



**Gordon Institute
of Business Science**
University of Pretoria

Title: Study of The Digital Transformation Adoption in The Life Insurance
Sector in South Africa

Rorisang Hlahatsi
18379193

A research project submitted to the Gordon Institute of Business Science,
University of Pretoria, in partial fulfilment of the requirements for the degree
of Master of Business Administration.

1 December 2020

Abstract

The Life insurance sector is one of the oldest industries in South Africa. This industry has evolved significantly since the beginning. This evolution is not only unique to South Africa but varies across world. This study aims to understand one of the recent evolutions, digital transformation, the digital transformation adoption in the Life Insurance sector in South Africa.

This study is similar to a study was done in Nepal by Niraula and Kautish (2019), and the Nepal study aimed to understand digital transformation adoption in the Life Insurance sector in Nepal. However, due to the difference in context between South Africa and Nepal, it became necessary to replicate this study in South Africa.

The South African study surveyed employees from Life insurance companies out of which 169 participants responded. These respondents were from some of the big Life Insurance companies in South Africa, such as Old Mutual, Sanlam, Liberty, Discovery and Hollard to mention a few. Leadership and Culture as well as New Technology were found to be important in the success of digital transformation adoption in the Life Insurance sector in South Africa.

Contrary to this finding, the study results also revealed that Regulations and Skills do not have a significant impact in digital transformation adoption in the Life Insurance in today's world. Even though Regulation is identified to be a moderator between digital transformation progress and technology interest.

Keywords:

Digital Transformation Adoption, Life Insurance Sector, South Africa, New Technologies, Life Insurance Regulation

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.



Rorisang Hlahatsi

01 December 2020

Table of Contents

Title: Study of The Digital Transformation Adoption in The Life Insurance Sector in South Africa.....ii

Abstract.....iii

Keywords:.....iii

Declarationiv

1. CHAPTER 1: INTRODUCTION TO RESEARCH PROBLEM..... 1

 1.1 Background to Research Problem..... 1

 1.2 Digital Transformation Adoption Gap in South Africa 1

 1.3 Digital Transformation Drivers..... 2

 1.4 Digital Transformation Barriers Nuances be Understood..... 3

 1.5 Applicability of Digital Transformation in Life Insurance in South Africa 5

 1.6 Purpose of the Study..... 6

 1.7 Research Scope 7

 1.8 Research Aim..... 7

2. CHAPTER 2: LITERATURE REVIEW 9

 2.1 Literature Introduction 9

 2.2 First Construct: Digital Transformation Adoption..... 10

 2.3 Second Construct: Life Insurance Also Known as Long Term Insurance..... 14

 2.4 Relationship Between Constructs: Digital Transformation Adoption in The Life Insurance Industry..... 17

 2.5 Literature Conclusion 21

3. CHAPTER 3: RESEARCH HYPOTHESES..... 22

 3.1 Hypotheses Based on Research Problem and Literature Reviewed 22

4. CHAPTER 4: RESEARCH METHODOLOGY..... 25

 4.1 Methodology Introduction..... 25

 4.2 Choice of Methodology / Research Methodology and Design 25

 4.3 Population 26

 4.4 Unit of Analysis..... 27

 4.5 Sampling Method and Size..... 27

 4.6 Measurement Instrument or Discussion Guide 27

 4.7 Data Gathering Process..... 28

 4.8 Data Analysis Approach..... 29

 4.9 Quality Controls – Including Validity/ Trustworthiness Criteria 30

4.10	Limitations and Future Research	31
4.11	Methodology Conclusions.....	32
5.	CHAPTER 5: RESULTS.....	33
5.1	Description of the Sample Obtained.....	33
5.2	Results of Reliability and Validity of the Data	48
5.3	Statistical Results per Hypothesis	60
5.4	Conclusion.....	68
6.	CHAPTER 6: DISCUSSION OF RESULTS.....	69
6.1	Introduction	69
6.2	Descriptive Statistics	70
6.3	Research Question: What is impact on digital transformation in adoption in South Africa	72
6.4	Summarised Findings	78
7.	CHAPTER 7: CONCLUSION AND RECOMMENDATIONS.....	80
7.1	Principal Conclusions.....	80
7.2	Implications for Management and other relevant Stakeholders.....	81
7.3	Limitations of the research	82
7.4	Suggestions for future research.....	84
7.5	Concluding remarks.....	85
8.	REFERENCE LIST.....	87
9.	APPENDIX A: QUESTIONNAIRE / SURVEY.....	97
10.	APPENDIX B: ETHICAL CLEARANCE APPROVAL	105
11.	APPENDIX C: CERTIFICATION OF ADDITIONAL SUPPORT	106
12.	APPENDIX D: PERMISSION TO REPLICATE THE STUDY	107
13.	APPENDIX E: COPYRIGHT FORM.....	109

1. CHAPTER 1: INTRODUCTION TO RESEARCH PROBLEM

1.1 Background to Research Problem

The impact of digital transformation is in various aspects of life and industries, it is one of the key drivers that causes changes in organisations and business models (Tumbas, Berente, & vom Brocke, 2017). While there may not be full consensus on the definition of the term digital transformation by different studies, the disruptive implications of digital technologies have gained increased attention in research (Hopp, Antons, Kaminski, & Oliver Salge, 2018). Studies in digital transformation are widespread and focus on a specific domain or particular technology which results in an increasing volume of publications with a number of different views and positions (Hausberg, Liere-Netheler, Packmohr, Pakura, & Vogelsang, 2019). This has led to the growing demand from established companies looking at ways to adopt current thinking to improve performance and deepen interactions between external partners and their customers (Constantinides, Henfridsson, & Parker, 2018).

1.2 Digital Transformation Adoption Gap in South Africa

There is a gap in literature that covers in more detail the effects of digital transformation on life insurance companies, including the challenges that may be faced from new entrants into the market and the opportunities that are enabled (Gomber, Koch, & Siering, 2017). The need for additional research to be added on to the body of knowledge around the issue of digital transformation in life insurance has been further highlighted in the future recommended studies (Eling & Lehmann, 2018; Gomber, Kauffman, Parker, & Weber, 2018; Morogra, 2019), particularly in South Africa.

Morogra (2019) and Soutter, Ferguson and Neubert (2019) have done studies in Sub-Saharan African and South African that look into the effects of digital transformation in the short-term insurance industry and digital payment methods in the insurance industry as a whole. But these studies lack clarity on digital adoption in the life insurance industry, in the context of South Africa.

This study will replicate the Niraula and Kautish (2019) study, which looks at the effects of digital transformation in the Nepal insurance sector and the challenges faced by both companies and their customers in the adoption of digital technologies. The Nepal study found that while customers were willing to accept the use of digital channels to conduct business with insurance companies, the insurance organisations remained laggards in adopting digital technology in the favour of focusing on compliance and risk activities (Niraula & Kautish, 2019).

The Niraula and Kautish (2019) study might not have the ability to evaluate in detail the population in this research primarily due to the distinct differences in the insurance sector in South Africa as opposed to Nepal. Some of the differences that may contribute attributed to the difference in regulations (Ghimire, 2020) with Nepal being regulated by a single regulator called Beema Samiti, which has been found to lack the appropriate measures to deal with corporate governance matters (Maharjan, 2019). While the South African insurance industry is one of the heavily regulated industries (Sawadogo, Guerineau, & Ouedraogo, 2018). Moreover the size of the insurance sector in Nepal comprises of 39 insurers (20 life, 19 non-life) (Ghimire, 2020) as opposed to a number of over 100 of non-life insurers in South Africa (Alhassan & Biekpe, 2016). While the study can be applied in different contexts, it would be impractical to replicate to use the Nepal results in the South African context, given the different aspects of both countries.

1.3 Digital Transformation Drivers

There are three drivers of digital transformation; digital technology, competition and consumer (Verhoef, Broekhuizen, Bart, Bhattacharya, Qi Dong, Fabian & Haenlein, 2019). Firstly, digital technologies, such as e-commerce and its adoption which now accounts for approximately \$2.3 trillion in 2017 with an estimated projection to reach \$4.8 trillion by 2021 (Verhoef et al., 2019). The emergence and prevalence of big data, which helps to enhance the way in which decisions are made based on evidence provided by data (Dremel, Herterich, Wulf, & Brenner, 2017).

The advent of new digital technologies in artificial intelligence such as OpenAI which is a non-profit initiative that has a committed value of \$1 billion in funding behind it (Ransbotham, Fichman, Gopal, & Gupta, 2016), also technologies such as blockchain which offer possibilities to introduce new currencies in a form of cryptocurrency such as

Bitcoin. Blockchain also offers opportunities to how we deal with issues of privacy, security and more (Kshetri, 2017). According the OECD (2017) Blockchain also plays a role in the life insurance sector, offering intermediary capabilities that are key to this industry. The vast growth of interconnected networks are currently broadening the concept of internet of things to the new concept of the internet of everything (Langley et al., 2020), which have a potential to change the way in which people in the world live, work and interact.

The second driver is new competition that is brought in by digital technologies, this allows new upcoming digital firms and other companies that are not traditionally based in the same industry to compete with established incumbents due to the lowered industry boundaries which increase the disruptive effects on the competitive landscape (Sklyar, Kowalkowski, Tronvoll, & Sörhammar, 2019). Research has also shown the complementary effects of digital technologies that can assist companies in enhancing their products and customer relationships thus helping maintain the ability to remain competitive (Tumbas et al., 2017).

And the third driver is, changing the consumer behaviours and preferences where consumers are changing the purchase processes to online stores that offer an assortment products and services in a single location or one-stop-shop capability thus reducing the number of touchpoints that they interact with (Visnjic, Wiengarten, & Neely, 2016). The advancement in customer relationship management systems that combine data around what the organisation generates around the customer as well as augmenting with data from the customers digital footprint (Timothy, Theodore, & Allison, 2015). This should help ensure that companies can manage key elements of customer centricity, satisfaction, relationship, loyalty retention and service which when not taken care of by organisations may lead to poor Net Promoter Scores which are used a measure of customer satisfaction with a company (Nqobo-Badi & Sookdeo, 2018).

1.4 Digital Transformation Barriers Nuances be Understood

Although digital transformation may open new opportunities and enabling organisations to attract new markets. There are also significant barriers, that hinders the success of digital transformation (Loebbecke & Picot, 2015). These barriers arise in yening to stay competitive, keeping up with the latest technology and keeping up with economic

development (Loebbecke & Picot, 2015). Regulation, Legacy Systems and Capability Limitations are identified as one of the few barrier of digital transformation (OECD, 2018).

1.4.1 Regulation and Regulators

Regulators govern how customers are advised in the financial service industries. Even though this requirement is meant to protect customer and organisations (Liebi & Haldemann, 2020). It has proven to be a hinderance to the success of digital transformation (OECD, 2018). Robo-advisors, digital solution that is used to digitise that financial advisers capability (Eling & Lehmann, 2018) have proven not to be more experience that humans to advise customer, as they still rely of human financial for financial advice training and appropriateness of algorithms (OECD, 2018).

1.4.2 Legacy Systems over Digital Products

According to Eling and Lehmann (2018) legacy systems have been in used in financial service industry for ages. And both internal and external customers have adopted and are comfortable using systems. Customers are therefore inherently bias and prefer using what they understand legacy systems over digital products (Constantinides et al., 2018). The OECD (2018) also indicate that the resistance to learn and understand digital tools leads to organisations not allocating enough time to understand thus leading to inadequate cover or hinders digital adoption.

Bouwman, Nikou, Molina-Castillo and de Reuver(2018) also indicates that digital adoption requires any organisation to learn new skills. STOF (service, technology, organization and finance) and VISOR (value proposition, interface, service platform, organizing model and revenue) are done differently with digital tools in comparison to legacy systems, and learning these difference brings uncertainty to organisations that trying to digitally transform (Bouwman et al., 2018) .

1.4.3 Capability Limitation

Digital tools are designed by humans and often reflect creators' beliefs, expectations, and biases(Nell, Foss, Klein, & Schmitt, 2020). These tools biases do not only affect what information is considered relevant but also how intelligent machines digital tools are.

Unfortunately, digital tools do not have bias detectors or bias algorithms yet (OECD, 2018).

When financial service companies digitally transform normally partner with leaders in the technology industry (Campbell & Flux, 2017). This makes the transforming process easy, however, these big technology providers; Amazon, Apple, Facebook, or Google also play in the financial service industry, and other traditional financial service are hesitant to adopt these digital technologies because these providers are also competitors (Fehér & Varga, 2019).

And lastly, traditional financial service organisations that have been in the industry for years already invested in none digital tools that fulfil the same outcome as digital tools (Ustundag & Cevikcan, 2018). And adopting digital tools means losing existing investments like data warehouses (Town, 2018).

1.5 Applicability of Digital Transformation in Life Insurance in South Africa

Like most countries, South Africa also displays its global acceptance through its associations in the digital economy where organisations operate in (Sifolo, Rugimbana, & Hoque, 2017). The Life insurance industry is also not unique to this South African plan. De Abreu (2019) did a study that focused on the readiness of the South African insurance intermediaries to the advent of digital disintermediation. De Abreu (2019) focused on Intermediaries also known financial advisers in Life Insurance, as they are key players in the Life insurance business. This study revealed that there is great importance of digitising this component of Life Insurance organisations.

Sifolo et al. (2017) also suggest that for South Africa to stay competitive it needs to digitise a lot of its organisations and competent supply chains to improve the country's economy. Soutter et al. (2019) also did a study that focused on the use of mobile money in the insurance industry in Kenya, South Africa, and Nigeria as these countries are well known as technology hubs in sub-Saharan Africa. Out of these three countries South African insurance industry is identified as one of the least industry to uptake the mobile money capability, simply because the country has advanced in other cashless and digital solutions capabilities (Sutherland, 2017). Competing mobile money solutions like M-Pesa (vodacom.co.za) and MTN Mo-bile Money (mtn.com) even discontinued in 2016 (Soutter et al., 2019).

1.6 Purpose of the Study

The purpose of the study will be described in detail in two distinct but related sections; business purpose and theoretical purpose of the study.

1.6.1 Business Purpose of the Study

Studies show that the insurance sector plays a critical role in the economic development of a country (Iyawe & Osamwonyi, 2017; Pradhan, Arvin, Hall, & Norman, 2017). In a study conducted to determine the relationship between the development of the life insurance industry and economic growth in developing countries which included South Africa, it was concluded that countries with better developed life insurance activity lead to higher levels of economic growth (Sawadogo et al., 2018). Studies revealed that the insurance sector in South African contributed to an average of 15% of GDP (gross domestic product) between 2011-2012 (Alhassan & Biekpe, 2016; Sawadogo et al., 2018).

While the financial industry has traditionally been known to be an early adopter of technological advancements (Gomber et al., 2017). There is a positive correlation for organisations that take a well measured approach to digital transformation and the firm's performance, this also including the potential for digital technology to innovate the insurance industry (Bohnert, Fritzsche, & Gregor, 2019; Eling & Lehmann, 2018). However, there have been differing views on these positive benefits, which propose that in the adoption of digital technology the impact erodes company value, and only benefits the consumer and not the company (Catlin & Lorenz, 2017). This study further highlights that digital transformation drains corporate earnings, which is also a loss to the company but not consumers.

Given these potentially varying outcomes and the size of the insurance sector in the South African market and the suggested impact that digital transformation has on the financial services industry, an understanding of the current state of insurance companies in the industry is a critical factor to understanding the impact of digital transformation to the socio-economic state of South Africa as a whole (Bohnert et al., 2019).

1.6.2 Theoretical Purpose of the Study

Digital transformation body of knowledge indicates that, there is limited work done to cover a multidisciplinary discussion on digital transformation, in which a keen focus is placed on how a company leverages digital technologies, to formulate digital business model that enable it to create value (Verhoef et al., 2019). While the three areas most covered by research on digital transformation are around finance, marketing and innovation (Hausberg et al., 2019), the studies that are contained in finance are primarily related to the banking sector and the short-term, non-life insurance industry (Morogra, 2019).

South Africa is regarded as one of the digital hubs in Africa, along with Nigeria and Kenya, however relative to the other countries South Africa has a strong banking sector with numerous outlets which has led to a slow adoption of FinTech companies such as the likes that provide mobile money solution like M-Pesa (Soutter et al., 2019). The South African insurance sector has a similar slow up take on digital disintermediation solutions.

1.7 Research Scope

Whilst other studies in the field of the digital transformation, adoption and impact on to the financial services industry (Catlin & Lorenz, 2017; Eling & Lehmann, 2018; Morogra, 2019) have a key focus on the Banking and short-term insurance companies and mostly within the westernised developed economies, this study will focus on legacy companies that were founded and operational before the widespread adoption of the internet or the “dot.com era” between 1995-2001 (Koy, 2018). The scope of this study will be localised to the South African life insurance sector, and the process of transforming digitally.

1.8 Research Aim

This research aims to contribute to the academic body of knowledge on the effects of digital technologies and the process of digital transformation in the life insurance industry in South Africa. It aims to understand the current state of digital transformation adoption within the life insurance industry and understand the impact of digital transformation on business models of companies within the industry.

The study seeks address its aims through the following research questions, where question 1 is adapted for the Nepal study:

1. What is the impact on digital transformation adoption in the South African life insurance sector? (Niraula & Kautish, 2019)

The following chapters outline the current state of recently reviewed academic literature that helps to provide an academic basis for the research. They also provide insights into the current theories, hypotheses and debates that assisted in framing the research questions and express the proposed data set and methodologies to be used to conduct the study.

2. CHAPTER 2: LITERATURE REVIEW

2.1 Literature Introduction

The purpose of this research is to understand the state of digital transformation within the financial services sector and more specifically the long-term or commonly known as life insurance sector. Ghimire (2017) and Ying, Linsen and Wenjie (2017) identifies the life insurance companies as long-term financial service companies. This study will use these terms interchangeably. The literature review that follows, aims to demonstrate the academic basis for the research and provides insight into the current theories, hypotheses and debates that assisted in framing the research questions. This literature review is structured as follows:

First, a review of recent academic literature which describes the current thinking around the broad topic of digital transformation, highlighting the current debates on its definition, and exploring the models that are used to describe its adoption within industries, which is aimed at exploring the generalized impact it has on market competitive behaviour, organisation structure and consumer behaviour.

Second, a review of the life insurance industry literature that describes the insurance sector and highlights the suggested impact that it has on the development and growth of economies. This then describes the different internal and external factors that make up and govern the operations of the insurance sector. The section then concludes by highlighting how different types of emerging technological changes are opening new debates for insurance industry level.

Lastly, a review of literature aims to clarify the different variations of digital transformation and Adoption and the impact in the context of the life insurance industry from a broad perspective. “topics like the adoption of Digital Insurance concepts or user behaviour in the field of Digital Insurance remain underexplored so far” (Gomber et al., 2017), and thus provide an overview of what is in literature leading to the research methodology presented.

2.2 First Construct: Digital Transformation Adoption

2.2.1 A Look into What Digital Transformation Really Means

While the term digital transformation is widely used in business and literature, and numerous studies have been conducted over the years (Hausberg et al., 2019). Some define digital transformation as decoupling existing technology and devices, with a plan to redesign the customer activities (Clayton, 1997; Sklyar et al., 2019). The exact definition of the term has not yet been widely adopted and agreed on by academia (Hausberg et al., 2019). In this study we will use the following definition as the base description.

“Digitalization is the integration of the analogue and digital worlds with new technologies that enhance customer interaction, data availability and business processes“ (Eling & Lehmann, 2018).

In spite of the fact that digital transformation has been in the mainstream discourse since the 1990s and 2000s (Niraula & Kautish, 2019), studies continue to show the importance of building a good understanding of the effects that digital transformation has on introducing beneficial change to strategies and behaviours of organisations such as those that are from the different types of partnerships enabled by the use to new advanced technologies like the internet and mobile technology (Kotarba, 2018).

As digital transformation requires a combination of deep-seated and continuous innovation this has led to a strong development of venture capitalist who seek to build new valuation schemes to help them win a competitive advantage and higher efficiency that can assist them in gaining larger customer bases and improved profitability (Niraula & Kautish, 2019; Alt, 2019).

Digital transformation projects require innovation and the close coordination and collaboration of many actors such as those involved in the development, operation and end users in initiatives that adapt existing processes and techniques (Alt, 2019). This not only changes the technology landscape but fundamentally changes the business landscape with impact to business models operating models and user experiences (Deloitte et al., 2013; Nell et al., 2020). These impacts have far reaching implications to other non-technology areas of business such as Human resources such as the

decentralisation of managers replaced with peer-to-peer platforms that can allow workers with different backgrounds dispersed across different geographies and decision making algorithms to make better informed decisions (Nell et al., 2020).

The changes brought in by digital transformation do not only have the ability to reshape existing business models and supply chains but also aim to provide a foundation for innovative long lasting applications that have the ability to impact all aspects of human society (Deloitte et al., 2013).

2.2.2 Digital Transformation Adoption Changing Markets

A growing trend of digital transformation, permeates different sectors and industries (Hopp, Antons, Kaminski, & Salge, 2018; Sklyar et al., 2019). The initiatives around digital transformation stem from the various technological capabilities and advancements in fields such as big data, robotics, artificial intelligence, blockchain and interconnected networks which are commonly collectively known as the Internet of Things (Hopp, Antons, Kaminski, & Salge, 2018; Langley et al., 2020; Loebbecke & Picot, 2015). From this, one may conclude that digital transformation is technology driven.

While Sklyar et al. (2019) is of a different view, that the transformational nature of digital also spans into the domain of product design, where companies are moving their offerings from a product centric focus to a service centred business model. These new models have brought new value propositions to the market, that are allowing products to reach previously untapped consumer groups (Clayton, 1997; Myerson, 2019). This means digital transformation is driven by business needs, and less about technology. Out of these two views this study is of the view that digital transformation is driven by business needs.

While new production frontiers are enabled for incumbents within industries through rapid prototyping technologies such as 3D printing and offering opportunities. These also bring new challenges as they allow for new entrants to enter the market and explore business opportunities (Sklyar et al., 2019).

One of the challenges identified is the appropriate adoption of digital transformation technologies that create better possibilities to innovate business models, systems and processes, and allows the business to gain a competitive advantage that increases

revenue (Niraula & Kautish, 2019). This however is not surprising as businesses have to constantly keep up with a exponentially growing technical and economic developments in information technology which now with an increasingly widespread standardisation and adoption cycle, have commoditised solutions which do not provide companies any long lasting competitive advantage with examples such as big-data and ERP systems (Loebbecke & Picot, 2015).

Further changes that are experienced due to Digitalisation are noted in the consumer/end user experience such as those identified in studies of the Kenya' insurance sector and the Asia pacific were variables such as adoption, client satisfaction, employee productivity and development are all influenced by the adoption of new technology (Niraula & Kautish, 2019).

Recent developments such as those of COVID 19 in 2020 have shown how the rapid adoption of collaboration tools such as Zoom or Microsoft Teams can be used to enable large number of employees to use different forms of collaboration to extract gains from fast and effective interactions that would have traditionally required face to face interactions (Nell et al., 2020).

2.2.3 Digital Transformation Adoption Changing Organisations

According to Constantinides et al. (2018) legacy companies are those that are established before the widespread adoption of the internet. And they are looking at ways on how they can adopt new business models such as platform thinking to improve performance. These changes are where financial institutions collaborate with technology companies to develop new products (Myerson, 2019).

The changes to business models do not only affect the external facing aspects of companies but also the internal organisational structure where companies are introducing new C-Suite leadership roles such as the Chief Digital Officer (Tumbas et al., 2017). This brings new organisational divisions such as the Digital Information Technology office which runs in parallel but serves a different purpose to the traditional Information Technology Office (Horlach, Drews, & Schirmer, 2016).

Even while Chief Digital Officers are in place to drive digital transformation they need internal support to drive transformation (Sklyar et al., 2019), the support of team members

is made more important given the rapidly changing world of IT which requires them to adapt quickly to new challenges brought about by an ever changing technology landscape (Narwal, 2013). The importance for organisations to have strong ICT policies that lay out a clear roadmap for the adoption of technology is required (Town, 2018).

2.2.4 Digital Transformation Adoption Affects Consumer Behaviour

According to Soutter, Ferguson and Neubert (2019) the new connections that are formed between Customers, Technology and Institutions, bring into focus what is needed to improve demand and adoption as seen in Figure 1 below.

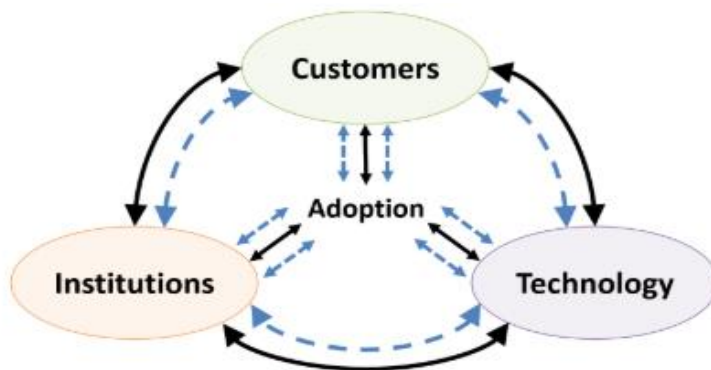


Figure 1: Framework of factors that affect Fintech adoption in sub-Saharan Africa (Soutter et al., 2019)

Christensen, Ojomo and Dillon (2019) attests that customers are an important aspect in the digital revolution which is likely to alter the consumer roles and products. However these changes come with challenges such as privacy and digital rights management (Eisend, 2019). In spite of the privacy challenges. Karpagavalli (2018) highlights that Nepal has also seen benefits in digital through e-Government project which digitise government process, such as those that are uncovered with the increased adoption of mobile technology globally, examples of countries facing digital revolution by activating untapped growth in areas such as digital literacy, financial inclusion and rural development programs (Town, 2018).

2.3 Second Construct: Life Insurance Also Known as Long Term Insurance

2.3.1 A Life Insurance Sector Analysis

Life insurance is a sub-sector of the financial sector that has a substantial contribution to the economic growth as well as market development in South Africa as well as other countries (Ward & Zurbruegg, 2019). This sector is defined as neither start-up nor technology or InsurTech (Gomber et al., 2017). Life insurance companies produce varying products that are built to stimulate long term savings which are used by public and private entities to fund projects (Pradhan et al., 2017).

Arych and Darcy (2020) provides an overview of how the impact of the insurance industry can be measured by using the share of total premiums as a percentage of GDP. Alhassan and Biekpe (2016) and Sawadogo et al. (2018) further agrees that the insurance sector in South Africa contributed 15% of the GDP (gross domestic product) between 2011 and 2012.

The insurance sector plays a fundamental role as one of the factors that can reduce the challenges of high unemployment (Ward & Zurbruegg, 2019) as well as helping emerging and developing countries such as those in Africa where it increases economic activities (Bezuidenhout, 2017b; Iyawe & Osamwonyi, 2017).

Ward and Zurbruegg (2019) have highlighted that countries with developed financial systems perform better than those with less established financial systems. This is further supported by Pradhan et al. (2017) who has identified countries such as Australia, Canada, France, Japan, South Africa, South Korea, the United Kingdom, and the United States who are comparatively high performers. Ghimire (2018) also believes that Nepal could also have a competitive economy if it focused on improving financial systems.

Since the early 1990s the role of insurance companies increased in prominence in international capital markets with examples such as the United States of America where insurance companies accounted for 6% and 10% of the equity and commercial mortgage markets respectively, with a total global assets under management for insurance companies reaching \$24.1 trillion in 2012 and set to exceed \$35 trillion in 2020 (PwC, 2014) (Ying et al., 2017).

Studies with emphasis on life insurance companies using a 16 year time series data set have indicated that a higher life insurance depth correlated positively to higher economic growth, specifically in light of GDP growth, life insurance has a positive effect on the total factor of productivity on the long-term quality of economic growth as life insurance is closely related to a person's life and their livelihood, improving peoples' quality of life leads to a healthier cycle of economic growth (Ying et al., 2017). The same study also indicated that in 48 developing countries whose insurance data was evaluated reveal a relationship between insurance industry growth and economic growth in that while the positive impact of the development of the life insurance market has an effect on the economy this effect only occurs in developed economies as the connection varies across countries (Ghimire, 2017).

The discrepancies in the results can be attributed to factors such as the lack of awareness, low income generation abilities, the ability of insurance companies to settle claims in a fair and equitable and efficient manner or in their ability to sell an adequate amount of policies despite competition from cooperative schemes that people have setup (Basaula, 2018).

According to Meko, Lemie and Worku (2019) as life insurance products are geared to encourage long term savings, which are invested in substantial private and public sector projects, and also play a role to protect the security of the assets of the breadwinner in the household from premature death, a positive demand in life insurance can be correlated to real GDP growth in the long run (Ghimire, 2017; Sawadogo et al., 2018).

2.3.2 Life Insurance Stakeholder Mapping

While the financial sector has traditionally preferred analogue, in person interactions to offer products and services to customers, using channels such as brokers, agents and bank branches. Customers preferences are changing towards searching and purchasing products through online direct channels that no longer require intermediation (Morogro, 2019).

Insurance markets in countries that have a comprehensive regulatory framework, enjoy stable environments that foster growth and development (Sawadogo et al., 2018). The regulations also serve as barriers to entry to new competitors and protect existing players

in the insurance industry (Eling & Lehmann, 2018). As financial inclusion is an important factor which is gaining importance from different stakeholders such as governments (Mutsonziwa & Maposa, 2016). The need for insurance markets to include agents, brokers, surveyors and other 3rd party administrators has increased the stakeholder map for insurance companies.

The traditional stakeholder map for insurance companies is constantly undergoing changes with the role of the intermediary coming under question, as Digital technologies continue to erode the intermediaries market share and revenues (De Abreu, 2019). Further to these are external regulatory and lobbying communities such as the National Council for Occupational Safety and Health who have the ability to enforce and implement measures that monitor the compliance of companies workplace safety measures that can impact the insurers ability to maintain a certain staff complement a given time (Matthew Idowu & Victoria Iyabo, 2017). And regulations such as the Black Economic empowerment (BEE) which are introduced to combat forms of institutional racism which may force insurance companies to look into their sourcing and recruitment policies and processes (Van Zijl, Wöstmann, & Maroun, 2017).

In other jurisdictions additional oversight and advisory committees made up of policy and technology experts and funders have been established (OECD, 2018), to design strategic solutions that answer the challenges brought in by the conflicting and economic needs of the marginalization of rural communities by urban residents (Johnson, Midgley, Wright, & Chichirau, 2018).

These increases in the stakeholder mapping for insurance companies is as a result of the recent exposure of corporate scandals and frauds, that have prompted many stakeholders initiating efforts to strengthen business control and company conduct (Salin, Ab Manan, Kamaluddin, & Nawawi, 2017). While these are not a guarantees of a perfect and accurate decisions and actions they are implemented to improve the checks and balances mechanism where the auditor is unable or ineffective in meeting all of the various stakeholders such as policy makers, private sector, non-governmental organisations and academics requirements (Mutsonziwa & Maposa, 2016).

2.3.3 Life Insurance Emerging Themes

According to Arych and Darcy (2020) some of the emerging trends that will impact the insurance industry in the near future are Insurtech, Digital, Blockchain, Artificial intelligence, Cyber insurance, Data analytics, Customer focus, Risk mitigation, New accounting standard IFRS 17.

As more companies set their objectives on the Digital Economy which is an ecosystem composed of a myriad of business process management, e-commerce, digital communication services and digital payments systems that facilitate direct and subsidy transfers (Town, 2018). The relatively unchanging tax systems across the world have allowed for shared markets to expand trade and export. Such an example is with the Indian Bharat Interface for Money-Unified Payment Interface (BHIM UPI) which as at 2019 processed over 600 million sales as a front end for many local Indian and international programmes such as Paytm, Google Pay, Amazon Pay (Town, 2018).

2.4 Relationship Between Constructs: Digital Transformation Adoption in The Life Insurance Industry

2.4.1 Digital Transformation Challenges

The external drivers and benefits of digital transformation are widely understood and adopted throughout the broader context (Hausberg et al., 2019) but some debate still exists around the value that it creates (Catlin & Lorenz, 2017). According to Fürstenau, Baiyere and Kliewer (2019) there are also less known drivers to digital transformation adoption that lie within organisations.

While the financial sector is traditionally known to be an early adopter of technology (Gomber et al., 2017). Financial institutions still do not regard internal Information Technology(IT) capabilities as a core competency and lean towards outsourcing these IT activities externally (Eling & Lehmann, 2018). These institutions have also suffered losses of assets and skills by embarking on risky untried technologies (Clayton, 1997). Opposing to this notion Hopp, Antons, Kaminski and Oliver Salge (2018) highlight that in Nepal financial service companies are changing their business models to accommodate digital transformation and they still see the importance of keeping this capability inhouse.

Studies also describe the downsides and new challenges brought in by the changes that digital transformation involves. Broekhuizen et al. (2019) and Soutter et al. (2019), both argue that while companies invest in the optimisation of their business processes, the added complexity to the business models become more difficult to change over time. This complexity has been identified as an additional obstacle to managers whose work has changed in recent time to require more cognitively complex, time sensitive and collaborative input than it used to be, thus requiring decisions to be made in a more agile environments where requirements and processes are not always clear or certain. As such managers are required to make often more complex decisions that may have negative consequences without adequate information (Zeike, Choi, Lindert, & Pfaff, 2019). These new ways of working also allow leaders to delegate more routine tasks and enable regular transparent feedback with followers thus allowing leaders to display acts of authentic leadership (Hesse, 2018).

According to Arroyo (2020) the advent of digital transformation also creates new challenges for leaders with relation to the question of diversity and inclusion more specifically on the question of gender equality. The literature highlights the imbalances that are faced by women as they continue to play a primary care role in caregiving and domestic work in their families which reduces their time to connect and participate in digital mechanisms that may help them develop digital skills.

Literature has highlighted gaps in the understanding of customer adoption when traditional Business to Business (B2B) push towards new middle markets in emerging economies in search of middle class consumers (B2C) and small to medium scale business (B2B) customers, suggesting that the influence that customers (B2C) have on the transferability of business models such as that of e-commerce platforms that may work in developing or developed economies is hampered in these markets (Chowdhury, Khan, & Alam, 2019; Christoph, Lars, Dinesh, Bernd, & Peter, 2016; Sinclair, 2018).

Another challenge that is raised is the one brought in by the question of the most appropriate level of digital technologies to employ, in relation to the organisations size, resources and business models especially when running into local competitors who may be more nimble and better adjusted to the local norms and buying patterns which may differ for B2C for those of B2B companies (Matt, Hess, & Benlian, 2015).

As B2B and B2C interactions and communications have already adopted technologies founded on the internet, which have reduced the cost to build relationships as opposed to traditional forms that were used by brick and mortar type businesses, the need for businesses to constantly evolve when faced with new and emerging relationship models such as e-commerce, digital transactions in the form of share of payments and transfers not only from Consumers to Business C2B but also Consumer to Consumer (C2C) places additional emphasis for business to create very low and cost effective highly profitable operations (Sheriff, 2018).

The growing interest in insurtech and advances that they have made have sparked great interest in finance practitioners (Eling & Lehmann, 2018). The concept of disruptive innovation continues to garner widespread interest and traction which has sparked broader research by both academic and business alike (Hopp, Antons, Kaminski, & Salge, 2018). Examples of the disruptive nature of digital technologies such as that of M-Pesa in Kenya that has grown to such an extent that banks began to form partnerships with Safaricom to enable their customers to earn interest on their M-Pesa accounts (Madger 2012) (Mutsonziwa & Maposa, 2016) indicate that going digital does not negate the requirement for financial services institutions to protect the interests of their stakeholders whether they be customer, intermediaries or their back office (Kulkarni, 2017).

According to Crockett, McGee and Payne (2013) insurance business should guard against disruptive innovation by improving their understanding of business models by critically assessing the current state of theory and emphatical evidence (Hopp, Antons, Kaminski, & Oliver Salge, 2018). This challenge emphasised by the growing trend that is noted when looking at business such as GE and IBM that have seen incremental growth from 2.9% to 3.2% and as high as 39% which is noted by IBM who has become a pioneer in digital growth (Gebauer, Fleisch, Lamprecht, & Wortmann, 2020).

The challenge that insurance companies face to adopt the most appropriate level of transformation that allows them possibilities to generate innovative business models, process, systems and procedures while remaining competitive and efficient (Niraula & Kautish, 2019). This while avoiding digitalization paradox which is a situation where investments in digitalization are made without any realisation of increases in projected revenue growth (Gebauer et al., 2020).

2.4.2 Life Insurance Changes

Clayton (1997) and Myerson (2019) agree that disruption occurs when established companies within an industry ignore less profitable market segments as they place emphasis on producing products that only cater to their most sophisticated customer. It is also highlighted that managers may have legislative restrictions imposed on them that would increase the difficulty of being innovative (Clayton, 1997). Soutter et al. (2019) also provides insights as to how these established companies may face challenges from disruptions that exploit new markets.

At the same time financial institutes are faced with digital transformation driven trends that pose a threat to their industry and their competitive advantage through factors such as the changes to the employment rate and jobs due to automation of routine tasks (Bezuidenhout, 2017a).

Challenges introduced by changes in the value chain and on customer's interaction channels such as online and mobile apps, where customers are able to search for and purchase products directly, add on the increasing number of factors that organisations need to cater for, as some customer still prefer to transact over traditional in person channels (Eling & Lehmann, 2018). Despite the view that customers do not like purchasing online Niraula and Kautish (2019) are still of the view that Nepal digitising insurance companies would increase sales and penetrate new customer bases, which will improve the economy in a long run.

Insurtech companies entering the market with digital insurance solutions such as that of peer-to-peer insurance, which provide consumers insurance outside of the traditional framework, may provide advantages to Insurtech (Gomber et al., 2018). According to Eling and Lehmann (2018) while Insurtech may be seen as threat, the lack of regulation and expertise pose a challenge when looking to expand, thus leading to more Insurtech opting to collaborate rather than compete with traditional insurers. And there are potential new players in the industry such as Amazon, Apple, Facebook, or Google, that have the right amount of data to make and sell better life insurance products (Campbell & Flux, 2017).

Digital Transformation in the insurance business has new ways in delivering insurance services using mobile devices, chat-bots which have shown an improvement on the service delivery of insurance. Further to these technologies such as Big Data, IoT and AI have made changes in the traditionally back office functions such as improved insights as inputs into the product design and improved policy pricing and underwriting through the use of IoT devices and AI that evaluate risk better and more consistently than current manual processes (Niraula & Kautish, 2019).

2.5 Literature Conclusion

In conclusion, the literature around digital transformation, has various descriptions of the concept and current debates on its definition, and identifies big data, robotics, artificial intelligence, blockchain as digital transformation enablers, to mention a few. Digital transformation is for well-known traditional industries who are shifting the focus from product centric to service centric.

Secondly, the review of the life insurance industry literature describes the industry to be one that has been in existence in the analogue era. It also reveals that Insurtech may appear to be life insurance competitors, however regulations are not making it easy for Insurtech as well as other digital providers to compete with legacy companies. It also highlighted that the life insurance industry is a great contributor to the GDP and is also recognised as one of the industries that decrease unemployment, thus making countries tighten regulations to protect this industry.

Lastly, a review of literature clarifies the different variations of digital transformation and adoption and the impact in the context of the life insurance industry. Literature highlights that for life insurance companies, digital transformation may not be easy due to complex infrastructure and processes. And there are potential new players in the life insurance industry such as Amazon, Apple, Facebook, or Google, who might lead in this industry because they have enough data to understand customers better. As much as these companies may appear to be a threat in the insurance market. And other companies see the need to partner with them in order to succeed, Nepal companies still see the need to build digital capabilities inhouse and not outsource.

3. CHAPTER 3: RESEARCH HYPOTHESES

3.1 Hypotheses Based on Research Problem and Literature Reviewed

This study will not only report on the sample correlations and regression coefficients, but will also report on the inferential results, that is, hypothesis test results. As well as the sample value of Cronbach’s alpha which will also include the confidence interval (Bonett & Wright, 2015). Below are questions accompanied by hypotheses based on the research problem and literature, with null hypothesis (H_0) and alternative hypothesis (H_1):

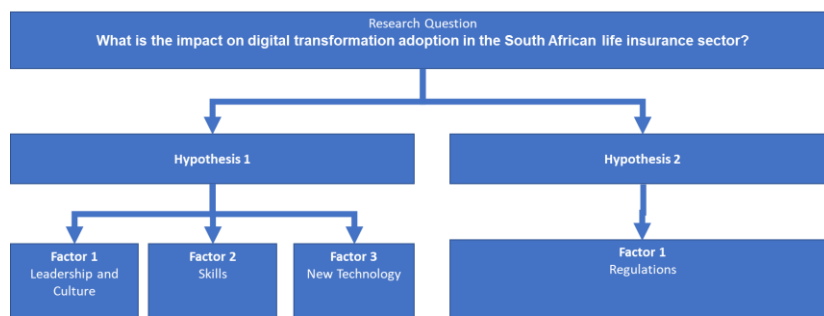


Figure 2: Representation of the research question and hypotheses.

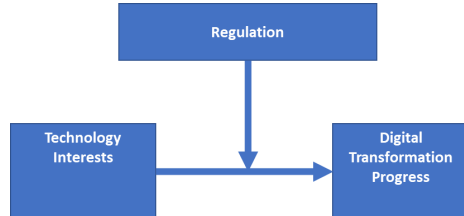


Figure 3 Conceptual diagram indicating a moderator.

3.1.1 What is the impact on digital transformation adoption in the South African life insurance sector?

3.1.2 Hypothesis 1

H₀: Leadership & Culture, Skills and New Technologies do not influence the digital transformation progress of South African insurance companies.

H₁: Leadership & Culture, Skills and New Technologies do influence the digital transformation progress of South African insurance companies.

From the literature review factors were identified that are perceived to have an influence on the digital transformation of insurance companies. These factors are namely

Leadership, Culture of the organisation in its relation to innovation and transformation, the skills of the employees and the rate at which new technology advances are adopted.

The attributes that were identified to contribute to the **Leadership and Culture** factor are ones those that have an ability to fundamentally change the way in which people in organisations work, from their daily routines to organisational structures (Tumbas et al., 2017). These also looked at the orientations of leaders towards digital technologies and how these influence organisational culture as a means to unlock opportunities (Hesse, 2018). The attributes also highlight the interest and relative importance that organisations place on digital technologies as investments that are made in acquiring new resources and upskilling employees to align with their transformation goals (Gebauer et al., 2020).

Literature review also identifies Skills as a contributing factor that influences digital transformation (Bouwman et al., 2018). This factor identifies attributes such as the confidence that employees towards leaders abilities to understanding digital trends and employing the right means and mechanisms to ensure a successful digital strategy (Clayton, 1997). Lastly literature also looks into the developments that organisations are making in the development of new types of leadership models that are required in the digital age (Arroyo, 2020).

The final factor extracted from the literature review is **New Technology**, which evaluates the competitiveness of a company (Loebbecke & Picot, 2015). As well as use of new digital technologies such as social media, chat-bots, artificial intelligence and collaboration tools in a reaction to digital trends (Arych & Darcy, 2020).

3.1.3 Hypothesis 2

H0: Regulations do not have a moderating effect on the relationship between a company's technological interest and the digital transformation progress of South African insurance companies.

H1: Regulations have a moderating effect on the relationship between a company's technological interest and the digital transformation progress of South African insurance companies.

The literature review identified perceived obstacles brought in by **Regulations** that may hinder the uptake and adoption of digital technologies. The regulations do not only govern the way in which insurance companies interact with the customers in relations to the services that they provide (Liebi & Haldemann, 2020) , but also impose restrictions that may create barriers to the implementation of digital technologies (Eling & Lehmann, 2018).

4. CHAPTER 4: RESEARCH METHODOLOGY

4.1 Methodology Introduction

This chapter will outline the research methodology used. The nature of philosophy in this research is positivism, and the major paradigm methodology used is of a positivist paradigm. This study has replicated an empirical study by Niraula and Kautish (2019) with testable hypotheses. This was an exploratory study that aimed to understand how digital adoption impacts the life insurance industry in South Africa. This study only covered the life insurance company's employees' sample while the Nepal study looked at both company's customers and employees. The Population, Unit of analysis, Sampling method and size, Measurement instrument or discussion guide, Data gathering process, Analysis approach, Quality controls (including validity/ trustworthiness criteria) and Limitations are discussed in depth in this chapter.

4.2 Choice of Methodology / Research Methodology and Design

4.2.1 Research Methodology

A quantitative research methodology was used. According to Creswell (2014) this methodology comes with various quantitative data analysis techniques and descriptive statistics to address research questions. This study involved a process of collecting data, analysing it and interpreting it, and then the study results were written (Creswell, 2014; Saunders, Lewis, & Thornhill, 2019). The Nepal study also chose a quantitative research methodology (Niraula & Kautish, 2019).

4.2.2 Research Design

The research design that was be used for this study was not longitudinal, instead it was a cross-sectional study due to the short time frame that this study needed to be delivered in. The life insurance sample that was surveyed was used to generalise the results (Creswell, 2014).

4.2.3 Type of Research

This study was an explanatory study, because the research aimed to add more findings on the study that was done in Nepal. With an intention to replicating it in a South African context. Currently there is little to no literature around the adoption of digital in the life insurance industry in South Africa. The explanatory research type was suitable for this study because it helped in understanding the relationship between the two variables (Saunders & Lewis, 2012), digital transformation and the life insurance sector in South Africa.

The study did not attempt to investigate why there is a relationship between these variables mentioned. It however tried to explain what is the relationship between them, hence it was ideal to use a descriptive study. Baxter et al. (2008) defines the descriptive study as a type of study that describes a real-life phenomenon that has occurred already. Insurance industries already exist in South Africa and literatures tells us that various industries are already transforming digitally. This study also used inferential analysis as a collection of methods, given the underlying distribution of probability on what is already known (Lewis & Thornhill, 2019).

4.3 Population

According to Saunders and Lewis (2012) population refers to a complete set of group members, but is not always represented by people it can also refer to organisations or places. Below was a selection criterion for the population for this study:

- South African Financial Services Institutions, the institution must be registered with the Financial Sector Conduct Authority in South Africa and must be in good standing, in addition these institutions must be registered life insurers (Financial Sector Conduct Authority, 2020).
- Similar to the replicated study by Niraula and Kautish (2019) most life registered Financial Service companies are based in Gauteng (Financial Sector Conduct Authority, 2020). And that is where most of the population will come from.
- The entities must be listed on the Johannesburg Stock Exchange (JSE) and have to comply to stringent policies and practices which ensure full and timeous public

disclosure is made to all stakeholders, of which one is a representation of what the organisation is investing in (Johannesburg Stock Exchange Limited, 2016).

The Author of this study holds a Head of Digital role for Africa Region at Liberty Holding, a financial service company. The Authors role and the industry was identified as helpful in getting access to the population selected.

4.4 Unit of Analysis

The unit of analysis for this study is life insurance companies, that are adopting digital or digitally transforming.

4.5 Sampling Method and Size

Stratified random sampling was used in this study to assist in dealing with multiple subgroups (strata) or companies that have different characteristics (Saunders & Lewis, 2012). The life insurance industry in South Africa has 78 registered long-term/life insurance companies (Financial Sector Conduct Authority, 2020). To ensure that the sample reflects the number of life insurance companies. 10 percent representation (Saunders & Lewis, 2012) of the life insurance companies in South Africa were sampled. And a minimum of 100 employees per company were targeted to be surveyed which was not possible due to restricted time constraints and the current COVID 19 global pandemic. In the Nepal study , the total employees across companies sample size was 140 (Niraula & Kautish, 2019).

4.6 Measurement Instrument or Discussion Guide

The study used a quantitative research questionnaire/survey instrument. This survey involved running an online standardized survey to a sample from the selected population. According to Saunders and Lewis (2012) a study must be repeatable for future research and this study will follow the same notion for this to be enhanced or repeated in other countries.

The reason why a questionnaire instrument was chosen, is because it allowed multiple people to be surveyed using the same questions, thus ensuring that the results are

comparable, confidential and consistent (Saunders & Lewis, 2012). Given the limited time and resources this type of instrument was also a cost and time effective approach. Furthermore, the study by Niraula and Kautish (2019) also used a questionnaire instrument to survey company employees that are employed by insurance companies.

4.7 Data Gathering Process

4.7.1 Steps to Acquiring Participants/Procedure for Data Collection

According to Saunders et al. (2019) it is important to acquire permission to use questions from original researchers. This study obtained permission to replicate the study and survey questions that were used in the research done by Niraula and Kautish (2019). The survey questions were adapted for the South African context. It is also highlighted in the limitations section that the customer survey was not used. Only the insurance company employee survey was used to collect primary data, and this study did not use secondary data.

4.7.2 Informed Consent

Engagements were made with key stakeholders from life insurance companies to request permission to survey company employees. As part of the survey informed consent was asked from respondents before completing survey (Saunders & Lewis, 2012).

According to Creswell (2014) surveys are one of the mechanism that are used to collect data required for quantitative studies. The questionnaires/surveys were prepared in a way that the data related to the digitization of the companies in the insurance industry could be uncovered. The survey also extracted data on the obstacles faced by insurance companies to digitally transform.

4.7.3 Data Gathering Tool

This study used a structured data collection technique using Microsoft Forms (online) to collect survey responses. It is an online tool which provided the benefits of distributing the surveys (Zikmund, Babin, Carr, & Griffin, 2010) across South Africa. This tool also provided data gathering capability and storage of the responses.

4.8 Data Analysis Approach

4.8.1 Data Preparation and Cleaning

IBM Statistical Package for Social Sciences (SPSS) version 25 was used to analyse the data that was collected. SPSS is a statistical tool that is not only able to compute Cronbach's alpha but is also able to estimate other coefficients, it also overcomes limitations that other statistical software have (Basto & Pereira, 2012).

According to Baker and Wurgler (2003) when working with statistical data and explanatory variables, the data outliers and errors should be windsorized, which is the process of limiting extreme values by transforming statistics. This study followed the same notion and where required any outliers, missing data and errors from the survey when found where windsorized.

4.8.2 Data Coding and Reshaping

To ensure quality and reliable coded data it was important to monitor and review data abstractions carefully (Snyder, 2019). This approach was also taken when coding and shaping the data that was received for the surveys that were distributed.

4.8.3 Descriptive Statistics

Descriptive statistics were used to summarise the outcome of this quantitative study from collected data (Baker & Wurgler, 2003). In the Nepal study descriptive analysis was done using SPSS (Niraula & Kautish, 2019). This study also used bar graphs as well as cross-tabulation tables in SPSS to summarise the outcomes. The correlation coefficient was used to measure the strength of relationships between intervals, and this was visualized in a scatter plot.

4.9 Quality Controls – Including Validity/ Trustworthiness Criteria

4.9.1 Measurement Model Validation

Because this was a quantitative research, it focused on two quality controls, which were reliability and both internal and external validity (Saunders, M., Lewis, P., & Thornhill, 2016). For reliability Cronbach's alpha, also known as coefficient alpha was used to determine the measure of internal consistency (Bonett & Wright, 2015). The coefficient alpha was used to indicate the extent that a set of questions could be used determine a single dimensional latent construct that is theoretically linked to factor analysis. SPSS was used to calculate the factors from the correlation matrix to identify a relationship between variables that were identified in the Nepal (Niraula & Kautish, 2019) study, this is also known as the confirmatory factor analysis. The test were carried out to measure the consistency of the questions that assess the same construct (Basto & Pereira, 2012) .

The Kaiser-Meyer-Olkin (KMO) test was used as it made it possible to identify if the data collected to measure a concept through Factor Analysis were adequate for Factor Analysis to be conducted. In addition to this Bartlett's test of Sphericity test, which examines whether the data are normally distributed was also performed. These two tests combined examined the distribution of the data and the sampling adequacy for each variable in the model, as well as the adequacy of the entire model.

Confirmatory factor analysis(CFA) is a technique that was used to group observable variables and verify the factor of these variable structures and of the assumed relationship between those variables to the respondents (Otoo & Mishra, 2018). These hypotheses were used to verify that variables were allocated to the correct constructs and there is a relationship between variables, this identification and allocation process confirms validity. The number of respondents that were required to ensure that the sample size was adequate for CFA needed to be greater than 100 (de Winter, Dodou, & Wieringa, 2009).

Exploratory factor analysis (EFA) is a statistical technique that was used in the study in an attempt to identify primary factors that describe the pattern of correlations within a set of observed variables (Basto & Pereira, 2012). Principal Components Analysis (PCA) was then used to form new principal component variables, which are uncorrelated amongst themselves but are linear composites of the original variables. As PCA depends on at

least some of the variable to be inter correlated, where none of the variables were correlated to any other there was not need to perform PCA (Augustin & Liaw, 2019).

The application of the root mean square error of approximation (RMSEA), comparative fit index (CFI), and Tucker–Lewis index (TLI) were used. RMSEA was used as it is an absolute fit index, that assessed how far the hypothesised model was from the perfect model. While on the other hand Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) are incremental fit indices, that compare the baseline model and the fit of the hypothesised model.

The most common information criteria which are the Akaike (AIC), Schwarz-Bayesian (BIC) were used for model selection. AIC (Akaike's information criterion was used to compare scores of several possible models to choose the one that fit the data best. BIC (Schwarz's Bayesian information criterion was used for selecting a model amongst a finite set of models; and the model with the lowest BIC was preferred.

4.9.2 Inferential Statistics

The inferential statistics was used to test the hypothesis formulated and analyse data. According to Saunders et al. (2019) in a deductive study when the premises are true then the outcomes are also true meaning in this study when two variables were true it was assumed that dependent variables are also true. This study used multiple regression analysis using SPSS.

4.10 Limitations and Future Research

These are some of the limitations identified currently:

- Firstly, the companies that were chosen were competitors to the authors employer, some participants were hesitant to take part in the in the survey and share information because of company confidentiality rules.
- Secondly, the replicated study that was done in Nepal surveyed insurance companies as well as their customers. This study did not have customers surveyed, only insurance company employees were surveyed using Microsoft

forms which is used by insurance companies. The customer point of view can be covered in future studies.

- Thirdly, author bias might influence data quality if the manner and tone in which the author directs questions towards the participants convey personal opinions and beliefs (Saunders et al., 2016).
- Fourthly, some of the selected participants may were not able to complete the survey due to not having digital supporting enablers like data, Wi-Fi and minutes or airtime.

4.11 Methodology Conclusions

This chapter outlined the research methodology that were used. The nature of the philosophy in this research was specified, and the major paradigm methodology used is of a positivist paradigm. And the fact that this study was replicating an existing study.

The study conducted a CFA because it needed to understand how digital adoption impacts the life insurance industry in South Africa. The Population selection focused on the following components, Firstly, companies that are registered with the Financial Sector Conduct Authority in South Africa. And Secondly, companies that are registered on the JSE.

The unit of analysis was life insurance companies, that are adopting digital. The sampling method and size was stratified random sampling and 169 participants were surveyed across all companies. The measurement instrument or discussion guide that was used was based on the quantitative research questionnaire.

Microsoft Forms tool was used to gather data, with informed consent. SPSS was used to analyse, prepared and clean data. This study used descriptive statistics using graphs, demographics, correlation and cross-tabulations to describe the outcomes.

The Cronbach's alpha was used for quality control, to determine internal consistency. And lastly, Limitations were discussed in depth in this chapter.

5. CHAPTER 5: RESULTS

5.1 Description of the Sample Obtained

5.1.1 Introduction

This chapter presents the results of the data analysis. The first section shows the results of the exploratory data analysis where data is checked for efficacy and then proceeds to do Descriptive Statistics. In the second section, the measurement model was tested to ascertain the validity and reliability of the measurement model. The study performed inferential statistics and presents the results of the various hypothesis testing results.

5.1.2 Data Preparation and Coding

A total of 170 responses were received, one of the responses was discarded thus the balance was 169. The 169 responses used in the study were all filled. The data was collected over a period of three weeks from the 13th of September 2020 using Microsoft Forms Online to collect data using an online questionnaire. Once all the responses had been received, data was exported as a comma delimited file and imported it into the statistical analysis software SPSS Version 26.

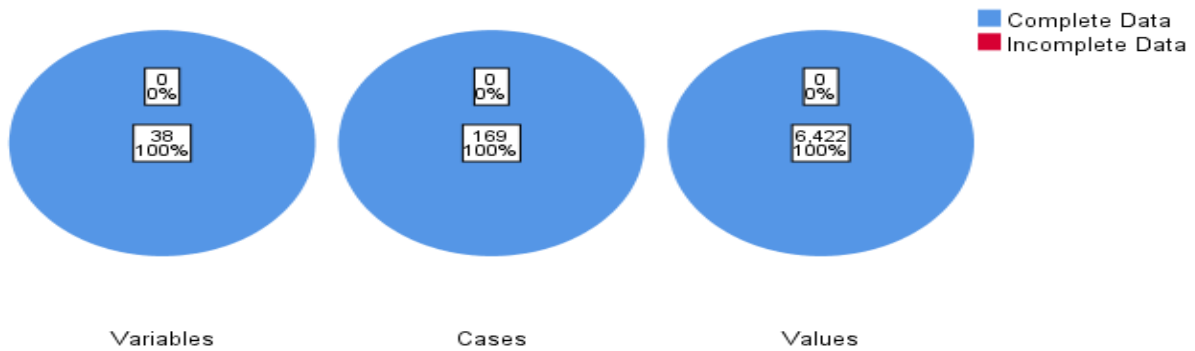
In exploring the data, the following steps were taken:

- Removed non-relevant columns e.g. IP addresses, identifiers
- Filtered for respondents that had given consent to the research questionnaire.
- Performed a missing-value analysis to ensure that all the analysis steps can be achieved with obstacles.
- Coding of all the variables was performed and the mappings for all the variables is available in the accompanying codebook.

5.1.3 Missing Value Analysis

Figure 4 below shows the panelled pie charts that represent the distribution of missing values in the dataset. As presented in the pie charts, the data did not have any missing values because all questions were made compulsory.

Figure 4: Overall summary of missing values



5.1.4 Descriptive Statistics

5.1.4.1 Gender

Table 1 below shows that most respondents were men while only a few were women. Out of a total of 169 responses, 101 (59.8) respondents identified themselves as Man, a further 66 (39.1%) respondents as Woman with only 2 (1.2%) Preferring not to say.

Table 1: What is your gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Man	101	59.8	59.8	59.8
	Prefer not to say	2	1.2	1.2	60.9
	Woman	66	39.1	39.1	100.0
	Total	169	100.0	100.0	

5.1.4.2 Age

Table 2 below indicates that most of the respondents were between the age of 35 to 44, followed by 45 to 54 and then 25 to 34 respectively. The respondents between the 55-to-64-year age group was lower, while the 18 to 24 had the lowest respondents. The 35- to 44-year-old age group contributed 40.8% of the total respondents which is almost twice as large as the second and third largest groups respectively which are the 45 to 54 at 26% and the 25 to 34 at 24,9%. The 55 to 64 age group and 18 to 24 only contributed to a 7.1% and 1.2% respectively.

Table 2:What is your age?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	2	1.2	1.2	1.2
	25-34	42	24.9	24.9	26.0
	35-44	69	40.8	40.8	66.9
	45-54	44	26.0	26.0	92.9
	55-64	12	7.1	7.1	100.0
	Total	169	100.0	100.0	

5.1.4.3 Company

Table 3 below indicates that respondents were drawn from across the financial services sector with the largest four insurance companies showing double digit numbers, mainly: Old Mutual (13.6%), Sanlam (11.8%), Liberty (17.2%), Discovery (16%). The next group of companies showing single digit response rates were Hollard (8.9%), AVBOB (4.1%), Standard Bank (3.6%), Assupol (1.8%), Clientele (1.2%), Momentum Metropolitan Holdings (1.2%). The rest of the remaining respondent companies all accounted for less than 0.6% respectively.

Table 3:Which company do you work for?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Absa	2	1.2	1.2	1.2
	ABSA	1	.6	.6	1.8
	Afrocentric health technologies	1	.6	.6	2.4
	Assupol	3	1.8	1.8	4.1
	AVBOB	7	4.1	4.1	8.3
	Bank	1	.6	.6	8.9
	Clientele	2	1.2	1.2	10.1
	Discovery	27	16.0	16.0	26.0
	GoldenRule	1	.6	.6	26.6
	Hollard	15	8.9	8.9	35.5

Investec	1	.6	.6	36.1
Liberty	29	17.2	17.2	53.3
Medchem	1	.6	.6	53.8
Momentum	19	11.2	11.2	65.1
Momentum Metropolitan Holdings	2	1.2	1.2	66.3
Old Mutual	23	13.6	13.6	79.9
One Life	1	.6	.6	80.5
Prefer Anonymity	1	.6	.6	81.1
Rand Mutual Assurance	1	.6	.6	81.7
RMB	1	.6	.6	82.2
Sanlam	20	11.8	11.8	94.1
SBSA	1	.6	.6	94.7
Self	1	.6	.6	95.3
Standard Bank	6	3.6	3.6	98.8
Truworths	1	.6	.6	99.4
Vodacom	1	.6	.6	100.0
Total	169	100.0	100.0	

5.1.4.4 Employment Type

From the 169 total respondents show in Table 4 below, the largest group at 146 (86.4%) of the respondents indicated that they are Full-time employees. The next group of respondents were tied at 9 (5.3%) identified themselves as either Freelance contractor or Part-time employees which the next 4 (2,4%) as Contractor and only 1 (0.6%) as a Consultant.

Table 4:How are you employed at your company?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Consultant	1	.6	.6	.6
	Contractor	1	.6	.6	1.2
	Contractor	3	1.8	1.8	3.0
	Freelance contractor	9	5.3	5.3	8.3

	Full-time employee	146	86.4	86.4	94.7
	Part-time employee	9	5.3	5.3	100.0
	Total	169	100.0	100.0	

5.1.4.5 Employment Duration

Table 5 indicates that 63 (37%) of the respondents who made up the largest group had an employment duration of 2 to 5 years followed by next group with 39 (23.1%) who indicated that they had been employed between 6 to 10 years which is closely followed by the next group with 35 (20.7%) respondents who indicated they had Less than 2 years. The last group at 32 (18,9%) indicated a tenure of more than 10+. The largest group of 2 to 5 years had a margin of roughly 15% above the rest of the groups who only had a difference of around 3% difference between themselves.

Table 5:How long have you worked at your company?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10+ years	32	18.9	18.9	18.9
	2 - 5 years	63	37.3	37.3	56.2
	6 - 10 years	39	23.1	23.1	79.3
	Less than 2 years	35	20.7	20.7	100.0
	Total	169	100.0	100.0	

5.1.4.6 Role

Figure 3 indicates that the two largest groups of respondents identified their role as C-Level at 18.9% followed by Head of Business Unit at 15.4%. The next groups representing single digit numbers identified as either Supervisory, Lead or Management roles, with the rest of the respondents in the sub 1% indicating generally experienced individual positions.

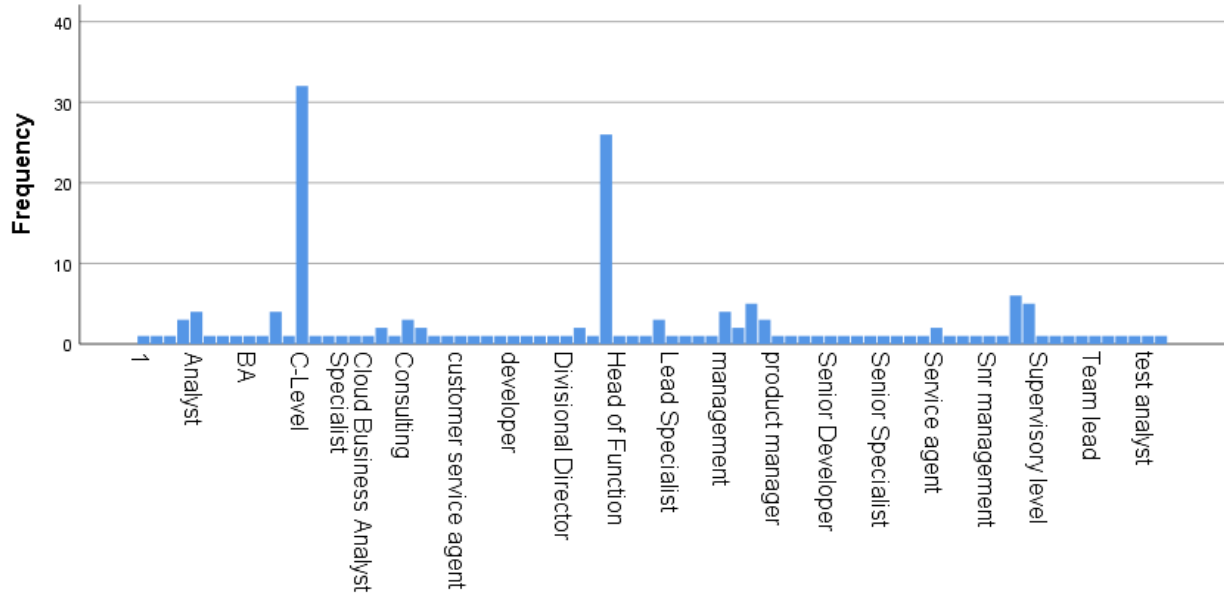


Figure 5: Which of the following best describes your role?

5.1.4.7 Primary Function

Table 6 below shows that 94 (55.6%) of the respondents were in the Information Technology function, with a further 30 (17.8%) were in Operations. This is followed by a Finance and General Management with equal respondents at 14 respectively which represents (8.3%) each of the total of 169 respondents. The last largest group of respondents identified as Marketing with 9 (5.3%) which the rest of the remaining business functions only had 1 respondent each. These were the dominating primary job function that the respondent reported.

Table 6: Which of the following best describes your primary functional affiliation?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Auditing	1	.6	.6	.6
	Both technology and ops	1	.6	.6	1.2
	Events	1	.6	.6	1.8
	Finance	14	8.3	8.3	10.1
	General Management	14	8.3	8.3	18.3
	Human Capital	1	.6	.6	18.9

Human Resources Management	1	.6	.6	19.5
Information Technology	94	55.6	55.6	75.1
Investigation	1	.6	.6	75.7
Marketing	9	5.3	5.3	81.1
Operations	30	17.8	17.8	98.8
risk	1	.6	.6	99.4
Risk	1	.6	.6	100.0
Total	169	100.0	100.0	

5.1.4.8 B2B or B2C

Table 7 indicates that the majority of respondents at 130 out of the 169 said their business was B2C, this amounted to 76.9% of all respondents. A further 21.3% indicated that they had a hybrid model which encompassed both B2C and B2B, and only 3 or 1.3% indicating that their primary business was B2B.

Table 7: Is your company primarily business to business (B2B) or primarily business to consumer (B2C)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Equally B2B and B2C	36	21.3	21.3	21.3
	Primarily B2B	3	1.8	1.8	23.1
	Primarily B2C	130	76.9	76.9	100.0
	Total	169	100.0	100.0	

5.1.4.9 Technological Interest

Table 8 below highlights that one respondent said their company had a low interest in technology. Otherwise the rest of the respondents ranged from medium (30.2%) to very high (16.6%)

Table 8: In your company what is the level of technological interest?

		Frequency	Percent	Valid Percent	Cumulative Percent
	Medium	51	30.2	30.2	30.8
	Somewhat High	61	36.1	36.1	66.9
	Somewhat Low	27	16.0	16.0	82.8
	Very High	28	16.6	16.6	99.4
	Very Low	1	.6	.6	100.0
	Total	169	100.0	100.0	

5.1.4.10 Online Revenue

Table 9 indicates that almost half, 49.1%, of the respondents indicated that they had no to low revenue from online channels. Whilst 39.6% were between 25 and 50% of their revenue. Only 3% can attribute their revenue to online revenue as being over 75% of total revenue.

Table 9: What percentage of your company's revenues are generated from an online presence?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 - 25	83	49.1	49.1	49.1
	25 - 50	67	39.6	39.6	88.8
	50 - 75	14	8.3	8.3	97.0
	75 - 100	5	3.0	3.0	100.0
	Total	169	100.0	100.0	

5.1.4.11 Digital Transformation Progress

The perceived performance of each company was captured using this question. From Table 10 most of the respondents indicated that little progress had been achieved whilst 27.8% said there was lots of progress.

Table 10: What level would you rate your company's digital transformation progress?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Little Progress	122	72.2	72.2	72.2
	Lots of Progress	47	27.8	27.8	100.0
	Total	169	100.0	100.0	

5.1.5 Cross Tabulations

5.1.5.1 Which company do you work for? * In your company what is the level of technological interest?

From Table 11 employees of Liberty accounted for the single largest number of respondents that believed that their company has a Very High interest in technology with the rest of the Liberty employees indicating either Somewhat High to medium. The Discovery employees accounted for the largest single group who indicated that their progress was Somewhat high, with the rest equally distributed between Very High to medium. Old mutual employees accounted for largest group of respondents who indicated that the progress is Medium.

Table 11: Which company do you work for? * In your company what is the level of technological interest? Crosstabulation

		In your company what is the level of technological interest?					Total
		Medium	Somewhat High	Somewhat Low	Very High	Very Low	
Which company do you work for?	Absa	1	0	0	1	0	2
	ABSA	1	0	0	0	0	1
	Afrocentric health technologies	0	1	0	0	0	1
	Assupol	2	0	1	0	0	3
	AVBOB	3	1	3	0	0	7
	Bank	0	0	0	1	0	1
	Clientele	0	0	2	0	0	2
	Discovery	3	21	1	2	0	27
	GoldenRule	0	1	0	0	0	1

	Hollard	6	3	6	0	0	15
	Investec	0	1	0	0	0	1
	Liberty	4	9	0	16	0	29
	Medchem	1	0	0	0	0	1
	Momentum	8	4	6	1	0	19
	Momentum Metropolitan Holdings	0	2	0	0	0	2
	Old Mutual	14	5	2	1	1	23
	One Life	1	0	0	0	0	1
	Prefer Anonymity	0	1	0	0	0	1
	Rand Mutual Assurance	0	0	0	1	0	1
	RMB	0	1	0	0	0	1
	Sanlam	7	6	6	1	0	20
	SBSA	0	0	0	1	0	1
	Self	0	1	0	0	0	1
	Standard Bank	0	4	0	2	0	6
	Truworths	0	1	0	0	0	1
	Vodacom	0	0	0	1	0	1
	Total	51	62	27	28	1	169

5.1.5.2 Which company do you work for? * What percentage of your company's revenues are generated from an online presence?

From Table 12 the results show that most respondents believe that online presence contributes 0 to 25 percent of their revenue with the next largest group estimating this at 25 to 50 percent. Discovery employees showed the highest single group at 19 out of 27 respondents who believe that the figure is between 25 to 50 percent whereas for Old Mutual, Liberty, Sanlam and Momentum the majority of respondents estimated this figure lower at between 0 to 25 percent. For Liberty while the single largest group of respondents which is represented by 14 out of the 29 responses believe that only 0 to 25 percent of revenue is from online, the remaining majority which is 15 out of the 29 respondents believe that over 25 to 100 percent of their revenues are attributed to online presence.

Table 12: Which company do you work for? * What percentage of your company's revenues are generated from an online presence? Crosstabulation

		What percentage of your company's revenues are generated from an online presence?				Total
		0 - 25	25 - 50	50 - 75	75 - 100	
Which company do you work for?	Absa	1	1	0	0	2
	ABSA	1	0	0	0	1
	Afrocentric health technologies	0	0	0	1	1
	Assupol	2	1	0	0	3
	AVBOB	4	2	1	0	7
	Bank	0	0	0	1	1
	Clientele	1	1	0	0	2
	Discovery	6	19	2	0	27
	GoldenRule	0	0	0	1	1
	Hollard	9	6	0	0	15
	Investec	0	0	1	0	1
	Liberty	14	9	4	2	29
	Medcheme	1	0	0	0	1
	Momentum	10	8	1	0	19
	Momentum Metropolitan Holdings	1	1	0	0	2
	Old Mutual	17	4	2	0	23
	One Life	0	1	0	0	1
	Prefer Anonymity	0	1	0	0	1
	Rand Mutual Assurance	1	0	0	0	1
	RMB	0	1	0	0	1
	Sanlam	12	7	1	0	20
	SBSA	0	0	1	0	1
	Self	1	0	0	0	1
Standard Bank	1	5	0	0	6	
Truworths	1	0	0	0	1	
Vodacom	0	0	1	0	1	
Total		83	67	14	5	169

5.1.5.3 Which company do you work for? * What level would you rate your company's digital transformation progress?

Table 13 shows that the majority of respondents which is represented by 122 out of 169 believe that there is Little progress when rating their company's digital transformation progress.

Liberty most Liberty employees rate their company's progress higher than the rest with 17 out of the 29 indicating Lots of progress and only 12 indicating Little progress. Sanlam showed the largest group of respondents at 18 out of 20 who indicated that there was little progress which is closely followed by Momentum at 17 out of 19, Hollard at 13 of 15 and Old Mutual at 19 of 23 which respectively equate to number between 80% to 87% of respondents in those respective companies. While the majority of Discovery employees also indicated little progress a third of the respondents which is 9 of the 27 also indicated Lots of progress which indicate an even balance similar to Liberty.

Table 13: Which company do you work for? * What level would you rate your company's digital transformation progress? Crosstabulation

		What level would you rate your company's digital transformation progress?		Total
		Little Progress	Lots of Progress	
Which company do you work for?	Absa	1	1	2
	ABSA	1	0	1
	Afrocentric health technologies	0	1	1
	Assupol	3	0	3
	AVBOB	7	0	7
	Bank	0	1	1
	Clientele	2	0	2
	Discovery	18	9	27
	GoldenRule	1	0	1
	Hollard	13	2	15
	Investec	1	0	1
	Liberty	12	17	29
	Medcheme	1	0	1

	Momentum	17	2	19
	Momentum Metropolitan Holdings	2	0	2
	Old Mutual	19	4	23
	One Life	1	0	1
	Prefer Anonymity	0	1	1
	Rand Mutual Assurance	0	1	1
	RMB	1	0	1
	Sanlam	18	2	20
	SBSA	0	1	1
	Self	1	0	1
	Standard Bank	3	3	6
	Truworths	0	1	1
	Vodacom	0	1	1
	Total	122	47	169

5.1.5.4 How are you employed at your company? * What level would you rate your company's digital transformation progress?

Table 14 indicates that most employees regardless of their employment type rate the level of digital transformation progress as Little, and only 42 of the Full-time employees also indicated Lots of progress. None of the part time employees indicated that there was Lots of progress. The Freelance Contractor, Contractor and consultant roles combined add up to 14 of the total respondents and in this group 9 out of the 14 indicated Little progress whereas only 5 out of the 14 indicating lots of progress.

Table 14:How are you employed at your company? * What level would you rate your company's digital transformation progress? Crosstabulation

		What level would you rate your company's digital transformation progress?		Total
		Little Progress	Lots of Progress	
How are you employed at your company?	consultant	1	0	1
	contractor	0	1	1

	Contractor	2	1	3
	Freelance contractor	6	3	9
	Full-time employee	104	42	146
	Part-time employee	9	0	9
Total		122	47	169

5.1.5.5 How long have you worked at your company? * In your company what is the level of technological interest?

The respondents in Table 15 indicate that those with Less than 2 years rated the technology interest in the company as Somewhat high and with the succeeding group at 2 to 5 years rating this at Medium. The rest of the 2 to 5year respondents are almost evenly distributed between the Somewhat Low to Very High with the Somewhat High comprising the second highest subgroup in the age category. The 6 to 10year group are evenly distributed between the Somewhat Low to Somewhat High. And an average of 11 respondents in each respective group with only 4 respondents rating this as Very High. The 10 year+ group rated their company's interest predominantly between Medium to Very High, with 4 respondents rating technology interest at Somewhat Low.

Table 15:How long have you worked at your company? * In your company what is the level of technological interest? Crosstabulation

		In your company what is the level of technological interest?					Total
		Medium	Somewhat High	Somewhat Low	Very High	Very Low	
How long have you worked at your company?	10+ years	10	11	4	7	0	32
	2 - 5 years	23	16	10	13	1	63
	6 - 10 years	12	12	11	4	0	39
	Less than 2 years	6	23	2	4	0	35

Total	51	62	27	28	1	169
-------	----	----	----	----	---	-----

5.1.5.6 Which of the following best describes your primary functional affiliation? *

What level would you rate your company's digital transformation progress?

Table 16 indicates that respondents from the smaller groups of Auditing, Human Resources /Capital and Risk all unanimously indicated that there was Little progress. These are then followed by the employees from the Operations and General Management groups which had 80% and 86% of their respective respondents indicating little progress. The next primary function groups which are Marketing and Finance had 78% and 71% of their respective respondents indicating Little progress.

From the largest group of respondents which is Information technology while the majority of participants indicated that there was Little progress in digital transformation with 63 out of 94 respondents, 33% percent of the group also indicated that there was Lots of progress.

Table 16: Which of the following best describes your primary functional affiliation?

*** What level would you rate your company's digital transformation progress?**

Crosstabulation

		What level would you rate your company's digital transformation progress?		Total
		Little Progress	Lots of Progress	
Which of the following best describes your primary functional affiliation?	Auditing	1	0	1
	Both technology and ops	1	0	1
	Events	0	1	1
	Finance	10	4	14
	General Management	12	2	14
	Human Capital	1	0	1
	Human Resources Management	1	0	1

	Information Technology	63	31	94
	Investigation	0	1	1
	Marketing	7	2	9
	Operations	24	6	30
	risk	1	0	1
	Risk	1	0	1
Total		122	47	169

5.2 Results of Reliability and Validity of the Data

5.2.1 Exploratory Factor Analysis (EFA)

The study performed an Exploratory Factor Analysis (EFA) to determine whether the constructs are composed of the most relevant variables. The dimension reduction was obtained with three specific constructs. The Principal Components Analysis (PCA) ran on the questions that constitute the various constructs. The study checked for the suitability of the method to ensure that the PCA was performed successfully. Analysis of the correlation matrix showed that its determinant of 0.002 was positive definite.

Correlation Matrix^a
a. Determinant = .002

5.2.2 Kaiser Meyer Olkin (KMO) and Bartlett's test for sphericity results

Kaiser-Meyer-Olkin (KMO) and Bartlett's test for sphericity were also conducted to determine the appropriateness of the exploratory factor analysis conducted on the collected data. The recommended minimum for Kaiser-Meyer-Olkin (KMO) is 0.7 and for this study the Kaiser-Meyer-Olkin (KMO) measure was 0.874.

The Bartlett's Test of Sphericity was statistically significant at a p-value = 0.00 (which is below the level of significance of $p < 0.005$). The results obtained in the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity are highlighted in Table 17 below and they indicate that outcomes from that the data was appropriate for Exploratory Factor Analysis using the principal components analysis algorithm.

Table 17:KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.874
Bartlett's Test of Sphericity	Approx. Chi-Square	1034.296
	df	66
	Sig.	.000

Table 18:Communalities

	Initial	Extraction
I am satisfied with my company's current reaction to digital trends.	1.000	.666
My company is more innovative compared to our competitors	1.000	.804
My company uses social media and collaborative digital technologies to a great extent.	1.000	.697
Digital technologies have the potential to fundamentally transform the way people in my company work.	1.000	.701
My company views digital technologies as an opportunity.	1.000	.710
My company needs to find new leaders from outside in order for the company to succeed in the digital age.	1.000	.703
My company is effectively developing the types of leaders who have the capabilities necessary to lead the company in a digital environment.	1.000	.671
I am confident that my company's leadership understanding of relevant digital trends and emerging technologies	1.000	.735
My company's leadership has sufficient skills and experience to lead our digital strategy.	1.000	.681
Digital technologies and capabilities are currently very important to my company	1.000	.691
My company provides me or my co-workers with the resources or opportunities to obtain the right skills to take advantage of digital trends.	1.000	.691
The leadership of my company has a very positive orientation toward change within the organisation.	1.000	.685
Extraction Method: Principal Component Analysis.		

According to Weiers, Gray and Peters (2011) principal component analysis is recommended when the study's primary goal is to ascertain the minimum number of factors that account for the maximum variance in the data in use in the particular multivariate analysis. To do this, the following 6 steps are performed during PCA (Weiers et al., 2011). These steps are:

1. Extraction of the aggregated variables
2. Determining the number of meaningful components that can be retained.
3. Rotation to a final solution
4. Interpreting the rotated solution
5. Computing component scores or component-based scores.
6. Reporting the results of the number of variables that remain

From the Total Variance Explained Table 19 below, 3 constructs contributed 70.29% of the variance in the data.

Table 19: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.458	45.479	45.479	5.458	45.479	45.479	3.218	26.814	26.814
2	1.788	14.902	60.382	1.788	14.902	60.382	2.783	23.189	50.003
3	1.190	9.913	70.294	1.190	9.913	70.294	2.435	20.291	70.294
4	.626	5.217	75.511						
5	.568	4.732	80.243						
6	.464	3.869	84.112						
7	.411	3.425	87.538						
8	.380	3.163	90.701						
9	.312	2.598	93.298						

10	.293	2.441	95.739						
11	.281	2.342	98.081						
12	.230	1.919	100.000						
Extraction Method: Principal Component Analysis.									

In conjunction a scree plot to the PCA a scree plot was used to determine the number of constructs to choose in the model. And It corresponds with the PCA results in Table 19 above that 3 constructs contribute significant variance thus the rest were discarded.

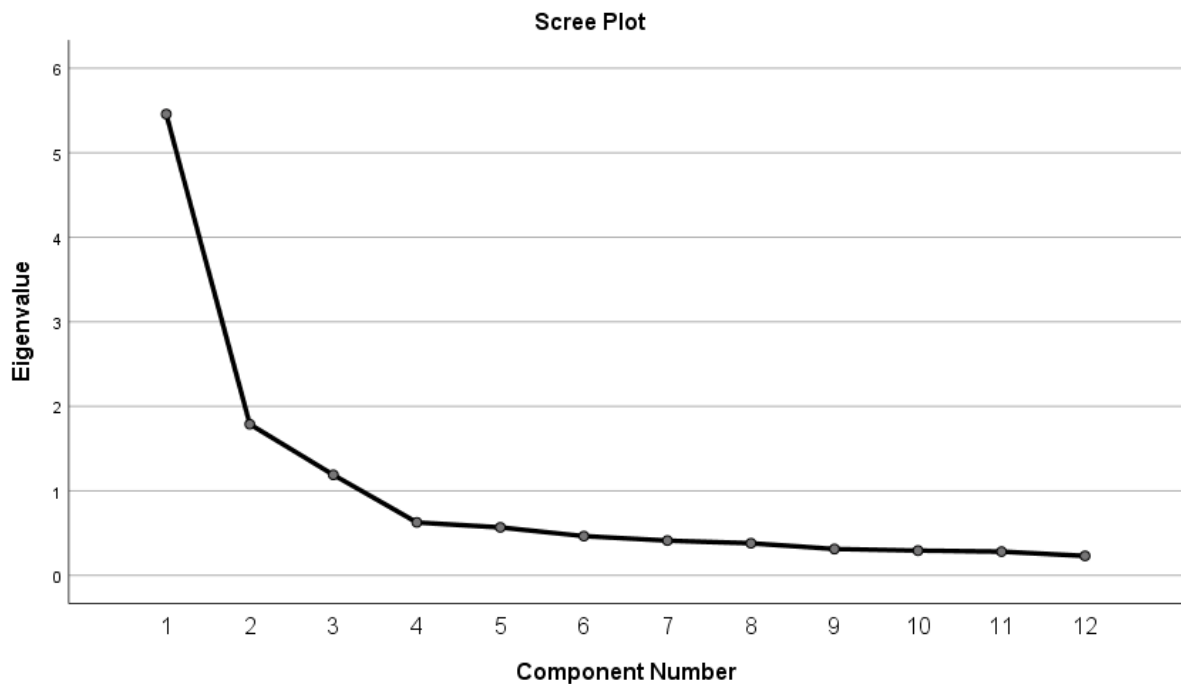


Figure 6: Scree Plot

The resulting Rotated Component Matrix composed of 3 constructs is shown below. The three constructs are:

1. Leadership and Culture
2. Skills
3. New Technology

Table 20: Rotated Component Matrix

	Component		
	1	2	3
Digital technologies have the potential to fundamentally transform the way people in my company work.	.837		

My company views digital technologies as an opportunity.	.818		
Digital technologies and capabilities are currently very important to my company	.795		
My company provides me or my co-workers with the resources or opportunities to obtain the right skills to take advantage of digital trends.	.650		
The leadership of my company has a very positive orientation toward change within the organisation.	.639		
My company needs to find new leaders from outside in order for the company to succeed in the digital age.		.836	
My company's leadership has sufficient skills and experience to lead our digital strategy.		.806	
I am confident that my company's leadership understanding of relevant digital trends and emerging technologies		.724	
My company is effectively developing the types of leaders who have the capabilities necessary to lead the company in a digital environment.		.673	
My company is more innovative compared to our competitors			.893
My company uses social media and collaborative digital technologies to a great extent.			.716
I am satisfied with my company's current reaction to digital trends.			.705
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 5 iterations.			

5.2.3 Internal Reliability

Cronbach's alpha was used to test internal reliability of each construct, to determine the efficacy of the constructs that came from the Exploratory Factor Analysis. Reliability is the extent to which results are consistent and yield the same results on repeated trials (Basto & Pereira, 2012). To understand and determine whether the questions formulated in the

survey all reliably measure the same underlying variable to support the constructs that are being researched in this study, statistical validity measures were performed.

To measure validity and reliability of the sets of questions Cronbach’s alpha is used (Field, 2013), as the internal consistency is key to ensuring replicability of the research study.

The acceptable internal consistency measures are illustrated in the Table 21 below:

Table 21: Internal Consistency Measures

$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 < \alpha$	Unacceptable

Source: (Field, 2013; Weiers et al., 2011).

5.2.3.1 Leadership and Culture Cronbach alpha results:

For Leadership and Culture, the Cronbach’s Alpha value was 0.831, which is above 0.7 the recommended minimum for internal consistency (Weiers et al., 2011). Thus, the study can conclude that the variables that constitute the construct are adequately contributing to it.

Reliability Statistics	
Cronbach's Alpha	N of Items
.831	4

5.2.3.2 Skills:

For Skills the Cronbach’s Alpha value was 0.822, which is above 0.7 the recommended minimum for internal consistency (Weiers et al., 2011). Thus, the study can conclude that the variables that constitute the construct are adequately contributing to it.

Reliability Statistics	
Cronbach's Alpha	N of Items
.822	4

5.2.3.3 New Technology:

For New Technology the Cronbach's Alpha value was 0.784, which is above 0.7 the recommended minimum for internal consistency (Weiers et al., 2011). Thus, the study can conclude that the variables that constitute the construct are adequately contributing to it.

Reliability Statistics	
Cronbach's Alpha	N of Items
.784	3

5.2.4 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) was used in this study as it specifies how a set of observed variables are related to some underlying latent factors (Otoo & Mishra, 2018). And the assumptions were as follow:

Confirmatory Factor Analysis (CFA) requires certain assumptions to be true in order for it to be used. To ensure that CFA was an appropriate method to use for the dataset, the study checked to discover that there were no violations of the assumption of multivariate normality as it this would have a significant effect on covariance values in the model.

Relationships where explained among the observed variables by specifying a latent structure connecting them as this is the goal of the CFA is to.

The eye inspection was used, to determine if there were any drastic deviations from normality which were not observed, and thus there was no need to transform any variables before continuing.

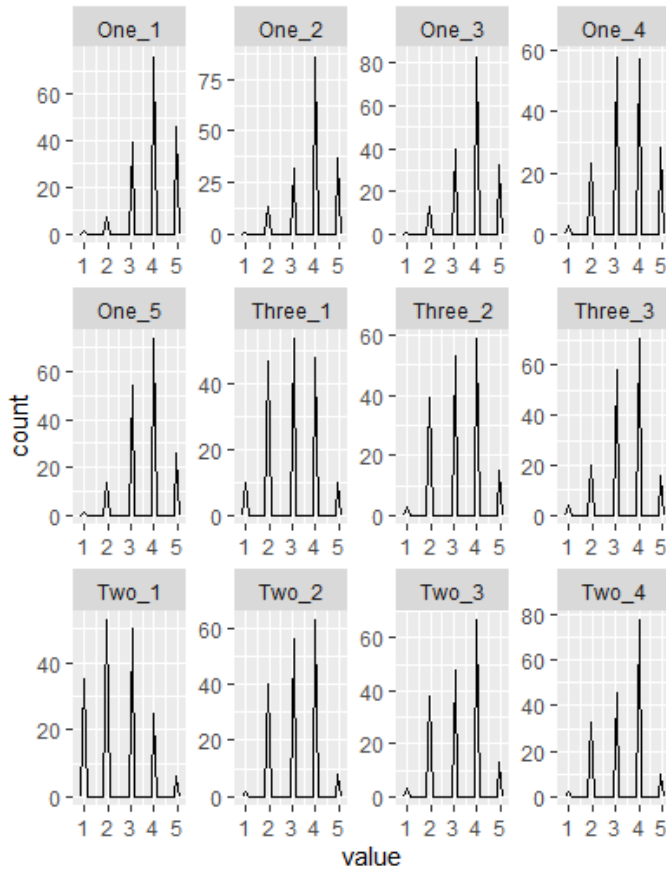


Figure 7: CFA Model

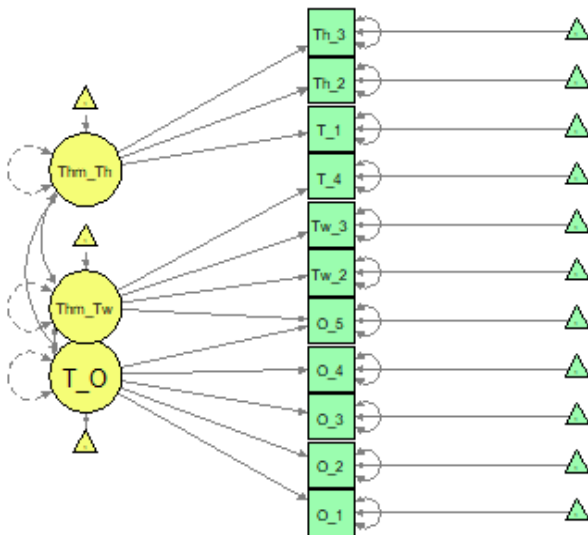


Figure 8: CFA model

The CFA model specified in Figure 5 above shows the relationship between each of the first order latent constructs with its constituent indicators. Modification indices were used to improve the model.

5.2.4.1 CFA Results

In addition to the EFA results provided these are the CFA results as presented in Table 22 below. A maximum likelihood estimator was used, and the Chi-square test produced a p-value of 0.067. The key indicators of the model fit looked good with both the Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) both above 0.9 with scores of 0.986 and 0.977 respectively. CFI (Comparative fit index): Measures whether the model fits the data better than a more restricted baseline model. A Higher value is better, with a value of $>.9$ fit being acceptable/okay.

The TLI (Tucker-Lewis index): is similar to CFI, but in addition it penalizes overly complex models (making it more conservative than CFI). It also measures whether the model fits the data better than a more restricted baseline model. Higher is better, with okay fit $>.9$.

Table 22: Model Test User Model

Model Test User Model:	
Test statistic	45.944
Degrees of freedom	33
P-value (Chi-square)	0.067

Table 23: Model Test Baseline Model:

Model Test Baseline Model:	
Test statistic	977.226
Degrees of freedom	55
P-value	0.000

Table 24: User Model versus Baseline Model:

User Model versus Baseline Model:	
Comparative Fit Index (CFI)	0.986
Tucker-Lewis Index (TLI)	0.977

The other indicators of interest were the RMSEA and SRMR which ought to be equal to or below 0.06. Their results were 0.048 and 0.035 respectively. On the background of this information the model fits the collected data and the study could proceed to do inferential statistics.

Table 25: Root Mean Square Error of Approximation

Root Mean Square Error of Approximation:	
RMSEA	0.048
90 Percent confidence interval - lower	0.000
90 Percent confidence interval - upper	0.079
P-value RMSEA \leq 0.05	0.507

Table 26: Standardized Root Mean Square Residual

Standardized Root Mean Square Residual:	
SRMR	0.035

Table 27: Parameter Estimates

Parameter Estimates:	
Standard errors	Standard
Information	Observed
Observed information based on	Hessian

AIC (Akaike's information criterion): Attempts to select models that are the most parsimonious/efficient representations of the observed data. Lower is better.

BIC (Schwarz's Bayesian information criterion): Similar to AIC but a little more conservative, also attempts to select models that are the most parsimonious/efficient representations of the observed data. Lower is better.

Table 28: Loglikelihood and Information Criteria

Loglikelihood and Information Criteria:	
Loglikelihood user model (H0)	-2001.488
Loglikelihood unrestricted model (H1)	-1978.516
Akaike (AIC)	4090.975

Bayesian (BIC)	4228.691
Sample-size adjusted Bayesian (BIC)	4089.374

RMSEA (Root mean square error of approximation): The “error of approximation” refers to residuals. Instead of comparing to a baseline model, it measures how closely the model reproduces data patterns (i.e. the covariances among indicators). Lower is better. It comes with a 90%CI in lavaan and other major SEM software, so that’s often reported along with it.

Table 29:lavaan 0.6-7 ended normally after 39 iterations

lavaan 0.6-7 ended normally after 39 iterations	
Estimator	ML
Optimization method	NLMINB
Number of free parameters	44
Number of observations	169
Number of missing patterns	1

The themes in tables below refer to the 3 constructs is shown below.

1. Leadership and Culture = Theme One
2. Skills = Theme Two
3. New Technology = Theme Three

Table 30:Latent Variables

Latent Variables:						
	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
Theme_One =~						
One_1	0.600	0.061	9.881	0.000	0.600	0.708
One_2	0.676	0.060	11.283	0.000	0.676	0.781
One_3	0.681	0.058	11.704	0.000	0.681	0.795
One_4	0.503	0.074	6.808	0.000	0.503	0.513
One_5	0.436	0.064	6.814	0.000	0.436	0.508
Theme_Two =~						
Two_2	0.699	0.125	5.583	0.000	0.699	0.780
Two_3	0.846	0.074	11.479	0.000	0.846	0.884
Two_4	0.754	0.069	10.880	0.000	0.754	0.837
Theme_Three =~						

Three_1	0.759	0.105	7.213	0.000	0.759	0.745
Three_2	0.864	0.075	11.579	0.000	0.864	0.892
Three_3	0.738	0.067	11.012	0.000	0.738	0.821
Theme_Two =~						
One_5	0.329	0.064	5.179	0.000	0.329	0.384
Theme_Three =~						
One_4	0.382	0.076	5.012	0.000	0.382	0.390
Theme_One =~						
Three_1	-0.185	0.100	-1.854	0.064	-0.185	-0.181
Theme_Three =~						
Two_2	-0.126	0.115	-1.098	0.272	-0.126	-0.141

Table 31:Covariances

Covariances:						
	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.Three_2 ~~						
.Three_3	-0.181	0.057	-3.185	0.001	-0.181	-0.807
.One_4 ~~						
.Three_2	0.024	0.046	0.508	0.612	0.024	0.090
.One_3 ~~						
.Three_3	0.105	0.033	3.225	0.001	0.105	0.395
.Two_3 ~~						
.Two_4	-0.109	0.064	-1.702	0.089	-0.109	-0.497
Theme_One ~~						
Theme_Two	0.500	0.070	7.135	0.000	0.500	0.500
Theme_Three	0.539	0.068	7.885	0.000	0.539	0.539
Theme_Two ~~						
Theme_Three	0.686	0.062	11.064	0.000	0.686	0.686

Table 32:Intercepts

Intercepts:						
	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.One_1	3.941	0.065	60.444	0.000	3.941	4.650
.One_2	3.858	0.067	57.949	0.000	3.858	4.458
.One_3	3.781	0.066	57.394	0.000	3.781	4.415
.One_4	3.497	0.075	46.370	0.000	3.497	3.567
.One_5	3.651	0.066	55.319	0.000	3.651	4.255
.Two_2	3.207	0.069	46.519	0.000	3.207	3.578
.Two_3	3.290	0.074	44.689	0.000	3.290	3.438
.Two_4	3.361	0.069	48.531	0.000	3.361	3.733
.Three_1	3.006	0.078	38.402	0.000	3.006	2.954
.Three_2	3.260	0.075	43.763	0.000	3.260	3.366
.Three_3	3.444	0.069	49.837	0.000	3.444	3.834
Theme_One	0.000				0.000	0.000

Theme_Two	0.000				0.000	0.000
Theme_Three	0.000				0.000	0.000

Table 33: Variances

Variances:						
	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.One_1	0.359	0.047	7.584	0.000	0.359	0.499
.One_2	0.292	0.044	6.644	0.000	0.292	0.390
.One_3	0.270	0.042	6.493	0.000	0.270	0.369
.One_4	0.355	0.052	6.877	0.000	0.355	0.369
.One_5	0.295	0.038	7.675	0.000	0.295	0.400
.Two_2	0.420	0.068	6.223	0.000	0.420	0.523
.Two_3	0.200	0.081	2.471	0.013	0.200	0.219
.Two_4	0.242	0.067	3.595	0.000	0.242	0.299
.Three_1	0.577	0.081	7.103	0.000	0.577	0.557
.Three_2	0.192	0.084	2.274	0.023	0.192	0.205
.Three_3	0.262	0.062	4.241	0.000	0.262	0.325
Theme_One	1.000				1.000	1.000
Theme_Two	1.000				1.000	1.000
Theme_Three	1.000				1.000	1.000

5.3 Statistical Results per Hypothesis

5.3.1 Hypothesis 1

H₀: Leadership & Culture, Skills and New Technologies do not influence the digital transformation progress of South African insurance companies.

H₁: Leadership & Culture, Skills and New Technologies do influence the digital transformation progress of South African insurance companies.

5.3.2 Assumptions for Binary Logistic Regression

1. **Assumption 1:** The dependent variable Digital Transformation Progress (Y) is nominal and has two states (Y=1 and Y=0) (LS, 2013).
2. **Assumption 2:** The binary logistic regressions had more than one independent variables, which were either continuous or categorical (LS, 2013).
3. **Assumption 3:** There was independence of observations and the dependent variable had mutually exclusive and exhaustive categories. (Y=1 and Y=0) (LS, 2013).

4. **Assumption 4:** There was a linear relationship between the continuous independent variables and the logit transformation of the dependent variable (LS, 2013).

Given that no assumptions are violated by the data, the study proceeded with the analysis using Binary Logistic Regression.

5.3.3 Variance Explained

Table 34 reflects what can be explained by a regression model, it indicates the pseudo-R-squared values which are measures of the variations in the depended variables. These values are represented by the Cox & Snell R Square and Nagelkerke R Square values (Field, 2009).

The values given by the Cox & Snell R Square and Nagelkerke R Square reflects that the variance in the dependent variable that is explained by the binary logistic regression model ranges from 22.6% to 32.6%. The Nagelkerke R Square value is a better measure to report as it is a modification of the Cox & Snell R Square (Field, 2009)

Table 34:Model Summary

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	156.560 ^a	.226	.326
a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.			

5.3.4 Hosmer and Lemeshow Test

The test that was chosen for binary logistic regression was the Hosmer and Lemeshow test, as it is a goodness of fit test that shows how well the data fits the model, by calculating if the observable event rates match the event rates in population subgroups (Hosmer, Lemeshow, & Sturdivant, 2013). The Sig value of 0.332 was observed which shows that the model fits the data well.

Table 35: Hosmer and Lemeshow Test

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	9.120	8	.332

Table 36 below provides the following information from (Hosmer et al., 2013).

1. The **percentage accuracy in classification (PAC)**, reflects the percentage of cases that can be classified as either $Y = 1$ or $Y = 0$ (Y represents the dependent variable Digital Transformation Progress) with the independent variables added i.e. Leadership and Culture, Skills and New Technology.
2. **Sensitivity** (true positives): represents the percentage of cases that had the observed characteristic.
3. **Specificity** (true negatives): represents the percentage of cases that did not have the observed characteristic.
4. The **positive predictive value**: the percentage of correctly predicted cases that had the observed characteristic compared to the total number of cases to have characteristic.
5. The **negative predictive value**: the percentage of correctly predicted cases that do not have the observed characteristic compared to the total number of cases predicted not to have the characteristic.

Table 36: Classification Table

Classification Table ^a					
	Observed		Predicted		
			What level would you rate your company's digital transformation progress?		Percentage Correct
			Little Progress	Lots of Progress	
Step 1		Little Progress	110	12	90.2

	What level would you rate your company's digital transformation progress?	Lots of Progress	28	19	40.4
	Overall Percentage				76.3
a. The cut value is .500					

5.3.5 Variables in the Equation

The Table 37 below is a table of weightings or coefficients of each of the independent variables. The contribution of each independent variable to the model is represented by the coefficients. The table also shows the statistical significance of each variable.

The output shown in Table 37 below shows that all the independent variables had an influence on the whether a respondent was burdened or not but not all of them were statistically significant. Leadership & Culture (with a coefficient of 2.279) and New Technologies (with a coefficient of 2.824) are statistically significant with p-value less than 0.05. The intercept (constant) is also statistically significant (Hosmer et al., 2013).

From the variables in the equation Table 37 below we can conclude that:

- LC = Leadership & Culture
- NT = New Technology
- Digital transformation progress = $2.279*LC + 2.824*NT$

Table 37: Variables in the Equation

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Leadership_Culture	.824	.371	4.920	1	.027	2.279
	Skills	.267	.367	.528	1	.467	1.306
	New_Technologies	1.038	.350	8.798	1	.003	2.824
	Constant	-8.627	1.495	33.286	1	.000	.000
a. Variable(s) entered on step 1: Leadership_Culture, Skills, New_Technologies.							

5.3.6 Summary of Hypothesis Test

A logistic regression was performed to ascertain the influence of Leadership & Culture, Skills and New Technologies **on Digital transformation Progress.**

The logistic regression model was statistically significant, $\chi^2(8) = 9.120$, $p < .005$. The model explained 32.6% (Nagelkerke R^2) of the variance in Digital Transformation Progress and correctly classified 76.3% of cases.

- **Increasing** Leadership & Culture was associated with an **increased** likelihood of an improvement in Digital Transformation by a factor of 2.279
- **Increasing** New Technologies was associated with an **increased** likelihood of an improvement in Digital Transformation by a factor of 2.824

5.3.7 Hypothesis 2

H₀: Regulations do not have a moderating effect on the relationship between a company's technological interest and the digital transformation progress of South African insurance companies.

H₁: Regulations have a moderating effect on the relationship between a company's technological interest and the digital transformation progress of South African insurance companies.

The moderated multiple regression analysis was performed to predict a company's Digital Transformation Progress from its Technological interest with Regulations serving as a moderator of that relationship.

All the independent and moderator variables are treated as continuous variables whilst the dependent variable is binary. Below is the conceptual diagram of the relationships of the model.

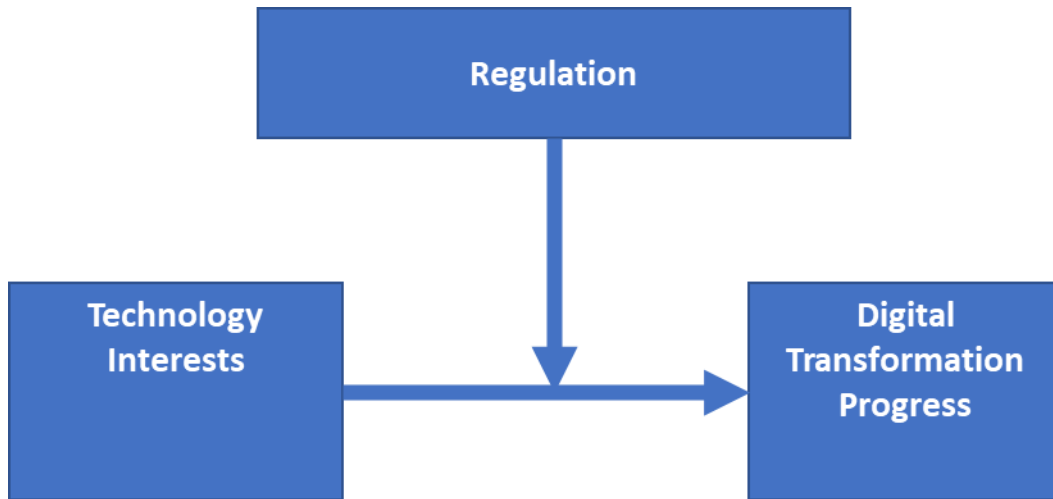


Figure 9: Conceptual diagram of the relationships

For the purpose of this analysis, the study mean-centred the independent variable (Technology Interest) and the moderator variable (Regulations)(Jose, 2013). Mean centering implies subtracting the mean from the raw scores on a variable. Mean centering facilitates the interpretation of the regression parameters, especially when a value of 0 does not fall within the range of values on the independent variable(Hayes, 2018).

The study chose the +/- 1 standard deviation Probe interactions option in SPSS to enable the representation of the moderator variable as three categories, low, medium and high. This means that the relationship between the independent and dependent variables will be tested on those three levels. The p-values was set to less than 0.10, thus only the conditional relationships with $p < 0.10$ will appear in the output.

The Johnson-Neyman output was enabled so as to allow for the probing of the independent and dependent variables in the regions of significance across the three levels of the moderator variable.

The model is such that Digital Transformation Progress is Y, Technology Interest is X and the moderator variable, Regulations is W ad shown below:

Model	1
Y	Digital Transformation Progress

X	Technology Interest
W	Regulations

The sample size was 169 respondents with the outcome variable being Digital Transformation Progress.

Sample Size: **169**

OUTCOME VARIABLE: Digital_Transformation

The respondents had two response type with respect to the outcome variable, namely, little progress and lots of progress. For the purposes of the analysis the responses were coded as 0 for little progress and 1 for lots of progress.

Coding of binary Y for logistic regression analysis:

Table 38: Coding of binary Y for logistic regression analysis

Digital_Transformation	Analysis
2	0
3	1

The model summary below shows that pseudo-Rsquare value that gives the percentage of variance in the data explained by the model is between 19.83% and 28.60%. These figures were extracted from the CoxSnell and Nagelkerk values respectively.

Model Summary						
-2LL	ModelLL	df	p	McFadden	CoxSnell	Nagelkrk
162,4593	37,3514	3	0	0,1869	0,1983	0,286

The interaction term Int_1 was not statistically significant ($b=0.2883$, $s.e.=0.2062$, $p=0.1621$). Although the relationship between technology interest and Digital Transformation Progress is statistically significant when controlled for the moderating variable, the conclusion is that Regulations do not moderate this relationship.

Regulations are not a significant moderator of the effect of technology interest.

Model	coeff	se	Z	p	LLCI	ULCI
constant	-1,1482	0,2077	-5,5275	0	-1,5554	-0,7411
New Technology	1,0196	0,1939	5,2589	0	0,6396	1,3997
Regulation	0,0643	0,2261	0,2845	0,776	-0,3788	0,5074
Int_1	0,2883	0,2062	1,3982	0,1621	-0,1158	0,6923

These results are expressed in a log-odds metric.

Figure 7 below shows the relationship between Digital Transformation Progress and Technology Interest for the three levels low (blue), medium (red) and high (green). The figure summarises the data for visualizing the conditional effect of the focal predictor (Technology Interest).

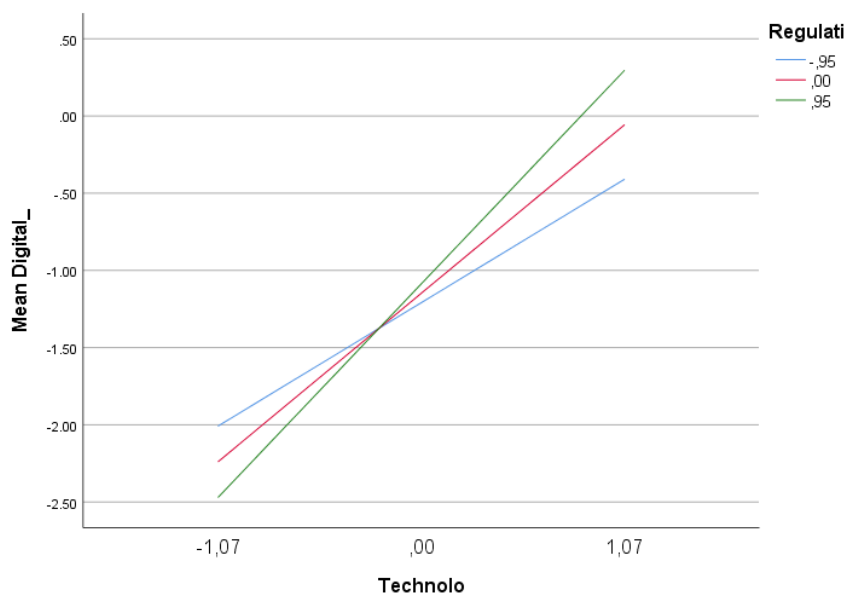


Figure 10: Relationship between Digital Transformation and Technology interest

5.4 Conclusion

Based on the respondents of the research survey performed, the results can be summarised as follows:

- The respondents indicated that companies had a high interest in new technology however the results also reflect that the participants perceive the level of digital transformation progress as low.
- From the 3 factors that we identified to have an impact on digital transformation progress which are Leadership & Culture, Skills and New Technology. While Skills was highlighted to have a contribution or an impact, it did not have a significant impact.
- Lastly regulations did not emerge as a significant moderator of the effect of interest that companies showed in technology, and thus not impacting digital transformation progress.

The following chapter further discusses the findings presented in this chapter.

6. CHAPTER 6: DISCUSSION OF RESULTS

6.1 Introduction

The data gathering process which is documented in chapter 4 resulted in a response rate of 65% of the expected 250 participants. Given that the data was collected over a short period of three weeks under extreme conditions of brought about by the COVID 19 pandemic. The survey had an overall completion rate of 99.9% with only one discarded test shows that respondents who attempted the survey found it engaging and relevant enough to complete. Tests were performed to assess reliability of the instrument that was used to collect the responses, and these confirmed that the instrument is reliable. Each construct was also validated to ensure that the questions that had been formulated to observe the constructs were consistently measuring the associated constructs.

The purpose of this chapter was to outline, discuss and integrate the research findings in respect to the research questions in the preceding chapter with the literature review that was conducted in earlier chapters. Emphasis is placed on whether the results either support, contradict or add to the body of literature. It must be noted that any inferences that are made from the findings are based on the sample of this study.

The chapter begins with a discussion of the demographics of the respondents of the study with the aim of assisting in a deeper understanding of the profiles of the participants. This section aims to understand the composition of each group and indicate any sampling bias concerns. The discussions then made inferences from the results for each relevant construct to be used in the understanding of the relationship between Leadership & Culture and Digital Transformation progress, Skills and Digital transformation Progress and finally New technology and Digital transformation Progress. These constructs were identified in chapter two of this study.

This chapter then ends by providing a summary of the research results with light to the literature that support the findings.

6.2 Descriptive Statistics

6.2.1 Gender

The results reflected that there was less female participation than men. The current workplace demographics of most South African institutions are still transforming along gender lines (Statistics SA, 2020). The population in South Africa is 51% female and 49% male however due to the traditional gender stereotypes that still have women performing more unpaid care work than their male counterparts, thus reducing their involvement in the formal workplace (United Nations, 2020).

According to Statistics SA (2020) female unemployment rate is higher than male unemployment rate with Black African women representing the highest unemployment rate in comparison to other population group thus explaining the noticeable difference in results. The gender stereotypes on technology also hinder the entry and progression in this field as it is traditionally a male dominated space (Pettman, 1979).

6.2.2 Age

This largest number is represented by later Generation X generally made up of those who are born between (1965 and 1981) and Millennials generally those born between (1981 and 1996) (Kulkarni, 2017). Millennials who are now entering the workforce and have grown accustomed to interacting with financial services through the use of technology (OECD, 2018). The next group of participants are the earlier Generation X, who are mostly established in their careers (Lusardi & Mitchell, 2017). The early proponents of this group Generation X the more experience workers who are less prone to shifting from their traditional ways of doing business and thus being a hinderance on the uptake of technology (De Abreu, 2019).

Survey participants in the 18-24 age group were low compared to other age groups, as this is the school leaving and tertiary going age, because Life Insurance industry require skilled labour and has limited use of unskilled labour (OECD, 2018). The results also highlight a low number of participants within the ages of 55-64, this is a common age for exiting the workforce in South Africa, with the average pension age at 60 for females and 65 for males.

6.2.3 Company

The results reflected that amongst these are the oldest Life Insurance companies with Old Mutual at 175 years, Sanlam at 102 years and Liberty at 63 years. While Discovery at 28 years and Hollard at 40 years are relatively young in comparison to the others but have managed to build a compelling market share. Their number of respondents can also be attributed to the number of employees at each of the organisations with Old Mutual at 31000 employees, Sanlam at 15000 employees and Liberty at 9200 employees. While Discovery at 12000 employees and Hollard at 12000 employees (Van Zijl et al., 2017).

6.2.4 Employment Type

The results reflected that permanent employment is most traditional method for employment, especially given the age of the companies involved (Van Zijl et al., 2017). As the loss of skilful workers is a cost to organisations, companies are inclined to keep skilled employees as opposed to hiring new employees due to the costs associated with recruitment, induction and training of new employees is costly, research has further indicated that a low staff turnover often leads to better productivity at an individual and organisational level (Biswakarma, 2016).

6.2.5 Employment Duration

This shows that the respondents are experienced on the job. This is also reflective of the current employment situation in South Africa where there is a scarcity of Jobs which leads to employees keeping their jobs for longer as the prospects of new are low. While the unemployment rate can be a deterrent for employees to change jobs, it is however balanced between the employees need for career growth and their attitude toward their current employer, this behaviour is more exhibited in younger generation who are more prone to leave organisations as a means to increase their chances of career progression and growth (Biswakarma, 2016).

6.2.6 B2C or B2B

Primary focus of the companies surveyed is Life insurance, even though this sector plays in both B2C and B2B, there were more B2C clients than B2B.

6.2.7 Online Revenue

Most respondents believe that online revenue is low is attributed to the current method of sales employed by South African life insurance organisations. This is in line with the current literature observation that while customers browse for products online, they still prefer to buy in person (Eling & Lehmann, 2018).

6.3 Research Question: What is impact on digital transformation in adoption in South Africa

The main purpose of this study was to gain an understanding of the factors that impact the adoption of digital transformation in South African insurance companies.

6.3.1 Skills

During the study analysis of the results indicated that most of the participants at 39% believe that the leadership in their organisations has and understanding of digital trends and emerging technologies. This is also corroborated by an additional 8% of participants who strongly agree with this statement. The results showed that 22% of participants disagreed with an additional 2% strongly disagreeing with this notion, while the remaining 28% remained neutral. The strong confidence that the respondents have in the leadership awareness of digital trends seems to corroborate the literature review which indicates the importance that emerging trends have on the insurance industry (Arych & Darcy, 2020).

The confidence in leaderships understanding of trends can also be linked to the importance and priority that financial institutes have placed on technology as literature has highlighted that this is sometimes a threat to organisations competitive advantage (Bezuidenhout, 2017a). While respondents indicated that they had confidence in their leaders understanding of trends. The results also indicated that respondents believed that their leaders had sufficient skills to lead their digital strategies with 37% agreeing and 5% strongly agreeing, however contrary to this, the majority of respondents at 30% agreed and 22% strongly agreed that their company needed to find new leaders from outside in order for the company to succeed. This indicated that there may still be doubt in the skills and abilities of the leaders to lead the organisation.

The doubt in leadership skills could also attribute to the reason why when asked whether their company is effectively developing leaders the majority of respondents agreed with the statement, which may indicate that South African insurance institutions in line with what literature has indicated Bouwman, Nikou, Molina-Castillo, and de Reuver (2018) understand the importance of learning new skills required for digital adoption.

Literature review highlighted multiple stances on the matter of skills required for digital. One of the views is that organisations need to constantly adapt and develop new skills to meet the requirements to keep up with the changes brought in by technology (Bouwman et al., 2018). The approach that organisations take to meet this requirement is however not agreed to. According to Eling and Lehmann (2018) not all insurance companies consider their internal IT as a core competency of the business and opt to outsource this skill. The results indicate that this is not the case for the South African market based on the respondents answers were the majority identified the primary function as IT and an overwhelming majority of the respondents indicating that they are employed fulltime this would suggest that similar to Nepal Hopp, Antons, Kaminski and Oliver Salge (2018), the South African insurance industry preferred to keep these skills inhouse.

Literature has indicated that in addition to the changes that are brought in from the changes from legacy to digital systems and solutions, the business model changes also bring with them challenges to existing roles and skills such as the risk of redundancy for intermediaries who may be replaced with digital tools (De Abreu, 2019).

This section discussed the observed variable, which was Skill and showed how from the results, skill had an impact on the decisions and choices taken by organisations. The findings on skills also supported the literature in that changes in technology came with a requirement for organisations to keep their skills up to date. However, despite this while skills have an impact on digital transformation adoption this impact does not show any statistical significance. The output of the analysis showed that while skill had an influence on the whether a respondent was burdened or not, the influence was not significant.

6.3.2 Leadership & Culture

The next factor identified was Leadership & Culture, which seeks to understand the views and beliefs that the leadership and ultimately the rest of the organisation views digital

technologies. With a coefficient of 2.279 a p-value less than 0.05 and an intercept (constant) Leadership & Culture showed to be both statistically significant and also a positive contributor to digital transformation adoption.

Literature review has identified that not only do business models of organisations change but also in certain instances also roles and responsibilities, such as with the introduction of the Chief Digital Officer (Tumbas et al., 2017). When asked if whether digital technologies can transform the way people work and overwhelming majority of respondents agreed 45% and strongly agreed 28%. The literature supported the idea that digital technology changes have a far- and wide-reaching implications changes that are brought about by digital technologies such as identified by Horlach et al. (2016).

The respondents when asked to rate their company's orientation to change most respondents at 43% and a further 15% strongly agreed that their companies viewed the change brought in by digital technologies. Literature contradicts the stance that was observed through the results as literature has shown that companies do not always have a positive orientation to change given their previous experiences on technology projects were they may have had losses of assets and skills (Clayton, 1997).

The results also showed that most respondents agree that technology capabilities are important to their organisation. According to Sklyar et al. (2019) internal support from the rest of the organisation is crucial to ensure that companies can navigate the ever-changing technology landscape. The research results further corroborate this importance where most respondents indicated that their company views digital technology as an opportunity. Financial services companies have been known to be early adopters. These opportunities are not without their challenges as literature has highlighted that the need to leaders to remain agile and adapt to new challenges, that are brought in by the uncertain environment that they operate withing, sometime requires leaders to make more complex decisions with limited information (Zeike et al., 2019). Leaders are also burdened with the need to implement robust policies and roadmaps to ensure that their technology investments yield the desired outcomes growth (Gebauer et al., 2020).

The results show that majority of the respondents either agree or strongly agree that their organisations empower them with the right resources, opportunities and skills to take advantage of digital trends, this may support the literature that highlights that digital

technologies are allowing leaders to delegate more task and also solicit regular feedback from their subordinates (Hesse, 2018). These results may also support literature were the automation of routine tasks has been replaced by algorithms and tooling which may allow employees to perform more cognitively complex tasks (Bezuidenhout, 2017a).

While not directly indicated, these results may also be a proxy to understand how and what leaders are doing to address the challenges of diversity and inclusion more specifically around the question of gender as it relates to female participation in digital skills. Literature proposes that due to gender stereotypes and norms, females are more susceptible to be excluded from participating in digital skills and opportunities in the workplace (Arroyo, 2020), while the research results do not contradict this notion they do highlight that in this context it seems that leadership effort has been placed to ensure that employees receive adequate resources and skills.

6.3.3 New Technology

The last factor that the study identified was New Technology, looked at how new and innovative technologies impacted organisations. With a coefficient of 2.824 a p-value less than 0.05 and an intercept (constant) New technology showed to be both statistically significant and also the largest positive contributor to digital transformation adoption.

The results indicated that respondents were evenly matched when asked how innovative they believe their company is both agree at 28% and strongly agree at 11% and equally disagree and strongly disagree. Given that all respondent companies answered all other questions in a similar fashion without any deviation indicating that the same challenges and opportunities are faced by all companies surveyed. When cross tabulating these results with the question on where the business revenue is generated from the majority indicated that only a small portion 0-25 percent of revenue is generated from online presence which supports the notion that insurance companies are not transforming fast enough to take advantage of digital sales through online channels. The low online channel integration is opposed to the view in literature that customers preferences are changing towards online direct channels (Morogra, 2019).

Literature has highlighted that changes in consumer sensations on the type of service experience that digital technologies such as e-commerce and self-service platforms has

brought about, has been identified as a having impact on the client and employee satisfaction (Niraula & Kautish, 2019) .This is in line with the results obtained where majority of respondents indicated that digital technologies are currently disrupting their company's industry.

Analysis of the results showed that most respondents felt that funding of digital initiatives was highlighted as a challenge faced by companies with regards to their digital efforts. This is in line with literature review which highlights the challenges that are faced by organisations with balancing the right amount of investment in technology which is in line with their revenue objectives (Niraula & Kautish, 2019). Literature has can also explain why funding may be a challenge as companies have found themselves in the digital paradox where they have not realised growth following their digital investments (Gebauer et al., 2020).

The respondents of the study were majority in agreement with the statements when asked if their companies had adopted digital technologies such as social media, data analytics and cloud computing tools. Literature indicated the prevalence of these technologies not only in the insurance industry but across many sectors (Hopp, Antons, Kaminski, & Oliver Salge, 2018; Langley et al., 2020; Loebbecke & Picot, 2015).

When asked to determine where the bulk of their business was generated most respondents indicated that this was primarily B2C. This is in line with literature that shows that while digital technologies may open new opportunities for businesses to venture into new markets, these investments into technology need to be weighed as no all models are transferable from one to the other (Matt et al., 2015).

However, with all the positive results that show that companies are interested, have a positive outlook and are skilling resources in digital technology, the when asked if there is any progress in digital transformation the overwhelming majority indicated there is Little progress. The study found these results to be contradictory to the statement that financial services institutions are early adopters of technology (Gomber et al., 2017) companies would report better progress results.

The results on the level of satisfaction in the reaction to digital trends are also interesting when placed in light of the question of digital progress as there would be a positive

correlation between the two, however these may support the view in literature about the uncertain nature of digital technologies hence the divided view from respondents (Bouwman et al., 2018). These results may support the literature as it explains the challenge that companies face in trying to constantly keep up with a rapidly ever changing landscape (Town, 2018).

These contradictory stances in the results also correlate to the views highlighted in literature that while digital transformations benefits are known, not all proponents believe that they are always achievable or worth it for businesses to pursue due to the added complexity that they impose on existing business models Broekhuizen et al. (2019) and Soutter et al. (2019).

Literature review had indicated that digital transformation was less about technology and more about the business needs (Clayton, 1997; Myerson, 2019), however the results from the study may indicate that both are equally as important as the benefits of new technologies have shown to enable new strategies and partnerships that can enable businesses to enter new markets (Kotarba, 2018).

6.3.4 Regulations

In terms of Regulations most respondents of the study agreed at 27% and strongly agree at 13% that regulations imposed a significant challenge to digital efforts. However, during the analysis of the data, the interaction term was not statistically significant ($b=0.2883$, $s.e.=0.2062$, $p=0.1621$). As such while the observed relationship between technology interest and Digital Transformation Progress is statistically significant when controlled for the moderating variable, the study concluded that Regulations are not a significant moderator of the effect of technology interest.

An analysis of the results, given the high number of respondents that indicated that regulation is a hinderance on digital transformation adoption. However, these seem to correlate to the literature review that highlighted how different regulatory schemes in different countries may yield varying results (Ghimire, 2020; Maharjan, 2019).

Literature review has identified the insurance sector as one of the most highly regulated industries (Sawadogo et al., 2018). These regulations are put in place to protect the

interests of customer and organisations by governing the way in with customers are given advise about financial products in the market (Liebi & Haldemann, 2020).

According to OECD (2018) regulations has been identified as one of the barriers to digital transformation and has also been a hindrance to insurers and other digital financial providers. Potentially these barriers may arise from the fact that the insurance industry has been in existence since the analogue era and still prefer in person interaction over digital (Morogra, 2019) also that there would be limited regulatory expertise to cover the number of emergent technologies and their implications (Eling & Lehmann, 2018). Given these implications however literature also highlights that the lack of regulations does not completely stop Insurtechs from doing business as they opt for partnerships instead of competing.

Literature review also highlights how countries such as South Africa that have a comprehensive regulatory framework, have more stable environments that provide growth opportunities rather than hinder growth (Sawadogo et al., 2018). As such the statistical analysis that has led to a conclusion that regulations while important are not a significant barrier to digital transformation adoption can be correlated to current literature.

6.4 Summarised Findings

In summarising the findings of this research study Figure 8 below provides a view of the identified relationships based on the participation of the survey respondents. In addition to this the figure highlights the literature that corroborates the impact that the identified factors that have been identified have on the research question. The objective of the research which is to understand the impact that Leadership, Culture, Skills and New Technology have on the digitalization of long-term insurance companies in South Africa are met.

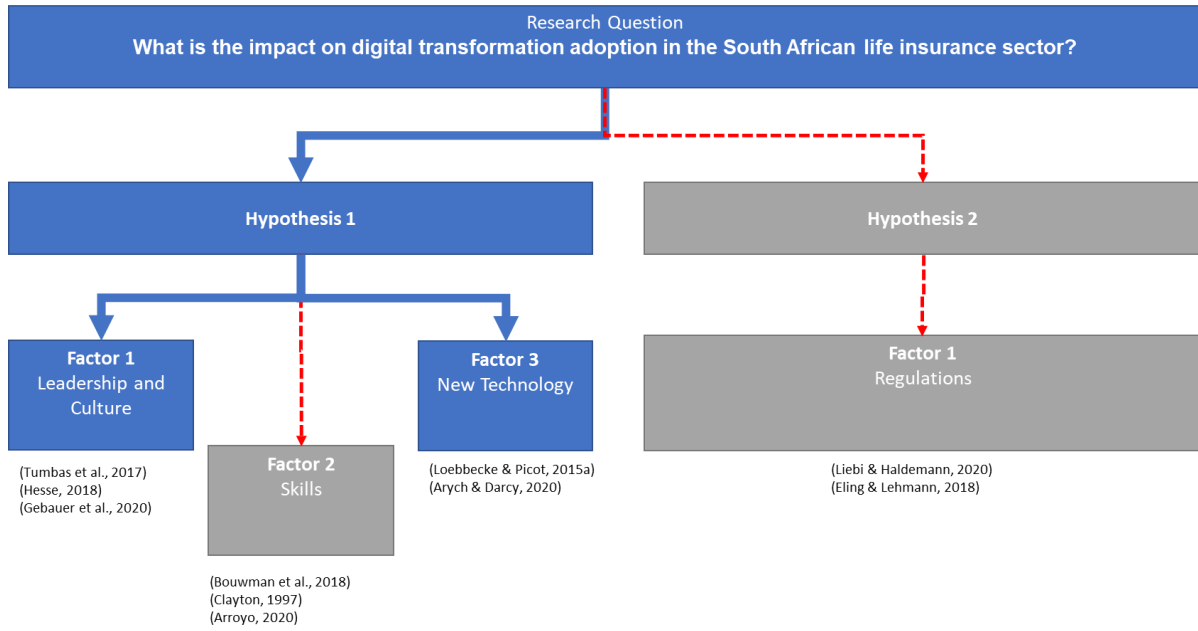


Figure 11: Research questions linked to hypothesis

7. CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

In the previous chapter, the results of this study were discussed in terms of the research hypothesis, theory and literature. This chapter sets out the principal findings of the research. Based on these findings, recommendations are made to business and managers. The limitations of the research are discussed, and suggestions for future research are made.

Practically as a Digital Transformation leader in their own organisation this study could be used to assist in explaining the challenges and exploiting opportunities that could be used to move forward digital initiatives within their own organisations, thus adding on to one of the factors that make this study relevant and valuable to businesses.

Academically the study seeks to uncover deeper insights into the applicability of current literature that is evolving around Digital Transformation, with a focus on the South life insurance services sector, more so on the applicability of the factors uncovered by other studies in their respective markets as compared to South Africa. This chapter highlights the main findings of the research study.

7.1 Principal Conclusions

There are 4 principal findings from this study. These are as follows:

1. Types of leadership and the culture of an organisation does impact the adoption of digital transformation in the life insurance industry.
2. Employee skills does not have a significant impact on digital transformation of life insurance industry.
3. There is a significant relationship between new technologies and the adoption digital transformation in the life insurance industry.
4. Literature shows that regulations do impact digital transformation of life insurance industry, however this study reflected different results.

Each of these findings are discussed in the discussion section.

7.2 Implications for Management and other relevant Stakeholders

7.2.1 For Business

Life insurance businesses play a critical role in the economic development of South Africa. This study determined the relationship between the development of the life insurance industry and economic growth in developing countries like South Africa. Countries with better developed life insurance activity lead to higher levels of economic growth.

Over and above the fact that Life insurance businesses have a greater contribution to the South African economy, the study also revealed that even more positive contribution can be realised when these institutions digitally transform. However clear measures need to be in place to facilitate monitoring of digital transformation initiatives. To ensure the return on investment in digital transformation initiatives requires that the initiatives undertaken must be aligned to the business goals and objectives. Life insurance businesses need to ensure that the correct policies and roadmaps are in place to ensure that the adoption of digital technology does not have a negative impact on company value.

Although initially digital transformation may be a drain on company resources with proper projections and new ways of financial reporting this may not be the case. The study discovered that when any institution embarks on a digital transformation journey, they need to release their legacy people, processes and technology to release the financial resources tied up in these capabilities.

Given these opposing views of whether to invest or not, South African Life insurance companies still see the importance in investing in digital transformation, as it realises that should other countries in this journey, they may venture into the South African market and pose a threat to existing Life insurers. This remains a critical factor to understand in the South African context.

7.2.2 For Academics

Digital transformation is a well researched topic in academic literature, most studies are focused on finance, marketing, and innovation. However, this study revealed the nuances

involved around digitally transforming the Life insurance industry. It was evident that each industry requires a particular focus when transforming. Even though there have been studies about the financial service industry, a focus on the Life insurance industry was still missing. Existing literature looked at the banking and short-term insurance sectors.

Literature also revealed that due to the differences in Life insurance, short term insurance and banking sectors their transformation journeys cannot be easily transferred from one sector to another. All these sectors have different regulations, capabilities, and their own set of legacy systems even though they may all fall under the financial services industry.

Even though South Africa is recognised as a digital hub in Africa, with a strong banking sector that has advancing in digital transformation and adopted some of the fully digital companies also known as FinTech's. Literature does not see a similar appetite in the Life insurance sector, this includes other digital hubs in Africa such as Nigeria and Kenya which are leading in the use of digital solutions such as mobile money such as M-Pesa in Kenya.

Despite the fact that there is limited research in the Life insurance sector in South Africa, this study revealed that organisations in this sector in South Africa are undertaking digital transformation initiatives.

7.3 Limitations of the research

Digital Transformation Adoption in the Life Insurance Sector in South Africa Firstly the local and global COVID 19 pandemic circumstances which resulted in major shifts in the way organisations and people interact and conduct business, might have shifted priorities and perceptions of Digitalization's importance or progress during the course of the survey collection.

Secondly this also led to a limited sample from each organisation than what was intended due to severely restricted timelines that might have introduced sample bias thus limiting the generalization of this study.

7.3.1 Global Coronavirus Disease 2019 (COVID-19) Pandemic

In 2019 China was hit by COVID19 , a sickness that is caused by a novel coronavirus known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2 also known as 2019-nCoV)(Nowotny, Bailey, Omori, & Brinkley-Rubinstein, 2020). The numbers of this disease cases increased rapidly and spread beyond the borders of China. Zweli Mkhize, Minister of Health on the 5th March 2020 announced the spread of the virus to South Africa. The first known patient was a male citizen who tested positive upon his return from Italy. On the 27th of March 2020, the first death was reported in South Africa that occurred from this disease. From the 27th March to 16th April 2020 South Africans went on a 21-day national lockdown and many more days subsequently and brought limitations to this research.

The study relied on engaging with participants on digital platforms and could not go to physically to Life Insurance organisation in South Africa due to the restrictions that were enforced during lockdown. And this had an impact on number of respondents received.

7.3.2 People Responsible for Digital Transformation Availability

Due to COVID19, people that are responsible for digital transformation had to hold the fought for most companies in South Africa and ensured that there was business continuity when theirs were on lockdown. And understandably so, they did not have enough time to focus on other things other than ensuring that businesses where able to operate effectively during this unforeseeable time.

This also had impact on the number of respondents, most people in Life Insurance organisation in South Africa were focused on adopting digital at a rapid pace.

7.3.3 The Authors Role and Responsibility

The researcher holds a position of Head of Digital at a Life Insurance organisation in South Africa. This had and impact on the uptake of the survey/questionnaire as participants were not comfortable to disclose company information with the researcher because the study focused on digital transformation adoption in the Life Insurance sector in South Africa. And there was conflict of interest concerns from some companies.

This had an impact on the projected number of companies that were planned to participate in this study.

7.3.4 Time constraints

Over and above the mentioned limitation, the study had to be completed in a limited time, the time restraint limited the ability to reach more participants due to the shortage of time.

7.4 Suggestions for future research

These are the 3 studies that future studies can research:

7.4.1 Digital Transformation Consumer Adoption in the Life Insurance Sector in South Africa

This research replicated a Nepal study, which was researched by Niraula and Kautish (2019) it focused or researched both consumers as well as Insurance organisations that are digital transformation in Nepal. And this paper did not cover the consumer element of the study even though it is still not covered in the body of knowledge, especially in the South African context. It is recommended that future studies look at the adoption of consumers when Life Insurance companies digitally transform.

7.4.2 Adoption Insurtechs Sector in South Africa

Secondly, another recommended future research is also in the digital transformation domain. It is the study of platform life insurance companies or insurtechs growing and capturing huge markets similar to traditional life Insurance Sector in South Africa. Today, South Africa does have insurtechs, however they do have as many customers as traditional life insurance businesses. This could be because of the number of years that traditional life insurance have existed I comparison to the number of years that insurtechs have been around, consumers not understanding how they operate, consumers are not ready to entrust technology engagement with their money/investments, insurtechs are heavily regulated that they cannot serve their markets well, or they are simply do not invest a lot in promotions and marketing? This has not been well research in the South African context.

7.4.3 Future Regulations Due to Digital Transformation Adoption in the Life Insurance Sector in South Africa

Current research indicate that regulation is one of reasons why there is delay in digital transformation in South Africa and other part of the world. Regulators protect how customers are advised in the long-life insurance industries. One of the reasons why these regulations are in place it to prevents both customer and organisations (Liebi & Haldemann, 2020). In the South African context, future research could look at what future regulations could enable the South African Life Insurance Sector to be more digital without abusing both customers and organisations.

7.5 Concluding remarks

Digital transformation gaps in literature where identified and some of these gaps had to do with the fact that this research aimed to replicate a study that was done in Nepal, which is different to South Africa. Drivers of digital transformation were also identified as they are critical to know specifically for the Life insurance sector in South Africa. In parallel to these digital transformation drivers' barriers such as regulation, legacy system and capabilities were also highlighted as one of the key inhibitors of digital transformation. The study then looked at the applicability of digital transformation in the Life insurance sector in South Africa as this would give an indication of whether subject was worth studying or researching.

Once the problem was defined, the study further analysed literature on what digital transformation adoption meant in the different contexts and sectors. Even though the definition of digital transformation was similar from various sources the application of it was different for different sectors. The study therefore critically assessed what the Life insurance industry entailed as this was the focus of the study. Once the industry was understood a relationship between the two constructs had to be established to understand what is in the body of knowledge with this regard.

The replicated Nepal study used a quantitative methodology which was also suitable for this type of study in South Africa. The study used a survey to extract information from employees of Life insurance companies out of which 169 participants responded. Unfortunately, due unforeseen circumstances beyond the control of the researcher the

study was impacted by the global COVID 19 pandemic which hindered the engagements with Life insurance companies.

This study has identified the need for Life insurance business to formulate digital strategies to manage the ever-evolving technology landscape in South Africa. These strategies may assist Life insurance business in managing the value that is derived from digital technology investments. The development of the company's Leadership skills was found to be beneficial in driving a positive organisational culture towards digital adoption in an organisation. Further to Leadership and culture the technology choices that organisations make are crucial in ensuring the success of a company's digital transformation journey.

8. REFERENCE LIST

- Alhassan, A. L., & Biekpe, N. (2016). Competition and efficiency in the non-life insurance market in South Africa. *Journal of Economic Studies*, 43(6), 882–909. <https://doi.org/10.1108/JES-07-2015-0128>
- Alt, R. (2019). Electronic Markets on digital transformation methodologies. *Electronic Markets*, 29(3), 307–313. <https://doi.org/10.1007/s12525-019-00370-x>
- Arroyo, L. (2020). Implications of digital inclusion: Digitalization in terms of time use from a gender perspective. *Social Inclusion*, Vol. 8, pp. 180–189. <https://doi.org/10.17645/si.v8i2.2546>
- Arych, M., & Darcy, W. (2020). General trends and competitiveness of Australian life insurance industry. *Journal of International Studies*, 13(1), 212–233. <https://doi.org/10.14254/2071-8330.2020/13-1/14>
- Augustin, J.-L. P. M., & Liaw, S.-Y. (2019). Grouping the Americas and Asia-Pacific Countries based on Their ICT Readiness, Prioritization of Travel & Tourism and Tourist Service Infrastructures. *International Journal of Marketing Studies*, 11(2), 38. <https://doi.org/10.5539/ijms.v11n2p38>
- Authority, F. S. C. (2020). LIST OF REGISTERED INSURERS.
- Baker, M., & Wurgler, J. (2003). *Investor sentiment in the stock market-Journal of Economic Perspectives*. 1–48. Retrieved from <papers://22880b5a-c3f7-4a61-9e33-ed4c97fcb3c7/Paper/p165>
- Basaula, D. (2018). Customers Satisfaction towards Life Insurance Claim Settlement in Nepal. *Janapriya Journal of Interdisciplinary Studies*, 6(December), 29–44. <https://doi.org/10.3126/jjis.v6i0.19307>
- Basto, M., & Pereira, J. M. (2012). An SPSS R-menu for ordinal factor analysis. *Journal of Statistical Software*, 46(4). <https://doi.org/10.18637/jss.v046.i04>
- Baxter, P., Susan Jack, & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report Volume*, 13(4), 544–559. <https://doi.org/10.2174/1874434600802010058>
- Bezuidenhout, C. (2017a). The impact of technological change on jobs and workforce structures Chandon. *The Development of Canada's Staples, 1867-1939*, (November), 350–352. <https://doi.org/10.2307/j.ctt1w6tgdb.87>
- Bezuidenhout, C. (2017b). The Impact of Technological Change on Prices. *The Development of Canada's Staples, 1867-1939*, (November), 350–352. <https://doi.org/10.2307/j.ctt1w6tgdb.87>
- Biswakarma, G. (2016). International Academic Journal of Organizational Behavior and

- Human Resource Management Organizational Career Growth and Employees " Turnover Intentions: An empirical evidence from Nepalese Private Commercial Banks. *International Academic Journal of Organizational Behavior and Human Resource Management*, 3(2), 10–26. Retrieved from www.iaiest.com
- Bohnert, A., Fritzsche, A., & Gregor, S. (2019). Digital agendas in the insurance industry: the importance of comprehensive approaches†. *Geneva Papers on Risk and Insurance: Issues and Practice*, 44(1), 1–19. <https://doi.org/10.1057/s41288-018-0109-0>
- Bonett, D. G., & Wright, T. A. (2015). Cronbach's alpha reliability: Interval estimation, hypothesis testing, and sample size planning. *Journal of Organizational Behavior*, 36(1), 3–15. <https://doi.org/10.1002/job.1960>
- Bouwman, H., Nikou, S., Molina-Castillo, F. J., & de Reuver, M. (2018). The impact of digitalization on business models. *Digital Policy, Regulation and Governance*, 20(2), 105–124. <https://doi.org/10.1108/DPRG-07-2017-0039>
- Broekhuizen, T. L. J., Emrich, O., Gijsenberg, M. J., Broekhuis, M., Donkers, B., & Sloot, L. M. (2019). Digital platform openness: Drivers, dimensions and outcomes. *Journal of Business Research*, (July), 1–13. <https://doi.org/10.1016/j.jbusres.2019.07.001>
- Campbell, I. L., & Flux, D. S. (2017). How Big Old Companies Navigate Digital Transformation. *The Journal of Agricultural Science*, 42(1–2), 150–154. <https://doi.org/10.1017/S0021859600058731>
- Catlin, T., & Lorenz, J.-T. (2017). Digital disruption in insurance: Cutting through the noise. *Digital McKinsey*. Retrieved from <https://www.mckinsey.com/industries/financial-services/our-insights/time-for-insurance-companies-to-face-digital-reality>
- Chowdhury, S. A., Khan, F., & Alam, M. (2019). *Users' Perceptions on the Usage of M-commerce in Bangladesh: A SWOT Analysis*. 4(3), 87–91. <https://doi.org/10.11648/j.ajomis.20190403.13>
- Christensen, C. M., Ojomo, E., & Dillon, K. C. N.-H. . C. 2019. (2019). *The prosperity paradox: how innovation can lift nations out of poverty* (First edit). Retrieved from <http://files/1/Christensen et al. - 2019 - The prosperity paradox how innovation can lift na.pdf>
- Christoph, N., Lars, F., Dinesh, K., Bernd, W., & Peter, U. (2016). *Transformation in Emerging Markets*.
- Clayton, C. (1997). Innovator's Dilemma. In *Harvard Business School Press*.
- Constantinides, P., Henfridsson, O., & Parker, G. G. (2018). Platforms and infrastructures in the digital age. *Information Systems Research*, 29(2), 381–400.

<https://doi.org/10.1287/isre.2018.0794>

- Creswell, J. W. (2014). *Research design: qualitative, quantitative and mixed method approaches, 4th ed* (4th ed.). CA: Sage Publication.
- Crockett, D. R., McGee, J. E., & Payne, G. T. (2013). Employing New Business Divisions to Exploit Disruptive Innovations: The Interplay between Characteristics of the Corporation and Those of the Venture Management Team: Corporate Interplays with New Venture Team. *Journal of Product Innovation Management*, 30(5), 856–879. <https://doi.org/10.1111/jpim.12034>
- De Abreu, M. F. (2019). *Business model innovation in construction supply chains in South African townships A research project submitted to the Gordon Institute of Business Science , University of Pretoria , in partial fulfilment of the requirements for the degree of Master of Bu.* (March).
- de Winter, J. C. F., Dodou, D., & Wieringa, P. A. (2009). Exploratory factor analysis with small sample sizes. *Multivariate Behavioral Research*, 44(2), 147–181. <https://doi.org/10.1080/00273170902794206>
- Deloitte, Obwegeser, N., De Araujo, B., Ana, L., Carugati, A., Westerman, G., & W. Taylor, M Sharif, W Claassen, H. W. (2013). E-social Astuteness skills for ICT-supported equitable prosperity and a capable developmental state in South Africa Zoran Mitrovic University of the Western Cape , South Africa Wallace Taylor The Information Society Institute , South Africa Ms Mymoena Sha. In *MCIS 2015 Proceedings* (Vol. 9). Retrieved from https://hbr.org/webinar/2014/06/the-nine-elements-of-digital-transformation%0Ahttp://aisel.aisnet.org/cgi/viewcontent.cgi?article=1038&context=mcis2015&sei-redir=1&referer=https%253A%252F%252Fscholar.google.it%252Fscholar%253Fas_ylo%253D2013%2526q%253Ddig
- Dremel, C., Herterich, M. M., Wulf, J., & Brenner, W. (2017). *How AUDI AG Established Big Data Analytics in its Digital Transformation Please quote as: Dremel , C ., Herterich , M ., Wulf , J ., Waizmann , J . -C ., and Brenner , W . 2017 . “ How AUDI AG Established Big Data Analytics in Its Digital Transformation .* (January).
- Eisend, M. (2019). Explaining digital piracy: A meta-analysis. *Information Systems Research*, 30(2), 636–664. <https://doi.org/10.1287/isre.2018.0821>
- Eling, M., & Lehmann, M. (2018). The Impact of Digitalization on the Insurance Value Chain and the Insurability of Risks. *Geneva Papers on Risk and Insurance: Issues and Practice*, 43(3), 359–396. <https://doi.org/10.1057/s41288-017-0073-0>
- Fehér, P., & Varga, K. (2019). Digital transformation in the Hungarian banking industry –

- Experiences with Design Thinking. *Society and Economy*, 41(3), 293–310.
<https://doi.org/10.1556/204.2019.41.3.2>
- Field, Andy P C N - HA32 .F54 2009. (2009). *Discovering statistics using SPSS: and sex, drugs and rock “n” roll* (3rd ed). Los Angeles: SAGE Publications.
- Field, Andy P C N - HA32 .F54 2013. (2013). *Discovering statistics using IBM SPSS statistics* (4th edition). Los Angeles: Sage.
- Fürstenau, D., Baiyere, A., & Kliewer, N. (2019). A dynamic model of embeddedness in digital infrastructures. *Information Systems Research*, 30(4), 1319–1342.
<https://doi.org/10.1287/isre.2019.0864>
- Gebauer, H., Fleisch, E., Lamprecht, C., & Wortmann, F. (2020). Growth paths for overcoming the digitalization paradox. *Business Horizons*, 63(3), 313–323.
<https://doi.org/10.1016/j.bushor.2020.01.005>
- Ghimire, R. (2017). Life Insurance Development and Economic Growth in Nepal: An Empirical Study Using VECM Approach. *SSRN Electronic Journal*, 1–12.
<https://doi.org/10.2139/ssrn.2797777>
- Ghimire, R. (2018). Market Share and Market Concentration of Nepalese Life Insurance Industries. *SSRN Electronic Journal*, 1–10. <https://doi.org/10.2139/ssrn.3164920>
- Ghimire, R. (2020). Situation Analysis of Insurance Services in Nepal. *SSRN Electronic Journal*, 1–14. <https://doi.org/10.2139/ssrn.3556498>
- Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services. *Journal of Management Information Systems*, 35(1), 220–265.
<https://doi.org/10.1080/07421222.2018.1440766>
- Gomber, P., Koch, J. A., & Siering, M. (2017). Digital Finance and FinTech: current research and future research directions. *Journal of Business Economics*, 87(5), 537–580. <https://doi.org/10.1007/s11573-017-0852-x>
- Hausberg, J. P., Liere-Netheler, K., Packmohr, S., Pakura, S., & Vogelsang, K. (2019). Research streams on digital transformation from a holistic business perspective: a systematic literature review and citation network analysis. *Journal of Business Economics*, Vol. 89, pp. 931–963. <https://doi.org/10.1007/s11573-019-00956-z>
- Hayes, A. F. (2018). Introduction to mediation, moderation, and conditional process analysis: a regression-based approach. In *Methodology in the social sciences CN - HA31.3 .H39 2018* (Second edition). New York: Guilford Press.
- Hesse, A. (2018). Digitalization and Leadership - How Experienced Leaders Interpret Daily Realities in a Digital World. *Proceedings of the 51st Hawaii International*

- Conference on System Sciences*. <https://doi.org/10.24251/hicss.2018.234>
- Hopp, C., Antons, D., Kaminski, J., & Oliver Salge, T. (2018). Disruptive Innovation: Conceptual Foundations, Empirical Evidence, and Research Opportunities in the Digital Age. *Journal of Product Innovation Management*, 35(3), 446–457. <https://doi.org/10.1111/jpim.12448>
- Hopp, C., Antons, D., Kaminski, J., & Salge, T. O. (2018). The Topic Landscape of Disruption Research—A Call for Consolidation, Reconciliation, and Generalization. *Journal of Product Innovation Management*, 35(3), 458–487. <https://doi.org/10.1111/jpim.12440>
- Horlach, B., Drews, P., & Schirmer, I. (2016). Bimodal IT: Business-IT alignment in the age of digital transformation. *Multikonferenz Wirtschaftsinformatik, MKWI 2016*, 3, 1417–1428.
- Hosmer, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). Applied Logistic Regression. In *Wiley Series in Probability and Statistics* (1st ed.). Retrieved from <https://onlinelibrary.wiley.com/doi/book/10.1002/9781118548387>
- Iyawe, O. O., & Osamwonyi, I. O. (2017). Financial Development and Life Insurance Demand in Sub-Sahara Africa. *International Journal of Financial Research*, 8(2), 163. <https://doi.org/10.5430/ijfr.v8n2p163>
- Johannesburg Stock Exchange Limited. (2016). JSE limited listings requirements. *Johannesburg Stock Exchange*, 1–494.
- Johnson, M. P., Midgley, G., Wright, J., & Chichirau, G. (2018). Community Operational Research: Innovations, internationalization and agenda-setting applications. *European Journal of Operational Research*, 268(3), 761–770. <https://doi.org/10.1016/j.ejor.2018.03.004>
- Jose, P. E. (2013). Doing statistical mediation and moderation. In *Methodology in the social sciences CN - QA278.2 .J67 2013*. New York: The Guilford Press.
- Karpagavalli, V. (2018). *NEGP IN PANCHAYAT - AN OVERVIEW WITH REFERENCE TO TIRUPPUR DISTRICT*. 874–877. <https://doi.org/10.21917/ijms.2018.0119>
- Kotarba, M. (2018). Digital transformation of business models. *Foundations of Management*, 10(1), 123–142. <https://doi.org/10.2478/fman-2018-0011>
- Koy, A. (2018). *Regime Dynamics of Stock Markets in Fragile Five Regime Dynamics of Stock Markets in the Fragile Five*. (December 2017).
- Kshetri, N. (2017). Blockchain's roles in strengthening cybersecurity and protecting privacy. *Telecommunications Policy*, 41(10), 1027–1038. <https://doi.org/10.1016/j.telpol.2017.09.003>

- Kulkarni, J. (2017). Digitalization - Implication for the Life Insurance Industry. *Journal of the Insurance Institute of India*, 5(2), 48–51. Retrieved from <https://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=131099261&site=ehost-live>
- Langley, D. J., van Doorn, J., Ng, I. C. L., Stieglitz, S., Lazovik, A., & Boonstra, A. (2020). The Internet of Everything: Smart things and their impact on business models. *Journal of Business Research*, (June 2018), 0–1. <https://doi.org/10.1016/j.jbusres.2019.12.035>
- Lewis, P., & Thornhill, A. (2019). “*Research Methods for Business Students*” Chapter 4: *Understanding research philosophy and approaches to theory development*.
- Liebi, M., & Haldemann, M. (2020). The New Rules for Providing Financial Services in Switzerland: Fundamental Changes to the Cross-Border Provision of Financial Services for Non-Swiss Financial Service Providers and Producers of Financial Instruments for the Swiss Market. *Business Law International*, 21(1), 23.
- Loebbecke, C., & Picot, A. (2015). Reflections on societal and business model transformation arising from digitization and big data analytics: A research agenda. *Journal of Strategic Information Systems*, 24(3), 149–157. <https://doi.org/10.1016/j.jsis.2015.08.002>
- Lusardi, A., & Mitchell, O. S. (2017). How Ordinary Consumers Make Complex Economic Decisions: Financial Literacy and Retirement Readiness. *Quarterly Journal of Finance*, 7(3). <https://doi.org/10.1142/S2010139217500082>
- Maharjan, R. (2019). Corporate Governance and Financial Performance of Insurance Companies in Nepal. *International Research Journal of Management Science*, 4(Query date: 2020-05-31 19:36:07), 99–117. <https://doi.org/10.3126/irjms.v4i0.27888>
- Matt, C., Hess, T., & Benlian, A. (2015). Digital Transformation Strategies. *Business and Information Systems Engineering*, 57(5), 339–343. <https://doi.org/10.1007/s12599-015-0401-5>
- Matthew Idowu, O., & Victoria Iyabo, O. (2017). Olatubi Matthew Idowu, Olatubi Victoria Iyabo. Ensuring a Safe Working Environment in Nigeria: Reality or Myth. *American Journal of Environmental and Resource Economics*, 2(3), 107–115. <https://doi.org/10.11648/j.ajere.20170203.13>
- Meko, M., Lemie, K., & Worku, A. (2019). Determinant of life insurance demand in Ethiopia. *Journal of Economics, Business & Accountancy Ventura*, 21(3), 293. <https://doi.org/10.14414/jebav.v21i3.1474>

- Morogra, E. (2019). Digital disintermediation in the South African short-term insurance industry: The readiness of the intermediary. *Gordon Institute of Business*, (March).
- Mutsonziwa, K., & Maposa, O. K. (2016). Mobile Money - A Catalyst for Financial Inclusion in Developing Economies: A Case Study of Zimbabwe using FinScope Survey Data. *GIS Business*, 12(4), 45–56. <https://doi.org/10.26643/gis.v12i4.3431>
- Myerson, D. (2019). The next global disruptive innovation: Can mobile money make the journey upmarket to disrupt the financial services industry? *Northwestern Journal of International Law and Business*, 39(3), 309–332.
- Narwal, R. (2013). INDIA'S RURAL FINANCIAL SYSTEM & FINANCIAL INCLUSION. *Journal of Global Research & Analysis*, 2(1), 179–189. Retrieved from <http://geetajgra.com/archives/June-2013-Issue.pdf#page=185>
- Nell, P. C., Foss, N. J., Klein, P. G., & Schmitt, J. (2020). *Avoiding Digitalization Traps: Tools for Top Managers*. 1–17.
- Niraula, P., & Kautish, S. (2019). *Study of The Digital Transformation Adoption in The Insurance Sector of Nepal*. 1(1), 43–60. <https://doi.org/10.13140/RG.2.2.25107.43040>
- Nowotny, K., Bailey, Z., Omori, M., & Brinkley-Rubinstein, L. (2020). COVID-19 Exposes Need for Progressive Criminal Justice Reform. *American Journal of Public Health*, 110(7), 967–968. <https://doi.org/10.2105/AJPH.2020.305707>
- Nqobo-Badi, E. N., & Sookdeo, B. (2018). Improving Customer Relationship Management Practices at a Financial Services Provider in South Africa. *International Journal of Business and Social Science*, 9(3). <https://doi.org/10.30845/ijbss.v9n3p11>
- OECD. (2017). Technology and Innovation in the insurance Sector 2017. *Shiyen Shengwu Xuebao*, 1–41.
- OECD. (2018). Digitalisation and finance. *Financial Markets, Insurance and Private Pensions*.
- Otoo, F. N. K., & Mishra, M. (2018). Influence of Human Resource Development (HRD) Practices on Organizational Effectiveness: The Role of Employee Competencies. *International Journal of Management Studies*, V(2(6)), 110. [https://doi.org/10.18843/ijms/v5i2\(6\)/13](https://doi.org/10.18843/ijms/v5i2(6)/13)
- Pettman, B. O. (1979). Women in Work~. *Employee Relations*, 1(1), 19–23. <https://doi.org/10.1108/eb054924>
- Pradhan, R. P., Arvin, M. B., Hall, J. H., & Norman, N. R. (2017). Insurance market development and macroeconomic interactions in twenty-six countries. *Journal of Economic Development*, 42(4), 23–57.

- Ransbotham, S., Fichman, R. G., Gopal, R., & Gupta, A. (2016). Special section introduction: Ubiquitous IT and digital vulnerabilities. *Information Systems Research*, 27(4), 834–847. <https://doi.org/10.1287/isre.2016.0683>
- Salin, A. S. A. P., Ab Manan, S. K., Kamaluddin, N., & Nawawi, A. (2017). The role of Islamic ethics to prevent corporate fraud. *International Journal of Business and Society*, 18(S1), 113–128.
- Saunders, M., Lewis, P., & Thornhill, A. (2016). *Understanding research philosophy and approaches to theory development*. In *Research Methods for Business Students* (7th ed.).
- Saunders, M., & Lewis, P. (2012). *DOING RESEARCH MANAGEMENT IN BUSINESS & An Essential Guide to Planning Your Project*.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). Understanding research philosophy and approaches to theory development. In *Research Methods for Business Students* (8th ed.).
- Sawadogo, R., Guerineau, S., & Ouedraogo, I. M. (2018). Life insurance development and economic growth: Evidence from developing countries. *Journal of Economic Development*, 43(2), 1–28.
- Sheriff, M. K. (2018). *Big Data Revolution: Is It a Business Disruption?* 79–91. <https://doi.org/10.1007/978-3-319-58589-5>
- Sifolo, P. P. S., Rugimbana, R., & Hoque, M. (2017). Deconstructing the role of tourism stakeholder engagement in the Northern Cape Province. *African Journal of Hospitality, Tourism and Leisure*, 6(3).
- Sinclair, N. (2018). *Competitive advantage and partnerships: business model innovation within multi-sided platform firms*. (November). Retrieved from <https://repository.up.ac.za/handle/2263/64526>
- Skyar, A., Kowalkowski, C., Tronvoll, B., & Sörhammar, D. (2019). Organizing for digital servitization: A service ecosystem perspective. *Journal of Business Research*, 104(February), 450–460. <https://doi.org/10.1016/j.jbusres.2019.02.012>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104(March), 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Soutter, L., Ferguson, K., & Neubert, M. (2019). Digital Payments: Impact Factors and Mass Adoption in Sub-Saharan Africa. *Technology Innovation Management Review*, 7(10), 41–55. <https://doi.org/10.22215/timreview/1254>
- Statistics SA. (2020). Quarterly Labour Force Survey. *Quarterly Labour Force Survey*,

(July), 1–70.

- Sutherland, E. (2017). Governance of Cybersecurity – The Case of South Africa. *The African Journal of Information and Communication*, (20), 83–112. <https://doi.org/10.23962/10539/23574>
- Timothy, M., Theodore, F., & Allison, S. (2015). Customer Data: Designing for Transparency and Trust. *Harvard Business Review*, (May 2015), 1–17. Retrieved from https://s3.amazonaws.com/academia.edu.documents/49352349/CUSTOMER_DATA-DESIGNING_FOR_TRANSPARENCY_AND_TRUST-R1505H-PDF-ENG.desbloqueado.pdf?response-content-disposition=inline%3Bfilename%3DCustomer_Data_Designing_for_Transparency.pdf&X-Amz-Algorithm=AWS4
- Town, Y. N. (2018). Emerging Trends in Business. In *Emerging Trends in Business*. <https://doi.org/10.3726/b13224>
- Tumbas, S., Berente, N., & vom Brocke, J. (2017). Three types of chief digital officers and the reasons organizations adopt the role. *MIS Quarterly Executive*, 16(2), 121–134. <https://doi.org/10.4324/9780429286797-14>
- United Nations. (2020). The Impact of COVID-19 on Women. *United Nations*, (April), 21.
- Ustundag, A., & Cevikcan, E. (2018). Industry 4.0: Managing The Digital Transformation. In *Industrial Engineering in the Industry 4.0 Era*. <https://doi.org/10.1007/978-3-319-71225-3>
- Van Zijl, W., Wöstmann, C., & Maroun, W. (2017). Strategy disclosures by listed financial services companies: Signalling theory, legitimacy theory and South African integrated reporting practices. *South African Journal of Business Management*, 48(3), 73–85. <https://doi.org/10.4102/sajbm.v48i3.37>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N., & Haenlein, M. (2019). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Visnjic, I., Wiengarten, F., & Neely, A. (2016). Only the Brave: Product Innovation, Service Business Model Innovation, and Their Impact on Performance. *Journal of Product Innovation Management*, 33(1), 36–52. <https://doi.org/10.1111/jpim.12254>
- Ward, D., & Zurbrugg, R. (2019). Does Insurance Promote Economic Growth? Evidence from OECD Countries. *The Journal of Risk and Insurance*, 67(4), 489. <https://doi.org/10.2307/253847>

- Weiers, R. M., Gray, J. B., & Peters, L. H. C. N.-H. . W. 2011. (2011). *Introduction to business statistics* (7th ed). Australia ; Mason, OH: South-Western Cengage Learning.
- Ying, W., Linsen, Y., & Wenjie, P. (2017). Life Insurance Contribution , Insurance Development and Economic Growth in China. *International Journal of Business and Economic Development*, 5(2), 45–58.
- Zamuee, M. R. (2015). Efficiency of Pension Funds in Namibia. *American Journal of Marketing Research*, 1(3), 106–112.
- Zeike, S., Choi, K. E., Lindert, L., & Pfaff, H. (2019). Managers' well-being in the digital era: Is it associated with perceived choice overload and pressure from digitalization? an exploratory study. *International Journal of Environmental Research and Public Health*, 16(10). <https://doi.org/10.3390/ijerph16101746>
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2010). *Applied Research Textbook*. 668.

9. APPENDIX A: QUESTIONNAIRE / SURVEY

Survey Link: <https://forms.office.com/Pages/ResponsePage.aspx?id=pv-4ZsCBpk6T-wbzKXn9o8WH-RY9VRLrql72Lvtdm1UNDUxUktUNFMwSk9CNUQ0Nk0wNIhUVEQzQi4u>

Digital Transformation Adoption Survey

Dear Participant,

In an effort to better understand the Digital Transformation Adoption in the Life Insurance Sector in South Africa, we would like to understand how companies and employees are impacted by the transformation journey. Your completion of this survey is voluntary, and you may withdraw from the process at any time. Your responses and participation are however valuable to us and we would appreciate your assistance. The collated results of the study are part of ongoing research being undertaken at the University of Pretoria's Gordon Institute of Business Science. While the collated results of the study may be published, your individual responses will be kept anonymous and confidential at all times and the respondent can withdraw at any time without penalty.

The questionnaire has been divided into three sections. Section 1 confirms that you understand the study and will be taking the questionnaire, Section 2 asks for general demographic information and Sections 3 is your company's Digital Transformation Adoption journey questions.

The questionnaire should take approximately 10 – 15 minutes to complete. Thank you for your time and contribution to this research study. Please do not hesitate to address any inquiries about the questionnaire or the research study to:

Rorisang Hlahatsi Craig Penfold
18379193@mygibs.co.za or craig@bloxadvisory.com
+2778 962 0788

Section 1

Consent

1. Do you accept and agree to take the survey?

- Yes
 No

Section 2

General Demographic Information

2. What is your gender?

- Woman
 Man
 Non-binary
 Prefer not to say

3. What is your age?

- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- Age 65 and older

4. Which company do you work for?

- Liberty
- Discovery
- Momentum
-

5. How are you employed at your company?

- Full-time employee
- Part-time employee
- Freelance contractor
-

6. How long have you worked at your company?

- Less than 2 years
- 2 - 5 years
- 6 - 10 years
- 10+ years

7. Which of the following best describes your role?

- C-Level
- Head of Business Unit
-

8. Which of the following best describes your primary functional affiliation?

- General Management
- Finance
- Marketing
- Operations
- Information Technology
-

Section 3

Digital Transformation Adoption Journey

9. Is your company primarily business to business (B2B) or primarily business to consumer (B2C)?

- Primarily B2B
- Primarily B2C
- Equally B2B and B2C

10. In your company what is the level of technological interest?

- Very Low
- Somewhat Low
- Medium
- Somewhat High
- Very High

11. What portion of your company's revenues are generated from an online presence?

- 0 - 25
- 25 - 50
- 50 - 75
- 75 - 100

12. What level would you rate your company's digital transformation progress?

- No Progress
- Little Progress
- Lots of Progress

13. My company is utilising a different mix of employment types (e.g. part-time, contractor, on-demand resources) in response to digital trends.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

14. Digital transformation is a top management priority at my company.

- Strongly Disagree
- Disagree
- Neutral
- Agree

- Strongly agree
15. My company is increasingly pushing decision-making authority down into lower levels of the company in order to better execute in a digital environment.
- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree
16. Our company has a clear and coherent digital strategy.
- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree
17. I am satisfied with my company's current reaction to digital trends.
- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree
18. I am confident in my company's readiness to respond to future digital trends
- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree
19. My company is more innovative compared to our competitors
- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree
20. My company is working or starting to work with advanced collaborative tools instead of email to facilitate better communication.
- Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

21. My company is actively seeking to use new data analytics (e.g. sociometric tools, artificial intelligence) to help employee and leadership performance.

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

22. Funding digital initiatives is a significant challenge that affects my company's digital efforts.

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

23. My company uses social media and collaborative digital technologies to a great extent.

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

24. My company uses cloud computing services to a great extent

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

25. My company uses data and analytics to a great extent

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree
26. Digital technologies have the potential to fundamentally transform the way people in my company work.

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

27. Digital technologies and capabilities are currently very important to my company

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

28. Digital technologies and capabilities will be very important to my company three years from today

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

29. Digital technologies are disrupting my company's industry to great extent.

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

30. My company views digital technologies as an opportunity.

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

31. My company is locating offices in new geographic areas to get better access to digital talent.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

32. My company needs to find new leaders from outside in order for the company to succeed in the digital age.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

33. My company is effectively developing the types of leaders who have the capabilities necessary to lead the company in a digital environment.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

34. I am confident that my company's leadership understanding of relevant digital trends and emerging technologies

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

35. My company provides me or my co-workers with the resources or opportunities to obtain the right skills to take advantage of digital trends.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

36. My company's leadership has sufficient skills and experience to lead our digital strategy.

- Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

37. I know what my company is doing with respect to digital technologies.

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

38. The leadership of my company has a very positive orientation toward change within the organisation.

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

39. The leadership of my company has a very positive orientation toward change within the organisation.

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree

40. Regulations impose a significant challenge to my company's digital efforts.

Strongly Disagree

Disagree

Neutral

Agree

Strongly agree



10. APPENDIX B: ETHICAL CLEARANCE APPROVAL

The screenshot shows an email interface. At the top, there are icons for various email actions. The subject line is "Ethical Clearance Approved" with a right-pointing arrow and an "Inbox x" label. The sender is "MastersResearch2020 <MBAResearch2020@gibssa.mail.onmicrosoft.com>" and the recipient is "to me". The date and time are "Mon, 31 Aug, 12:21".

The email body features a blue header with the "Gordon Institute of Business Science University of Pretoria" logo on the left and the text "Ethical Clearance Approved" on the right. Below the header, the text reads: "Dear Rorisang Hlahatsi, Please be advised that your application for Ethical Clearance has been approved. You are therefore allowed to continue collecting your data. We wish you everything of the best for the rest of the project." A blue link labeled "Ethical Clearance Form" is provided. The email concludes with "Kind Regards".

A blue footer bar contains the text: "This email has been sent from an unmonitored email account. If you have any comments or concerns, please contact the GIBS Research Admin team."

11. APPENDIX C: CERTIFICATION OF ADDITIONAL SUPPORT

CERTIFICATION OF ADDITIONAL SUPPORT

(Additional support retained or not - to be completed by all students)

Please note that failure to comply and report on this honestly will result in disciplinary action

I hereby certify that (please indicate which statement applies):

• I DID NOT RECEIVE any additional/outside assistance (i.e. statistical, transcriptional, and/or editorial services) on my research report:

• I RECEIVED additional/outside assistance (i.e. statistical, transcriptional, and/or editorial services) on my research report Statistical

If any additional services were retained— please indicate below which:

Statistician

Transcriber

Editor

Other (please specify:.....)

Please provide the name(s) and contact details of all retained:

NAME: Edzai Zvonwo


EMAIL ADDRESS: edzaizvobwo@gmail.com

CONTACT NUMBER: +27 78 385 8937

TYPE OF SERVICE: Statistician

I hereby declare that all statistical write-ups and thematic interpretations of the results for my study were completed by myself without outside assistance

NAME OF STUDENT:Rorisang Hlahatsi.....

SIGNATURE: 

STUDENT NUMBER:18379193.....

STUDENT EMAIL ADDRESS:18379193@mygibs.co.za.....

12. APPENDIX D: PERMISSION TO REPLICATE THE STUDY

PERMISSION TO REPLICATE THE STUDY

Please note that failure to comply and report on this honestly will result in disciplinary action

I hereby certify that :

I received permission to replicate and use the survey of the Study of The Digital Transformation Adoption in The Insurance Sector of Nepal (Niraula & Kautish, 2019).

Please provide the Authors name(s) and contact details of all retained:

FIRST AUTHOR: Pramod Niraula

EMAIL ADDRESS: 1709811003@ibef.edu.np

AND


SECOND AUTHOR: Dr. Sandeep Kautish.....

EMAIL ADDRESS: dr.skautish@gmail.com and sandeepkautish@yahoo.com

CONTACT NUMBER: +91 97795 72601

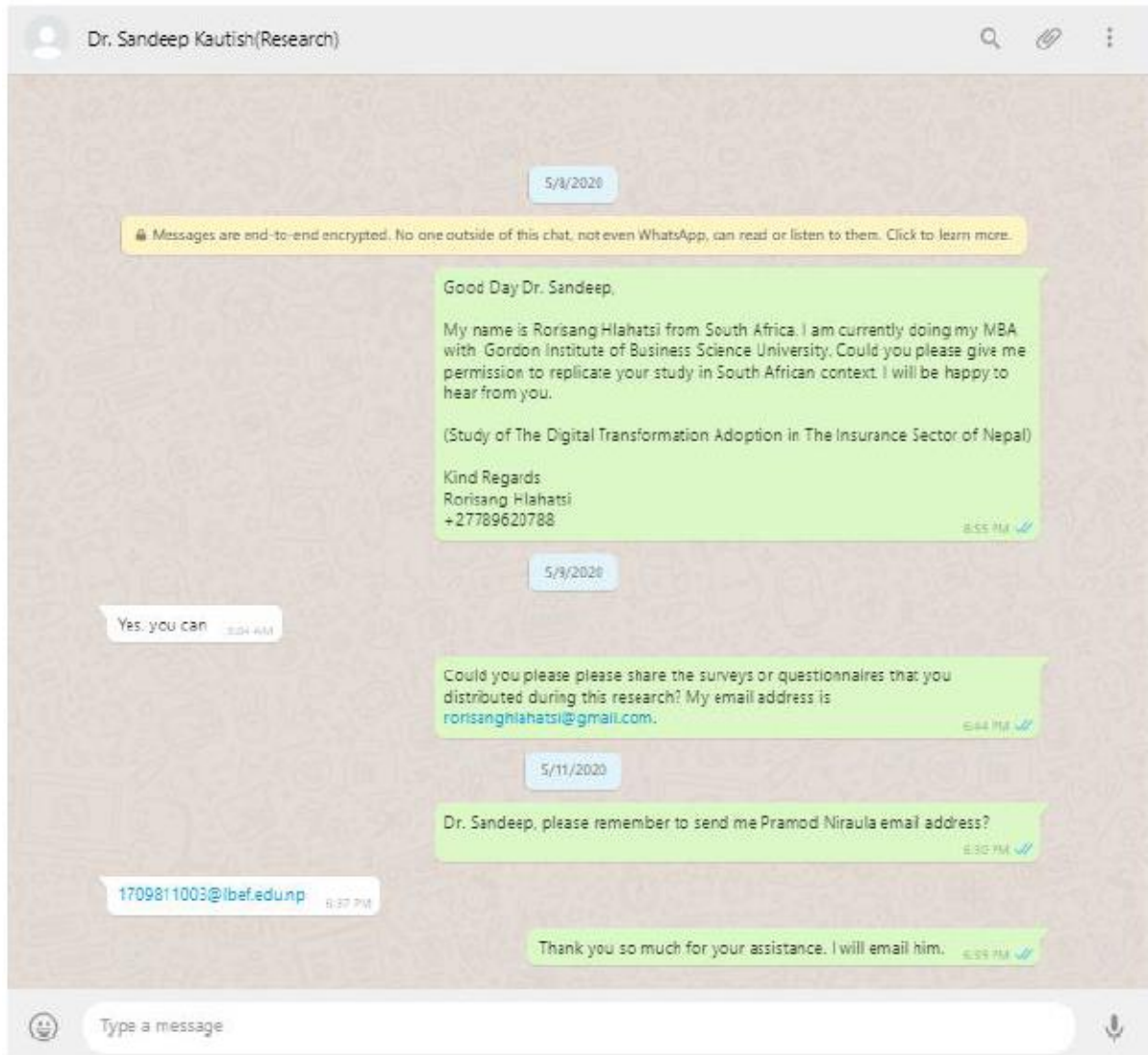
I hereby declare that I received permission to replicate and use the survey of the Study of The Digital Transformation Adoption in The Insurance Sector of Nepal (Niraula & Kautish, 2019)., and my focus is in a South African context.

NAME OF STUDENT:Rorisang Hlahatsi.....

SIGNATURE: 

STUDENT NUMBER:18379193.....

STUDENT EMAIL ADDRESS:18379193@mygibs.co.za.....



From: Hlahatsi, Rorisang
Sent: Monday, 11 May 2020 18:57
To: 1709811003@lbf.edu.np
Cc: dr.skautish@gmail.com; sandeepkautish@yahoo.com
Subject: Survey/Questionnaire Request - Study of The Digital Transformation Adoption in The Insurance Sector of Nepal

Good Day Pramod,

My name is Rorisang Hlahatsi from South Africa.

I got your email address from Dr. Sandeep Kautish. I am currently doing my MBA at Gordon Institute of Business Science University. And I would like to replicate your study in South Africa. Could you please share the two surveys/questionnaires you distributed during your research?

The Paper Titled: Study of The Digital Transformation Adoption in The Insurance Sector of Nepal

I will be happy to hear from you.

Rorisang Hlahatsi

Head of Digital - Africa Regions

t +2711 408 3088

c +2778 962 0788


e rorisang.hlahatsi@liberty.co.za

w liberty.co.za

a Liberty Centre, 1 Ameshoff Street, Braamfontein, Johannesburg, South Africa, 2001

13. APPENDIX E: COPYRIGHT FORM

22.1 COPYRIGHT DECLARATION FORM

Student details			
Surname:	Hlahatsi	Initials:	R
Student number:	*B379193		
Email:	18379193@mygibs.co.za		
Phone:	0769620788		
Qualification details			
Degree:	MBA	Year completed:	
Title of research:	GIBS		
Supervisor:	Craig Penfold		
Supervisor email:	craig@bloxadvisory.com		
Access			
<input type="checkbox"/> A. My research is not confidential and may be made available in the GIBS Information Centre and on UPSpace.			
I give permission to display my email address on the UPSpace website			
Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
<input type="checkbox"/> B. My research is confidential and may NOT be made available in the GIBS Information Centre nor on UPSpace.			
Please indicate embargo period requested			
Two years	<input type="checkbox"/>	Please attach a letter of motivation to substantiate your request. Without a letter embargo will not be granted.	
Permanent	<input checked="" type="checkbox"/>	Permission from the Vice-Principal: Research and Postgraduate Studies at UP is required for permanent embargo. Please attach a copy permission letter. Without a letter permanent embargo will not be granted.	
Copyright declaration			
I hereby declare that I have not used unethical research practices nor gained material dishonesty in this electronic version of my research submitted. Where appropriate, written permission statement(s) were obtained from the owner(s) of third-party copyrighted matter included in my research, allowing distribution as specified below.			
I hereby assign, transfer and make over to the University of Pretoria my rights of copyright in the submitted work to the extent that it has not already been affected in terms of the contract I entered into at registration. I understand that all rights with regard to the intellectual property of my research, vest in the University who has the right to reproduce, distribute and/or publish the work in any manner it may deem fit.			
Signature:		Date:	29 November 2020
Supervisor signature:		Date:	30/11/2020