emerge during the interview. This type of questioning will also bring the same benefit to my research study due to it also being of a semi-structured type.

Some of the literature will give guidance in so far as the development of the interview schedule, taking into account the main themes on Business Model Innovation described in Chapter 2 of this study.

The research data instrument is detailed in Appendix 1.1. Questions 1 and 2 are used to get the respondent's background and understanding the relevance of the sample (Guetterman, Fetteres, & Creswell, 2015), while questions 3 and 4 is to answer the first research question. Questions 5 is to answer the second research question, and Question 6 is to answer the second research question. Question 7 is to solicit any in-depth discussion and knowledge that the respondents might have.

3.3.2 Research target population and selection of respondents

3.3.2.1 Research target population

Bryman (2012) describes a population as "a universe of units from which a sample is collected". The population for this research study is private enterprises, such as financial, insurance, manufacturing, mining, and retail. It will consist of both big and small companies.

Bocken and Geradts (2020) used a target population similar to our research study. They took enterprises that are considered to be multinationals (to limit this, they used two sustainability indexes). The aim and objectives of the research were to ascertain how organisational design and dynamic capabilities influenced sustainable business model innovation.

The researcher did not use the Wall street indexes since the Population is South African based companies; private companies were used since their survival are based on revenues, and it is in

their best interest to implement business model innovation. The unit of analysis will be companies, represented by the individuals within those companies.

3.3.2.2 Sampling or selecting respondents from the target population

Sampling is defined as the process of selecting a subset or segment from a population for research (Bryman, 2012). The two strategies for sampling are based on Probability sampling (where a statistically random sample is used) and non-Probability sampling (not a random sample). For our research study, we are going to use a Non-probability sample. This is because people who will be used as respondents are selected based on their ability to provide the requisite information for the study and not randomly selected. Even the companies themselves are selected in this fashion.

Achtenhage, et al. (2013), in their study used a similar sampling method (Achtenhagen, Melin, & Naldi, 2013). They were performing a qualitative study focusing on sustained growth of businesses, in particular dynamics of business models. They had a population of companies and selected their sample based on a specific award received. They then applied specific filtering based on the Return on Capital Employed higher than that of the previous three years. This approach ensured they did not have sampling bias in their selection. A similar strategy was employed in this research, categorising companies based on a specific criterion.

The number of respondents to satisfy convergence in the study is between 5 and 25 for generic semi-structured interviews (Saunders, Lewis, & Thornhill, 2015). In this study, ten (10) respondents participated in the study, which falls within the range suggested.

3.3.3 Ethical considerations when collecting research data

Ethical consideration is vital in research as it highlights how research participants get treated. When performing a research study, ethical conduct must be followed, so no harm is brought to the people that have agreed to participate in the study. There are four significant elements or principles to ensure ethics are upheld (paraphrased from Bryman (2012)):

- People that have agreed to participate should be provided with the information and objectives to make sure they are interested and understand after which a consent will be sought (*principle of informed consent*) (Bryman, 2012). They should be advised that they have the right to withdraw at any time.
- Their privacy should be protected (*principle of invasion of privacy*). No names or identifiers should be used that will compromise their views.

- There should be protection from harm and be informed of their rights (*principle of harm to participants*). Effort should be made to ensure no sensitive questions. Study should be used for academic purposes.
- Data collected should be seen by few people (*disclosure and principle of deception*) such as the interviewer, supervisor, or authorized representative.
- Saved in cloud storage and protected by password or encrypted.

3.3.4 Research data and information collection process

Research data collection is the process of collecting data from the respondents using the chosen instruments. Data was collected using the interview schedule. Due to the pandemic, there were no face-to-face meetings. Video sessions were utilised, and a systematic approach using an in-depth semi-structured interview schedule used.

The journal article that used this method (albeit with face to face or telephone interviews) is Bocken and Geraldts (Bocken & Geradts, 2020), as described in the previous sections.

3.3.5 Research data and information processing and analysis

3.3.5.1 Research data and information processing

Data processing is the process of transcribing and categorising the date collected via the research instruments.

Data Coding is the process of transforming collected information into a set of meaningful categories.

Data entry is entering the data onto a computer with data cleaning referring to removing data that doesn't belong to a set.

3.3.5.2 Research data and information analysis

The content was analysed with an assistance of a computer program Atlas TI (version 9). During the analysis a 4-stage content analysis on the data was performed.

3.3.6 Description of the research respondents

The population of the research is South African companies from all sectors. Government departments were excluded from the study, apart from one state-owned agency. Due to constraints relating to COVID-19 and time, only companies in Gauteng were selected.

The interviews were conducted with senior management (senior managers and executives) of companies who had direct involvement in the business strategy. A significant amount of the

participants falls under the categories of managing directors or founding directors of the businesses. Eleven participants were interviewed, with ten of the eleven respondent's results used in the study. The eleventh participant's primary business operation was outside the country, although the company itself is registered in South Africa; thus, this was discarded from the data sample. The respondents that participated in the study and their roles are listed in Table 1.

Table 1. List of respondents and their roles

	Industry	Job Title	Interview Date	Interview Duration (min)
R1	Information Technology Services	Managing Director and Founder	03 Feb '21	19:48
R2	Engineering Design Services	Managing Director and Founder	10 Feb '21	19:53
R3	Telecommunication Services	Managing Director	22 Jan '21	34:15
R4	Legal services	Partner	18 Feb '21	29:57
R5	Healthcare Services	Senior Manager: Strategy and Marketing	21 Feb '21	30:23
R6	Energy	Director and Founder	01 Feb '21	25:49
R7	Retail	Senior Manager	27 Jan '21	25:39
R8	Information Technology Services	Chief Operations Officer and Founder	17 Feb '21	23:21
R9	Postal Services	General Manager	12 Feb '21	26:17
R10	Government Agency	Chief Executive Officer	15 Feb '21	19:21
Total Duration (minutes)				259:43
Average Duration (minutes)				25:57

3.4 Research strengthens—reliability and validity measures applied

Bryman describes data reliability as a concept to do with the consistency of measures used in a study, which needs to hold over time (Bryman, 2012). The author also describes validity as ensuring an indicator used for a study is measuring that concept for which it was designed. The two concepts are used to ensure data has rigour and credibility. Morse et al. (2002) explain four significant elements required in a qualitative study: credibility, transferability, objectivity, and confirmability (Morse, Barret, Mayan, Olson, & Spiers, 2002).

In the research, to ensure these elements are considered, the following measures were put in place:

- Credibility – select the right design, data can be triangulated (data from a different industry), do members check – data recorded was sent to some of the people to ensure they confirm the content and context
- Transferability – qualitative does not have a generalizable sample, can be transferred to a setting or situation similar to our research.
- Objectivity – do the interview verbatim to ensure the researchers are not going to be subjective; make sure it is evidence-based. The researcher will not put his views on the data. Make sure both negative and positive, including contradictions, are considered.
- Confirmability – make sure researcher will confirm data using coding techniques.

3.5 Research weaknesses—technical and administrative limitations

3.5.1 Researcher Bias

The researcher is working for one of the companies in the respondent list. This could have the negative effect of the results being influenced by the researcher's bias and prior expectations, which according to Leedy & Ormond, 2001, needs to be considered when assessing the usefulness or applicability of the study (Leedy & Ormond, 2001). While the above could have been the case in the study, other authors suggest that the prior knowledge can be used as a source of knowledge, where a researcher can draw from his own experiences and use this as a resource for understanding the perspectives of others (Taylor, Bogdan, & DeVault, 2016).

Realising this possible unconscious bias allowed the researcher to be aware during the interview process and allowed the participant to discuss the research topics with minimal interference or leading questions.

3.5.2 Longitudinal Effects

The limited time available for this research, meant that it was not possible to conduct the study over a long period of time, which would have enabled data to be collected to study the long-term sustainability of the business because of the application of business model innovation. The other aspect is that since the COVID-19 pandemic is still in play, it was not possible to look at the post-COVID-19 pandemic effects of how businesses have transitioned themselves and whether they would indeed be more successful.

3.5.3 Administrative limitations

Due to the advent of COVID-19, the research was conducted using an interview schedule over a videoconferencing facility (or audio telecon). With audio, one cannot see people face to face. However, with video, one can see part of the person, though it is not the same as a face-to-face meeting.

The other factor is that this is still predominantly a subjective study; for example, there could be struggling companies and those that are not struggling; hence the responses could be slightly skewed. The study is also exploratory, making it challenging to confirm relationships between artefacts, though these can still be inferred.

Administrative issues encountered during the research, such as time frame, accessing respondents, and interacting with respondents, were experienced, especially during holidays. Another practical issue was the difficulty of physical contact due to COVID-19, hence teleconferencing or virtual sessions. Some of the respondents encountered technological challenges, and this resulted in these sessions being rescheduled.

4 PRESENTATION OF RESEARCH RESULTS

This section presents the research findings, which was to understand the application of Business Model Innovation within the context of a changing working world. The section is organised into themes from using the research questions that the research is trying to answer. As discussed, the approach was using an in-depth semi-structured interview to collect the empirical data. The data collected was analysed using thematically, based on the six phases by Braun and Clarke (Braun & Clarke, 2006) using a computer aid program, Atlas TI ver9.

The total duration of all the interviews combined amounted to 259:43 minutes, the average time of the interviews amounted to 25:57minutes. The shortest interview was 19:21 minutes, and the lengthiest interview was 34: 15 minutes. These times indicate that there was significant time spent with the interviewees to discuss the topic of interest.

4.1 Findings from the empirical data

Ten interviews were transcribed and analysed without a filter using a computer aide program, Atlas TI version 9. These interviews were coded in detail, after which consolidated codes were developed. A total of three themes were developed to answer the research questions of the study, which focuses on the aim of the research: "aim of this research was to understand the application of Business Model Innovation within the context of a changing operating environment". A total of twenty-one consolidated codes were developed to support the three themes of the study.

Table 2 Thematic table with three themes

Theme	Consolidated codes
Theme 1: Major current influences of business operation and sustainability within South African companies	Covid-19 pandemic
	Government response and support
	Youth Employment status
	Poor education systems
	Poor economic growth
	Lack of technological savvy
	Failure to adapt
Theme 2: Critical factors required to develop an innovative business operating model	Proper strategy and organisational Structure
	Financial viability
	Efficient clientele and stakeholder relations

	Knowing and understanding your target market
	Having good values and ethics
	Willingness to invest
	Ability to plan ahead and being informed
Theme 3: Hindrances to effective implementation of the optimum innovative business models	Strategic buy-in
	Funding and resources
	Cultural changes
	Lack of skills
	High level of corruption
	Lack of capability to Implement
	Customer Centricity

4.1.1 Theme 1: Major current influences of business operation and sustainability within South African companies

Theme one is developed to understand the Major current influences of business operation and sustainability within South African companies; seven consolidated codes were developed using the respondents' views to support this theme. Covid-19 pandemic, Government response and support, Youth Employment status, Poor education systems, Poor economic growth, Lack of technological savvy as well as Failure to adapt (Table 3).

Table 3 Major current influences of business operation and sustainability within South African companies

Theme 1: Major current influences of business operation and sustainability within South African companies	Covid-19 pandemic
	Government response and support
	Youth Employment status
	Poor education systems
	Poor economic growth
	Lack of technological savvy
	Failure to adapt

Covid-19 pandemic

The world economic, corporate community led by first world countries has been intensifying the adoption and application of the Fourth Industrial Revolution to other emerging economies like South Africa just before the arrival of the pandemic. South Africa is one of the smallest and stagnant economies struggling to adapt to digital work set up due to several factors that stem or emanate from the country's poor education system. The arrival of the COVID 19 pandemic was unfortunate for the country, mainly based on the currently available health system being incomprehensive, when fractioned to the state beneficiaries depending on it.

The pandemic indirectly forced businesses to adapt to the digital working world, including distance gatherings and meetings.

Businesses had to close down, and personnel function from their homes. It has been noted that such setups are efficient, and other organisation managed to spot areas where they can cut cost.

I think the pandemic is obviously top of mind it affects in my environment It affected us slightly positively because it led to a lot of consumption of bandwidth for work as well As for residential. **R3**

We don't have a great economy and we are going to be affected by much more by COVID than many other countries are for example you know. So it follows in secondly quite close is that COVID has not been good for our country and it hasn't been good for our customer base either. **R1**

Government response and support

Loss of the country's fiscal was evident by the duration of the business closures due to the COVID-19 Pandemic. The government had presented plans to curb the spread of the diseases and recover the economy in sequences.

The government introduced the COVID-19 Relief grant fund, stimulus package and Temporary Employee Relief Scheme (TERS) intended for small business that was adversely affected across the sectors including agriculture and tourism. The TERS stimulus is one of the potent mechanisms spearheaded by the government to influence positive change in the economic recovery.

I think another major current influence is the government's response to an economic stimulus package. **R3**

The local client is government related, and in the government itself doesn't have a positive view, and so I think government support is definitely impacting the defence industry in South Africa. **R2**

Youth Employment status

It is a known fact that youth in every society is the first recipient of new technological developments. South African youth, unfortunately, occupies the highest fraction of the unemployment rate.

This is another indicator that hinders the complete application of the fourth industrial revolution(4IR). The government ought to prioritize the issue of unemployment to enable them to have dignity and buying power. The country is not delivering and producing products and services to its optimum for the sake of our gross domestic product. It would be prudent to the youth if the country can start producing and processing locally.

We also need to think about employment, creating employment within the South African context because the same people that we are importing products from, we expect those people to have money to buy our product, and if we don't provide them with the employment, how then do we grow our economy? **R7**

So you have very Structural issues affecting youth unemployment right and long term disposes it's almost like a sovereign crisis right Because if you've got all these multitudes of young people who are able to work but they can't find work. **R10**

Poor education systems

The poor education system is a major contributing factor in our struggling economy. The system cannot produce products or results that will make the country competitive locally and internationally. Recent results have shown that grade one children cannot read and write; this is solid evidence that reflects the poor state of our education system in the country.

The government seems to be failing in planning, especially if one compares the number of matriculants a year with the total capacity tertiary institutions can afford to keep. The labour market is dominated by bachelor degree holders who cannot be consumed by either corporates or the government.

On the one side you have an education system which is not producing the right skills that economy requires or that a modern economy requires. ***R10***

Poor economic growth

The poor education system, inequality, corruption breeds social ills that include poverty. South African Government is performing poorly in managing state-owned entities that are meant to be prolific due to corruption. Inequality directly correlates to an increase in violent crime and other social ills that ought to be corrected or managed by the stagnant fiscal of the country. Corruption has been the main factor amongst many other contributors to the poor growth of the country. One-third of the country population earns below minimum wage, over 60 per cent of the households from the nine provinces survives on income that is below poverty, low bound level, and 15million people survive on State grants.

The country operates on an annual fiscal deficit due to the unprecedented escalation of community plight in poverty and other social skills.

On the other side you have an economy that is not being fundamentally growing for the last 10 years or so. **R10**

Adoption of technology

The adequate education system of the country should be the primary source of acquiring, understanding, and implementing new technological development in the business stream. The South African education system has been quoted several times to be performing below average. Public schools have minimal apparatus and resources to aid learners to comprehend scientific research work, including artificial intelligence.

The cost of data and digital gadgets further lengthens the gap of access to information between rich and the poor or public and private schools. These are plausible evidence supporting the narrative of slow adaptation to new technological developments in South Africa. Businesses across the globe are embarking on new modes of production in the form of 4IR that seeks to yield more and quicker than the current mechanical application.

We can comfortably report that this gap and time will continue to lengthen.

The new tools that we have, even though it's all technology in terms of video conferencing, yeah telecommunication, It's not something that most of the clients are used to, so it becomes impersonal. **R8**.

And if you look at the workforce, we are not that savvy when it comes to technology. **R8**

When you look at where we are going as a society. The issue of digital leadership and digital culture... **R9**

Failure to adapt

There seems to be reluctance and resentment in adapting to technology from the older generations in South Africa.

The South African Taxi industry is predominately composed of males who are 55 years old on average. We witnessed several violent revolts incident against those using Uber transport instead of the taxis commuters has been using in the years.

The resentment of the Uber app bred anger and rift, which unfortunately yielded several unnecessary mortalities. We are currently observing unprecedented heist that appears to be going unchallenged. These are easy issues that could have been resolved by technology.

The Post Office entity has been performing poorly in recent years, and some of that can be linked to reluctance of adapting to new technologies.

I think the first element is it's its failure to adapt. Even if we have to forget technology and digital. Just failure to adapt to markets. We in South Africa, we are a leadership of tick sheets more than the dynamics that is required in managing business in today's society so there is that element. **R9**

Then the other major issues basically is that the borders of industry have disappeared. Miller, for example, is the Post Office. We used to compete with banks on our financial services. We used to compete with Courier companies. Those are no longer our competition. Our competition now appears to be supermarket which are actually eating our lunch. **R9**

there are two things that I can mention that I feel they're kind of staring the market in somehow changing the way of prioritizing, setting, forcing us to prioritize certain things that we should have prioritized a long time ago as Industries; one of those is localization, because even in the industry the industry that we are in, the retail industry in the past, even for things that we can easily make like apparel. **R7**

In summary, there was a total of seven consolidated codes developed to profile this theme; these were Covid-19 pandemic, Government response and support, Youth Employment status, Poor education systems, Poor economic growth, Adoption of Technology as well as Failure to adapt. The respondents were confident in answering this theme, and they gave valid points.

4.1.2 Theme 2: Critical factors required to develop an innovative business operating model

Theme two was developed to discuss the critical factors required to develop an innovative business operating model. For this theme, a total of seven consolidated codes were developed to profile the factors, these were namely proper strategy and organisational structure, financial viability, efficient clientele and stakeholder relations, knowing and understanding the target market, having good values and ethics, willingness to invest and ability to plan ahead and being informed.

Table 4 Critical factors required to develop an innovative business operating model

Theme 2: Critical factors required to develop an innovative business operating model	Proper strategy and organisational Structure
	Financial viability
	Efficient clientele and stakeholder relations
	Knowing and understanding your target market
	Having good values and ethics
	Willingness to invest
	Ability to plan ahead and being informed

Proper strategy and organisational Structure

An entrepreneur or an organisation needs to have a proper structure and strategy for the success of the business; not only should they have a strategy but the ability to execute and implement it. The organisation must have the ability to identify where it will get funding to reach its goals and fund the business's required resources.

The Strategy and People. Yeah, if you do not have a proper strategy and you don't have people forget about being in business, you're not going to make it. **R6**

To have a structure that had a sufficient amount of resources to enable us to be able to reach out to all these various stakeholders that we operate with. **R5**

Financial viability

According to the respondents, financial viability is a critical factor required to develop an innovative business operating model; this also helps to sustain the businesses expenses. Finance will help accumulate all the needed resources required during the process of developing the business.

Financial viability, finances. And Actually, I'm just mentioning it, but it's everywhere. **R6**

Two is some level of increasing household income. Yeah, and whether that's done through a basic income grant or increased public employment programs, but generally we find that where household income is increased. **R10**

Efficient clientele and stakeholder relations

The primary objective for every organisation is to make a profit for its shareholders. Clients provide monitory benefits or gains to the organisation. The stakeholders are usually business supporting organs in the business attaining its envisaged vision; they can further assist by providing non-financial value to the business. Therefore, any business requires clients and stakeholders to ensure its sustainability and relevance in the fraternity business.

I want to mention the issue of stakeholder and clients. If we don't have clients or we don't have good relationship with stakeholders we do not exist. **R6**

The other story is relationship with suppliers. If we're buying from the East and then all of a sudden, because of COVID, the prices went very, very high and somebody says no man, if you buy a bulk of 20 or maybe two pallets, I'll give you a discount so that relationship works very well for us. **R6**

Knowing and understanding your target market

An organisation must know and understand its target market. This means knowing the age group, which segment includes the class the organisation is targeting, the culture, area of advertisement and the location of the market.

Know who's your customer and how does that customer behave? Align yourself to capture their own behaviour. **R9**

You need to know what the addressable market that you are appealing to is. And then I need to know what my customer's addressable market is? and need to understand what is the economics involved with connecting a single household for each one of their clients, I need to understand that and then I need to understand what is the rest of their costing pressures. **R3**

Having good values and ethics

The organisations can have the capital to keep the business operational, they can have good business ideas and secure employees with good planning skills, but if they lack good values and ethics, they will not grow and expand because no one wants to work and partner with disloyal people. Therefore having good values and ethics is a required critical factor in order to develop an innovative business operating model.

Its matters of your values, ethics are going to be important going forward. Not necessary that you have to be both ethical But you must be aligned to the ethics of the constraints that you are focused on that target market that you are focused on. **R9**

Willingness to invest

The organisations must be willing to invest for future purposes. Most organisations that had invested in the past were able to survive the Covid-19 pandemic. This is proof that the management team must have a mindset which focuses on the future successes of the organisations.

One that comes to mind is the leadership team's appetite to invest in research and development. **R7**

Ability to plan ahead and being informed

The respondents further indicated that planning ahead and being well informed plays a considerable role in the organisation's success. The management must continuously come together to brainstorm new ideas on keeping the customers happy and the organisation growing; they further need to stay informed and be up to date about what is going on around them and in the world. This will enable them to always be ahead of the game and overcome challenges even before they hit them.

We as a firm were following the Covid pandemic all around the world and prepared very much in advance for what we thought was coming. So come March 2020 when the pandemic hit here, we had already secured laptops for all our employees. We had secured connectivity by dongles and everything else. **R4**

So definitely a little bit more in terms of the planning and the organising aspect of Business, yeah, because you know if there's not enough planning and organising, then your execution and your end goal is compromised. **R5**

In summary, the respondents were confident with the critical factors that they listed and believed play a huge role in developing an innovative organisation. The respondents indicated that for an organisation to flourish, it must sustain a good relationship with both its clients and stakeholders. Furthermore, the respondents indicated that good planning goes a long way as well as being strategic.

4.1.3 Theme 3: Hindrances to effective implementation of the optimum innovative business models

Theme three was created to understand the hindrances to effective implementation of the optimum innovative business models by South African companies. The respondents indicated seven major hindrances that they believed play a considerable role to implement effectively. Table 5 presents these hindrances.

Table 5 Hindrances to effective implementation of the optimum innovative business models

Theme 3: Hindrances to effective implementation of the optimum innovative business models	Buy-in strategy
	Lack funding and resources
	Cultural changes

	Lack of skills
	High level of corruption
	Lack of capability to Implement
	Customer Centricity

Buy-in strategy

According to the respondents, it is critical to have a proper and precise strategy to convince board members to accept and support a specific concept. This is a challenge because trying to convince people to see eye to eye with one's vision takes a lot because not everyone will be open-minded and willing to take a risk; some individuals will want to be bought in order to agree. Furthermore, not everyone in the industry will be supportive and wishing others well; therefore, trying to sell one's ideas might take time and energy.

The first hindrance would be a strategic buy-in from the board, whether they actually agree with how I see the market involving myself in the expert team. It sometimes takes a lot to persuade people who believe themselves that they are also experts in the market, **R3**

Lack of funding and resources

Finance is the most crucial aspect in running a business together with the relevant resources. However, with the Covid-19 pandemic, many businesses have made substantial financial losses, and the Covid-19 relief grant fund was granted to the emerging businesses; meanwhile, the more established business was also affected and slowly losing business because of the economy that was closed. Because of the pandemic, the businesses had to retrench and reduce the company expenses and invest less to keep the organisation running.

Every new initiative that you put, you need to fund it. So if I want to evolve to become a test neutral host operator, I need to business plan in place. I need to cost it. I need to create demand for that I need to go knock on the doors for MTN and Vodacom and say, would you give me your DAS business here if I become a DAS operator if they say yes, then I need to have funding to implement it. **R3**

I think for one it would obviously be finances. **R5**

One is like financial constraints, I think we can't separate the fact that even though things might be looking better, we're still in a really bad financial situation. **R10**

So lack of resources is one. **R10**

the best hindrance to use, but that's reality we face, its Money, because when you find that We, but also we found some form of solution on how to deal with it, but it's still a hindrance where we train these specialized individuals. **R8**

Limited capability to invest, 'cause we're self-funded ,so we invest from our own operations and I think it's the linkage here is that if we sit with clients that's not paying. **R2**

Cultural changes

The pandemic indirectly changed the operational culture within the business industry. People were forced to learn new working ways, including working from home and holding online meetings like Skype, Zoom, Microsoft Teams and Google Meeting. The remote working meant that the organisations had to supply their employees with laptops and data. This is a challenge because most people do not like change, and also change can be expensive and time-consuming.

…Would be culture change. People are used, companies been around for ten years doing, mostly more or less the same thing, even though the product makes change. **R3**

I think we don't have the culture of everyone feeling that they can take a decision. **R9**

Lack of skills

According to the respondents, another hindrance to the effective implementation of the optimum innovative business models by South African companies is the lack of skills within the country; there is no efficiency, and many uneducated individuals also lack skills. Employing people without skills will force organisations to conduct training and workshops to try and upskill these individuals; this is, however, time consuming and expensive.

Back to the whole skill set point that I highlighted to say you can't switch on the model and as fast as would you like to because shortage of skill in the industry that we have to address and then addressing that it means the training and development and it takes time for someone to be up skilled to a level where they can be as efficient as we want them to be. **R7**

The other issue is say in IT, in engineering in particular you have got lack of skills. You employ people today, you teach them how to install solar; three weeks down the line he knows, he thinks he knows how to install the solar, and he leaves. **R6**

High level of corruption

Some respondents felt there is a high level of corruption within the business industry. If one wants one's business to flourish, one need to be willing to bribe one's way to the top of the corporate ladder; with the pandemic at hand, most businesses had to be closed down although there was a Covid-19 relief grant for emerging, however, not everyone got it due to corruption.

The possibilities could be those that were privileged to get the fund had to bribe their way through or they knew people within the department who made it easy for them to have access to the fund. ***R6***

Massively high levels of corruption in South Africa, which derail many visionary projects from actually seeing the light of day, and. **R10**

Lack of capability to Implement

According to the respondent, most businesses fail due to the lack of implementation of programs needed for the business to be operational. Most entrepreneurs have a vision and a plan to grow their business but cannot execute.

…Lack of a capable and ethical state to implement the kind of programs that are needed and those three things are the biggest risks to actually implementing the reforms and programs we need to succeed. **R10**

Customer Centricity

An organisation needs to have a strategy and a culture of doing business that focuses on creating the best experience for customers, building brand loyalty and a sustainable relationship with its clients. According to the respondents, an organisation that maintains a good relationship with its clients can attract more and more customers and build a solid and trustworthy relationship.

Attracting customers as well, because what we offer is not believable, so it takes time for new client to trust us. They don't trust that we're doing what we do because it's like that's not normal, we have not seen a company like yeah, you doing what you saying you doing. **R8**

Is that we don't always listen to customers or listen to competition. Yeah so I think that's a very important thing is being to bring in a customer focus in everything we do. **R1**

We need to change our customer experience it's very bad too. Our major complaint is staff attitude from the public. **R9**

In summary, according to the respondents, the pandemic had a negative impact on effectively implementing the optimum innovative business models. The respondents agree that the major hindrance to a successful implementation is the lack of finance and resources, which resulted in many businesses shutting down, employee retrenchment, and salary reduction. The respondents further indicated that another hindrance was the lack of customer centricity by organisations, the employees or staff member's unfriendly attitude plays a role, some organisations fail to meet the customers' needs due to poor service delivery.

5 DISCUSSION OF RESEARCH FINDINGS

5.1 Introduction

The literature review conducted confirms that innovative business models allow companies to create value and lead to a sustained competitive advantage, examples cited as Google, Amazon, Microsoft, and similar companies (Afuah, 2019) (Achtenhagen, Melin, & Naldi, 2013). The field of business model innovation is relatively new, and an emerging concept and research are still being undertaken in this topic of business model innovation. This research was conducted to add to the existing literature on this concept, especially looking at Business Model Innovation within the context of a changing working world of work.

Three research questions were formulated to guide the interview process, with the insights from the findings presented in this chapter. The following part of the chapter will discuss these findings in relation to the literature study conducted in Chapter 2.

5.2 Major current influences of business operation and sustainability within South African companies

The study's findings have revealed seven influences affecting business operations and sustainability within South African companies. These major influences are (i) the Covid-19 pandemic, (ii) Government response and support, (iii) Youth Employment status, (iv) Poor education systems, (v) Poor economic growth, (vi) Adoption of technology and, (vii)Failure to adapt.

With regards to the **COVID-19 pandemic**, as explained by the World Health Organisation, this is a pandemic caused by a novel coronavirus (WHO, 2020). It has killed more than 3 million people worldwide (in South Africa, death rates are over 50 thousand) and caused fractures in the global economy. It is not surprising that it was highlighted as one of the major current influences. Respondents mentioned the COVID-19 pandemic as top of mind currently, affecting both their businesses and customers. The COVID-19 pandemic has affected businesses in two

major ways: closure (or reduction) of business operations and loss of talent due to death. As businesses were closed due to the lockdown's that were instituted to reduce transmissions, many people lost their jobs and the economic means to participate in the economy. Businesses lost revenue as well due to the restrictions in movement, upstream supplier closures and other factors. The COVID-19 pandemic has also driven changes in work structure, with most companies exploring the hybrid model of working from home and office. One respondent mentioned that they are not going back to the full-time office arrangement but rather use remote working to save costs. This insight is mentioned in the literature as a trend to be accelerated due to COVID (Industry Week, 2020).

Respondents also mentioned the positive aspects brought about by the pandemic. An example cited is the increased demand for Fibre installations at homes due to more people working from home, increasing revenue in companies in the telecommunications space. Another respondent echoed a similar sentiment and pointed out the increased drive towards digitalisation, which included the increased use of digital signatures as part of the digitalisation processes. This is in line with the literature where it was found that COVID-19 accelerated the rise in digitalisation, such as the use of digital payments, increased the use of online education in universities and also changing business models (Braunstein, 2020), (Chamorro-Premuzic & Frankiewicz, 2019).

The second influence emerging from the study is **Government Response and Support.** The government remains the key enabler of business. They have to create an environment for business to operate and be sustainable. The way government response is measured is on the legislation and interventions they do in support of businesses. Respondents mentioned both positive and negative aspects with government legislation supporting and detrimental to their businesses, respectively. Favourable legislation introduced includes the Electronic Transaction and Communications Act, which recognised the use of digital signatures, thereby spurring businesses to move towards legally acceptable contracts. Other respondents mentioned legislative and regulatory changes that are negatively affecting their businesses, such as the move to allow ordinary citizens to register their property (without being an attorney) at the Deeds Office, thereby taking business away from the Law firms who derive income from this process. Lack of government support for the defence industry is also mentioned as an example by one respondent.

The emerging themes of **Youth unemployment** and **Poor education systems** are closely linked. The latter inadvertently leads to a high number of youth unemployment. Both these factors influence the uptake of emerging technologies such as 4IR, which would enable innovative business models to be implemented. Other factors related to the two themes are that due to the high unemployment amongst the youth, they cannot partake in the economy and assist in the uptake of technologies (the youth are widely known to be early adopters of technology). One respondent bemoaned this fact by indicating that high numbers of unemployed people mean they cannot create fashionable apparels targeted at the youth since they can't afford it.

Although the **Poor economic growth** theme emerged as an influence, it is not difficult to understand the relation between the previous themes of government support and poor education systems. As the government is the enabler of the environment in which business operates, the lack of support has a direct bearing on the economy as businesses will not operate efficiently and grow, hence increasing the tax base that government needs to provide needs such as education and infrastructure. Thus, it is not surprising that respondents named the country's dire economic situation as a direct influence. The lack of economic growth results in a high level of unemployment, especially amongst the youth, in that, although they can do work, they are unable to find jobs that can accommodate them.

The adoption of technology is also closely linked to the **Failure to adapt theme**. The literature has shown that technology and technology innovation are catalysts for adopting innovative business models (Teece, 2010). The literature study revealed technological innovation by companies such as Tesla, Google, Alibaba, etc., to capture the value and enabled these businesses to adapt to new business models (Baden-Fuller & Haefliger, 2013). This assertion was confirmed by respondents who identified the use of technology to increase efficiency and automate processes. The use of Artificial Intelligence (AI) in particular was mentioned as a strategic imperative by a respondent of a legal firm. AI would be used to generate legal contracts, thereby reducing the need for people to generate them manually.

5.3 Critical factors required to develop an innovative business operating model

Seven themes emerged during the study that was cited as critical factors for developing an innovative business operating model. These factors are (i) proper strategy and organisational structure, (ii) financial viability, (iii) efficient clientele and stakeholder relations, (iv) knowing and understanding your target market, (v) having good values and ethics, (vi) willingness to invest and, (vii) the ability to plan ahead and being informed.

Although the literature differs on the exact definition of a business model, there is consensus that organisational **strategy and how the organisation structures itself** to deliver value is key to the business model. The business model canvas concept of Osterwalder & Pigneur's, business objectives and business model squares presented by Ritter and Afuah's business model builder intersect at the idea that strategy and delivering value to customers are what makes the models work (Teece & Linden, 2017) (Afuah, 2019) (Ritter, 2014). The study indeed confirmed this. One responded specifically mentioned structure and strategy and the ability to execute as the key towards an innovative business model.

The study also revealed **financial viability** as a critical factor required to develop an innovative business model. This is similar to the **willingness to invest** theme that also emerged from the study. One respondent mentioned that their business relies on selling the capability as an engineering design company and not necessarily selling a product. They thus require working capital to pay their engineers to do the work and keep the skills from being poached. Others specifically mentioned finances being required to source all other resources required to operate the business. These findings are congruent with the literature, such as Magretta, who point out that Profit and Loss (P&L) alongside strategy form part of the Business Model (Magretta, 2002). If a business cannot invest in its future growth, there is very little chance it will succeed going forward. This speaks to the Capabilities component of the business builder framework proposed by Afuah (Afuah, 2019).

There is no business without customers. All business models reviewed in Section 2 contend that businesses are there to deliver value to customers. Thus, it is not surprising that the study revealed that **clients and other stakeholders** need to be efficiently managed; there needs relationship management that is efficient and beneficial to all involved. Harrison and Wicks confirm Freeman's

earlier ground-breaking paper that a firm's performance should not only be managed by just financial metrics, but rather by how much value and emphasis is placed on the needs of stakeholders (Harrrison & Wicks, 2013). The study also confirmed this stakeholder theory by showing the importance of clients and stakeholders in doing business. It shows that by keeping clients and stakeholders longer within the business, there is greater performance to be expected in the future, hence guaranteeing the business's long-term viability.

The previous theme is closely related to the other that emerged about **Having good values and ethics**. Customers are increasingly being conscious about whom they are doing business with. They are more and more aligning their purchase decisions based on whether the business is ethical and subscribes to the same value as them. The issues of Environment, Society and Governance (ESG) is taking a more prominent stage. The literature study showed the importance of including ESG imperatives for sustainable business model innovation. This was highlighted by authors such as Velter et al. and Evans in their respective papers dealing with sustainable business models (Velter, Bitzer, Bocken, & Kemp, 2020) (Evans et al., 2017). Thus, the theme that emerged from the study is in line with what the studies found.

Knowing and understanding your target market also emerged as a critical factor required to develop an innovative business model. It would be amiss to develop a product or service that will not serve the needs of one's target market. Innovation within a business model includes finding novel ways to serve customers, amongst other things. Literature reviewed reveals ways to successfully implement a business model involves segmenting the market and creating value for that specific target market (Teece, 2010) (Osterwalder & Pigneur, 2010). The respondents were very clear about this fact, and they brought it out strongly in the study.

Ability to plan ahead and be informed

Although not explicitly described in the literature review chapter, this theme can be closely coupled with the strategy theme that emerged. Planning is an inherent component of developing a company's strategy. There's no way a business can develop a strategy without planning on how to execute it. Planning ahead during the COVID-19 pandemic especially was highlighted by respondents as key to keeping the business operations under this changing world of work conditions

5.4 Hindrances to effective implementation of the optimum innovative business models by South African companies

The first two parts of the study were about understanding the influences and critical factors required to implement an innovative business model. This last part of the research was designed to establish what hinders the effective implementation of an optimum innovative business model, given what was known about the influences and factors. The study revealed the following themes as hindrances: (i) (lack of) Strategic buy-in, (ii) Funding of resources, (iii) Cultural changes, (iv) Lack of skills, (v) High level of corruption, (vi) Lack of capability to Implement and (vii) Customer Centricity.

Bocken and Gerhadts list some of the barriers to sustainable business model innovation (Bocken & Geradts, 2020). Some of these barriers that came out of the literature can be categorised as strategic barriers, functional barriers and operational barriers. The first hindrance that came out of the study was **Strategic buy-in**, or more concisely, the lack thereof. Respondents mentioned the lack of buy-in specifically from the board of directors as one aspect that can derail the successful implementation of an innovative business model. The lack of this buy-in can have other repercussions, such as **funding of resources** (another emerging theme from the study) not being made available. Companies that do not put enough resources and invest into the future growth of the business will find it difficult to survive. Finances and funding have consistently come out of the study in the previous two research questions as critical to the successful implementation of an innovative business model. It would thus be surprising if the funding theme did not emerge as a hindrance.

In the changing world of work, cultural changes are inevitable. What people are used to is forced to change. The effect of the pandemic has had this effect of unplanned but indeed necessary **cultural changes**. What was normal is going to offices was suddenly not normal anymore. The time it took for people to adapt to this new normal and, by extension, many organisational cultural changes can be a significant hindrance to the effective implementation of an optimum business model. Lord mentions the sharp focus on cultural changes, among others, brought about by the COVID-19 pandemic (Lord, 2020). Universities, as an example, have always known that they need to move online for a few years; according to Gallagher and Palmer, however, they suffered from the same issue of cultural familiarity until the COVID-19 pandemic pushed

them to change (Gallagher & Palmer, 2020). The respondents articulated this same view during the study, that cultural changes can make implementation time consuming and difficult.

A major hindrance mentioned by almost all the respondents is the **lack of skills**. Respondents bemoaned, in particular, the education system that is not designed to respond to the needs of the country's economy. The country lacks skills, but other social ills are also driving the little skills that the country has a way; the country is thus losing skills to other countries due to the socio-economic issues plaguing the country. A respondent in the engineering field mentioned that they have to compete with international companies for skills. These international countries offer them more money (due to their stronger currencies) and offer them prospects of working abroad and even relocating permanently. This is in line with the literature; this is the operational hindrance mentioned in Bocken and Gerhardt's (2020) paper. **The lack of capacity to implement** is also a direct result of a lack of skills. It doesn't matter how good a business model is; if there are no skills to implement this, it will not be successful, and thus this indeed becomes a hindrance as has emerged in the study.

High levels of corruption within the country has been mentioned as a hindrance to the effective implementation of innovative business models. This assertion is true in that if a company's business is with the state, it doesn't matter how good one's value proposition is because corruption will ensure that one's products or services will not see the light of day. Even interventions meant to assist struggling companies ended up not getting to them due to corruption; this emerged in the study, with particular reference to the COVID-19 relief fund that was meant to assist businesses in surviving the pandemic. Due to high levels of corruption, this ended in the wrong hands, meaning those businesses that were contributing to the economy were denied access to financial means that could have enabled their survival. This, in turn, means that when the pandemic is over, the government would have lost on potential tax bases. Although corruption wasn't discussed in the literature review, this finding is in line with what Weber argues that corruption in government erodes confidence in the public institutions. In addition, it has a direct effect on foreign direct investment, which hampers the economic growth of a country (Weber, 2008).

The last theme that emerged as a hindrance was the **lack of customer-centricity**. Customer experience is increasingly being considered as core to the success of organisations. The results of the study found that customers need to be put in the centre of everything a business does, the focus should be on customers, and more attention should be paid to listen to what they have to

say. This view is supported by literature, such as the model by Gassman et al.(2019), building on the work of Teece (Teece, 2010) and others who contended that the customer should be placed at the centre of the business model (Gassmann, Frankenberger, & Csik, 2019).

6 SUMMARY, CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

6.1 Introduction

This section summarises the key findings of the study. The study was looking at the business model innovation in South Africa under the changing world of work. Three research questions were formulated, whose findings should answer what influences business model innovation in the South African context, what these key factors are, and the hindrances on implementing this business model innovation in the country.

Respondents were also asked what their understanding of business model innovation was and how this applied in their organisations. The responses were quite different. However, they all gravitated towards creating value, organising themselves and delivering a great service to their customers. This shows that they understood the concept well, reflecting the model developed by Gassman et al. (Gassmann, Frankenberger, & Csik, 2019).

In order to understand the Business model innovation in South African companies under the changing post-COVID-19 world of work, three research questions were formulated. These are revisited here as follows:

Research Question 1: What are the major current influences of business operation and sustainability within South African companies?

Research Question 2: What are the critical factors required to develop an innovative business operating model with these influences in the companies?

Research Question 3: What are the hindrances to effective implementation of the optimum innovative business models by South African companies?

The primary findings from the study answers the research questions above in the following sections.

6.2 Primary Findings and Conceptual Business Model Framework

A vital aspect of the study was looking at the changing world of work, primarily influenced by the current COVID-19 pandemic. Although COVID-19 was understood to be an important factor under the current conditions, it was left out to the study's outcome to determine if indeed this would be mentioned as a major factor influencing business model innovation decisions. The primary findings on each of the research questions are discussed in the subsections to follow.

The Section ends with a presentation of the conceptual business model framework, which considers the key findings from this study.

6.2.1 Findings on major influences of business operations and sustainability

The first major influence that came out of the study was COVID-19. This outcome was to be expected as this pandemic is on top of mind of every business executive surveyed. The pandemic has fundamentally changed the way most firms operate. It has brought fortunes for some and calamity for others. Those who adopted digitalisation and pivoted their businesses to respond to this change have fared well. The findings suggested that since South Africa was already at a technical recession when COVID-19 hit, the country would be worse off post the pandemic. Just how far the country will be impacted remains to be seen.

The other items related to youth employment, poor education systems and poor economic growth are considered wicked problems of the country. These themes, although they emerged separately, are closely related as one affects the other. Poor education results in poor skills, which in turn drives unemployment. This also translates to poor economic growth, although this is also primarily affected by government response and support, another of the influences that came out of the study. The government was hailed and also vilified for the response to the COVID-19 pandemic in support and detriment to organisations.

The study also revealed technology as a catalyst to an innovative business model. A couple of respondents recognised the use of Artificial Intelligence to improve efficiency. Adopting technology and adapting to changing market conditions and the changing world of work will be pivotal for organisations to remain sustainable and competitive.

6.2.2 Findings on critical factors for the implementation of an innovative business model

The study revealed several critical factors necessary for the implementation of an innovative business model. These could be considered as drivers for business model innovation in South Africa. The factors ranged from strategy to being able to plan ahead and be informed. Strategy and a functional organisational structure were found to be a key driver, which supports the business models reviewed in the literature, such as those by Teece, Gassman et al. and Ritter (Teece, 2010), (Gassmann, Frankenberger, & Csik, 2019), (Ritter, 2014). It was also found that customers and stakeholders need to be core to the organisation's operations to succeed. The study also found that value to stakeholders should be considered in everything the organisation do. Financial viability is also a key driver. Finances are required to secure most resources needed to ensure the capability of an organisation in delivering on its core business.

The study also confirmed a growing trend with organisations putting environmental, society and governance (ESG) goals as part of their strategy. ESG metrics are now also being used when capital is being allocated or borrowed to firms. Those who have a higher ESG rating are getting finance at a cheaper rate than those who do not pay much attention to their ESG components. It will thus benefit many organisations by putting ethics, values, the environment higher in their agenda.

6.2.3 Findings on Hindrances to an effective implementation of optimum business models

The study predominantly revealed the lack of most enablers (major critical factors) that were key to implementing a business model as hindrances. This is hardly surprising as, without the key enablers, the business model innovation implementation would fail. Strategic buy-in by key senior management, such as the board of directors, is key to implementing a successful innovative business model. Without financial support, there is not much one can do in an organisation. The study revealed finances as key to both implementing the business model and funding other organisational operations. Lack of skills is also cited heavily as a hindrance to implementing innovative business models. Thus, organisations must source the right people and keep them while continually ensuring they have the right skills to perform their jobs optimally.

6.2.4 Conceptual business model framework

The major findings of the study were used to develop a conceptual business model framework that could be used by management during a crisis such as a pandemic.

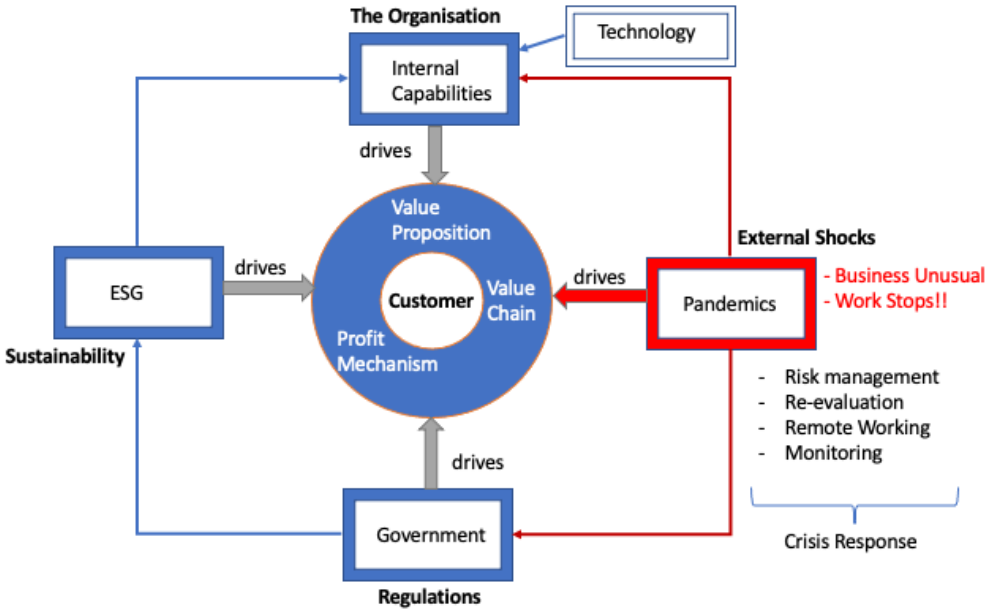


Figure 3. Conceptual business model framework developed by the researcher, adapted from the St. Gallen Business Model Navigator (Gassmann, Frankenberger, & Csik, 2019)

The conceptual model presented in Figure 3 is adapted from the St. Gallen Business Model Navigator, developed by Gassmann et al. (2019). The conceptual model consists of crucial components, the Customer, Sustainability, the Organisation, Regulations and External Shocks (**new to the model**).

The conceptual model starts with the customer at the centre of the model. The proposed conceptual model is in line with the St. Gallen Business Model Navigator model, and everything around the customer is meant to serve the customer through a value proposition.

The organisation uses its internal capabilities (including resources, people and other components) to service customers through a value proposition while interacting with the external environment in which it operates. This external environment affects in terms of what the organisation can do to serve its customers. Technological innovations are also inputs to the internal capabilities of the organisation if used correctly. The sustainability component is concerned with the environment, society, and governance, which drives values that customers expect, thereby influencing the organisation to provide this value to customers. Regulations enacted by the government also affect the organisation and customers alike.

The external shock component is the crisis and pandemics that may arise unexpectedly. This prompts the organisation to operate; differently, it is business unusual. The business model needs to change and adapt to this shock. During a crisis, there are specific parameters that need to be constantly monitored and re-evaluated throughout. Pandemics creates a situation where it becomes difficult for people to work as usual. Remote working and the inadvertent effects of loss of productivity becomes a major influence.

6.3 Conclusions

Business model innovation as a concept is still a complex and not uniform concept. However, it is proven that firms that implement business model innovation retain a competitive advantage over their competitors. Business model innovation has also been shown to carry firms through times of uncertainty and crisis. The world is currently facing a pandemic that will cripple countries' economies.

Business leaders who wish to keep their firms competitive can use business model innovation to stay ahead of the competition and capture additional market share from them. To achieve differentiation and competitive advantage, they need to avoid all the hindrances that emerged and implement the enablers for business model innovation. Therefore, these leaders shall do well to understand all the enablers and hindrances to an innovative business model implementation.

The conceptual framework presented can be used to navigate a crisis while continuing to provide value to customers.

Research Question 1: There are a multitude of influences affecting business operations and sustainability

The findings support the literature that business models are affected by a multitude of influences (Teece, 2010), (Teece & Linden, 2017). External shocks such as the impact of the COVID-19 pandemic came out clearly in nearly all the responses. This resulted in the new adoption of technology and new ways to work, thereby supporting the literature outcomes that technological innovation and digitization are influences (Braunstein, 2020) (Chamorro-Premuzic & Frankiewicz, 2019)

Research Question 2: Critical factors are required to develop an innovative business model

Critical factors that emerged from the study align with the business models found in literature. The factors range from strategy and organizational structure, value creation, financial means and aspects such as values and ethics as positive drivers to retain customers. There is indeed consensus in the findings and as supported by literature (Osterwalder & Pigneur, 2010), (Teece, 2010) that understanding these critical factors and others that emerged will help to develop an innovative business model.

Research Question 3: There are hindrances that need to be managed to effectively implement an optimum business model

The findings listed hindrances related to the strategic, operational, and functional aspects of the organization that could potentially hinder the effective implementation of business models. These related to Strategy, financial support and acquiring the right skills. It is thus critical to get strategic buy-in from top management before any business model can be implemented. This will also ensure funding and other resources (such as skills) required to implement the business models is made available.

6.4 Limitations

The research was conducted on a limited sample; since it was a semi-structured interview, it was impossible to do a completely random sample. This is because the participants had to be chosen based on the researcher's prior knowledge of their capability to answer the questions. This effectively limits the sample and excludes many potential respondents who could have added value to the study.

The limited number of respondents (10) is also a direct result of this strategy. This limited sample is not likely to represent the entire population. The study also focused mostly on companies in Gauteng, mainly due to the COVID-19 pandemic and limitations inherent with interviews. The study was conducted online with video, so some of the non-verbal cues could still be observed, however not to the extent that a face-to-face interview would have provided.

6.5 Recommendations

Business model innovation is a complex and emerging field of study. The findings that were presented also show divergent views regarding what are critical factors for business model innovation.

It is recommended that the major topics that emerged be used and refined to conduct further research. This could be in the form of a quantitative analysis using these major topics as categories. More respondents could participate if qualitative data analysis is performed. Another approach would be to use a two-stage mixed approach, where qualitative analysis is performed, followed immediately by a quantitative approach.

Management should focus on the following aspects to assist them in implementing an innovative business model under the changing world of work, especially post COVID-19:
The business strategy must be developed with the key stakeholders in mind; these include customers, society in general, employees and investors. This will ensure a wide buy-in to the strategy and increases its potential for success. The organisation must endeavour to structure itself optimally in order to deliver value to all its stakeholders.

Finances and funding for innovation also came out strongly, and it is thus recommended that before any major shift in a business model is undertaken, there should be enough funding secured for this.

Technology is a catalyst for innovation, and managers should focus on using technology to augment their operations and reduce costs where possible. Employees, in particular, should be encouraged to use available technology platforms, so they gain confidence and enable them to suggest changes to the benefit of the organisation as a whole.

South Africa has a high skills shortage gap. Managers should find ways to absorb and upskill graduates without the requisite skills required for the job market. It is also recommended that companies work closely with the academic sector to develop curricula that are responsive to the market needs.

An emerging trend is the ESG scoring used to measure companies' sustainability and investment risk. It has been shown that companies that are good "corporate citizens" tend to exist for much longer as they are in sync with the environment in which they operate. The ESG ratings are also used as investment risk metrics and thus have a financial benefit as well.

Further research is recommended to improve on the conceptual model proposed. The sustainability of the businesses post the COVID-19 world of work can truly be enumerated once the pandemic itself has passed, with empirical data collected to determine the long term sustainability of the businesses post the pandemic.

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APPENDICES

Appendix 1.1: Data collection instrument(s)

INTERVIEW SCHEDULE

The aim of this interview is to understand and document the application of business model innovation, with a view of how influences affect the sustainability of organisations.

Please carefully read and consent to participating in this study. By signing the consent forms, you agree to and understand the contents thereto and that you will participate out of your own volition. If you have any questions or concerns, kindly contact myself or my supervisor who would be happy to assist with any further questions. This interview will be recorded (both audio and video), by continuing you consent to the recording of this interview.

INTERVIEW QUESTIONS

1. Please provide us with the industry that you are working in, your role in the company and your function in developing or implementing a business operating model within the company

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2. What is your understanding of business model in general and how would you contextualise it within your company?

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3. What are the major current influences of business operation and sustainability within South African companies?

(answers the first research question)

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4. How have these influences affected the operation and sustainability of your company and how are you anticipating it will influence the company into the future?

(answers the second research question)

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5. What are the critical factors required to develop an innovative business operating model with these influences in the companies?

   5.1 Please elaborate on these factors and why are they critical?

   5.2 Is there some link or relationship that these critical factors have?

   5.3 In your view and considering the current operating model, what innovative operating model would you say is applying in your company?

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6. What are the hindrances to effective implementation of the optimum innovative business models in your company?

   6.1 Please elaborate on these hindrances and why are they critical?

   6.2 Is there some link or relationship that these hindrances have?

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7. Is there anything else you would like to add that is related to the topic under the discussion?

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Appendix 2.1: One-page bio of the researcher including declaration of interest in the research and funders, if any

Katekani Hlabathi is an MBA student at the University of the Witwatersrand. His day job is working as a Chief Information Officer at an Information Security company, based in Pretoria. He is an Engineer by training and also holds numerous certifications including one as a Certified Information Systems and Security (CISSP) Professional. He is one of the resident experts in PKI having been involved in Trust Centre designs, implementation and management over the years. Katekani is also responsible for the drafting and implementation of all Information Security Policies of his current employer and in particular the Policies and Procedures necessary to maintain a Secure and Accredited environment for the Trust Centre where the Public Key Infrastructure is hosted. Katekani is also responsible for ensuring compliance to Webtrust, ISO 21188, ECT Act Regulations and Root Trust List Programs such as the Adobe Trust
List, Microsoft Root Program and similar. Responsibilities also ensured that the LAWtrust Information Security Management System is managed in accordance with the ISO 27001 and ISO 27002 standards.

Other duties include executive oversight of all Software development within the company.

I declare that I have no interest in any of the companies participating in this study and that this research is not funded by any of the participants.

Appendix 2.2: Ethics documentation

Participant Consent Forms

General Consent to participate in the study

I, Katekani Hlabathi, am conducting this study on the impact of the application of business model innovation in South African companies, taking cognisance of influences affecting their long-term sustainability.

The objective of this study is to find out how businesses respond to influences affecting existing business models, especially within a rapid changing environment and environmental shocks such as COVID-19. I appreciate you bringing in your personal experiences in this area of study and trust this will enable me to bring light to this strategic imperative.

Your participation in this interview is voluntary ad you are free to withdraw your participation at any time. All data collected during this interview will be used solely for this research study, will be kept confidential at all times. Feedback solicited in this study will be anonymised and all identifiable artefacts removed. Any queries can be submitted to myself or my supervisor

Thank you for your kind participation

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Tel: 011 717 3649

Researcher Signature: _____Date:_____

Participant Name: _____ Date: _____

Signature of Participant: _____ Date: _____