An explorative study into the effect of Information Technology in streamlining the access to development finance, for Small, Medium and Micro Enterprises (SMMEs) in South Africa

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ABSTRACT

This study was concerned with exploring and describing a solution to optimise access to development finance for SMMEs in South Africa. SMMEs and entrepreneurs have long been identified as key drivers of economic development, job creation, and poverty elevation. In response to this and, in an effort to support SMMEs, the South African Government has established a number of development finance institutions with a specific mandate to support SMMEs by providing them with both financial and non-financial support. However, this much-needed support is constrained by several independent factors. The objective of the study was to identify information technologies that are currently available in the financial sector and explore how they can be integrated into development finance institutions (DFIs) and SMMEs to streamline their access to finance. The research started with a structured literature review, followed by a qualitative case study research design, and utilised ten (10) embedded units of analysis. These respondents consisted of industry experts in the field of SMME finance, senior employees within the sampled developmental finance institutions, as well as experts in the financial technology sector.

The findings of the study, through the views of the sampled industry experts and relevant literature reviewed, revealed that it can be collectively summarised that there is a need for information technology such as Fintech in the development finance and SMME sector in South Africa. It is evident that a need exists to streamline the current application process to access development finance for SMMEs looking for finance. There is a significant misalignment between the current demand for development finance by SMMEs and the magnitude of finance supplied by DFIs to SMMEs looking for finance. The study then concluded with practical recommendations for the streamlining of development finance by using relevant Fin tech solutions.

Key words: South Africa, SMMEs, DFIs, access to finance, Fintech, investment, job creation, poverty alleviation, economic growth.

LIST OF ACRONYMS AND ABBREVIATIONS

ABSA – Amalgamated Banks of South Africa
AI – Artificial Intelligence
B-BBEE – Broad-Based Black Economic Empowerment
BEE – Black Economic Empowerment
CAPEX – Capital Expenditure
CPPP – Community Public Private Partnership
CSD – Centralised Supplier Database
COVID-19 – Coronavirus 19
DBSA – Development Bank of South Africa
DD – Due Diligence
DFI – Development Finance Institutions
DOJ – Department of Justice
DSBD – Department of Small Business Development
ECDC – Eastern Cape Development Corporation
Fintech – Finance Technology
FSB – Financial Stability Board
FNB – First National Bank
ECGI – European Corporate Governance Institute
GDP – Gross domestic Products
HMPR – Hesitant Multiplicative Preference Relation
IDC – Industrial Development Corporation
IPAP – Industrial Policy Action Plans
IMF – International Monetary Fund
IT – Information Technology
ITC – TransUnion
JSE – Johannesburg Stock Exchange
M-Pesa – Mobile Payment Technology
MAFH- Mauritius Africa FinTech Hub
MOMO – MTN Mobile Money

MSME – Micro Small and Medium-sized Enterprises

NDP – National Development Plan

NEF – National Empowerment Fund

NFC – near-field communication

NMU – Nelson Mandela University

NGP – New Growth Path

NAMAC – National Manufacturing Advisory Centre

OECD – Organisation for Economic Co-operation and Development

SAPS – South African Police Service

SARS – South African Revenue Service

SEDA – Small Enterprise Development Agency

SEFA – Small Enterprise Finance Agency

SAQI – South African Quality Institute

STP – SEDA Technology Programme

SME – Small and Medium-Sized Enterprise

SMME – Small, Medium, and Micro Enterprises

SCS – Social Credit System

PF's – Projects Funds

P2P- peer-to-peer

PRP – Primary Responsible Person

TWIB – Technology for Women in Business

TTF – Tourism Transformation Fund

WEF – Women Empowerment Fund

US.SBA – United States Small Business Administration

USA – United States of America

UK – United Kingdom

LIST OF FIGURES

Figure 1: Application for Covid-19 guarantee scheme current performance……………11
Figure 1.6 1: Conceptual Research Framework ……………………………………………..…..15
Figure 1.7 1 Independent Variables Dependent Variable……………………………..………19

LIST OF TABLES

Table 1.5. 1: Secondary Research Questions ……………………………………………12

Table 1.6. 2: Secondary Research Objectives ……………………………………………...13

Table 3.2.6. Strategies to ensure trustworthiness……………………………………………49

Table 4.6 1: Linking data to the preposition………………………………………………..89

TABLE OF CONTENTS

TURNITIN REPORT i

ACKNOWLEDGEMENTS iv

ABSTRACT v

LIST OF ACRONYMS AND ABBREVIATIONS vi

LIST OF FIGURES viii

LIST OF TABLES ix

TABLE OF CONTENTS x

CHAPTER 1: INTRODUCTION TO THE STUDY 1

1.1 INTRODUCTION 1

1.2 PROBLEM STATEMENT 3

1.3 RESEARCH PROBLEM 6

1.3.1 Start-up capital 7

1.3.2 Working capital 8

1.3.3 Funding gap 8

1.3.4 SMMEs struggle to access finance 9

1.3.5 Fintech solutions 11

1.4 PRIMARY RESEARCH QUESTION 11

1.5 SECONDARY RESEARCH QUESTIONS 12

1.6 RESEARCH OBJECTIVES 13

1.6.1 Primary research objective 13

1.6.2 Secondary research objectives 13

1.6.3 Conceptual research framework 15

1.7 METHODOLOGY OF THE STUDY 17

1.7.1 Research paradigm 17

1.7.2 Research approach 17

1.7.3 Dependent and independent variables 18

1.8 RESEARCH ETHICS 19

1.9 OUTLINE OF THE STUDY 20

1.10 CHAPTER SUMMARY 21

CHAPTER 2: A LITERATURE REVIEW OF THE DEVELOPMENT OF FINANCE INSTITUTIONS AND THE FINANCIAL TECHNOLOGY SECTOR 22

2.1 INTRODUCTION 22

2.2 THE IMPORTANCE OF SMMEs TO THE SOUTH AFRICAN ECONOMY 23

2.3 DEFINING DFIs AND THEIR IMPORTANCE TO THE SOUTH AFRICAN ECONOMY 24

2.3.1 The Small Enterprise Development Agency (SEDA) 26

2.3.2 The Small Enterprise Financial Agency (SEFA) 27

2.3.3 The National Empowerment Fund (NEF) 28

2.3.4 Industrial Development Corporation (IDC) 31

2.4 Financial Technology (Fintech) 32

2.5 Challenges Experienced in Accessing Development Finance 35

2.6 How Can Fintech Optimise Access to Development Finance? 36

2.6.1 Alternative credit scoring 38

2.6.2 On investment 40

2.6.3 Lending 40

2.6.4 Payment 42

2.7 CHAPTER SUMMARY 43

CHAPTER 3 RESEARCH DESIGN AND METHODOLOGY 45

3.1 Introduction 45

3.2 Exploratory Research Case Study Approach 45

3.2.1 Sampling design 47

3.2.2 Population 47

3.2.3 Sample 47

3.2.4 The sampling frame. 48

3.2.5 Data collection 48

3.2.6 MEASURES TO ENSURE TRUSTWORTHINESS OF THE STUDY 50

3.3. DATA ANALYSIS 52

3.4. REPORTING 55

3.5. CHAPTER SUMMARY 56

CHAPTER 4 RESULTS AND ANALYSIS OF THE STUDY 57

4.1 DESCRIPTIVE ANALYSIS OF EMBEDDED UNITS 57

4.2 DESCRIPTIVE ANALYSIS OF EMBEDDED UNITS 57

4.3 QUALITATIVE FINDINGS OF EMBEDDED UNITS 59

4.4 SUMMARY FROM RESEARCH QUESTIONS ANSWERED 88

4.5 PATTERN MATCHING 89

4.6 LINKING THE DATA TO THE PROPOSITION 89

4.7 SUMMARY FROM PATTERN MATCHING 90

4.8 CODING 90

4.8.1 Introduction to coding 90

4.8.2 Coded work 91

4.8.3 Themes..92

4.9 CONCLUSION 97

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS...98

5.1 INTRODUCTION 98

5.2 SUMMARY..98

5.3 CONCLUSION BASED ON THE RESEARCH METHODOLOGY..100

5.4 INTERPRETATION OF AND CONCLUSIONS ABOUT THE RESEARCH PROBLEM AND RESEARCH QUESTIONS...101

5.4.1 Small, medium, and micro enterprises (SMMEs) 102

5.4.2 Development Finance Institutions (DFIs)...102

5.4.3 Financial technology (Fintech) 103

5.4.4 Access to finance 103

5.4.5 Alternative credit scoring 103

5.4.6 Investments...104

5.4.7 Peer-to-peer (P2P) lending 104

5.4.8 Alternative payment services 104

5.5 THE DEPENDENT VARIABLE: THE PERCEIVED SUCCESS OF INFORMATION TECHNOLOGY BEING USED TO STREAMLINE ACCESS TO DEVELOPMENT FINANCE TO SMMES IN SOUTH AFRICA...............105

5.6 SUGGESTIONS FOR FUTURE RESEARCH AND CONCLUSIONS 106

REFERENCES 107

ANNEXURE B: INTERVIEW SCHEDULE..120

ANNEXURE C: TRANSCRIPTIONS 122

CHAPTER 1: INTRODUCTION TO THE STUDY

1.1 INTRODUCTION

South Africa's Gross Domestic Products (GDP) fell by 1.4% in the fourth quarter of 2019. This decrease in the fourth quarter followed a decrease of 0.8% in the third quarter of the same year (Statistics South Africa 2021). According to Statistics South Africa (2021) in their statistical release for the fourth quarter of 2019, the negative growth was primarily caused by a 14% decrease in GDP in the transport industry, storage, and communication industry, catering and accommodation industry, agricultural sector, and the construction industry. While these sectors all have large industry players, they also have a significant number of SMMEs in these markets. They include small transport operators or logistical companies, caterers, and owners of restaurants and eateries, small and emerging farmers, as well as small to medium construction companies. These sectors depend on SMMEs to drive their sectors, create and maintain jobs, broaden the tax bracket, and contribute positively to the national GDP (Statistics South Africa 2021). The current economic performance of the South African economy shows the importance of such SMMEs to the economy. There is consensus among policy makers, economists, and business experts that SMMEs are drivers of economic growth (Mahembe, 2011). Abor & Quartey (2010) believe that a healthy SMME sector contributes positively to the economy by creating employment, generating higher production volumes, increasing exports, and introducing innovation and entrepreneurship skills (Turner, 2008). Fakoti and Asah (2011) support this and add that the value of the small business sector is recognised in economies worldwide, irrespective of the economy's developmental stage. The above-mentioned authors also identified that one of the major functions of SMMEs is to contribute to the economic activities of a country through the provision of services and goods to general consumers and other businesses. Earlier research (Olawale & Garwe, 2010) maintained that these SMMEs mainly employ people in the low-income market and, by doing so, play a pivotal role in the reduction of poverty and government grant dependency. These sentiments were supported by Bushe (2019) who said the importance of SMMEs, particularly in creating employment, should not be overlooked.

The researcher (2019) further states that SMME's activities contributed significantly to economic growth in developed countries, such as Japan, Korea, and Taiwan. Nkomzwayo (2016) attests in unison that entrepreneurship is the key driver of job creation across all advanced markets and particularly in developing economies.

In a developing economy like South Africa, unemployment continues to hinder economic growth due to the increasing dependence on state grants and services by the unemployed and impoverished citizens, thus, reducing the percentage of GDP that can be ploughed back to stimulate the economy. In August 2012, the Minister of the Presidency: National Planning Commission, Trevor Manual, launched the National Development Plan (NDP). The NDP seeks to reduce unemployment, reduce income inequality, and stimulate economic growth. According to this commission, if unemployment should fall to 14% by 2020 and 6% by 2030, South Africa will require an average annual GDP growth of 5.4% (Kaseeram, Irrshad & Mahadea 2018). Kaseeram & Mahadea (2020) further claimed that most of the targeted employment growth and economic growth should come from SMMEs. The South African Government is aiming to create 11 million new employment opportunities, 90%of which will be created by SMMEs (SEDA 2016). The NDP further emphasises the importance of SMMEs as one of the key drivers of economic growth and the reduction of unemployment and poverty.

In the speech by Trevor Manual, during the 2012 launch of the NDP, the South African Government identified DFIs as the vehicle and catalyst to support SMMEs and entrepreneurs in order to stimulate economic growth by creating jobs and meeting the NDP's 2030 targets. DFIs have a clear role to play in attaining these with their primary role being to fulfil developmental objectives by addressing market inequalities for finance and investment capital; and assist markets to stimulate growth, thus contributing positively to the greater public good (Khadiagala, 2015 a).

However, despite the above roles and mandates, many South African citizens are still under the impression that DFIs are not adequately fulfilling their intended purpose. There have been ongoing debates on their efficiency and effectiveness in the South African context. Some experts believe the DFIs are trapped in the past and, therefore, using outdated funding techniques and approaches, which cause a miss alignment in the demand and supply of the much-needed development finance to the SMME market (Osano & Languitone, 2016).

As such, the South African banking sector has wholly transformed in the past decade, by using information technology called financial technology (Fintech) to provide quick, easy, and secure access to finance to their customers as well as improve customer experience. These new technologies have completely revolutionised the way consumers bank, as banking becomes increasingly digital. Consequently, this research explores how current and future financial technologies can be used to streamline SMMEs' access to development finance in South Africa.

1.2 PROBLEM STATEMENT

The purpose of the study is to explore and describe methods to optimise access to development finance for SMMEs requiring this finance. The accessibility of finance by SMMEs has captured the attention of academics and policy makers worldwide for decades. Discussions about this problem has taken place in the form of seminars and several debates with a view to improve the finance line for SMMEs and to formally integrate their contributions to the economy (Osano & Languitone, 2016). Extensive global research has revealed that finance is a critical resource in determining the growth and survival of SMMEs (Jones, and Slack 2009). Osano and Languitone (2016) support this statement as their research has found that access to finance allows small businesses to make crucial investments in their businesses; thereby enabling SMMEs to contribute to the development of the economy and assist in reducing unemployment. The above-mentioned authors also add that SMMEs are not likely to survive beyond their first year without adequate access to finance. The SMMEs stand a small chance of competing with companies in international markets that have entered local markets. Access to finance is the most significant barrier for entrepreneurs wishing to start a business or expand an existing one (Mori, 2012).

Botha and Mokgolo (2019) on behalf of the International Finance Corporation, a division of the Word Bank Organisation, conducted a study, titled “the unseen sector, a report on the MSME opportunity in South Africa”. The study supports the general consensus that SMMEs are a great tool to address poverty, create employment, and drive economy growth. It also supports the idea that for SMMEs to adequately play their intended role, access to finance is critical (Botha and Mokgolo, 2019).

The South African Government has established institutions to support SMMEs and has given the institutions adequate resources in both financial and infrastructural divisions to fulfil their mandates. These DFIs seek to address the evident misalignment between low-income earners and conventional finance, which is provided by the big four (4) commercial banks, namely Standard Bank, Amalgamated Banks of South Africa (ABSA), First National Bank (FNB), and Nedbank.

Accessing finance from established commercial banks proves difficult due to high capital and collateral requirements. This could represent an unattainable qualifying criterion for the majority of South African SMMEs. The purpose of DFIs is to bridge the gap and provide finance to stimulate economic activities mainly in the private sector. The South African Government, through an act of parliament, has established numerous DFIs for this purpose. These have a national footprint with regional offices in every province and include the Small Enterprise Finance Agency (SEFA) and the Small Enterprise Development Agency (SEDA), which fall under the executive authority of the Department of Small Business Development (DSBD) under the current leadership of Minister Stella Ndabeni-Abrahams. The Development Bank of South Africa (DBSA), the Industrial Development Corporation (IDC), and the National Empowerment Fund (NEF), are under the executive authority of the Department of Trade and Industry under the leadership of Minister Ebrahim Patel. These organisations were established with the primary purpose of supporting business growth and development in South Africa. Nevertheless, there is limited access to finance for SMMEs, as a result of long processes, information asymmetries, and outdated funding methods. This study seeks to explore how to address the irregularities and optimise access to development finance by using financial technologies and future technologies forthcoming in the fourth industrial revolution. The study seeks to explore the following: firstly, the possibilities of an integrated system to link all relevant government institutions such as the South African Revenue Services (SARS), Department of Home Affairs, commercial banks, and all state information technology agencies, and, secondly, how to utilise big data, block chain technology, and artificial intelligence (AI) to streamline the application process, due diligence, disbursement of funds, and overall access to finance within the South African SMME market.

As previously established, SMMEs are critical drivers of economic development in South Africa and the world. Research conducted by SEDA (2016) reveals that these types of enterprises employ nearly 50% of developing countries' workforce. In addition, research reveals that SMMEs also represent a large portion of active businesses in developing countries, including South Africa. In specific reference to the latter-named country, SMMEs account for approximately 91% of its formal business entities, contributing to between 51% and 57% of the GDP, and providing almost 60% of its national employment (Kongolo, 2010). The support and development of SMMEs encourage national income and help to reduce inequality and promote social cohesion. Therefore, while SMMEs play an important role in the development of a country (Kongolo, 2010), they require financial assistance to support their growth and this is where DFIs should come in.

According to Adendorff and Collier (2015), although the traditional financial services sector is rapidly changing, consumers' demand for access to finance is unlikely to change in the medium to long-term and this change is not particularly relevant to service offerings. However, moving into the fourth industrial revolution and the rapid digitalisation of banking and finance, consumers are demanding new ways to access finance and banking that are fast, agile, and innovative. This is certainly the case for DFIs both globally and in South Africa. While the function of DFIs has not changed and is not envisaged to change soon or in the long-term, the way in which SMMEs, entrepreneurs, and the public at large access these services needs to evolve in order to accommodate the rapidly changing environment in which they operate (Khadiagala, 2015a).

Research by Ayyagari and Maksimovic (2016) identifies a number of factors that contribute negatively to the ability of SMMEs to access finance, which include:
Distortions of financial sectors are caused by the dominance of a few big players such as the previously mentioned big four (4) commercial banks in South Africa and their stringent lending criteria. Information asymmetry is the access to business information to both consumers and lenders (Cusmano, 2015).

Earlier research by Kongolo (2010) further adds that SMMEs' inability to access formal sector finance is a combination of both demand and supply side factors. In terms of demand, several researchers (Claessens & Kose, 2013) and (Ramlee & Berma, 2013) believe that SMMEs' major challenges (as pertaining to access to finance in the traditional financial sector) can be as follows:

- the availability of credit as well as the quantity of credit available;
- the cost of credit, regarding charged interest rates;
- the reliability of credit, is credit available timeously when needed?
- convenience, can credit be accessed from anywhere?
- can credit be accessed repeatedly?
- is the credit flexible enough to meet various customers' needs?

1.3 RESEARCH PROBLEM

The South African Government, through the National Small Business Amendment Act (Act 29 of 2004), created the DSBD, after which it created SEDA, as well as SEFA. This demonstrates its commitment to placing SMMEs at the centre of economic growth and job creation. These particular agencies seek to provide both non-financial and financial support to SMMEs. SEFA provides SMMEs access to finance that is affordable (in the form of low interest rates), reliable (as the money is readily available), and flexible (as they fund most formal business enterprises) (SEFA, 2020).

However, the bureaucracy in the application process hinders SMMEs' financial access. In terms of supply, DFIs require a great deal of information from SMMEs to assess their finance application, while, on the demand side, SMMEs require a great deal of information about the DFIs in order to assess their product offerings and assess which is best suited to them.

SMMEs are crucial to sustainable economic growth and the government's efforts to create employment and a reduction in poverty. By expanding SMMEs' access to finance, entrepreneurs can grow their businesses from informal businesses to start-ups to medium-sized businesses. SMMEs will be able to expand their activities within the economy if their access to financial support is increased; this will ultimately result in improved creation of employment. According to (Botha and Mokgolo 2019), the financial requirement of SMMEs vary, depending on size, as well as their current growth stage. Start-up capital is required at the inception of a business venture or formalisation of a previously informal trader. Working capital and long-term capital are typically required by established or formal SMMEs to ensure their sustainability or expansion (Botha and Mokgolo, 2019).

According to the Fin scope report (2020) authored by Mutsonziwa, Motsomi, and Khumalo (2020), SMME finance within the South African context, can be accessed by a range of stakeholders. These stakeholders include, but are not limited to, friends and family, informal micro-lenders, commercial banks, and DFIs. Mutsonziwa, Motsomi and Khumalo (2020) further indicate that access to finance in South Africa is relatively low at approximately 26 % in comparison to 36 %, 40%, and 63% in Turkey, Brazil, and China respectively.

1.3.1 Start-up capital

Recent research by Mutsoziwe, Matsomi and Khumalo (2020) reveals that start-up-phase SMMEs struggle to access finance from traditional banks. In general, this is due to their lack of tangible, fixed, or movable assets, as well as an insufficient transactional history that tracks their average monthly revenue. This results in these organisations having to rely on personal savings and funding from friends and family. The authors also state that access to personal savings and funds from friends and family is not readily available or sustainable for start-up SMMEs. The research further suggests that there is a start-up capital financing gap in South Africa, which constitutes a significant barrier to entrepreneurship. DFIs in South Africa, such as SEFA, have attempted to bridge this gap through funding programmes aimed at start-up SMMEs. The Township and Rural Empowerment Programmes (TREP) supports informal micro and small enterprises and cooperatives in rural and township economies and provides blended finance and business development support to various sectors with a view to promoting their participation in the mainstream economy. (SEFA, 2021)

1.3.2 Working capital

According to Botha and Mokgolo (2019), once a business is established, carrying out everyday operations often requires access to short-term loans in the form of working capital. Working capital loans are critical to increase a business's cash flow, which is often utilised for making short-term immediate investments, typically for inventory, machinery, equipment, and the paying of employees and suppliers. SMMEs can acquire finance from a variety of informal sources, such as friends, family, employers, stokvels, and informal micro-lenders. Other formal sources include banks, DFIs, and other micro-lenders, donors, and government agencies, retail credit, and corporates with supplier development programmes (Botha and Mokgolo (2019). Traditionally, banks are considered the main source of short-term funding for SMMEs as verified by the 2010 Fin Scope Small Business Survey.

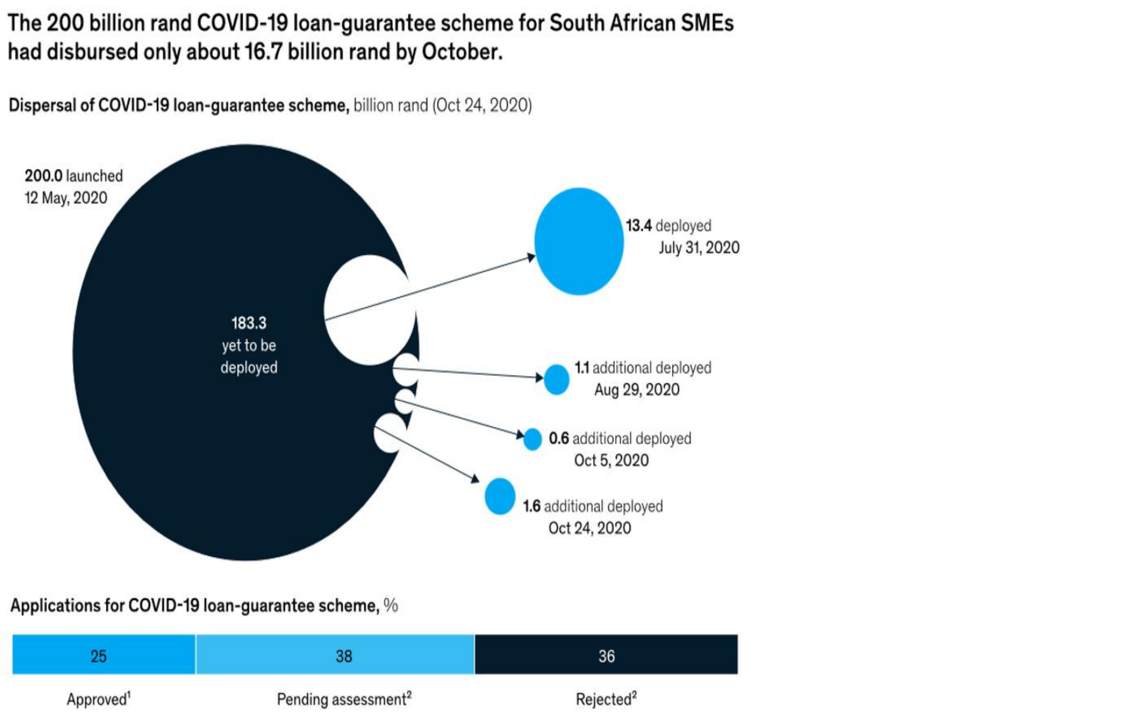
1.3.3 Funding gap

Botha and Mokgolo (2019) believe that SMMEs' low levels of access to credit suggest a finance gap between the supply and demand for SMME-related finance in South Africa. These authors further state that this identified gap is typically larger in the emerging markets of developing economies, such as South Africa, where the banking sector is less developed. While this funding gap is usually expressed in the form of loan value terms, it can also be seen in the number of SMMEs that require finance but are unable to access it. According to the International Finance Corporation, the demand for finance in the formal and informal South African SMME market is estimated at 30 billion US dollars and 28 billion US dollars, respectively (Botha and Makgolo 2019). In addition, a study conducted for the National Credit Regulator uses Fin Scope Small Business Survey data to estimate the credit gap by the number of firms. It estimates the number of formal firms with unmet demand at 779,321 and the number of informal firms with unmet demand at 1,997,270 (Botha, and Mokgolo, 2019). The study further indicates that although South Africa does not have a shortage of funding channels available, many small businesses eligible for funding are still unable to secure the finance they need.

To support the statement regarding the inherent funding gap caused by limited access to finance, the SA SME fund conducted a study in 2019 on the credit gap experienced in South Africa. The results thereof reveal that the country's credit gap for is estimated to be between R86bn and R346bn (Visser, 2019). The research also reveals that 62.4% of the funding gap is comprised mainly of funding requests for start-up capital, expansions, and investments in equipment (Visser, 2019).

1.3.4 SMMEs struggle to access finance.

Cunha, Entwisie, Jeenah, and Williams (2020) state that SMMEs make up about 98.5 % of all businesses in South Africa and note their significant importance to economic growth. However, they also note that access to funding is the main constraint to growth. They authors further indicate that only 6% of SMMEs reported receiving government funding and only 9% received funding from private sources, according to a 2018 survey (Cunha et al 2020). During the global COVID-19 pandemic, it was found that this pattern persisted in terms of access to Covid-19 relief funding. Of the 200 billion Rands offered by the COVID-19 loan guarantee scheme, which was established to provide critical financial support to South African SMMEs during the pandemic, only 16.7 billion Rands was utilised as of October 24, 2020 (Cunha, et al 2020). This poor uptake and performance of the relief funds is believed to have resulted from both the demand and supply side of the SMME market. According to Cunha et all (2020), on the demand side, SMMEs were reluctant to take on debt or further gear their businesses under the current uncertain economic conditions with their main concern being their ability to repay these loans. These authors also note that (on the supply side) the main factors limiting the uptake of the COVID-19 loan guarantee scheme include banks' lack of distribution agility, especially under Covid-19 restrictions, which limited movement for SMMEs. This, in turn, affected the former's ability to reach SMMEs in remote areas. Other limiting factors were their current, slow lending processes. Most funders have yet to migrate to digital platforms and still follow manual processes, which require SMMEs to submit hard copy documents and perform in-branch applications (Cunha, et al 2020). As of October 5, 2020, it is reported that a mere 44.912 COVID-19 loan scheme applications had been received by commercial banks, representing only 2 % of South Africa's SMME population; furthermore, 40% of these are still pending processing. (Cunha, et al 2020)



Source: Mckinsey & Company

Figure 1: Application for Covid-19 guarantee scheme current performance

1.3.5 Fintech solutions

(Visser, 2019) believes that using technology to assist small businesses to access much-needed finance has potential in South Africa. The author supports her statement by echoing the sentiments of Kumaran Padayachee, the CEO of the independent SME financier, Spartan, who states that South Africa is lagging behind countries in East Africa, Asia, and even Latin America in terms of offering Fintech-based funding solutions (Visser, 2019). Within a global context, reference is made to the Chinese company, Alibaba, which is the world's largest e-commerce company (Visser, 2019). Its customers can apply for a loan in just three seconds and be approved in one minute. In the South African context, reference is made to Business Fuel, which is South Africa's leading e-commerce company, that allows its customers to apply for funding up to R3million within a few minutes and be approved within a maximum of 24 hours (Business fuel, 2022).

Amanda Visser (2019) further states that according to a Finfind study, several international digital small business lenders, like Lulalend and Merchant Capital, have gained some traction in the local marketplace to help solve the challenges related to financial access. This study's main research problem was formulated against this backdrop. As a result of current long processes, information asymmetries, and traditional funding methods utilised within current South African DFIs, SMMEs face ~~challenges~~ in accessing crucial development finance.

1.4 PRIMARY RESEARCH QUESTION

Therefore, the main research question posed, was formulated as follows:
How can the supply and demand of development finance be streamlined to suit SMMEs in need of finance by South African DFIs in South Africa by means of incorporating relevant and available information technologies and alternative funding methods?

1.5 SECONDARY RESEARCH QUESTIONS

The above-mentioned research question is supported by the following secondary questions, as presented below:

Table 1.5. 1: Secondary Research Questions

RQ1	What is the demand for development finance by SMMEs in South Africa?
RQ2	What is the supply of development finance by DFIs in South Africa?
RQ3	What information system is your organisation currently using and what are the benefits and shortcomings of the system?
RQ4	Which information technologies are available within the financial services market now?
RQ5	What is your perception of the following Fintech: Alternative Credit Scoring; Peer-to-Peer lending; Mobile Payment Technology (M-Pesa)?
RQ6	What is your perception of said information technologies; can they streamline the supply of development finance to SMMEs?
RQ7	What is your perception of these information technologies; can they increase the demand for development finance to SMMEs?
RQ8	What are the constraints within your organisation that limit the development of these technologies?
RQ9	What are the constraints within your organisation that limit the implementation of these technologies?
RQ10	What are the constraints in the South African market that limit the adoption of these technologies?
RQ11	How can the application of information technologies assist DFIs to fully fulfil their role as catalysts of economic development, job creation, and poverty alleviation?

RQ12	How can Fintech be used to integrate all stakeholders (from both the demand and supply sides) of development finance to eliminate information asymmetries?

1.6 RESEARCH OBJECTIVES

1.6.1 Primary research objective

The primary objective of the study was to “identify information technologies that are available in the financial sector and explore how these technologies can be integrated into DFIs and SMMEs to streamline the access to finance”.

1.6.2 Secondary research objectives

To achieve the above-mentioned primary objective, the following secondary research objectives will be pursued:

Table 1.6. 2: Secondary Research Objectives

RO1	To establish what is the demand for development finance by SMMEs in South Africa.
RO2	To investigate what is the supply of development finance by DFIs in South Africa.
RO3	To investigate the current information systems being utilised by DFIs and banks by highlighting their benefits and shortcomings.
RO4	To conduct an in-depth analysis of information technologies available in the financial services market.
RO5	To conduct an in-depth analysis of: Alternative credit scoring; Peer-to-Peer lending; and Mobile Payment Technology(M-Pesa).

RO6	To investigate how information technology can improve the supply of development finance between DFIs and SMMEs.
RO7	To investigate how information technology can improve the demand for development finance between DFIs and SMMEs.
RO8	To investigate the market constraints within organisations that limit the development of these information technologies into DFIs and SMMEs.
RO9	To investigate the market constraints within organisations that limit the implementation of these information technologies into DFIs and SMMEs.
RO10	To investigate the market constraints within the South African market that limit the adoption of these information technologies into DFIs and SMMEs.
RO11	To investigate how the application of information technologies can assist DFIs to fully play their role as catalysts of economic development and poverty alleviation, as prescribed by the NDP.
RO12	To investigate how Fintech can be used to integrate all relevant stakeholders (from both the demand and supply sides of development finance) to streamline access to finance.

1.6.3 Conceptual research framework

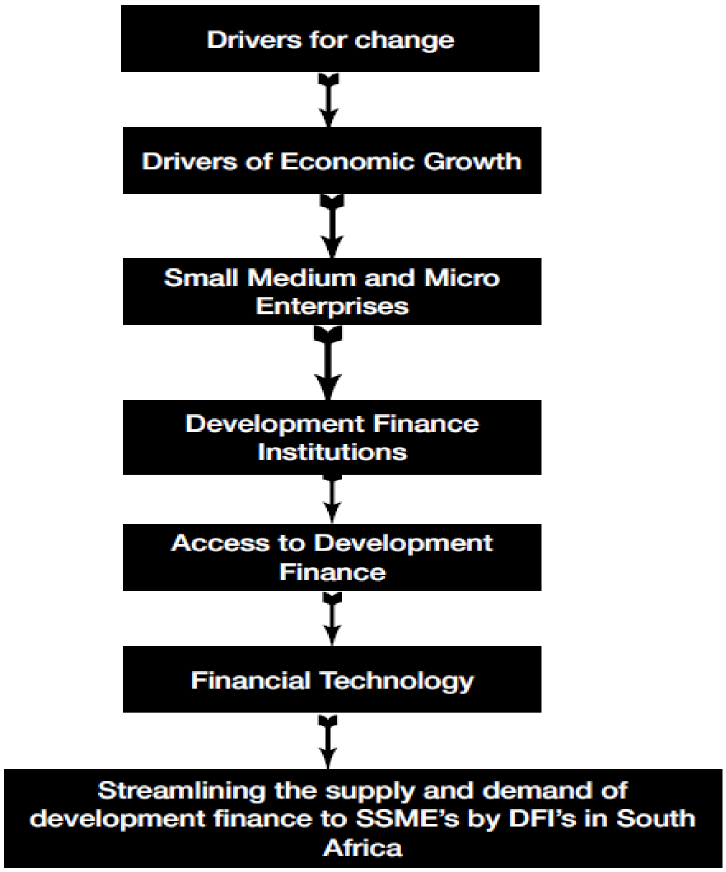


Figure 1.6 3 : Conceptual Research Framework

The framework above describes the factors influencing the streamlining of access to development finance by DFIs to SMMEs in South Africa. The framework starts with the drivers for change, followed by the drivers of economic growth. Next, the SMME sector is examined with emphasis on its importance to the South African economy. This is followed by an examination of the development financial institutions in South Africa and their importance to the country's economy. An in-depth analysis is then conducted on the sampled DFIs SEDA, SEFA, IDC, and NEF to highlight their mandates and product offerings. The challenges regarding access to finance by SMMEs are examined, highlighting outdated funding methods that contribute to this phenomenon. Financial technology is examined highlighting trends and current product offerings; these include alternative credit scoring, peer-to-peer lending, and innovative payment methods.

The framework describes the proposed factors deemed critical to streamlining the supply and demand of development finance to SMMEs by DFIs in South Africa and is presented in this sequence since preceding factors influence the factors that follow them. For example, the drivers for change directly influence the drivers of economic growth. The drivers of economic growth directly influence SMEs' ability to grow. Small to medium enterprises directly influence the development financial institutions regarding the demand for finance. The development of finance institutions directly influences how finance is accessed by SMMEs. Their access to development finance is then influenced by the financial technology currently available in the market and how it is utilised. This then informs the purpose of the study, which is the streamlining of the supply and demand of development finance to SMMEs by DFIs in South Africa.

1.7 METHODOLOGY OF THE STUDY

1.7.1 Research paradigm

According to Saunders, Lewis, and Thornhill (2019), a research paradigm is a method of examining social phenomena from which understanding of these phenomena can be gained and explanations attempted. There are two (2) main paradigms in research, namely positivism and interpretivism (Saunders et al 2019).

Positivism is associated with quantitative research while interpretivism is associated with qualitative research (Saunders et al 2019). The interpretivist paradigm believes that reality is multi-layered and complex and that a single phenomenon can have multiple interpretations (Neuman 2014). The interpretivism paradigm is utilised when researchers seek to gain a deeper understanding of a phenomenon within its unique context together with its complexity instead of trying to generalise the base of understanding for the whole population (Creswell, 2007). The researcher considered the depth of understanding and description required from participants since the study is dependent on gleaning information from industry experts in financial information systems, development finance, as well as senior staff members within DFIs. The study also required in-depth insider insight to achieve research objectives. Since qualitative research uses multiple methods that are interactive, emergent, and fundamentally interpretive, the interpretivism paradigm was utilised as it was most appropriate to the study.

1.7.2 Research approach

The research followed an exploratory research approach. Exploratory research is conducted when enough is not known about a phenomenon and investigates a problem that not been clearly defined (Saunders et al., 2012). It does not aim to provide final and conclusive answers to the research questions but merely explores the research topic with varying depth. Therefore, it aims to tackle new problems upon which little (or no) research has been done (Creswell, 2014). Even in extreme cases, exploratory research forms the basis for more conclusive research and determines the initial research design, sampling methodology, and data collection method (Creswell, 2014). This research approach involves the collection of primary data with qualitative methods, such as semi-structured interviews, which were analysed to gain a deeper understanding of the research questions and establish the different views within the phenomenon (from the viewpoints of the participants). The semi-structured interviews were conducted via online platforms, such as Microsoft Teams, to comply with the Covid-19 lockdown restrictions (imposed by the government during the research period).

1.7.3 Dependent and independent variables

The dependent variable was identified as the perceived success of a financial technology used to streamline access to development finance by DFIs to SMMEs in South Africa. A total of eight (8) independent variables were identified, which could have potentially influenced this dependent variable. These independent variables include SMME’s, DFIs, Fintech, access to development finance, alternative credit scoring, investments, P2P lending, and alternative payment methods. The relationship between the two types of variables is illustrated and presented in Chapter Four (4). The relationship between these were empirically tested, which achieved the primary and secondary objectives of the study.

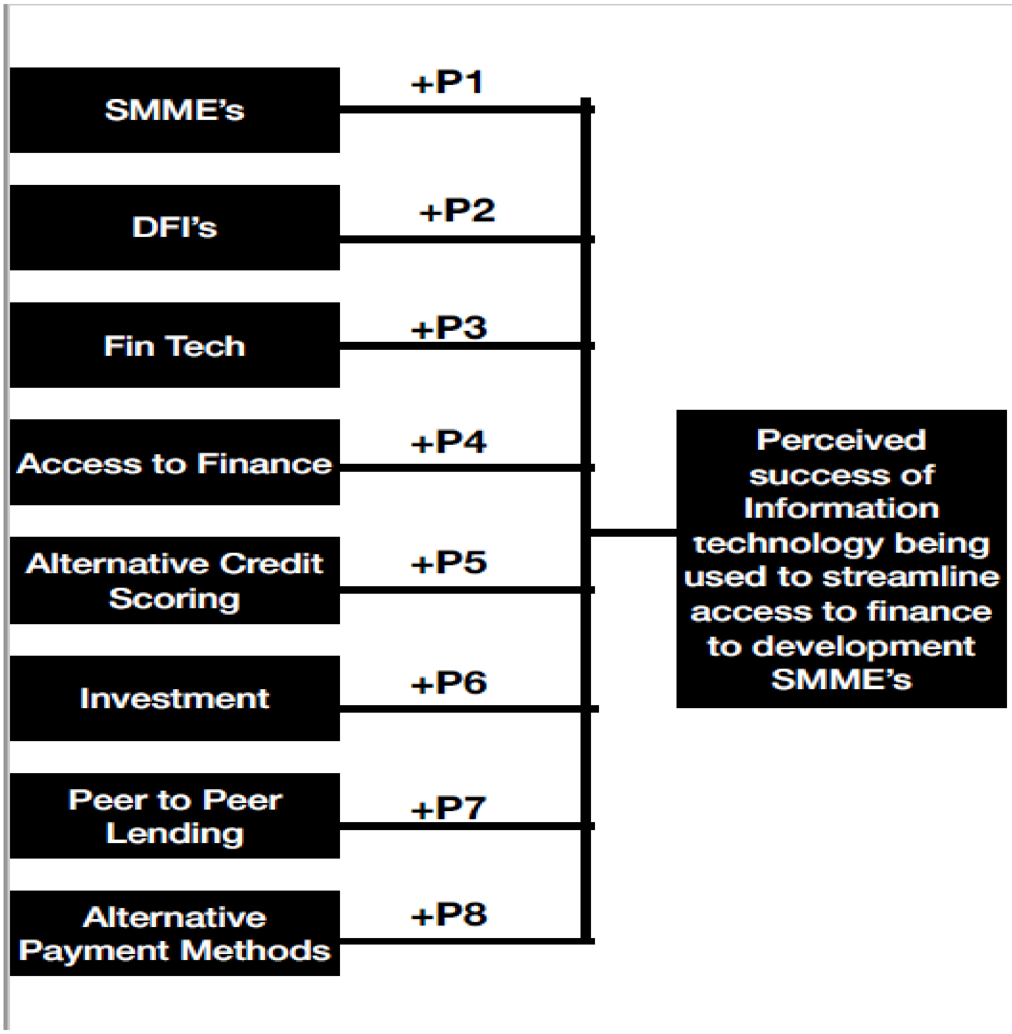


Figure 1.7 3 **Independent and Dependent Variables**

1.8 RESEARCH ETHICS

The research ethics protocol of the Nelson Mandela University (NMU) was maintained in this study. Ethics approval was received and clearance certificate H20-BES-BUS-046 has been attached as Annexure A. The attached Ethics Clearance Application covers all the relevant aspects of ethical research as prescribed by the University. The ethics referred to covers the protection of participants, maintenance of their privacy, avoiding coercion, obtaining their consent in written form, and treating the provided material with confidentiality (Gill, Stewart, Treasure, & Chadwick, 2008).

1.9 OUTLINE OF THE STUDY

SMMEs have been identified as the key drivers of employment creation, poverty alleviation, and economic growth in the world economy. This is also the case for the South African economy as highlighted in the NDP. To support SMMEs to play their intended role in economic growth, the South African Government created DFIs to provide both financial and non-financial support to these specific enterprises. However, this support has been deemed inadequate despite these DFIs having been established, sufficiently capitalised, and infrastructurally resourced. It has been noted that the inadequate supply of development finance is a result of outdated funding models, long processes involving much bureaucracy, as well as the general absence of the use of existing technologies to streamline access to development finance by DFIs to SMMEs in South Africa. This is despite the technology being readily available and currently utilised by the South African banking sector. This topic seeks to explore the effect of information technology in streamlining access to development finance in terms of SMMEs in South Africa.

Chapter One (1): Introduction and background

In this chapter the researcher details the background of the study as well as the research problem. The primary and secondary research objectives are highlighted as well as the research questions, followed by a brief overview of the research methodology which consists of the research paradigm, research approach, and research framework.

Chapter Two (2): Literature Review

The chapter introduces the relevant literature in context. The chapter then compares existing industry-specific literature. The literature review focused specifically on the SMME sector and its stakeholders. There was a specific focus on SMMEs, DFIs, and financial technology. This chapter then describes the extent and nature of the SMME sector and its stakeholders with a specific focus on access to finance and how it can be affected by financial technology.

Chapter Three (3): Research design and methodology

The chapter details the research design and the type of research applied in the study. The researcher details which methodological paradigm the study makes use of and why. This chapter also specifies what the selected research paradigm entails. Explaining that, an analysis was done on the research sample, the data collection technique used, and reporting methods to be followed. The chapter concludes by presenting the reliability and validity of the study including the research ethics as outlined by the NMU ethics committee.

Chapter Four (4): Results and analysis of the study

The focus of this chapter is on the analysis and interpretation of the data collected. In addition, the trustworthiness and reliability of the data are explicated. The chapter further assists in answering research questions as outlined in Chapter One (1).

Chapter Five (5): Findings, recommendations, and conclusions

The chapter concludes the study by giving findings of the research, responses to research questions and providing future recommendations to the main research question.

1.10 CHAPTER SUMMARY

This chapter introduced the background of the study, provided the context, the rationale, and the aim of the study. It also presented the research problem statement and the related research questions. How IT impacts the South African economy and the ability of the SMME market to play its role as the driver of the economy as per the NDP. Having outlined the background, rationale, and research objectives in the first chapter, the second chapter, below, provides a review of the relevant and related literature.

CHAPTER 2: A LITERATURE REVIEW OF THE DEVELOPMENT OF FINANCE INSTITUTIONS AND THE FINANCIAL TECHNOLOGY SECTOR.

2.1 INTRODUCTION

(Ramdhani, Ramdhani, & Amin, 2014) describe a literature review as an evaluative report of information found in the literature relevant to the study being undertaken. Its purpose is to convey the existing knowledge on a particular subject matter. Such reviews assist researchers to identify gaps in and propose improvements to the current knowledge. A literature review can also provide context for the research, justify the need for the research, ensure that the same research has not been done before, enable the researcher to learn from previous theories on the subject, while highlighting flaws in the previous research (Calabrese 2006).

This study was informed by a variety of literature relating to the fields of development finance, SMMEs, and financial technology, as well as from the data collected from the respondent DFIs and industry experts. As indicated in Chapter One (1), the research study involved exploring the effect of information technology in streamlining the access to development finance for SMMEs in South Africa. The main issue in the arguments presented by the researcher is that SMMEs are key drivers for economic development, job creation, and poverty alleviation. While DFIs have clear and specific deliverables, nationally and possess the resources to support SMMEs, information technology, such as Fintech, is currently available in the market and is being used in the private financial sector to improve access to finance, however, is not yet being utilised by DFIs. This chapter reviews current literature pertaining to the importance of SMMEs and DFIs within the South African economy. It then reviews the literature on Fintech, its origins, nature, and what Fintech is currently available in the market. Following this, it reviews the literature related to SMMEs' challenges in accessing required finance and how Fintech can improve this.

2.2 THE IMPORTANCE OF SMMEs TO THE SOUTH AFRICAN ECONOMY

The definition of SMMEs encompasses a broad range of firms, which include formally registered; informal; and non-VAT registered organisations (SEDA 2016). Small businesses range from medium-sized enterprises, such as established traditional family businesses employing over a hundred people, to informal micro enterprises. Micro enterprises include small survivalist businesses run by self-employed entrepreneurs from the poorest parts of society. The upper end of the range is comparable to the small and medium-sized enterprises (SME) segment found in developed countries. In South Africa, a large majority of SMMEs are concentrated on the very lowest end, where survivalist firms are found (SEDA, 2016).

SMMEs are recognised as one (1) of the key mechanisms to stimulate job creation, globally (Makwara 2019). They have consistently demonstrated over many years. and in different countries around the world, their ability to stimulate competition, bring about a diversity of products and services, achieve increased flexibility, possess a hands-on managerial style, and facilitate faster decision-making. These attributes signify their importance as players within economies, whose role should be encouraged and nurtured. Therefore, sufficient capital injections, as a support mechanism, can assist them to grow into large businesses (Dlodlo and Dhurup, 2013). The sheer number of SMMEs in almost all economies in the world makes them extremely essential. An example of their importance can be seen in Hong Kong, where they form 98% of business enterprises and provide 47% of employment. Another example can be found in Japan, where 99.7% of all enterprises are SMMEs, who collectively, are responsible for 70% of that country's employment figure (Inn, Dumay, & Kokubu, 2015). Similar statistics are evident in Egypt, where 99% of all businesses are SMMEs, employing 75% of the country's total workforce (Subrahmanyam, 2016). The same trend is apparent in the United States of America (USA) where, according to the United States Small Business Administration (US.SBA), SMMEs account for 55% of all jobs and 66% of jobs since the 1970s. The US.SBA also adds that big businesses lost four (4) million jobs since 1990 but that SMMEs added eight (8) million new jobs within the same period (SEDA, 2019). The figures demonstrate the immense impact these enterprises have in different economies around the world and emphasises the consensus among researchers on SMMEs' ability to generate economic growth and development.

In South Africa, SMMEs currently contribute 56% of all jobs and are one (1) of the main drivers of economic growth. As such, the South African Government recognises the role SMMEs can play in creating meaningful employment on a broader scale by alleviating poverty. It is projected by the NDP that to ensure South Africa alleviates poverty and achieves full employment, the economy needs to create approximately 11 million new jobs in the next 20 years (NDP, 2011). To achieve this, it is estimated that the economy needs to grow by an average of 5.4% consistently over the next two decades. (NDP, 2011) The key driver of this projected economic growth and employment is SMMEs, as the New Growth Path (NGP) estimates that 90% of the projected economic growth and employment creation will come from this market (NDP, 2011). SMMEs offer the only real prospect of large-scale job creation in South Africa, and, thus, need to be capacitated to play their vital role in the South African economy effectively.

2.3 DEFINING DFIs AND THEIR IMPORTANCE TO THE SOUTH AFRICAN ECONOMY

South Africa's NGP, as released by Minister Ebrahim Patel on 23 November 2010, highlights the crucial role played by state-owned DFIs in creating jobs, raising shared economic growth, and enabling pro-poor expansion of infrastructure (NDP, 2011). The contribution and effectiveness of DFIs have been in the spotlight in recent times due to factors such as global financial crises, allegations of corruption in government, misappropriation of state funds, allegations of state capture in state-owned entities, and subsequent stunted economic growth. This has resulted in significant job losses and a failure of SMMEs. There has also been renewed public pressure for increased public service delivery from DFIs, as well as a constant drive to accelerate equitable economic development.

Globally, DFIs were created to act as a catalyst to accelerate industrialisation, economic growth, and create jobs and have played this role for many years with examples of effective DFIs being found in developed countries like Sweden, Germany, Japan, Singapore, and South Korea (OECD, 2014). Studies have also shown a positive relationship between DFIs and economic development in the emerging markets of China and Turkey as well as the developing countries of India and Brazil (OECD, 2014).

According to Khadiagala (2015 a), DFIs historically focused on providing development finance to address crucial market failures. Market failures are caused by the financial gap left by commercial banks and local governments. DFIs would then use government resources to address these failures. This included crucial infrastructure development programmes (such as building and maintaining the national road networks), electrification of rural areas building of schools, and providing seed funding to start-up companies.

These initiatives addressed their broader traditional objectives, namely to target market failures such as unemployment, income distribution, poverty alleviation, import substitution, and the stimulation of the local economy and SMME market (Gumede, 2016). Gumede further argues that the role of DFIs in developing countries now goes beyond addressing market failures alone, and now broadly addresses development failures (Gumede, 2016).

The South African Government has learned from other foreign states, the importance of DFIs and the positive impact they can bring in accelerating government objectives of economic growth, job creation, and poverty alleviation. In 1995, a white paper on SMME development was documented and named the Integrated Small Business Development Strategy (SEDA, 2016). The policy’s main objective was to increase financial and non-financial support to SMMEs, create a demand for their products and services, and reduce regulatory constraints to create an enabling environment for them to trade (DTI 2008). Subsequently, this policy paved the way for the creation of several DFIs that would be responsible for the implementation of the small business development strategy.

2.3.1 The Small Enterprise Development Agency (SEDA)

The Small Enterprise Development Agency (SEDA) is an agency of the DSBD. According to its national website, it is mandated to implement the South African Government's small business strategy. This entails the design and implementation of a standard and common national delivery network for small enterprise development and the integration of government-funded small enterprise support agencies across all tiers of government (Malefane, 2019). SEDA was established in December 2004, through the National Small Business Amendment Act – Act 29 of 2004, as an agency under the Department of Trade and Industry (SEDA, 2019); according to its 2019 annual report, it was created by merging three (3) entities, namely Ntsika Enterprise Promotion Agency, National Manufacturing Advisory Centre (NAMAC), and the Community Public Private Partnership (CPPP) programme (SEDA 2019). Following this, in April 2006 the GODISA Trust and the National Technology Transfer Centre merged with it, creating the SEDA Technology Programme (STP) (SEDA 2019). In 2008, the small enterprise support function of the South African Quality Institute (SAQI) and the technology-related activities of the Technology for Women in Business (TWIB) were incorporated with the STP, which was fully then integrated into SEDA structures in 2009. In 2014, SEDA's mandate and functions were transferred from the DFI to the DSBD (SEDA 2019). According to the SEDA annual reports reviewed for the past five (5) years from 2015 to 2019, its mandate has not changed. The agency's mandate and purpose are to provide non-financial business support to SMMEs in the form of business-related information, advice, consultancy, training, and mentoring services in all areas of enterprise development. These services aim to provide solutions related to various business functions from production to human resources, finance, marketing, and export development. Rural enterprise development and cooperatives are supported through the CPPP (SEDA 2019). Through STP, SEDA also provides technology transfer, business and technology incubation services, and incentives for management systems implementation (such as ISO9001 and OHSAS 18001), product testing, and certification (SEDA 2019).

SEDA implements its above-mentioned mandate through its national network of business advisers who assess SMMEs individual business needs. Dependent on the results of the assessment, the business advisers together with the SMME, draft a developmental plan with specific developmental interventions. These services are offered at no charge to the SMMEs and are aimed at increasing the success rate of SMMEs and creating an entrepreneurial culture at micro and survivalist levels to create jobs and globally competitive small enterprises at the SME level. According to the 2019 annual report, SEDA has a national network of 53 branches, nine (9) mobile units, 76 incubation centres and 74 access points where it co-locates with other DFIs or local municipalities (SEDA 2019).

2.3.2 The Small Enterprise Financial Agency (SEFA)

Having reviewed the annual reports for the past five (5) years, namely from 2015 to 2019, it is noted that SEFA is a wholly owned subsidiary of the IDC and was founded on 1 April 2012 in terms of Section 3 (d) of the Industrial Development Corporation Act, No. 22 of 1940 (SEFA, 2020). It was established following a cabinet decision in 2011 and the State of the Nation Address, respectively, in order to merge the three (3) existing DFIs, namely Khula, the South African Micro-Finance Apex Fund, and IDCs small business funding (SEFA, 2019).

The DSBD was then appointed as its executive authority, and, according to the latter's 2019 annual report, its core functions are to foster establishments, develop and grow SMMEs and Cooperatives, and, lastly, contribute to poverty alleviation, job creation, and the promotion of economic growth in South Africa. Furthermore, its mandate and purpose are to provide SMMEs and Cooperatives throughout South Africa with simple access to finance in an efficient and sustainable manner by delivering wholesale and direct lending credit facilities or products, providing credit guarantees to SMMEs and Cooperatives, supporting the institutional strengthening of financial intermediaries to enable them to effectively assist small and micro enterprises and cooperatives. It further aims to create strategic partnerships with a range of institutions for sustainable small, micro and cooperative enterprise development and support, monitor the effectiveness and impact of financing, credit guarantee, and capacity development activities and develop (through

partnerships) innovative finance products, tools, and channels to encourage increased market participation in the provision of affordable finance.
Source: www.sefa.org.za

SEFA implements these objectives and mandate by providing direct loans of between R50 000 to R15 million to SMMEs and Cooperatives at favourable rates and minimal collateral requirements in comparison to commercial banks. These can be accessed through its national network of regional offices, co-location offices, and satellite offices. Currently, SEFA has nine (9) regional offices with one (1) office in every province in South Africa. As per its 2019 annual report, SEFA also has 41 co-location offices in the Western Cape that it shares with SEDA, IDC, and Transnet (SEFA, 2019).

2.3.3 The National Empowerment Fund (NEF)

Annual reports of the past five (5) years, namely from 2015 to 2019, reveal that the NEF was founded with the intention of offering financial and non-financial support to black-empowered businesses. It has a specific focus on Black Economic Empowerment and was established by the NEF Act No 105 of 1998 (NEF, 2019). Its vision is to become the leading provider of innovative transformation solutions for an economically inclusive South Africa. It is a catalyst for Broad-Based Black Economic Empowerment (B-BBEE) in South Africa (NEF, 2019) and organisation promotes, enables, implements and develops innovative investments and transformation solutions to advance sustainable black economic participation in the South African economy. According to its 2019 annual report, it is mandated to be a driver and thought leader in promoting and facilitating black economic participation by providing financial and non-financial support to black-owned and managed businesses (NEF, 2019). Its operations are governed by the Public Finance Management Act No 1 of 1991 (PFMA), including the National Treasury Regulations, the King III Report on Governance for South Africa, and the Protocol on Corporate Governance in the Public Sector of 2002 (NEF, 2019). According to the NEF website, it currently has nine funds with which it implements the above-mentioned mandate. These include:

a) Women Empowerment Fund (WEF)

The WEF is aimed at accelerating the provision of funding to businesses owned by black women. The funding starts from R250 000 to R75 million across a range of sectors, for start-ups, expansions and equity acquisition purposes (NEF, 2020).

b) Imbewu Fund

The Imbewu fund supports SMMEs by offering debt, quasi-equity and equity finance products with the funding threshold ranging from a minimum of R250 000 to a maximum of R15 million to fund start-ups, expansions, procurement finance and franchise finance (NEF, 2020).

c) uMnotho Fund

THE uMnotho Fund is designed to improve access to Black Economic Empowerment (BEE) capital and has 5 (5) products, namely:

- Acquisition Finance;
- Project Finance;
- Expansion Finance;
- Capital Markets Fund; and
- Liquidity and Warehousing (NEF, 2020).

These products provide capital to black-owned and managed enterprises, including black entrepreneurs buying equity shares in established black and white-owned enterprises, starting new ventures, or expanding existing businesses and BEE businesses that are, or wish to be, listed on the Johannesburg Stock Exchange (JSE) (NEF, 2020).

d) Rural and Community Development Fund

The Rural and Community Development Fund aims to provide funding, ranging from R250 000 to R75 000, to aspiring rural entrepreneurs and facilitate skills transfer and operational involvement by community groups to promote social and economic upliftment pursuant to the NEF Mandate (NEF, 2020). The targeted sectors for this fund include agro-processing and manufacturing, eco-tourism, forestry and fisheries, commercial property, aqua and marine culture, and non–farm activities (rural-based).

Source: www.nefcorp.co.za

e) Strategic Projects Fund (SPF)

The SPF focus is informed by the government's strategies on industrial development through the DFIs National Industrial Policy Framework, the corresponding Industrial Policy Action Plans (IPAP), as well as the current government economic growth strategy, according to the NGP (NEF, 2020). The sectors identified, based on the IPAP and the NGP, are listed as follows, namely agriculture, business process outsourcing (call centers, data storage centers and termination centers), textiles, mining, including mineral processing and mineral beneficiation, automobiles, renewable energy and biofuels (solar, biomass, hydro, co-gen, and wind), plastics, pharmaceuticals and chemicals, forestry, pulp and paper, infrastructure (telecoms, healthcare, roads, rail airports, dams and water), manufacturing; and tourism (hotels, resorts, tourism attractions and leisure). Source: www.nefcorp.co.za. This fund is said to embody the NEF's truest sense of achieving its developmental finance objectives and, most importantly, securing the participation of black people.

Arts and Culture Venture Capital

This particular fund is designed to promote and develop the arts and culture sector by providing affordable loans to start and or expand small businesses. It is an important source of finance for start-up entities and for companies that have limited operating history and do not have access to capital markets (NEF, 2019).

Tourism Transformation Fund (TTF)

The TTF is a dedicated capital investment funding mechanism established by the Department of Tourism in collaboration with the NEF and focuses specifically on financial support for black investors and communities by investing in capital projects within the tourism sector (NEF, 2020). It aims to drive transformation in a more direct and impactful manner, not only assisting black-owned tourism enterprises to expand and grow, but also catalysing the rise of a new generation of black-owned youth, women, and community-owned tourism enterprises to take the tourism sector to new heights. The TTF is administered by NEF on behalf of the Department of Tourism (NEF, 2020) and is capitalised to the value of R40 million in annual grant funding, over a period of three (3) financial years, up to 2020.

2.3.4 Industrial Development Corporation (IDC)

The IDC is one (1) of the oldest sampled DFIs and was established prior to 1994 by the previous apartheid government by an Act of Parliament, namely the Industrial Development Corporation Act (Act, No. 22 of 1940). It is fully owned by the South African Government under the supervision of the Department of Economic Development (IDC, 2020) and is a national development finance institution mandated to promote economic growth and industrial development and the develop domestic industrial capacity (IDC, 2019).

In the 2019 annual report, the current Minister of Trade and Industry, Mr Ebrahim Patel, noted the IDC is a key implementing agency of industrial policy. He emphasised that the its current activities are aligned with and centred on the NDP, the NGP, and the IPAP (IDC, 2019). This is achieved by the IDC identifying specific sectors to develop. Consequently, it is through funding extended to qualifying SMMEs in these sectors that it achieves its mandate of facilitating industrialisation, job creation, and economic growth. According to Minister Patel, for more than 70 years, it has contributed to the implementation of the South African Government’s industrial policy. Currently, it has fifteen (15) regional offices and six (6) satellite offices where SMMEs can apply for funding. The IDC funding parameters are broad with the corporation mandated to fund loans from R1 million to R1 billion to sectors such as:

- agro-processing and agriculture;
- clothing and textile;
- chemical products and pharmaceuticals;
- heavy and light manufacturing;
- industrial infrastructure;
- machinery and equipment;
- tourism;
- media;

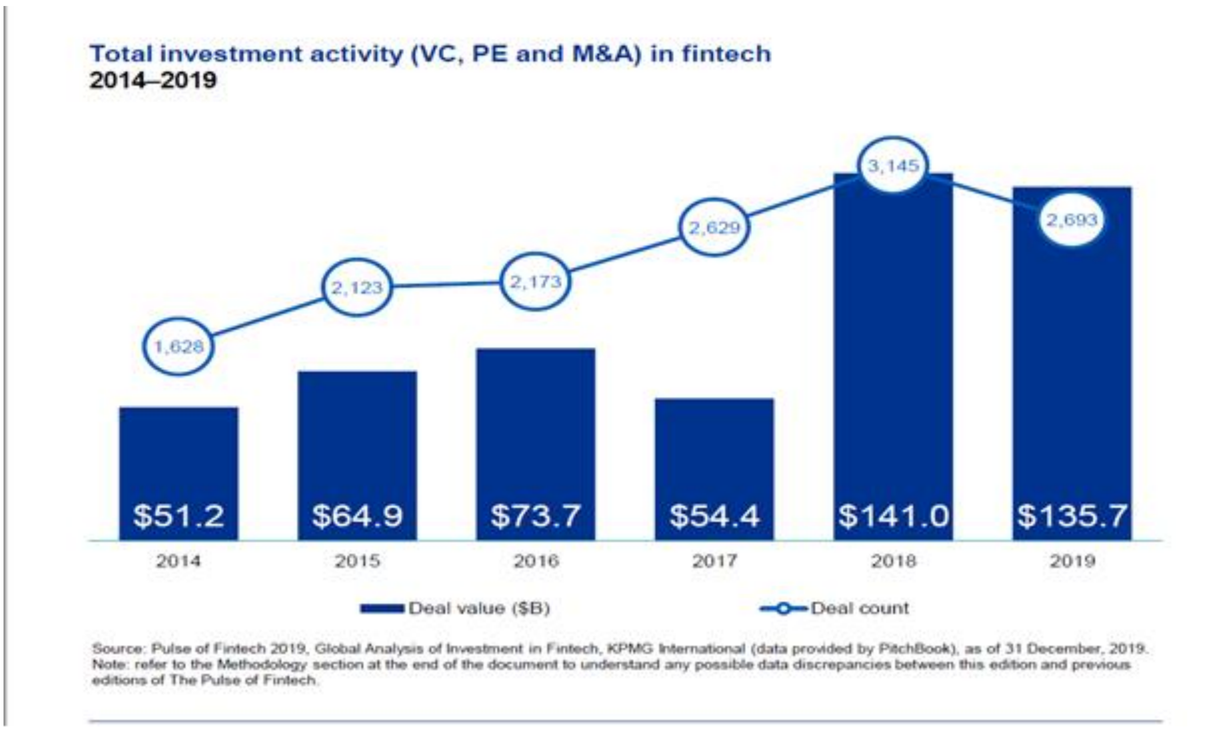
- audio-visuals;
- automotive; and
- transport equipment. (IDC, 2020).

2.4 Financial Technology (Fintech)

Fintech represents the combination of the words, “finance” and “technology”. It is the resulting combination of the financial and technology sectors and relates to all technology that is used in finance to facilitate trade, in corporate business, and to facilitate the interaction of and services provided to the retail consumer (SECO, 2019). SECO (2019) further defines it as an “economic industry composed of companies that use technology to make financial systems more efficient”, while the Financial Stability Board (FSB) describes it as “technologically enabled financial innovation that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services”. (FSB, 2019). These definitions have one (1) common trend, namely that Fintech is the integration of modern technology into the financial sector. It provides technological solutions to constraints experienced by the traditional financial sector both on the demand and supply side.

It is noted that innovation is not new to the formal banking and financial sector at large. The latter has advanced from using the out-of-date banking books of the 1960s to bank cards, ATMs, Internet banking and cell-phone banking through mobile apps. However, while innovation in finance is not new, its focus on technological innovations and the pace of their growth has increased significantly in recent times. This is evident in the current Fintech solutions that make use of big data analytics, AI ,and Blockchain technologies currently being introduced into the market at a rapid rate (Mahdavian et al. 2016). These new technologies are changing the nature of the financial industry, creating opportunities for Fintech start-ups to offer more inclusive financial solutions and provide crucial access to financial services to previously excluded members of the population.

There have been several recent international studies conducted on Fintech that reveal how this industry is growing at an alarming rate, both in investment and adoption, and most especially in developing markets. Such studies have shown that it is disrupting the financial system and is an emerging topic around the world. In total, global Fintech funding increased to USD140.8 billion in 2018, an increase of 120% compared to 2017's USD54.4 billion (Pollari and Ruddenklau 2018). A more recent 2019 study conducted by KPMG, revealed a substantial increase in total global funding. In 2019, global investment in Fintech companies was USD 135.7 billion (Pollari and Ruddenklau 2019) and signified another big year for this particular industry.



Source: Pulse of Fintech 2019

Figure 2.4.1 Global Analysis of Fintech

In 2017, Zhang et al. (2018) found that the total value of the alternative finance market in the United Kingdom (UK) grew by 35% to £6.2 billion . Wardrop (2020,) in his study on the Global Alternative Finance Market Benchmarking Report of 2019, indicated that the global alternative finance industry facilitated USD 304.5 billion in transaction volume. This research represents the finance raised by consumers through online alternative finance platforms for consumers, businesses, and other fundraising needs and the volume represents a 27% annual decline from the $419 billion recorded in 2017 (Wardrop, 2020). However, it is noted in their study that the decrease in volume from the previous year was caused by a sharp decrease in activity in the Chinese market and that if that particular market was excluded, the global alternative finance market volume actually grew each year by 48%, from the $60 billion in 2017 to $89 billion in 2018 (Wardrop, 2020). This further strengthens the argument that Fintech is changing the way consumers interact with their financiers. The interest in Fintech has also increased substantially recently with entrepreneurs, job seekers, and students looking to get involved in this emerging and rapidly growing industry. A previous study conducted in 2019 by (Sung, Leong, Sironi, & Reilly, 2019) found that there was a continuous increasing trend in the use of the key word, “Fintech” under the category “Jobs and Education” in online search engines from September 2012 to August 2018. Its development has also facilitated the emergence of start-ups through alternative sources of financial services (Gomber & Parker, 2018).

According to Disrupt Africa’s 2019 report, Africa is home to 491 Fintech start-ups, which are together building a new vision for the African financial services industry (Disrupt Africa 2019). This report notes that Kenya, Nigeria, and South Africa are currently leaders in start-up, adoption, and innovation within the Fintech industry; furthermore, their research has shown that new Fintech eco systems are emerging in other countries. According to the Mauritius Africa FinTech Hub (MAFH), only 0.4% of the global Fintech investment is directed towards Africa. Further statistics provided by the Fintech MAFH also suggest that it is set to grow to US$3 billion from US$ 200 million in sub-Saharan Africa by 2020 (Latif, 2019). This large growth projection is supported by the MAFH and their research indicated that 52% of the world’s mobile transactions are to and from Africa, while 58% of the world’s mobile money accounts are registered in sub-Saharan Africa.

Research has shown that the African continent holds great potential for the development and adoption of Fintech as it has one of the world’s largest unbanked populations with access to smartphones (Gumede, Govender, and Motshidi 2011). According to the International Monetary Fund (IMF), Sub-Saharan Africa is the only region in the world where close to 10% of GDP in transactions occur through mobile money. Fintech has been earmarked to significantly address the major issue of financial exclusion in Africa, and, by so doing, drive economic development in developing countries and facilitate the inclusion of survivalist and micro enterprises in the formal economy to create jobs, reduce unemployment, and drive economic growth in developing markets. According to (Disrupt Africa 2019), the emerging trends in Africa are concentrated around mobile money, mobile payments, and online remittances (Disrupt Africa 2019). However, Africa's shortcomings in terms of accessing adequate infrastructure, technology, telecommunications, and accessing information in comparison to Europe and the USA is well documented. Nevertheless, the availability of Fintech has changed the way in which consumers interact with the financial services market. Consumers and businesses based in under-developed geographic areas can now access core functions of the financial sector, such as settling payments, facilitation of borrowing and saving, risk sharing, and allocating capital (Disrupt Africa 2019).

In recent years, (Alexander et al. 2017) conducted a study on behalf of the European Corporate Governance Institute (ECGI), the results of which confirmed that Fintech has provided financial access to those previously excluded by conventional banks and financial institutions, such as the unbanked population, the poor, and the informal sector labourers. In doing so, it has captured previously neglected areas of the African economic market, including youth, women, and micro enterprises by providing them with critical access to finance to stimulate economic development.

2.5 Challenges Experienced in Accessing Development Finance

Despite the potential role of SMMEs in accelerated growth and job creation in developing countries, several bottlenecks affect their ability to realise their full potential. As discussed in Chapter One (1), SMME development is hindered by numerous factors, including access to finance. Debeila (2018) also notes that although SMMEs are recognised as key drivers of the development process in many developing countries, they are always constrained by the limited availability of financial resources to meet a variety of operational and investment needs (Fatoki, 2014). Credit is also noted as a major constraint to new investments and (Ayyagari & Maksimovic, 2016) indicates that there is limited access to financial resources available to smaller enterprises, when compared to larger organisations. The consequences thereof being their growth and development (Debeila, 2018). While the role of finance has been viewed as a critical element for the development of SMMEs, a large portion of this particular sector does not have access to adequate, appropriate forms of credit and equity, or financial services generally (Cusmano, 2015). By competing for the corporate market, formal financial institutions have structured their products to serve the needs of large corporates. Research shows that traditional funding models used by financiers constrain access to finance by requiring consumers to access it by physically visiting the branches and filling in cumbersome documentation, which is often misinterpreted. This creates information asymmetries between financiers and consumers. Consumers are not able to provide the information required and lenders are unable to access the information they require. Other information irregularities are caused when consumers are not aware of the product offerings available from the lender prior to applying for funding and the lenders are not aware of the financial needs of the consumers thereby applying a blanket approach to funding. These information disproportions create a funding relationship marred with uncertainty, resulting in potential finance providers, both formal -and informal, being unlikely to commit funds to a business or consumer viewed as unsound, irrespective of the exact nature of the unsoundness (Cusmano, 2015).

2.6 How Can Fintech Optimise Access to Development Finance?

Fintech has the potential to optimise access to development finance in many ways, such as improving the efficiency of payment processes and enhancing financial inclusion. As discussed, SMMEs face challenges obtaining funding from financiers; however, the Fintech market has already started to bridge this funding gap. Finexkap, a French Fintech company, developed an integrated platform that enables SMMEs to obtain financing through a quick, flexible, and entirely digitalised factoring process (Torris, 2017). Torris (2017) notes that Finexkap has been able to develop this integrated platform through collaboration and partnerships with key stakeholders. Research into the Fintech industry has revealed several alternative methods of assessing SMMEs and extending them funding that have been successful recently.

Research by (Appaya, 2021) of the World Bank Group studies financial inclusion by focusing on the access, usage, and quality of financial services. Her research also supports the view that Fintech has the potential to lower costs while increasing the speed of and accessibility to finance. The study also determined that increased access and usage would allow for more customised financial services. Further research also reveals that in the past ten (10) years, 1.2 billion previously unbanked adults gained access to financial support (Appaya, 2021). This directly resulted in a 35% decrease in the global unbanked population. It must be noted that although the unbanked population remains high at 1.7 billion, Fintech is bridging the gap primarily through mobile money accounts (Appaya, 2021).

During the Covid-19 pandemic, Fintech has also shown promise in areas such as government-to-person payments (Appaya, 2021). Digital payment methods were used to advance government relief schemes to vulnerable and secluded sections of society. This allowed critical Covid-19 relief funds to be extended to businesses and individuals through cash transfers with minimal physical contact (Appaya, 2021).

The Covid-19 pandemic has also stimulated the DSBD to initiate research into an online directory comprised of Cooperatives and SMMEs. The directory will be used to consolidate all data collected from SMMEs and Cooperatives active in the South African economy (DSBD, 2021). It will categorise them according to sector, size, locality, ownership, and persons living with disabilities (DSBD, 2021) and will integrate key government agencies with SMMEs and Cooperatives. The directory will enable an SMME rating system that considers business viability and will link an applicant directly with financial and non-financial opportunities, which will include business advisory services (DSBD, 2021). In the annual report for the year 2020/2021, the current Minister of Small Business Development, Stella Ndabeni-Abrahams, notes that currently this department is not using any Fintech and is not clear on the number of SMMEs and Cooperatives active in the country or what their financial and non-financial needs are. It is her view that an SMMESA directory will enable the department to accurately document the number of SMMEs and Cooperatives in South Africa at both formal and informal sector levels.

The DSBD also recognises that access to finance remains a key constraint in the development and growth of SMMEs and Cooperatives in South Africa (DSBD, 2021). The department has prioritised increasing access to finance and the coordination of financial investments utilising Fintech. This is noted in the annual report for the year 2020/2021 financial year (DSBD, 2022).

2.6.1 Alternative credit scoring

A credit score is defined as a numerical expression based on an analysis of an entity's credit history to represent its creditworthiness (Cooper, 2020). This score is used by financiers to decide whether a loan will be approved and is also used to assess the recommended interest rate to be charged as well as the credit limit to be extended. Traditional financial institutions, such as banks, have in the past relied heavily on the historical transactional records of SMMEs to assess whether to extend funding to an SMME. SMMEs and lenders have been looking for new ways loan applications can be assessed without compromising the quality of the assessment, which could lead to reckless lending and impairments. A study by Cooper (2020) indicates that there are already alternative credit scoring methods currently being used in the market. American financial service provider, AT&T Capital Corporation, has been using a new automated system for credit scoring and collection. This has resulted in improvements in decision quality and has led to business volume gains of $86 million annually while reducing bad debt losses by $1.1 million annually within a few years (Rossi, Lombardi, Siggia, & Oliva, 2016).

Alternative credit scoring refers to obtaining diverse types of data from diverse data sources by using more contemporary analysis methods to determine credit scores. Recently, the emergence of big data technology and analytics has enabled many new alternative credit scoring initiatives (Rossi et al., 2016). Studies have been conducted to explore the relationship between social media activity, one's body mass index, and individual credit card usage to construct an alternative credit scoring model (Rabuh, 2020). Zhang et al. (2018) have constructed a credit scoring model by fusing social media information based on a decision tree for predicting the default, while Fei et al. (2015) applied textual analysis to social media platforms and found that analysing the opinions extracted from both social media posts and the commentaries on the social media posts surpassed professional advice from financial analysts in terms of credit risk predictions. Fei et al. (2015) also conducted a study that demonstrated the application of the Bayesian classification method to improve the effectiveness of the process. Furthermore, (Gutiérrez-Nieto & Serrano-Cinca, 2019) used profit scoring as an alternative to traditional credit scoring systems, in peer-to-peer (P2P) lending. Their subsequent results showed that the profit scoring system outperforms the results obtained by traditional credit scoring systems. Gutiérrez-Nieto and Serrano-Cinca (2019) employed a Hesitant Multiplicative Preference Relation (HMPR) to construct a credit risk evaluation indicator system for supply chain enterprises. Other studies showed that a very large scale of credit scoring reform can be found in China. Madzimure, Mafini, and Dhurup (2020) report that the State Council of China published a document called "Planning Outline for the Construction of a Social Credit System", a social credit system (SCS) to rate the trustworthiness of its 1.3 billion citizens. The system entails the constant monitoring and evaluation of the daily activities of individuals. Following this, the system then creates a publicly available citizen score detailing whether an individual is trustworthy.

According to (Leong, Sung, & Teissier, 2021 a), Fintech has improved the lending decision-making process and enabled SMMEs to access finance when needed. By doing so, it has facilitated the inclusion of the previously unbanked and had insufficient centralised data available to generate the traditional credit score, but this does not mean that they are not trustworthy (Leong et al., 2021 a). These authors also note that Fintech enables the development of innovative alternative ways to determine an SMME's creditworthiness and provides a unique opportunity for financiers to reach previously excluded borrowers.

2.6.2 On investment

An investment could be defined as the action of purchasing an item (e.g., an asset, share, property, currency, painting, antique, or others) not for consuming purposes, but rather for future wealth creation (Leong et al., 2021 a). Historically, information asymmetry has dominated the investment industry, but the development of Fintech is changing this (Sung et al., 2019) with the evolution of the Internet of things, AI, big data mining, and blockchain since financial information can be recorded and stored at a very rapid rate. This data can then be mined to reveal patterns and trends to predict future trends. The information is then analysed and interpreted to assist in the investment decision or to provide sound business advice to SMMEs (Leong et al., 2021 a). Some examples include using data mining techniques to predict the exchange rate of currency and detecting the content of daily Twitter feeds for predicting stock market fluctuations (Vasilakis et al 2013). According to a PWC report in 2019, Fintech is disrupting the advisory service sector and predicts that up to 74% of insurance companies and 51% of asset management firms will be replaced by Fintech.

2.6.3 Lending

P2P lending is a method for people to lend money to individuals or businesses. According to Htay, Salman, and Meera (2013), the first commercial online P2P lending platforms started in 2005 and note that a key feature of P2P lending is that the mediation of financial institutions is not required in the lending process (Htay et al. 2013). Similar to findings of Leong, Sung, and Teissier (2021), they maintain that online P2P lending platforms can be categorised into two (2) types:

- Commercial: The authors noted that lender who engages in commercial platforms is more risk sensitive. and
- Non-commercial: Non-commercial platform lenders get little or no reward for the risks they are willing to take.

Compared to traditional financial institutions, a previous study (CGFS 2017) suggests that the advantages of P2P lending are:

- Provide access to finance to previously excluded members of society;

- Provide reduced transactional costs to credit consumers; and are much faster and more agile due to technical innovation as compared to traditional financial solutions offered by banks.

Ding et al. (2019) indicate that P2P lenders use borrowers' reputations as a key factor in their lending decision process. Moreover, there is an effective reputation mechanism that can discipline borrowers' behaviour in this type of lending. Earlier research by Freedman and Jin (2008) maintains that loans with friend endorsements and friend bids have fewer missed payments and yield significantly higher rates of return than other loans. Later studies by Yang, Fan, and Yang (2020), which examined investors' fast-thinking patterns on Renrendai, one of China's top P2P lending platforms, found that lenders tend to rush into investing in risky high-interest loans. The introduction of a mobile app that makes interest rates even more salient intensifies this fast-thinking bias. Lee and Lee (2012) conducted a research study to analyse lenders' behaviour within the online P2P lending market and their results showed strong evidence of herding behaviour. Wu et al. (2021) conducted an analysis building on the data from Pai-Pai Lending, the largest P2P network lending website in China, and found borrowers' gender and residential status influence successful borrowing rates. P2P lending can also be found in different forms. For example, social lending is a subdivision of P2P lending. It refers to a form of lending established between friends and relatives via the Internet. Zhang et al. (2018) suggests that social lending can effectively reduce the risk and enhance transaction efficiency. From the P2P aspect, the key contributions of Fintech development on sustainable development are related to financial inclusion and mobilising capital market since the new Fintech enables P2P platforms to connect people, including borrowers and lenders, from different backgrounds. These platforms not only allow borrowers to finance their initiatives but also provide various new opportunities for investors to better use their idle capital. In turn, these contributions help to develop a more diverse global economy.

2.6.4 Payment

Kang (2018) states that Fintech companies are being developed everywhere, especially in the payment market and expect that the global mobile phone payment technology market will reach a value of approximately £2660.87 billion by 2024 (Naghavi, 2020). Many new payment solutions have been developed by building on various innovative enabling technologies, including, but not limited to, using near-field communication (NFC) technology to support the online payment process and incorporating URL (web address) shortening (Hamzah et al., 2019). Moreover, improving the process in terms of convenience, efficiency, traceability, and security is the key focus of the development of new payment solutions in the age of Fintech (Barkhordari, Nourollah, Mashayekhi, Mashayekhi, & Ahangar, 2017). In sustainable development, payment solution is an important topic. There is a strong correlation between SMME growth and mobile payments. Uwamariya, Loebbecke, and Cremer (2020) suggest that the nationwide adoption of mobile payment has been a key driver for socio-economic development in emerging markets. An example of this is M-Pesa, a mobile phone-based money transfer, financing, and microfinancing service, launched in 2007 by Vodafone for Safricom and Vodacom. Its success has become a case study of the potential mobile infrastructures (Maurer, 2012). Moreover, a study by Islam, Muzi, and Rodriguez Luis-meza (2016) found a positive relationship between mobile money use and the probability of a firm's purchase of fixed assets in the three (3) East African countries of Kenya, Tanzania, and Uganda. International trading helps SMMEs, start-ups, and local businesses to extend their distribution channels and reach more customers globally. However, transferring and exchanging money internationally is often a painful and expensive process. The absence of an effective money transfer system limits the growth of many businesses. In recent years, many Fintech solutions have been launched to make the money transfer process simpler, faster, and less expensive. The related technologies include:

- mobile technologies;
- internet of things;
- blockchain;
- cryptocurrency;
- AI;

- data analytics; and
- smart contracts.

For example, Lee et al. (2017) have developed a secure method for supporting money transfer using email, while TransferWise, a UK-based money transfer service launched in January 2011, suggests their charges could be up to eight (8) times cheaper than banks. Other than business purposes, international workers and immigrants are also often involved in money remittance. As stated by Buch and Kuckulenz (2010), worker remittances constitute an increasingly important channel for the transfer of resources to developing countries, while (Chami et al. 2018) suggest that immigrant remittance flows are a source of capital for development. Therefore, the development of related Fintech solutions for money transfer and remittances contributes to the global economy in terms of improvement in resource mobility. The key contributions of Fintech development on sustainable development include:

- Reducing transaction costs;
- Enabling new distribution channels;
- Improving fund transfer efficiency; and
- Enhancing the security of payment processes.

For example, a lack of funding and limited distribution channels to reach consumers are frequent problems faced by farmers in meeting their required level of sustainability. Anshari et al. (2019), therefore, proposes an integrated Fintech payment system that can assist and support agriculture's sustainability by connecting all stakeholders (farmers, landowners, investors, and consumers) by means of a platform.

2.7 CHAPTER SUMMARY

In this chapter, a definition of SMMEs, as well as their importance in the South African economy, was detailed. It also provided a detailed definition of DFIs and their importance to the South African economy. Specific focus was placed on the sampled DFIs of SEDA, SEFA, NEF, and the IDC, noting their product offering and specific mandates that assist SMMEs to drive their objectives in terms of the NDP and NGP. The chapter then proceeded to define Fintech as well as detail its advancements in recent times. Finally, it reviewed empirical literature and existing studies conducted in the field of Fintech and discussed the challenges faced in accessing finance and how this technology may be able to provide unique solutions to these problems. The following chapter will look at the methodology used in the study by focusing on the research paradigm, research approach, and data collection methods that were followed.

CHAPTER 3 RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This particular chapter seeks to detail the methodology followed to collect the data. It justifies the research methods used in the study and clearly describes its primary and secondary objectives. The researcher then provides an explanation of the research paradigm as well as the research approach followed. A description of the sampling design and data collection process is provided as well as the data analysis method used. Finally, the researcher provides details on how the findings or results were reported or synthesised as well as the method utilised to do so. The research topic aimed to explore the effect of information technology in streamlining access to development finance for SMMEs in South Africa. The researcher also consulted secondary sources for the literature review conducted in Chapter two (2); following this, an exploratory singular case study approach was adopted. Semi-structured interviews were then utilised to collect primary data, which was analysed through pattern matching and coding to identify emerging themes.

3.2 Exploratory Research Case Study Approach

According to Creswell (2014), the main aim of an exploratory research approach are to satisfy the desire and curiosity of the researcher to better understand the phenomenon of interest. This research approach is primarily used to establish the possibility of later more extensive studies on a particular phenomenon and to develop tools/methods that could be used in such subsequent studies (Creswell, 2014).

In order to gain new insights and ideas while increasing knowledge in terms of the effect of information technology in streamlining access to finance, for SMMEs in South Africa. The research design allowed the researcher to use a wide range of research methods to investigate the full nature of the phenomenon of interest (Creswell, 2014).

In this research study, the researcher approached the research utilising an exploratory case study method, using a single-case design with ten (10) embedded units. There was only one (1) unit of analysis. An explanatory case study method was chosen as it was the most appropriate to achieving the research objectives. An exploratory study can be defined as one that goes beyond a mere description and endeavours to clarify and explain the reasons for a certain phenomenon (Anshari et al., 2019). Other authors confirm this definition and add that this type of case study is used to explore certain situations in which the phenomenon being evaluated does not have clear or a single set of outcomes (Lucas, Fleming, & Bhosale, 2018). This further necessitated that the researcher approaches the study by using a single-case design with ten (10) embedded units of analysis. The researcher focused on a single context, namely streamlining the access to development finance to SMMEs in South Africa, and, in a single case of the utilisation of Fintech to streamline the access to development finance to SMMEs looking for finance in South Africa. The ten (10) embedded units of analysis consisted of industry experts within the development finance industry, industry experts in the Fintech industry, as well as business advisory and consultancy within the SMME sector.

Due to the nature of exploratory research, general questions are meant to provide an opportunity for further examination of a particular phenomenon (Rice, 2002). This research is suitable for resolving ‘how’ and ‘why’ questions related to specific phenomena (Yin, 2014). The case study provided insight into streamlining the access to development finance for SMMEs looking for finance in South Africa. This was accomplished by examining the key areas of DFIs, SMMEs, and Fintech solutions.

To address the research propositions of the exploratory case study, the researcher formulated the investigative interview questions highlighted in Table 1.5.1 in Chapter One (1), which were supported by secondary sources of information, that needed to be considered for each of the ten (10) embedded units of analysis.

Secondary data was also obtained through a literature review and takes the form of journals, reports, prior studies, and electronic resources, such as organisational annual reports of institutions that operate in the information technology space, development finance, or other study-relevant sectors.

3.2.1 Sampling design

Sampling is a technique commonly used in qualitative research to identify and select information-rich cases for the most effective use of limited resources (Gupta, Manish et al. 2019). It involves the identification and selection of specific individuals or groups of individuals that are especially knowledgeable about or experienced in a particular phenomenon of interest (Creswell and Plano Clark 2017).

3.2.2 Population

A population is any precisely defined body of people or objects under consideration for statistical purposes (Collis and Hussey 2009) Since this was a qualitative study, it was important that participants should be at a senior level of the organisations due to the nature of the research questions. Therefore, the selection of the participants was pitched at a CEO level, or nominee in each of the DFIs was surveyed in this study the population will be the executives or nominees of the sampled DFIs. The DFIs are SEFA, NEF, IDC, and SEDA. Other participants will include industry experts in the fields of financial information systems and SMME finance. This will enhance the reliability of the data from the respondents.

3.2.3 Sample

Collis and Hussey (2009) describe a sample as a subset of a population, and, thus, the selected sample size is relative to the population size. However, they state that ensuring a minimum sample size is not a concern in qualitative studies as it is used in quantitative studies. This is because the goal of qualitative studies to provide more depth and richness by means of the investigation. Blumberg et al. (2014) agree, asserting that in qualitative research, sample sizes are usually small and differ according to the different methods used. Collis and Hussey (2009) advance that the characteristic of the sample is a subset of the population permits the outcomes for the sample to be extrapolated to the entire population. In this study, the researcher has sampled the entire population.

3.2.4 The sampling frame.

According to (Collis and Hussey 2009), a sampling frame includes everyone in the population from which a sample can be drawn for the research study. In the context of this study, it will include senior staff members of DFIs as well as industry experts in the field of information technology. For this study, it was decided to include everyone in the population; thus, the sample size is equal to the population size. That is 10 (10) officials. The researcher also considered the Covid-19 regulations limiting human contact; as such online platforms such as Microsoft Teams were utilised to conduct the interviews to mitigate the risk of infection and avoid contravention of national lockdown regulations. Participation in the study was completely voluntary and relevant gatekeepers identified thirty (30) potential participants in the respective organisations and invite them to participate in the study via electronic mail. However, only ten (10) of the thirty (30) invitations stated that they would like to take part and expressed their willingness to participate in semi-structured interviews. For this study, 10 (10) semi-structured interviews were conducted a via video conferencing platforms, namely Microsoft Teams, due to the COVID-19 regulations to limit human contact.

3.2.5 Data collection

Data collection methods are used to collect data for research (Creswell, 2014). The nature of this study necessitated that a multi-layered approach to data collection be undertaken to increase its reliability and validity. Two (2) data collection instruments were used namely, document analysis and unstructured interviews.

Document collection

Documents collected in qualitative research included all documents related to the research (Creswell, 2014). The following secondary data was collected: five (5) years' annual reports of each DFI to access background information and performance regarding access to finance. The latest financial technology literature detailing current and future trends within the financial technology sector such as reports, academic journals, and online articles were also collected.

Interviews

Interviews are described as guided conversations and are considered to be one of the most important sources of case study evidence (Jamshed 2014; Yin 2014). Interviews can be done in multiple forms, these include structured interviews; semi-structured interviews and unstructured interviews. Semi-structured interviews, or focused group interviews, are most flexible and allow the researcher to better understand the perspective of the interviewees (Daymond and Holloway 2010)

The semi-structured interviews held for purpose of this research, consisted of several key questions that assisted the researcher to define the research questions, but also allowed the interviewer or interviewee to diverge in order to provide additional information or insight that was not expected by the researcher. Semi-structured interviews with open-ended questions were conducted with information technology experts, SMME business consultants, and senior members of the relevant DFIs. These interviews were then used as a primary data collection method for the study. The data collection method assisted the researcher to collect valid and reliable data relevant to the research questions and objectives. Such semi-structured interviews were particularly useful as they offered unique data since interview outcomes were not exactly the same in all participants (Creswell, 2014).

The interview schedule was designed in English by the researcher to accommodate the targeted population. At the commencement of the interview, the researcher explained the objectives of the study and its potential benefits to the SMME and DFI sectors and how Fin tech can enable the optimisation of both these sectors. The participants were then informed that their participation was voluntary and that they were free to withdraw at any time. They were then allowed to ask questions or seek further clarity on the study before the interviews commenced. The researcher utilised non-directive, open-ended questions, which were designed to encourage participants to talk freely about their experiences. The interviews followed ordinary conversation patterns, whereby the researcher simply engaged the participants regarding their experiences and perceptions regarding how information technology can streamline access to development finance by SMMEs in

South Africa. The questions were simplified to avoid confusion and probing was done according to each participant's responses in order to obtain more information on the research topic (Creswell, 2014).

Due to the current Covid-19 epidemic and lockdown restrictions, interviews were conducted and recorded using Microsoft Teams. Permission to record the interviews was obtained from each participant. The interview recordings and interview transcripts were forwarded to the PRP for safekeeping. Thus, the anonymity and confidentiality of participants was preserved. Participants were not linked to particular interviews and no names were mentioned in the interviews.

3.2.6 MEASURES TO ENSURE TRUSTWORTHINESS OF THE STUDY

According to (Elo, Kääriäinen, Kanste, & Pölkki, 2014), validity and reliability of data are two (2) aspects that focus on the credibility of the research findings specifically. These authors were of the view that the research study, as well as its results, must adhere to the requirements of validity and reliability. In the context of a qualitative study, (Venkatesh, Brown,. and Bala 2013) define validity "as the extent to which data is plausible, credible, and trustworthy", and (Yin, 2014) continues to explain that a valid study properly collects and interprets its data to accurately reflect and represent the real world. Consequently, trustworthiness of this study was established according to the criteria suggested by Lincoln & Guba (1981) as quoted in (Brink, et al., 2012). The following table discusses the determination of the trustworthiness of this study.

Table: 3.2.6. Strategies to ensure trustworthiness

Criteria	**Strategies to ensure trustworthiness**	**Application**
Credibility	Prolonged engagement	• Adequate time was spent with the verbatim transcription.

Indicates confidence in the truth of the data and the interpretation of the data. (Brink, et al.,2012)	Triangulation	• Individual interviews with the different participants were used. The researcher repeated back the quotes of participants to verify and prevent misunderstanding.
	Member checking	• The transcribed data were confirmed with participants, all participants confirmed that the transcribed data were a true reflection of the interviews.
	Peer examination	• Discussion of the process and findings was held with experienced researchers. • Consensus discussion between the researcher and an independent qualitative co-coder regarding the development of themes occurred.
Confirmability Congruency of data in terms of accuracy, relevance or meaning (Brink et al., 2012).	Reflexivity	• Reflective notes were kept
	Audit trail	• The unprocessed data (voice recordings) the documents related to themes, development of categories, consensus and promoters' discussions were kept as evidence in case an audit needed to be conducted.
Dependability Consistency of data over time (Polit, & Berk, 2008)	Thick Description	• A detailed description of the research process followed was provided • Digital recording was verified by the researcher and the supervisor
Transferability Application of research in	Accurate description	• A dense description of the research process and results of the study was provided.

similar circumstances (Creswell, & Plano Clark, 2017)		• A detailed account of the focus of the study, the researcher's role, the participants position and basis for selection was explained.
Authenticity The extent to which the realities of the participants are described Creswell, & Plano Clark, 2017)	Detailed description	An emic perspective of participants was provided

3.3. DATA ANALYSIS

Data analysis methods are used to analyse the collected material and involves the process of inspecting, cleaning, transforming, and modelling data. It supports decision-making while drawing conclusions (Creswell, 2014). For qualitative research, the most commonly used methods are:

- Coding;
- Analytic induction;
- Grounded theory;
- Narrative analysis;
- Hermeneutic; and
- Semiotic (Creswell, 2014).

The data collected was analysed using the coding approach, in which data is presented as being collected with the meaning of the respondents and interpreted through the lens of the researcher. This method is appropriate since the data is very technical in nature and contained in-depth knowledge provided by the sampled respondents. As such, it was important for the researcher to accurately present the data as given by the respondents. Data coding was utilised following axial and selective coding to ensure that the same themes were assessed across the four (4) DFIs and industry experts, and, as far as possible, relevant questions were raised with each of the participants. Use was made of the same questions (or similar) questions to establish any differences based on performance differentials and effectiveness indicators. This effectively addressed the research question of “How to streamline the supply and demand of development finance to SMMEs by DFIs in South Africa by incorporating relevant available information technologies and alternative funding methods”.

Pattern matching is the most desirable analytic strategy in case study research and is implicitly limited to the testing of propositions (Yin, 2014). Pattern matching was also utilised by the researcher and is a method of analysis that also enhances internal validity. The researcher also used pattern matching to link the primary data to existing literature in order to determine whether a certain variable was present in each case.

It has also been argued that pattern matching may be used to enhance internal validity, and involves qualitative but logical deductions (in accordance with an empirically based pattern) being logically compared to a predicted pattern (Baškarada, 2014). Pattern matching is the technique adopted to interpret the case study findings and to link the data to the propositions. Such logic, as previously mentioned, compares an empirically based pattern with a predicted pattern; if the empirical and predicted patterns appear to be similar, the results can strengthen the internal validity of a case study (Yin, 2014).

The review of documents was also undertaken with a focus on the mandates of the different DFIs, their product offerings, and developmental impact. Document analysis provided background information on the performance and internal environment of the DFIs, especially the performance of the DFIs concerning:

- approvals of loans and advances;

- disbursing of funds;
- performing and non-performing loans; and
- non-financial support mechanisms.

At the end of each financial year, DFIs prepare annual reports that include audited annual financial statements and audit reports from external auditors. These annual and audit reports were reviewed to assess the extent of access to development finance for SMMEs.

The semi-structured interviews were then transcribed verbatim by the researcher from the saved recordings and the transcripts were labelled with codes known only by the researcher who kept them safely in folders and labelled them appropriately to make it easy to retrieve them if necessary.

To further analyse the data collected, the researcher used an independent coder who was experienced in data analysis, which assisted in enriching the trustworthiness of the study (Creswell, 2014). The researcher made available to the coder, Tesch's method of data analysis to ensure that the coder and the researcher's data analysis was the same. The transcripts that were given to the coder were kept anonymous; this ensured participants' confidentiality.

In analysing data, the researcher used Tesch's eight steps of data analysis as stated below:

- The researcher selected the transcripts one by one and read them independently to gain meaning from the information, writing down thoughts coming to mind to allow a holistic view.
- After reading each transcript thoroughly, the researcher arranged similar topics in groups by forming columns labelled major topics.
- The researcher then coded and wrote the codes next to the appropriate segment of the text. After that, the researcher observed the organisation of data to check if any new categories or codes were emerging.

- The researcher found the most descriptive wording for the topics and converted them into categories. The aim of this was to reduce the total list of categories by grouping topics together that relate to each other. Lines will be drawn between the categories indicating the interrelationship of categories, therefore, identifying commonalities.
- A final decision was then made on the abbreviation of each category and the codes were arranged alphabetically.
- The data material belonging to each category was then put together in one place and preliminary analysis was performed.
- Recoding of the data was done where necessary (Creswell, 2014).

Coding by the researcher and the independent coder was conducted simultaneously and after completing the data analysis, both parties sat down to discuss the themes and sub-themes that emerged from the data in order to reach a consensus. The themes and sub-themes were also discussed with the supervisor. Soft copies of the data were stored in folders, which are access-controlled and in the researcher's possession (De Vos, et al., 2011).

3.4. REPORTING

The findings of the research were reported according to the coding approach of data analysis and data were presented as collected from the opinions of the respondents. However, the interpretations and recommendations were based on the researcher's deductions. The data collected from the interviews was also analysed by the researcher using the thematic synthesis method. This method is often used to analyse data in primary qualitative research (Scheider et al. 2014) and follows followed a three (3) stage approach, which includes free line-by-line coding of the findings of primary studies, the organising of these 'free codes' into related areas to construct 'descriptive' themes and develop 'analytical' themes. (Scheider et al. 2014).

In the next chapter, a detailed description of emerging themes will be presented, and these themes and theories discussed. Finally, recommendations and conclusions are offered.

3.5. CHAPTER SUMMARY

This chapter provided insight into the exploratory case study design methodology, conducted through the adoption of a single-case design approach with ten (10) embedded units of analysis. It discussed in detail the case study's questions, propositions, and units of analysis. A detailed description of the pattern matching technique was provided, which was used as the logic, linking the data to the proposition. Finally, the criteria for interpreting the findings were discussed.

The following chapter presented detailed findings of the analysis of data performed. Finally, the chapter details how the data were synthesised to answer the research topic to "Explore the effect of information technology in streamlining the access to development finance for SMMEs in South Africa". In the fourth chapter, the researcher will analyse and interpret the data collected. The chapter focuses on the trustworthiness and reliability of the data. The chapter also assists in answering research questions as outlined in Chapter three (3).

CHAPTER 4 RESULTS AND ANALYSIS OF THE STUDY

4.1 DESCRIPTIVE ANALYSIS OF EMBEDDED UNITS

This chapter focuses on the analysis and interpretation of the data collected by means of two (2) methods and the empirical results and analysis of the study are discussed. Firstly, the analysis and interpretation were done by utilising data coding following axial and selective coding. Secondly, an analysis was conducted using pattern matching to link the collected primary data to the preposition. Through these methods, Chapter Four (4) assists in answering the primary research question as outlined in Chapter One (1), namely "How to streamline the supply and demand of development finance to SMMEs by DFIs in South Africa by incorporating relevant available information technologies and alternative funding methods"?

4.2 DESCRIPTIVE ANALYSIS OF EMBEDDED UNITS

As outlined in Chapter Three (3), the case study made use of an embedded unit design approach in which the focus was on the ten (10) interviews . The semi-structured interviews took place between October 2020 and February 2021and were recorded on Microsoft Teams and transcribed by a third party for increased reliability. The embedded units consisted of ten (10) respondents, consisting of industry experts in the field of SMME finance, senior employees within the sampled developmental finance institutions, as well as experts within the financial technology sector. The interview transcripts, together with the interview recordings, were forwarded to the PRP, a permanent staff member of the NMU Business School, for safekeeping. Thus, the anonymity and confidentiality of the interviewees preserved. Participants were not linked to any particular interviews and no names were mentioned; this is consistent with the ethics clearance for this study. The embedded units highlighted below are a representation of the descriptions of the respondents. The full transcripts for each interview with embedded units are available in Annexure 1.

Embedded unit one (EU1: a Fintech specialist based in Johannesburg, South Africa, the CEO of his or her organisation. The semi-structured interview was conducted on 13 October 2020 via Microsoft Teams.

Embedded unit two (EU2): an information systems specialist and programmer. The respondent specialises in providing and programming information system solutions for SMMEs, state-owned entities, and private companies. Based in East London, South Africa, he or she is the CEO of an organisation. The semi-structured interview was conducted on 14 October 2020 via Microsoft Teams.

Embedded unit three (EU3): an SMME business consultant, specialising in accessing finance for SMMEs based in East London, South Africa, he or she is the CEO of an organisation. The semi-structured interview was conducted on 06 January 2021 via Microsoft Teams.

Embedded unit four (EU4): a Fintech specialist and solutions manager for a large insurance company in South Africa based in Johannesburg. The respondent is a senior manager in this organisation. The semi-structured interview was conducted on 05 January 2021 via Microsoft Teams.

Embedded unit five (EU5): a director of a private consultancy firm that specialises in business advisory, financial advisory, due diligence performance and funding origination for SMMEs. He or she is based in Johannesburg, South Africa. The semi-structured interview was conducted on 06 January 2021 via Microsoft Teams.

Embedded unit six (EU6): a senior manager at one (1) of the sampled DFIs based in Port Elizabeth in South Africa. He or she specialises in providing finance to SMMEs from R50 000 to R15 000 000. The semi-structured interview was conducted on 08 January 2021 via Microsoft Teams.

Embedded unit seven (EU7): a director of a private consultancy firm that specialises in business advisory solutions specifically in electronic banking and information solutions. Previously, he or she was employed by one (1) of the big four (4) major banks as a project manager specialising in Fintech solutions for banking in Africa. The semi-structured interview was conducted on 05 January 2021 via Microsoft Teams.

Embedded unit eight (EU8): a senior credit manager at one (1) of the four (4) major banks. Specialising in providing finance to SMMEs from R1 million to R100 million, he or she is based in East London South Africa. The semi-structured interview was conducted on 08 January 2021 via Microsoft Teams.

Embedded unit nine (EU9): a senior manager at one (1) of the sampled DFIs. He or she is based in Port Elizabeth, South Africa and specialises in providing finance to SMMEs from R1 million to R1 billion. The semi-structured interview was conducted on 08 January 2021 via Microsoft Teams.

Embedded unit 10 (EU10): a senior manager at one (1) of the sampled DFIs. He or she specialises in providing finance to SMMEs from R250 000 to R 75 000 000 and is based in East London, South Africa. The semi-structured interview was conducted on 14 January 2021 via Microsoft Teams.

4.3 QUALITATIVE FINDINGS OF EMBEDDED UNITS

The main research question of the case study research as outlined in Chapter One (1) was addressed by collecting the primary data. and, presenting and organising the research questions, as stated in Table 1.5.1. The transcribed interview responses of each embedded unit of analysis are organised under the related research questions below and then pattern-matched in Table 4.6.1. The researcher proceeded to link the remaining data to the proposition by using the pattern matching technique in line with the exploratory case study research methodology. All 10 experts were asked various questions, depending on their expertise and the industry in which they operated. The questions and the responses are provided below with a copy of the responses attached in Annexure 1. The embedded unit responses corresponding with the research questions are as follows:

RQ 3 What information system is your organisation currently using and what are the benefits and shortcomings of the system?

EU1: "Yeah, I mean… You know, some of the banks are very advanced in terms of supporting SME's and one (1) of the banks is FNB. I don't bank with FNB in my business but the people that are SME's that bank with FNB are very praising of it saying, they have tech tools that actually help SME's to simplify their lives. For example, you can actually go into your FNB app and print your revenue and expenses. It automates your financial statement basically, one (1) of the apps within the FNB space. I think for me that is a very powerful technology because whenever you are applying for funding, what the funders want is your financial statements comprising of your income statement, your cash flow statements, and your balance sheet, and the FNB app provides that technology at the press of a button. I think that for me, is very important. I also understand that there are some financial institutions or tech companies that actually offer, not necessarily similar technologies, but business intelligence, applications, and tools that could actually be used by SME's to do focused accuracy. For example, from their revenue point of view, Power B Point is one of those. Those are some of the examples that I can think about. I can't name the FNB app that a lot of small businesses use to press or to generate their financial statements, but I know that these could be very helpful for SME's if they want to apply for this financing."

EU3: "So, we use a lot of the CSD system, a supplier database system that the government has developed. The government developed a very efficient system which is the CSD however, how they use it is different. In CSD you get any company's or entity's information in real-time. So, from the fact that you want to develop the company and if it is up to date in terms of annual returns, if the tax clearances are up to date and valid, who the directors and shareholders are and all the information we are required to put as part of the application you get as one single document. So, from that document, you can do a lot of your analysis. For example, if an SMME says "I am a government supplier", there is a section there that can tell you exactly how many orders or how much business the person is doing with the state. So, you would find that this one system can tick a lot of boxes but you'd find that a lot of people either do not know how to access this information or do not want to use it in the appropriate ways. So, you will find that instead of using the system, people are still relying on a paper-based system which now takes longer for the finance to be developed and because of the paper-based system, things can fall through the cracks. You would find that now you have a situation where I can't find the ID and those are things that can delay access to development funding."

EU4: "Well, we are actually about three (3) years, into building a transactional bank. It didn't start off like that, it started as just a pocket where an individual (I work for a rewards company but I won't mention which one it is), can get cash back in some pockets but through the years it has grown and now we run a fully-fledged transactional bank where you can transact, you have a card, and it is a bank effectively. It is for individuals; we do not support businesses, but that same tech can be used for businesses. I think where tech can play a role in this is the transactional part of it, not necessarily access to funding. I do believe that even these businesses that I have just spoken about, which are offering micro-loans to other businesses, can link and it is all online. There is also another business called Mix that has a platform where investors and these businesses that are vetted, and debt funders can meet on that platform. You can then as a debt funder or as an investor, choose which business you want to invest in or lend money to. So, I think it can be very simple and you can do everything online that way you can access your apps."

EU6: "We do have an information system that is more geared towards reporting more than the actual application process. As with any system, it would store the information as it should but I don't think that benefit is more on it giving a reporting than the system actually assisting in the application process."

EU7: "CSD is a good platform but it is limited in the sense that it is an ad-hoc platform, there is no activity in it. So, I would say maybe if there could be an additional suggestion box where if an individual or small business or an administrator for one of the government institutions could submit that there is a gap that we see in this institutional organisation. Someone can tend to it and see if it is indeed a requirement, then there can be some sort of tender process built around it and released onto that platform. For now, it is very reactive, you hope and wish…and being on CSD myself, I often get tender requests where I know this is way different to what my business specialises in, even though I have captured in detail what my business does. Being that details are selected in a check box, it should be easy enough for a system to collect that information and say for tenders that have this requirement, you send them to businesses that have selected these specialities. So, it's very reactionary and it is almost like a black box. You submit your information but the only purpose it serves, for now, is from a governance perspective."

EU8: "Ok, there are various platforms. I work for First Rand for example, which is a massive group. So, part of the group and the main funding entities or subsidiaries within First Rand are obviously FNB and West Bank. The West Bank side uses an online platform where guys can go and get pre-approved for funding, that's on the SMME side. Now we need to obviously define what an SMME is, in terms of turn over but obviously, there are various segments in there. For the smaller ones, what we call a growth section, is more online-based. You can go on your app and apply for finance instead of going into a branch to speak to a banker or anything like that. In the higher turnover space, you have the same options but if you've got a banker then you can go via your banker and West Bank, for example, has what they call scoring where essentially, they score you for your funding based on your financials or based on your bank statements. So, there are a lot of scoring options where you don't have to go into a branch and deal with a particular person. So, I think that is where we are using it quite a lot. It's mass production and can score you from property finance to a car, to an overdraft or a business loan, based on your bank statements or financials, without doing any judgemental credit (that's what we call it)."

EU9: "The system that we use is SAPP, in terms of assessment, SAPP we rarely use for our purposes. We use it mainly to store information for our business partners. As opposed to using it for assessment purposes because our assessment process is still predominantly manual, so our due diligence process is done on-site and it is still a very manual process. We don't really use these systems with complex AI built into them to help us assess, which is really something we have been looking at. I know there is a company-wide digitisation process currently taking place to try to look exactly at that aspect of our business and our assessment process. Obviously, our assessment process is critical in us processing funding applications quickly and efficiently, which is an important aspect of financing in this sector. So, there is some focus on it, but at this time, it is still predominantly manual, and we only use SAPP for storing information and such type of things. But, I think what I have seen in the market, a lot of institutions now especially in the private sector use IT to really help them become more efficient because you have to be efficient in this sector and process applications as soon as possible."

EU10: “We use CRM which stands for “Customer, Relationship Management system”. That is the backbone of what we have in terms of IT infrastructure. Then have a system called Credit Ease, which is a loan management system to calculate interest rates or interest that we charge to the client, and we use it to monitor the repayments. It’s like an input table if I may put it that way. It’s Credit Ease, which adjusts interest rates as they change and issues out statements automatically to our clients. The shortfall of this system though is that it is not a live system. You cannot go into the system and check what the interest rate was yesterday, it is always a month behind. So, if you go and check a statement today, it will show you as of 31 December 2020. I have noticed that many DFIs that I have interacted with, have a similar system and, I find it problematic in that the technology exists today so that we can check today, what the outstanding balances were yesterday. Just like if you were to go to your own bank and request a statement. They will show you information as at today so, as DFIs we need to move towards being on par with the banks in terms of having up-to-date and live loan management systems. Where we are lacking also is that we do not have a live portfolio management system, we rely a lot on excel. And you know, excel is not a great tool for this purpose of managing portfolios. So, if you want to know where most of your investment is in terms of sectors, whether it's petroleum or CSR or property and so forth. We don’t have a system linked to Credit Ease that can, at the click of a button, produce this information where you would see where your money lies and then be able to make informed and strategic decisions based on that. Those are some of the areas that I feel are lacking in our organisation and I think, it’s something we are going to work on going forward. The drawback of excel is that it’s garbage in, garbage out. It depends on whoever is inputting the information. So, it can be manipulated easily, susceptible to human errors, so if someone is trying to put a million and they put an extra zero, all of a sudden you have 10 million and that information would be incorrect. I hope that makes sense… So, that is the drawback of relying too much on excel. It’s a huge risk for an organisation of our size, to be relying on excel when it comes to portfolio management. But, for loaning systems as I said, we use Credit Ease”

RQ5: What is your perception of the following Fintech? Alternative credit scoring; P2P lending; M-Pesa.

EU1: “Yeah, I mean I think if you look at the country where we are you know and certainly, where we are going, considering where we are coming from. The traditional credit scoring models still play a critical role in the financial industry in advancing loans or credit to not only SMMEs but individuals. But if you look at the type of businesses that we run as SMME’s, it actually renders the traditional credit scoring system useless and its prejudice, the new technology businesses that we are running. I mean, I will give an example, a company like Uber for example, or Airbnb. These are companies that if you had to follow a traditional credit scoring model, a bank would not give them money because they are not profitable right… but you do have venture capitalists who are pumping money into those businesses because they are not looking at what the business is doing now or the profitability of the business over the last two (2) or three (3) years. They are looking at the network effect and the future value of what that business could achieve, and the traditional credit scoring mechanisms are not designed for that. They are designed for your credit history based on your correctability and your revenue and all those kinds of things. So, my perception when it comes to alternative credit scoring is a positive one. I think it’s a step in the right direction and it will help disruptive business models or business technology that are coming up. To be able to participate in the market of getting funding without being prejudiced by your traditional credit scoring systems. I mean, P2P lending, definitely this is the way to go. You are an entrepreneur, I am an entrepreneur, I see potential in your business, and we can do the cross-lending through equity and collaboration and all those kinds of things. I think it’s also great, I think it is something that is not very big in South Africa.

But as time goes on, I think it is important to adopt that as more entrepreneurs. Mobile technology, from a payment point of view, and you are using M-Pesa as an example. M-Pesa failed in South Africa, but it did very well in other countries, I am sure you are aware of that. Most of the technology companies like MTN do have all these mobile payment technologies like your MOMO and all that. So, these are playing a huge role in guiding not only entrepreneurship in the tech space but also the transfer of cash. We want to live in a cashless society because paying is also high risk. So, these mobile payment technologies play a big role in driving different behaviour in different places. And I mean, especially for people who are immigrants working in this country and they want to send money to their families in their African countries. These mobile technologies are playing a huge role in driving that economic revolution so to speak. So, my perception regarding alternative technologies is positive and they are a step in the right direction."

EU2: "I think for me with credit scoring, I always say this to people. At times you might be able to afford something, but a bank can tell you your credit score is low. Even though you know that you can afford it. So, I think for me with SMMEs to be able to get funding, the credit scoring has to be kind of fair. M-Pesa, for example, is a good application I won't lie, but, did it reach the target market? Because we are not in the States, for example, we still have problems with technology, and I think Covid-19 has actually woken up a lot of people. If you can look at the people who are in business, you will find that most of them are very technologically disadvantaged. The guys who are working with electricity and your construction guys, they are very reluctant to use technology which is where the bulk of your SMMEs are and I think there is something that needs to be done. Trying to mobilise things like M-Pesa, for example, to be downloadable when you go to your google chrome and have a pop-up or get and send an SMS on your phone that will take you straight to the database or give you more tools that are available."

EU3: "Alright, let's start with the first one (1). I am a big advocate of alternative credit scoring. Let's take a scenario, you find that there are certain people who all they know is being an entrepreneur. With entrepreneurship, you will find that there are a couple of things… you do business with the state, people don't pay you on time and as a result, now you pay late with your own creditors and now your credit score is bad. It's not that you don't pay but it's the way or how you pay. Sometimes you pay more, sometimes you pay less due to the fact that you have not received any funds. Now, the system itself, is what works against you because it's not that you don't have an intention to pay, it is the fact that one creditor has not paid you. And alternatively, you will find that with the banks, when you say transactional history, it also goes back to what they do as well. I have had a situation where I had to wrestle with one (1) of the banks asking them, “With all the systems that you have, especially with debit orders where they can hold off until such a time that you have money, why can’t you hold off on bank charges until some money comes in?” as a result we got them to the point where they said, “We will take it up with higher management” because it was making sense to them. I am saying that now, you are giving us a bad record and when you are an SMME and your bank statement is reflecting, it will have a negative purely because of bank charges. So, something as small as that could hinder someone’s credit scoring. So, it’s of those things where alternative credit scoring would… if there was a for SME’s and entrepreneurs could be given their own scope of how to be scored, it would make a better fit. P2P lending works to a certain point. The biggest problem with P2P lending is the return on investment for the lender and security. Unfortunately, nowadays, it is difficult for anyone to just lend money because they will end up not returning or having too many creditors because they will always be waiting for some cash flow from their clientele.

With the mobile payment technology, what it has done is give access to banking technology for a lot of people who did not qualify before however, with the mobile payment technology, what I have also done is that certain people are just being paid via this mobile [technology] and they have no banking history. Which goes back to the credit score, how do you now say this is the history of this guy because you are being paid using mobile technology and there are no statements or anything that can show that this guy is able to settle his obligations in this way.”

EU4: “So, let me start with the alternative credit scoring and P2P lending. It is important. As I said in the beginning that when you go to traditional financial institutions, banks, or other financial institutions which are run by the government, there is a lot of bureaucracy and credit scoring is part of it. Unfortunately, if you are going to be an entrepreneur and you are going to run a small business, chances are that you have quit your job and your credit scoring for a lot of South Africans who do that is not going to be great. Even for people who are now on their second, third, or fourth attempt at running a business and have failed, which is fine and normal for these kinds of people, are they now written off forever? So, you do need something, and I guess it is called alternative credit scoring, where someone will look at your situation differently and can tell that this person is in this situation because of this and take your situation with its merits.

EU5: “I think that that’s where the market is going. So, I will immediately talk about your P2P. There was another one (1) that we partnered with and these guys were based in the Western Cape, I have just forgotten the name of the Fintech but, basically, that is where it is going because there is obviously a large demand for finance and then on the supply side there are probably private individuals or institutions that are willing to put money up for some kind of return. And, I think that that’s where it is going in terms of the P2P, a lot of FinTechs are popping up where people looking for finance, on the one (1) side, can access and people who have excess money and are looking to fund some type of project, I think that is definitely where it is going in the future. Obviously, all of this comes with the developments in tech.”

EU6: “Look, I think the alternative credit scoring should be able to allow for a quicker decision to be made, especially for the smaller businesses who do not have the luxury of time and resources. In most cases, your smaller businesses want the decision and the money in a relatively short space of time so, ideally, the alternative credit scoring should be able to facilitate the approach where the decision and money are released to the businesses in a much quicker period. Then in terms of your P2P lending which you said is your business-to-business lending, again one would have to assume and think that there would be some analysis done by the lending business to the other business. So, again it will then be driven by the appetite of the lending business which probably would then be driven by their appetite towards the other business. It definitely works in the instance where both businesses share the same interest and both businesses share the same appetite. Obviously, one for venture lending who trusts and believes that the businesses they are lending their money to will make it happen. Again, one would assume that it should be accompanied by some sort of support for mentorship for formal enterprise development because it’s from business-to-business, not a funding institution to business.

Then on your mobile payment service, I don't think there is enough noise made about the benefits of M-Pesa, especially for small businesses in terms of cash management and in terms of abiding their banking profile with the relative institution. So, I still believe there is quite a big space for noise to be made in as far as benefits for businesses to be using those payment platforms. Which, again one of the benefits would be low cash reserves kept, because mostly those small businesses are one (1) person-owned businesses and everything is cash… but, as I said earlier, there is not enough noise that is made about the benefits of payment technologies for small businesses."

EU7: "I think they are the future. From P2P lending, there is a project that I am busy with for my business, on that. There are constraints in terms of when peers borrow money from each other on a platform, if the lending is recurring, they need to register as a credit provider. I think P2P lending and money transfer platforms, are the future of Fintech, no doubt about it. I myself, am busy in that space even though I don't have something that is out there in the market now, but I have been working on it for the last two (2) years. It's definitely the future. If you look at the market in Africa, in 2012 only 13% of Africa was banked. If you extrapolate that and take people who have got access to banking so that meant that 87% of people didn't have access to banking and beyond that, people who don't have access to credit because banking is one (1) thing, but credit is another. When you want access to credit you have to have an address, bank account, and credit record. The majority of South Africans and Africans do not have those three (3) things all at once. In South Africa, there are a lot of people who live in rural areas and informal settlements where there are no addresses, there are gardeners, domestic workers, and wage earners, and they don't have a record of employment. So, there are all of those constraints from a consumer's perspective. And then if you expand that to the expense of banking, people go to the bank just to withdraw their money but if there was a way where they could bank from home because the fees are one (1) thing but the travel expense to go and bank is another. If you link that with smartphone tech, (which is sitting at about 70% the last time I checked, so a lot of people have got smartphones) people do have the ability to bank digitally but the solutions just aren't there for them. So, there is a big gap in that market, it is the future, and people want convenience."

EU8: “On alternate credit scoring: “Ok, yeah. It’s something for me that would be a lot of work because in that particular situation there is a lot of performance risk. If you are not relying on ITCs and stuff like that and relying purely on these guys’ ability to perform for a particular contract… for example, let’s say contract funding. There is a lot of performance risk so your due diligence on whether these guys can actually do this thing and going into the company and understanding the controls that are in there, I would assume you have to do a whole lot of work and actually deep diving into the whole operation of the entity. Whereas in a more mainstream where you use transactional history and things like that, it might not because you don’t have to go into so much detail. So, I would assume that there is a lot of due diligence that goes into that particular process otherwise, you are taking a shot in the dark.”

On P2P lending: “I think we call that… I forget the name… But anyways, I don’t think there is enough of that, to be honest with you. Within the market, I don’t know I guess it might be social issues and lack of trust, but I don’t think there is enough P2P lending within the market because everyone is out to get something out of the deal. So, everyone is still looking at mainstream banking or mainstream ways of raising funding, or maybe within families; but a business-to-business in my experience, there is not enough of that.”

On mobile payment technology: “Ya, I think that is a great thing. I know, for example, we are driving -which is in Africa, it’s going to be rather difficult- but obviously, in the future, there is talk about a drive for cash to disappear and for everything to be electronic. But, in Africa and our economy as well, I think this is very new. Something like that in the Transkei for example, you would never get rid of cash in the Transkei, or you will die trying. Those platforms are still very new in our market. There is a lot of development going on in the background but where we are falling short maybe, is upskilling the user and the market in terms of security with these things and just building trust in them, until people start using them more. I think that’s where we also fall short.”

EU9: “I think each one (1) has got its own objectives that it is trying to achieve but obviously the key is efficiency. From what I have seen, I have been really impressed with the type of capabilities that these systems have. To the point where I think professionals within this space would get intimidated in terms of these capabilities in that it makes one feel redundant because these systems can really do anything. So, yes there will always be that human aspect needed but these types of systems can even, based on the kind of information that you input, give you the [different] types of risks. So, it is really amazing what kind of systems are out there and gone are the days where one has to input functions on excel to calculate ratios. Those can be done readily, and one has the ability to just focus on interpreting the information. I mean this thing even writes your report for you, it’s really amazing what capabilities we have out there.”

EU10: “In terms of literacy, I don’t think our market is advanced to a point where we can say we will rely on all these alternative financial technology systems. But, in terms of credit scoring, I think for your advanced institutions like your NEF and SEFA, IDC, these are some of the things we should be exploring and using in our day-to-day activities. The P2P lending, my view is that it won’t make a huge change because if we are talking about Silicon Valley which is an advanced place where people come up with new IT ideas and there is money floating around. It is easy to do P2P, one just comes up with an app and then you speak to the next person who is available to finance further development or to finance the commercialisation of the app. In such a vibrant market it is easier because there is lots of money floating around. In South Africa we don’t have “rich uncles” that can lend you money for a business, you still have to speak to a financial institution if you are trying to start something new. Even though it’s an alternative, I don’t think it’s going to move the middle much. Mobile technology such as M-Pesa, I think it is almost dead in South Africa and I doubt they still use it in Kenya and Tanzania. So, I don’t know if that will make a huge dent or inspire alternatives in the future, but…I can’t say we must not come up with mobile technologies that will assist people. We the eWallet which is doing well but I don’t think they will do big things.”

RQ6: What is your perception of the said information technologies; can they streamline the supply of development finance to SMMEs?

EU1: “Yeah, even though I have a positive perception of these technologies that we have discussed, but if you look at the way the development finance houses operate, they are suffering from what is called amnesia. They are not moving with the time Bongo; they are still using the old traditional models of funding you know. “Give us your financial statement”

EU2: “Definitely, both the demand and supply should increase. In terms of the demand, more SMMEs will then have visibility of it, which means they will be more aware instead of currently the selected few. Then, in terms of the supply, yes the supply should increase because there will be more people in the demand so obviously the supply should then increase.”

EU3: “Yes, I do believe so, I believe that we need to think out of the box now. I also believe that with technology comes efficiency, the more we automate certain processes, the easier it will become and the simpler it will become for people to access this development funding.”

EU4: “So, let me start with the alternative credit scoring and P2P lending. It is important. As I said in the beginning that when you go to traditional financial institutions, banks, or other financial institutions which are run by the government, there is a lot of bureaucracy and credit scoring is part of it. Unfortunately, if you are going to be an entrepreneur and you are going to run a small business, chances are that you have quit your job and your credit scoring for a lot of South Africans who do that is not going to be great. Even for people who are now on their second, third, or fourth attempt at running a business and have failed, which is fine and normal for these kinds of people, are they now written off forever? So, you do need something, and I guess it is called alternative credit scoring, where someone will look at your situation differently and can tell that this person is in this situation because of this and take your situation with its merits.”

EU5: "I think they can. If you look at your traditional organisation, it's really just an organisation that has funds specifically to finance individuals, businesses, or projects. What the FinTechs are doing is creating a platform and allowing access to a whole lot of different potential funders to access that individual so, I think it creates an opportunity for a wider supply of finances."

EU6: "Yes, the short answer is yes, in that in the banking sector in South Africa is driven by a lot of presenting evidence. If an institution has to give you the money you need to show them that one (1), you have some form of track record and you have some form of performance record. Particularly with the M-Pesa where you are able to say "this is my presentation in the form of money that I have made, in the absence of your traditional financial statements. So, for smaller businesses, such technologies can streamline the information required by the DFIs which would then inform those institutions how they would streamline their supply towards those businesses. So, I do think there is a benefit in the adoption and use of those technologies, which again I said that in South Africa, a lot of institutions require certain information that a lot of small businesses do not necessarily have or do not necessarily record. But, if there is an embedded system that pushes them to recall the information, then I do think there could be some benefits and it could streamline the supply of funding."

EU8: "Definitely. I think development finance is a rather difficult and wide range. In development finance, there are a lot of start-ups for example. Whereas existing entities usually start with their banks. To do that purely based on an online application is rather difficult than thought because obviously, the due diligence involved in a start-up is different when you have historical numbers to actually look at. So, along the line you will always need human intervention otherwise you are going to have a big black debt book if you just streamline things and finance start-ups on online applications, or, online scoring of some sort. So, from what I have seen, I might be wrong. There are a lot of guys with dreams, that go to DFIs so, so if you have historical financials and you have got a bank account then I assume your first point of call is the bank. I guess DFIs provide cheap money as well. It’s a difficult one for technology to fully be operational in a DFI, I would like to see how they would put it together. I guess that is where AI would come in.

EU9: “Again, even there, a huge role but, there seems to be quite a bit out there in terms of supply of information technology. If these systems could be adopted by DFIs, it could change the perception of SMMEs on the assessment processes of the DFIs and could increase demand and people having confidence in the DFIs to meet their needs in terms of access to funding. That could really increase demand because some people give up without even trying because they know that they are going to take three (3) months before they give you an answer on investment decisions. So, I think those could improve the perception that people have of the DFIs and thereby increase the demand for DFI funding quite significantly.

EU10: “They can, there is huge potential. If you think back about our own organisation where we say, we rely too much on legal advisers to start new agreements from scratch, every time there is a new transaction. So, if you replace that with a technology system that will manage and produce accurate legal agreements with the relevant information to the deal, at a fraction of the time that a legal adviser would have spent typing that document out, the productivity increases, and you can help more people. We have that resource which is the legal adviser, who is available to advise on other things as opposed to sitting down for two (2) to three (3) days, and even sometimes a week, writing one (1) legal agreement. So, I think technology can be used to streamline the process and make it shorter. Secondly, if you remember I mentioned something about Credit Ease which is not a live system and it’s not useful for managing portfolios. If the decision-makers were to have a system where, at the press of a button, it could tell you how much is invested into petroleum, how much is invested in property student accommodation and so forth; the decision-makers at EXCO and even at board level would find it a lot easier to make a strategic decision about where the organisation needs to go. So, these are some of the benefits that I see if we are using relevant and good information technologies, that can assist in managing a portfolio. We would be able to make the decisions quicker and release some of the payment resources to do other things such as deal sourcing and so forth, as opposed to having this person bogged down writing a legal agreement for a week. So, there are some benefits we can derive by using reliable information technologies and we can be in a position to finance more deals, instead of doing 60 deals a year, that means 60 agreements written by legal advisers… maybe we can produce double that if we were to rely on information systems."

RQ7 What is your perception of the said information technologies; can they increase the demand for development finance to SMMEs?

EU1: "Definitely, both the demand and supply should increase. In terms of the demand, more SMMEs will then have visibility of it, which means they will be more aware instead of currently the selected few. Then in terms of the supply, yes, the supply should increase because there will be more people in the demand so obviously the supply should then increase.

EU3: "Not really, I think the demand is high now purely because there is no access. You will find that once people have access to certain things, your biggest problem with the high demand is the financial management of these SMMEs. There is a big problem where people are not able to manage their finances, so they fall into the trap of reoccurring debt. If we had to employ financial technology in development finance, it would also be able to streamline these regular lenders to see what our alternative solutions can offer them. Instead of them always being the ones being lent, how do we assist people in terms of managing their finances I always believe that, you want to access finance when you are moving into the next step. So, if you are still at the same level to gain yourself finance the first time, it means you made a profit and that profit is supposed to sustain your business until you want to expand. Then you need finance again. If you are still on the same level I don't understand why, unless for unforeseen circumstances like Covid-19 and so forth. I believe that in a theoretical environment, the demand will not increase."

EU6: "I don't think that they would necessarily increase the demand but, I do think they would increase the awareness in terms of the availability of supply. I am not sure if they would increase the demand because, I am of the view that demand is not necessarily driven by any technologies, just by the needs of the business. Perhaps maybe it could to some degree where the businesses would then say, this is the streamlined process that would allow me to access such money. Maybe there would be that kind of appetite, but I do not believe necessarily that it would be the overall demand."

EU7: "They will both increase because from a demand side if there is an easier way to access funding then more people will use that process because currently, you have to submit so many documents, there is so much information that you need to fill in and a lot of it is duplicated from one (1) page to another. So, people become discouraged, it's a tedious process and whenever you apply for funding again, you have to fill in that information again. So, definitely from a demand side, if you fill in something once and just amend it as and when situations in my business improve or change, that will definitely increase in demand as well as make me as the person who is applying for development finance, more accepting to the process."

EU8: "Ya, definitely. The easier it is to apply for funding, the better. That is a no-brainer but obviously, on the DFI side, it's managing the quality of those applications and assessments. The easier it is, the more people will apply and that is where I guess you have to keep your wits about you because you could be getting a lot of chance-takers in that process as well. But, what can you do?"

EU9: "Certainly, they have a huge role to play. One (1) of the key pieces in the development financial institutions has been efficiency, we take too long to decide. I think the big value in these systems add is to really cut down on that because SMMEs and especially existing businesses that find themselves in distressing situations. They don't have days and weeks to wait and they have very little room for error so if there are significant delays in getting finance, those could result in businesses shutting down very quickly. Also, in terms of those that are in the expansionary stage or the start-up phases looking for opportunities, these opportunities shouldn't wait. The biggest criticism of DFIs has really been the time it takes to make these investment decisions. So, if these technologies could be adopted, they can make a big difference in terms of getting access to this funding and I think that is where the private sector institutions have differentiated themselves. In that now it takes hours, they talk about 24 hours or 48 hours to make decisions, especially for businesses that are low risk. There is no need to go through a whole due diligence process, which is what development funding institutions need to do. Whether it’s a low or high-risk business, the process is predominantly the same and there is always that thing that says, because we don’t really rely on security, so we have to satisfy ourselves, then the business will be viable. So, this informs why they go through all of these very stringent assessment processes for SMMEs. But, I mean, technology can take away a lot of that, especially on the clerical task that I have mentioned, where you get a system that you can quickly input financials into a financial model, which that alone can take up a day or two (2) if you do it manually. So, it’s such small things that can really make a difference in the end and cut down the time it takes to make investment decisions efficiently.

EU10: “I don’t necessarily think that it would increase the demand because the demand is already incredibly high. It’s just that I don’t think that the supply is able to meet the demand because of the constraints that we have discussed already. So, I certainly think that it would increase the happiness of the beneficiaries because if we were to improve the supply side and make it easier for people to access the funding, then they start businesses and you might find less irate and critical entrepreneurs because some of them are very critical of government initiatives. After all, they believe that government does not help and instead puts stumbling blocks in front of them when they come looking for finance. So, I don’t know if it would increase but we would find a much happier and more vibrant group of entrepreneurs that are able to access the funding pickup. It will certainly improve jobs because the more sustainable business that gets started or bought by entrepreneurs, more jobs will be created and so forth, and all these other nice things will come.”

RQ10 What are the constraints in the South African market that limit the adoption of these technologies?

EU1: "For me, I see a number of issues. Firstly, it is connectivity, I mean these technologies operate on bundles, right? You have got an app that needs to be downloaded. Downloading an app consumes a lot of data, and even when you have downloaded the app, just logging into the app consumes data. So, connectivity and broadband are big issues that is causing huge constraints. The second issue as well as education and education on how these technologies can simplify people's lives. The third one is the language. Most of these apps are developed in English and not everybody in South Africa, I mean the population that speaks English in this country is lower."

EU2: "I think again one of the biggest constraints would be, especially on the developing of it, the support. The support I am talking about is in terms of financial and infrastructure."

EU3: "So, the biggest development financiers in the country right now are government parastatals or government subsidiaries. So now they come with all the bureaucracy of being a public state-owned entity. Now with these public state-owned entities, they love paperwork. You look at companies like Lulo funding, their applications are 100% online, and you can track your application without ever interacting with someone. So, until such a time the main DFIs are able to say that they are walking away from the paper-based application form, then we will still have these constraints."

EU4: "Yes, so strangely I did some research on the tech industry last month and the problem is infrastructure, in South Africa. You can have the greatest solution but if you go to Kromehoek, Kamagato where my grandfather is from, it is going to be useless because there is no connectivity."

EU5: "I there are a couple of things right. Let me start from an organisational point of view. One (1), I think a lot of these projects are pretty technical, so it is really around, do we have the technical skills to develop these types of platforms? And they cost a lot of money. Knowing from my experience of having been in the bank, these projects cost quite a bit of money and then obviously your executives have to prioritise these types of projects versus a whole bunch of other projects going on in the back. That is one (1) of the big challenges that a lot of organisations are facing. I think two (2) are around the fast ever evolving things around tech. If you develop something now, then in a year it could be outdated. So, it's really just about a lot of organisations trying to keep up with the current trends and obviously, all of that encompasses quite a lot of research development and resources into it, so it is quite a bit of money. From an SMME side, what I have picked up is around one (1), a lot of security. A lot of people, when it comes to information systems and all of that, security becomes quite a big conversation because now people are concerned about their information and all of that. The other thing is that looking at SMMEs and the technology itself, do they know much about using technology to try and access funding and all of that? So, I think there is a big education piece that needs to come into play there as well because what I find is that a lot of guys or SMMEs don't know how to access funding through digital channels, even though there are some platforms available where people can go and apply, but they wouldn't even know where to start. I think those are probably the key things I can think of for now."

EU6: "Funny enough, I don't think that finances are the constraint, when I say finances I mean in terms of the developing or acquiring such technologies, I think the issue is more on the model of how the institution is structured from a decision-making point of view. A lot of it, but not all of it, is person orientated and its committee driven which means a number of people have to congregate to assess and make a decision. So, I don't think it is the technology but rather the business model itself. It certainly does not allow enough room for these technologies to be applied and used in making the decision. Perhaps if the business model and strategy could be changed, then there would be a great need for such technologies to be applied and implemented. Perhaps a starting point would be on our entry point loans of R50 000, where these technologies could be gradually introduced. Like paying these small fees as a learning curve until the applications then increase to the larger boundaries."

EU7: “From my side, there are no limitations. If we are talking about my business and the ability to develop these technologies”

EU8: “Within my organisation, I honestly think we have been winning innovation awards worldwide, it’s what the company is about. There is a massive innovation drive within the company so, the drive is there. The only thing is obviously people because everyone might think that people might start losing jobs. So, it’s getting the employees within the company to buy into it and to upskill and change their skillset, so they can be part of the solution and not be scared to lose their jobs. I think that is the biggest challenge within our organisation, otherwise, the drive for technology is there… it’s massive.”

EU9: “It’s really difficult to tell because as I was saying to you, right now we are currently going through a process of trying to determine…. I think one (1) of the things is cost. Maybe these can be viewed as quite costly to procure and implement, and also, it’s not only the cost of the CAPEX but the cost of maintaining these systems and the cost of maintaining the backup of these systems. I guess there is also the worry about the security of this information. There is cyber security crime at the moment. But I think also it’s just that mindset shift that people struggle to get through. Us marrying to the old way of doing things, you just need new people who are willing to have that mindset shift that says “guys, let’s just embrace technology.” You really don’t have to do a deal that is worth R1 000 000.00 in the same way that you do a deal that is worth R100 000.00 because people think they are managing risk, but at the same time, you need to strike a balance between efficiencies and risk. So, I think, that mindset shift is critical because as I said before, this thing of thinking technology is here to take our jobs, because some people feel really intimidated. But I guess, one can embrace technology into their system and still be able to maintain their job numbers but at least we will be able to do things much quicker to reach out to more projects.”

EU10: “Sigh… there are a few. Number one (1) is that sometimes it is difficult to get buy-in from top management. So, as a person who sits on the ground dealing with applicants of dealing with other DFIs, you get to see a lot of things out there. You meet someone with a very nice technology that you think could benefit the organisation and you take it to the decision-makers that are responsible for acquiring these new technologies and if they don't believe in it or you find people are comfortable using the ancient systems that we are using currently, then you find that there is resistance in terms of changing and moving to new technologies. So that is one side of it, the buy-in from top management is difficult to obtain.

The other side has got to do with financial resources. Some of these IT systems are very expensive so the cost to acquire can sometimes be very expensive or sometimes it is cheaper, but you find that you would rely on the manufacturer of the system for the maintenance. So, the maintenance contracts become very expensive and the update you find that if they give you a system to use today, you could use it for two (2) years then they tell you… we have the same system but not it is version 2.0 and it is going to cost you another million rands. So, maintenance and updating the system becomes very expensive so which is another constraint that is there.

The other one (1) would be, you might find that the whole organisation has to be trained on the new system and the cost of training all these people becomes enormous, such that it becomes a deterrent when deciding. So, for me, those are the top three (3). Lack of buy-in from top management, the new cost of the new systems including the maintenance cost, and the cost of training the users."

RQ11 How can the application of information technologies assist DFIs to fully fulfil their role as catalysts of economic development, job creation, and poverty alleviation?

EU1: "I think for me that is very important these DFIs can see the value that technology can play once they bring applicants into their pool. So, I think it's important that we learn, technology if used properly, could be a catalyst and a driver for job creation in this country through SMMEs."

EU3: "It's about turnaround time. As I indicated earlier, there are private lenders out there who within three (3) days, they let you know if they are going to fund you or not. With the big guys, it takes two (2) to six (6) months for you to know if they are going to fund you or not. With the turnaround time, a lot of changes and a lot of jobs are at stake. You get a project that would have employed 200 people but doesn't have the finance. The finance eventually gets approved and the project has been taken away from you. You find that the whole thing is about time. If we have become more efficient using technology and the time between application approval or decline is decreased, then at that your economic development and your poverty alleviation would be addressed properly."

EU4: "Do we have a Fintech problem or do we have a problem with red tape? Because even if you never have to see a person and you do everything digitally, you still have to spend "45" hours on your computer filling in these forms. Its defeats the purpose.

It can make access easy and it can make repayment easy so that we can take many things in the chain of transacting digitally and we can take the different features and build something that can make it easier. I think there is a lot of room for creativity in this space and I don't think it is being done now, honestly. There is room for people to be creative and say, "How can we take these and put them together to make life easier for small businesses."

EU5: "I think it is probably two-fold here as well. So, one is access to information. In terms of financial institutions, one (1) of the key things is understanding your potential customer. Fintech could play a role in enabling these institutions to have a good view of customer behaviour and patterns for the organisation to make better decisions. But, I think what it also does is create, on the demand side, an opportunity for organisations to look at opportunities from a wide variety of sectors because on the demand side. What I am trying to say is, what Fintech would do is open up the market a lot more which then would enable your organisation to gain opportunities or have a look at opportunities across a larger range of sectors."

EU6: “I think the approach would be more of a pull system because often in the South African market or context, everything is sort of a push system that society has to shed themselves into what they are given. Perhaps the DFIs, in order to fully play their role, need to better understand the market and the dynamics and take a pull approach that says, let’s get from the market as to what is it they want, and the challenges they are facing. Versus currently where I would give a client a list of 20 things to bring me before I can help them. Then the question there is, do I understand the client’s market for me to even request such information? Because if I don’t understand his market, I would then be taking a blanket approach. But, if I understand his market I would then be able to understand what sort of information I need to ask from him because his particular market or market space does not provide such information. So, I don’t think that for the technologies to be fully effective in assisting the DFIs to play their role, they would need to be structured in such a manner that they use more of a pull factor and not to push to extract information on how the market is behaving.”

EU7: “You know, Fintech can serve multiple purposes, more than providing a core solution to streamlining and managing the process. So, it can play a role of marketing, information sharing to all the suppliers so that if the government has a repository with contact information, all those businesses can have visibility of what is out there and Fintech can play a role in that.”

EU8: “I am not sure what the current set up is right now, but they need to make it easier for people to apply for funding. That is basically it, and that is what technology will do. It can make it easier for people to apply for funding and to track their applications if that is possible, to stop the back and forth.”

EU9: “Yes, I have spoken about this quite a bit. For us, I think the biggest value add would really allow us to focus our energies on risk litigation as opposed to making sure the formula works for instance or that you have calculated the formula correctly. The system could do that for you and you could rely on the system to do the clerical work and focus on you mitigating risk and really reducing your time of doing that, which will improve the perception of the organisation itself. And also, through that, be able to reach out to more people because easer you are able to utilise your resources much better, in that way, and therefore you are able to spread your wings and assist more people. Which will create jobs and result in better economic development and poverty alleviation. So, there is a big role in. We must just embrace it."

EU10: "The simple answer would be streamlining processes. That's the "how" part because what we go through is that, we receive an application at a regional office level, we register that application on our system called CRM and then we load it there. Once we have loaded, assessed, and ticked all of our boxes on the checklist, we then write a five (5) page document making a recommendation to head office saying, there is a deal here can we look at this? Then head office will go to the system and check and if they need additional information, they will come to us and say give us this additional information. By that time, it's already a month and a half down the line. If they are happy they will say ok, we are coming down for DD on this date and maybe they set it two (2) weeks ahead and then after that DD then they write a paper which goes to the credit committee for a decision. You are already now two (2) and a half month down the line, depending on the size of the deal it could go to more than one (1) committee. So, you have already spent a three (3) month process and you don't even have a legal agreement at that time. If the deal is approved then it will be allocated to a legal adviser who is probably sitting with other files for transactions and legal agreements that you are working on, and yours become the fifth and it will sit there until he/she is done with the four (4) that were on their desk at the time they were allocated the new transaction. Once they get to yours they will take another week to write legal documentation so now you are four (4) months down the line.

So, what I am trying to demonstrate, by making this example is that using information technologies would definitely assist DFIs in streamlining the process and making the turnaround time shorter. The consequence of that is that it takes less time for people to access the funding and can start their businesses sooner, operate them sooner, jobs are created now, and once these businesses do well and generate profit, the employees together with the owner of that business's lifestyle will improve and poverty is alleviated there… and it becomes a vibrant economy. So, the issue that I have is that process takes so long that by the time the person accesses the funding, chances are for some of them the window of opportunity is long gone."

RQ 12 How can Fintech be used to integrate all stakeholders from both the demand and supply side of development finance to eliminate information asymmetries?

EU2: "Yes, I think Fintech can integrate all the stakeholders and I think what is important is basically, more analysis has to be done. I think one of the biggest challenges in IT is coming up with the technology without understanding what the requirement is among SMMEs. What is important is that we first need to map the needs and requirements because once we have the requirements it is easier for you to come up with a solution. After all, now, you develop a solution and it only ends up reaching 5% instead of 100%. So, I think what is important here, before you understand anything, you have to know what the needs are, so basically what it does in terms of your question around credit scoring, we will integrate with Home Affairs to validate the identity of the person who is saying "I have this business." It will identify, if they are still alive or not because of fraud, then will go through other databases to validate that they have no criminal record and be able to do those kinds of background checks. With credit checks, we will do the normal check of the person with no judgements. Whether the person has 400 or 300 as a score it won't matter as long as there is no criminal record. So that is what I am doing, and I intend to complete it by the end of the year."

EU3: "Earlier on, when I started I spoke about a government central supply database. The reason that I alluded to the central supply database is that it was a system that was designed to take all the information and it puts it under one hub (if I can put it like that). So, at some point, there has to be a technology that says these are the lenders and this is what they are looking for so that all applicants can do one application which can go to all the different lenders. So, someone [lender] can say, you don't fit my criteria then I am out and the system filters that. Currently speaking if an SMME is looking for finance, they have to do separate applications for all these institutions and you will find that 90% of what they are looking for is the same but it is always the 10% here and the 10% there. The running around, the copying, it's costing someone who does not have money and that's the reality of it."

EU4: "Yes, to align the market needs to the market supply. So, the intention of the funds is where the problem is because, if I have a business that the IDC does not fund then it does not matter what I do, they will not give me funding. The mandate is where the problem lies. Maybe tech can help in feeding their intelligence to know that now they should pull back in funding movies and fund manufacturing or construction infrastructure. Maybe in that leg tech can help but, if they have a mandate and they are sticking to it, I don't think it is going to help a small business if it doesn't change."

EU5: "Look, I think the keyword here is information and I think if you look at all the stakeholders in that value chain, information is key. It's about having the right type of information and consistent information and I think the Fintech and their platforms are in a good position to enable that and obviously enable all the stakeholders to dig into one centralised platform which would then create consistency across the board."

EU6: "The first step would be the correct schedule of information, consistent evaluation of information that is available, and changes in the information set up. For example, if my organisation has changed the approach in certain provinces then we need to inform our partners and other role players in our space and say look, we have changed our approach, this is how we are structuring, and this is the direction that we are taking. This should then allow Fintech to integrate the new information into their system which would be used by a number of role players in the space like SARS, the banking system, and all of those things. So, I am thinking the best approach would be the correct schedule of factual information, a consistent update of information, and linkages within the various systems to allow the role players to have access to each other's information while protecting confidentiality so that at any given point if any of the role player in the chain requires such information, they are able to access a system that would be able to access live information. So, I think that access to each other's information systems and provision of accurate and factual information would be a good start because Fintech would then be able to have a global view of what's happening in the market space and the role players. I think one of their responsibilities is to be able to provide factual information to the South African SMMEs and they can only do that if they have the correct information before they can pass it on. So, I do think such an approach would eliminate those [information] asymmetries.

EU7: "So, obviously there needs to be a partnership with all the stakeholders involved. So, for example, if we start with the one (1) that is most important, Fintech companies can attack them one (1) by one (1), especially from a tax perspective. CSD is already integrated with SARS but I am not sure if the integration is fully automated, but when you submit something at SARS, it feeds through to CSD which tells you this company is in good standing and can operate. `So, that is a start and it is something that exists already, so it says that there are integration points that your different organisations can supply to a Fintech that can create a platform that consolidates all information and is used as one (1) single point of entry. So if you can have one (1) interface that I can submit my information on and it then feeds all the integration points, your SAPS, SARS, suppliers, and, for example, in a municipality, if as an IT manager I can get all the suppliers in my area that meet certain criteria to supply services and know they are in good standing, I can target a certain tender to a group of suppliers instead of just shooting in the dark."

EU8: "It goes back to what I just said now… But, also if on the demand side, for example, DFIs are part of the government. They need to petition the government to get their house in order and to give them access to Home Affairs and all these places so that the paper process can be easier. So that is just one (1) part of it. Then obviously the documentation required, where a client can go online to supply their documentation then they can't move forward if they have not supplied all of their documentation and then maybe allow them a way to track their application (Your application is now with so and so or at this point) or for example, something that FNB is moving towards where you would be able to talk to your business banker… because I can already talk to my banker on my app but now businesses will be able to send their information and talk to their business banker on the

FNB app, no more emails and all of that stuff. Upload everything on the FNB app, and I do everything on the FNB app, I talk to them on the App. We are going towards a platform-based future basically, similar like they like to say on Uber, both the user and the driver are on one platform. You can talk to the guy directly when he is on his way so, it's all platform-based and that is where I know we are going. We are moving towards that. It's that type of thing. Maybe get a SEFA app or DFI app or something along those lines to make communication easy. I don't know if that is viable based on just the pure number of people but… That is just an example."

EU9: "I think it can play a critical role because through IT, we are rightly saying, in no time you can from SARS and all this information because technology has that ability to store data and these systems can talk to each other, which can cut out the manual process that we get to do. If one can use technology to integrate information from SARS, banks, and DFIs, which could mitigate a lot of your risk assessment process and give you comfort with regards to the vetting process."

EU10: "I think the starting point would be who is going to be the host of all that information? If the government were to answer that question for us we would have a much easier job. At the end of the day, if you are going to create a system that links all of these stakeholders, it needs to be hosted by someone and someone needs to be accountable for all of that information. The idea that we have a database that links all the different stakeholders is a great idea because what it does is allow a potential investee to go to one central point or one database to look for information. So, at the click of a button, they get what is needed. If NEF wants a tax return from SARS there can be a button on the same system, that links the person to SARS to get a list of all that is required to get a tax return, that would make the job of the funders and other stakeholders a lot easier and would eliminate the information asymmetries that you are talking about. But, I think the first question for me would be how much does it cost and who will be the one responsible for hosting such a database. But, the idea is a great idea and I think it is something that needs to be explored by all the relevant government departments, together with the DFIs. As long as it's done correctly because there is nothing more irritating than going to SEFA for funding and they tell you, you need a tax return. Then you must drive to SARS to get one (1) and stand in the queue for 14 hours only for them to tell you that you did not bring your proof of residence. Now you must go and get the proof of residence in order to come back and apply. I think that could be avoided by having this central database where irrespective of where I am in South Africa, I will know what is required and hopefully be able to submit everything electronically instead of knocking on their doors and queuing for hours on end."

4.4 SUMMARY FROM RESEARCH QUESTIONS ANSWERED

As detailed through the above views of the sampled industry experts and the documented evidence provided, it can be collectively summarised that there is a need for information technology such as Fintech in the development finance and SMME sector in South Africa. It is evident that a need exists to streamline the current application process to access development finance for SMMEs looking for finance. There is a significant misalignment between the information required by DFIs to supply finance to SMMEs and the information SMMEs have in their possession to apply for finance. There is evidence that Fintech can provide a possible solution by integrating all stakeholders from both the demand and supply sides of development finance. Evidence suggests that the integration of stakeholders would provide a platform on which critical information can be shared easily and is readily accessible. It is evident that Fintech can be utilised to record market data that can, in turn, be used by stakeholders for decision-making to accurately understand the dynamic market trends and needs of the SMME market. Through a better understanding of the SMME market needs, DFIs can employ a pull approach in response to market needs instead of the current push approach in which the SMME market needs to respond to the product offerings of DFIs. It is evident that timeous access to relevant information reduces bureaucracy, cumbersome administration/clerical work, and the duplication of processes, consequently, is speeding up the decision-making process and ultimately assisting in streamlining access to finance.

There were also several issues highlighted that constrained the adoption and use of Fintech as a solution to the identified problem statement. These include the high financial cost of the development and maintenance of Fintech, insufficient infrastructure such as connectivity in remote areas to enable the use of available Fintech; the training and education of DFI officials, SMMEs, and consumers on the use of Fintech; the buy-in of the relevant authorities for the adoption of Fintech to effectively change the business model currently utilised was also noted as a significant limiting factor.

4.5 PATTERN MATCHING

As mentioned, one (1) common strategy to bring dissimilar data together in case study research is the pattern matching technique (Yin, 2014) Such techniques subsequently identify and compare the patterns evident in the data against one (1) or several hypothesised patterns, known as the proposition, developed by the analyst through their familiarity with the field (Almutairi, Gardner, D, Mccarthy, & D, 2014). Pattern matching techniques enhance, strengthen, and contribute to the internal validity of a study and result in the confirmation of the propositions (Yin, 2014).

4.6 LINKING THE DATA TO THE PROPOSITION

After completing the interpretation of the data, Yin (2014) recognises the importance of effectively organising the data. A database enables the researcher to track and organise data sources, which, in turn, improve the reliability of the case study (Baxter and Jack 2010; Yin 2014). Through the pattern matching technique, the following table links the collected primary data to the propositions illustrated in Figure 1.7.1. The interview questions and answers are transcribed in Annexure 1.

The following table, Table 4.6.1, links the primary data obtained from each embedded unit and interview questions to the various propositions identified.

Table 4.6 1: Linking data to the preposition

Preposition	Embedded unit	Interview question
P1 SMME’s	2,3,4,5,7	10,11,12
P2 DFIs	1,3,4,5,6,8,10	10,11,12

P3 Fintech	1,3,4,5,6,7,8,9,10	3,5,10,12
P4 Access to finance	1,2,3,4,5,6,7,8,9,10	3,5,10,11,12
P5 Alternative credit scoring	1,2,4,5,6,7,8,9,10	5
P6 Investments	1,2,3,4,5,6,7,8,9,10	10
P7 P2P lending	1,2,4,5,6,7,8,9,10	5
P8 Alternative payment methods	1,2,4,5,6,7,8,9,10	5
Researcher's own construct 2021		

4.7 SUMMARY FROM PATTERN MATCHING

The primary data collected presented various patterns, which linked directly to the propositions proposed in Chapter One (1) and illustrated in Table 4.6.1 above. This table illustrates the gathered primary data linked to the propositions P1-P8 for each embedded unit of analysis by utilising pattern matching. The interview question or questions that provided positive correlations with the propositions are highlighted per embedded unit.

4.8 CODING

4.8.1 Introduction to coding

Creswell (2012) defines coding as the procedure of fragmenting and classifying text to form explanations of and comprehensive themes within the data. It is the process through which the researcher gathers or 'tags' content related to a specific theme or idea (Nowell, Norris, White, & Moules, 2017). It aims to reduce the data by sorting the information transcribed into manageable and meaningful transcript segments with the aid of a coding framework. For the purpose of this study, the voice-recorded interviews were transcribed by the researcher as well as a third party (Nowell et al., 2017) to increase accuracy and validity. The themes arising from the unstructured interviews were then recorded as research study objectives.

The researcher followed Tesch`s approach (De Vos, 1998) in analysing the transcripts and field notes. This included the following steps:

a. The transcripts were read through carefully and the researcher took note of important ideas.
b. All identified themes were listed and arranged in terms of major themes, sub-themes, and sub sub-themes.
c. Each topic was assigned a code that was written next to the appropriate piece of transcribed text.
d. Categories were created by describing themes more clearly; the total list was reduced as much as possible by grouping similar categories.
e. A final decision on the abbreviation for each category was made and these codes were alphabetised.
f. The data material for each category was assembled; a preliminary analysis of the information and comparison between the different interview documents was done.

4.8.2 Coded work

Research Title: Exploring the effect of information technology in streamlining the access to development finance for SMMEs in South Africa.

Problem statement: In South Africa, access to finance is hindered by the bureaucracy that is present in the application process. DFIs require a great deal of information from SMMEs to assess their finance application this is on the supply side. On the other side of the coin, SMMEs require a great deal of information about the DFIs to assess their product offerings and assess which is suited to them, this is on the demand side.

Primary objective: The primary objective of the study was to identify information technologies that are available in the financial sector today and explore how these technologies can be integrated into DFIs and SMMEs to streamline access to finance.

Secondary objectives: Conduct an in-depth analysis of information technologies that are available in the financial services market: Availability of Fintech and how information technology can improve access to development finance and eliminate information asymmetries between DFIs and SMMEs. Investigate how the application of information technologies assists DFIs to fully play their role as catalysts of economic development, and poverty alleviation as prescribed by the NDP.

The three (3) objectives of the study were utilised to formulate the following themes, namely: information technologies in the financial sectors; access to efficient technology; demand for development finance; supply of development finance to smmes looking for finance; challenges/constraints with the supply of developmental finance; information technology systems being used by DFIs to assist them to play a catalyst role for economic development; how fintech can be used to integrate all stakeholders from the demand and supply side.

4.8.3 Themes

Theme 1

Theme	Sub-theme
1.1 Information technologies in the financial sectors	1.1 Status quo regarding the availability of information technologies in the financial sector.

Sub sub-theme

This varies according to the different companies indicated by participants/documents reviewed. Information technology is available in only certain government-owned institutions ,such as IDC, SEDA, SEFA, NEF, Gauteng Propeller, National and Provincial Treasury, and ECDC. In the private sector, FNB has a good information system; for example, its mobile app that allows both the bank's clients and its officials to interact with, access, and submit information, submit finance applications, and receive instant responses regarding the outcome of funding applications. However, it has limited availability in that not everybody has access to Fintech or technology. Furthermore, people are not aware of the technology available and users aren’t knowledgeable about how the system works. Therefore, they may use inappropriate means to access the system or use the available systems inefficiently.

Theme 2

Theme	Sub-theme
2. Access to efficient technology	2.1 Limited access.

Sub sub-theme:

Government vetting technologies are only available in certain areas, such as Johannesburg or Cape Town. Certain SMMEs are located in underdeveloped areas with limited infrastructure, such as electricity and connectivity, to enable their use of technology. Available technology utilised for record management requires constant human intervention for data collection. There is a lack of budgeting for continuously developing and updating tech solutions as well as a lack of qualified programmers to develop necessary platforms and a further lack of education allowing people to fully utilise this technology.

Theme 3

Theme	Sub-theme
3. Demand for development finance	3.1 Demand varies between stages of operation of SMMEs. 3.2 Demand is high: mostly from previously disadvantaged groups (those from townships and rural areas).

Sub sub-theme:

Demand may be high in relation to start-up businesses due to high unemployment and moderate in the expansion of already existing business. The high demand is driven by low to no historical wealth accrued from previous generations among previously disadvantaged groups. Furthermore, it is driven by the previous regime in that some people were denied the opportunity to participate in the country's economy. Demand is also driven by a lack of employment opportunities and the drive to advance the entrepreneurship. In addition, it is driven by the aim of assisting to bridge the gap of unemployment and by people who have ideas of establishing businesses but do not have start-up funds.

Theme 4

Theme	Sub-theme
4. Supply of development finance to SMMEs looking for finance	4.1 Limited supply of development finance. 4.2 Bureaucracy and red tape limits supply of development finance to SMME's looking for finance.

Sub sub-theme:

There is a perceived lack of commitment and inefficiencies by developmental financial institutions to provide funding. Furthermore, there is a cumbersome and complicated application process that has to be followed in order to apply for funding.

Theme 5

Theme	Sub-theme
5. Challenges/constraints in terms of the supply of developmental finance	5.1. Governmental bureaucracy. 5.2. A high number of people requiring funding. 5.3 Not enough funding. 5.4 The process followed in accessing funding. 5.5. A lack of support required to manage existing financial bottlenecks. 5.6 Duplication of document requirements. 5.7 Inadequate sharing of information with target market.

Sub sub-theme:

Procedures and processes put in place as requirements to access funding.

Increase in several SMMEs looking for funding.

Protocol that must be followed.

The rules that govern accessing of funds

The number of forms and tedious process in filling in forms

Lack of uniformity in terms of how the government has set up the funding companies

No proper systems to check balances that would inform the decisions to supply funds

Tricky ways of accessing information about systems in place

Lack of infrastructure

Exclusions due to preferences of funders for certain businesses

Available tech systems not providing all portions of functions to enhance access

No financial support provided on managing finances needed

Many things overlap in terms of processes of access

Poor communication to the communities

Theme 6

Theme	Sub-theme
6.Information technology systems being used by DFIs to assist them to play a catalyst role for economic development	6.1 Current credit scoring system. 6.2. Time spent and effort to fill forms leads to delays in obtaining funding. 6.3 Lack of skills and resources to manage data and to make data intelligence.

<u>Sub sub-theme</u>

The system does not favour many entrepreneurs due to factors like: stalled payments from customers beyond their control.

Current scoring credit system more concerned about assessing returns on: investment rather than viability of business.

Daunting formal documentation A lot of scary hurdles (not defined/ explained).

Lack of authenticity of information supplied by SMME’s.

Poor understanding of market needs.

Theme 7

Theme	Sub-theme
7. How Fintech can be used to integrate all stakeholders from the demand and supply side	7.1 Ensuring improved efficiency. 7.2 Improve competencies in use of technology. 7.3 Automation to make it easier for people to access funding. 7.4 Elimination of asymmetries. 7.5 Development of shared platforms to manage information. 7.6 Establish who will host and manage shared platform.

<u>Sub sub-themes</u>

Discontinuation of old fashioned / obsolete systems for finance application assessments

Length of time a business takes to access finance.

Perceived preference by government funding institution to use paperwork rather than technology.

Lack of knowledge about existing technology.

Lack of competency in operating the existing technology to obtain developmental finance.

Develop competencies in use of technology to improve efficiency in applying and enhance speedy approval of applications. Lack of automation cause delays in obtaining developmental finance and leads to loss of opportunities.

Too many people having to go through the same application forms.

Should employ more “pull” rather than “push” factors in accessing funds for example: Should better understand the business market, should understand the dynamics of the business, should understand what the clients want, should understand the challenges they face.

Ensure a central data base to access a lot of information required.

Have schedule of factual information.

Have linkages with various systems and sources of information to integrate all stakeholders to create partnerships and shared access to information.

Provide possibilities of accessing information across financial institutions.

Be consistent in retaining correct information and consistent with evaluation of information.

Ensure consistent evaluation of changes of information by uploading all new information in apps provided. Determine the best host in terms of all the information and identify stakeholders to account for all the systems used.

4.9 CONCLUSION

Chapter Four (4) addressed and provided insight into the propositions in the case study research effort. The purpose of the chapter was to report the empirical findings and effectively organise the data. This was achieved using two (2) methods, namely pattern matching and coding. Chapter Five (5) below will now provide the conclusions and limitations of the study.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The goal of reporting the case study is to describe the study in a comprehensive manner. Baxter et al. (2008) and Yin (2014) suggest that it is important for the researcher to describe the context in which the phenomenon occurred/occurs as well as the phenomenon itself; they continue with the importance of returning to the propositions and suggest the comparative analysis as a method for reporting the case study. The empirical findings of the study and the insights gained from the research are interpreted, organised, and comparatively evaluated according to the propositions, after which recommendations are made based on the findings. This chapter concludes with proposals for future research and general conclusions.

5.2 SUMMARY

This exploratory case study research study was concerned with exploring and describing a solution to optimise access to development finance by SMMEs. As outlined in the problem statement in Chapter One (1), access to development finance to SMME's has been a topic of discussion by academics and policy makers for many years. In the effort to provide access to finance to SMMEs, the South African Government has established institutions to support them and has provided them with adequate resources, both financial and infrastructural to fulfil their mandates. As highlighted in Chapter three (3) DFIs were created to ensure adequate funding is extended to portions of the economy that are underfunded. It has also been highlighted (in Chapter Four (4)) through the transcribed embedded units and the respondents that there is a significant misalignment between the stringent lending criteria of the big four (4) commercial banks (Standard Bank, ABSA Bank, FNB and Nedbank) and the needs of the SMMEs. The purpose and mandates of the DFIs, as noted in Chapter three (3), is to bridge the gap left by the commercial banks by providing development finance to SMME's to stimulate economic growth. However, there SMMEs have limited access to finance due to long processes, information asymmetries, and outdated funding models. This study sought to explore how to address this funding gap and optimise access to development finance for SMMEs looking for finance by using financial technologies (fintech).

The main research problem, as formulated and presented in Chapter One (1), was presented as follows: a result of current long processes, information asymmetries, and traditional funding methods used within the current DFIs in South Africa, SMMEs face a challenge in accessing crucial development finance.

To adequately address the research problem, specific areas of interest were identified, which, consequently, included the following: SMMEs, DFIs, Fintech, access to finance, alternative credit scoring, investments, P2P lending, and alternative payment methods. The research framework illustrating the above-mentioned areas of interest was provided in Figure 1.6.1 of Chapter One (1). The literature study was comprised of a single literature review that was outlined in Chapter Two (2). From this review, the chapter discussed the challenges faced in accessing finance and how Fintech can provide unique solutions to this problem by reviewing empirical literature and existing studies conducted within the field of Fintech.

The primary research objective of the research effort, as stated in Chapter One (1) was to identify information technologies that are available in the financial sector today and explore how they can be integrated into DFIs and SMMEs to streamline access to finance.

The primary research objective was supported by several secondary objectives, which were achieved and were listed and described in Table 1.6.2. The dependent variable was identified as the perceived success of information technology being used to streamline access to development finance for SMMEs looking for development finance in South Africa. A total of (8) eight independent variables were identified that could potentially influence the dependent variable. These independent variables included:

- SMMEs;
- DFIs;
- Fintech;

- access to finance;
- alternative credit scoring;
- investments;
- P2P lending; and
- alternative payment methods.

The positive relationship between these variables was illustrated and presented in Chapter Four (4), after which, the relevant relationships were then empirically tested to achieve the study's primary and secondary objectives – one (1) to twelve (12).

5.3 CONCLUSION BASED ON THE RESEARCH METHODOLOGY

An interpretivism paradigm was applied in line with the exploratory case study research methodology. In order to test the propositions proposed, a semi-structured questionnaire was developed to source primary data through an interview process. The above-mentioned interviews were initiated personally by the researcher as well as a third party, who, consequently, documented them. Each interview was considered as an embedded unit of analysis within a single case in the context of the South African development finance industry. The collected data were subjected to further testing. Firstly, to ensure validity in the exploratory case study, rich data was obtained from respondents through an in-depth interview process. Subsequently, respondent validation was ensured by the voice recording method adopted for the interviews and the semi-structured nature of the interviews. This nature allowed the researcher to ask clarifying questions, which decreased possible misinterpretation issues. The researcher carefully compared the results across the different settings through pattern matching and was able to confirm the independent variables as criteria for the success of information technology being used to streamline access to development finance to SMMEs in South Africa.

5.4 INTERPRETATION OF AND CONCLUSIONS ABOUT THE RESEARCH PROBLEM AND RESEARCH QUESTIONS

In South Africa, access to finance is constrained by bureaucracy present in the application processes. DFIs require a great deal of information from SMMEs to assess their finance application on the supply side, and this was confirmed during the interviews with industry experts and senior officials in DFIs. Conversely, SMMEs require a great deal of information about the DFIs to assess their product offerings and determine which is suited to them on the demand side. In addition, this access to development finance is also constrained by the prevailing outdated funding methods employed by DFIs that still rely heavily on physical documents being supplied to branches and having them assessed manually by officials in order to make a funding decision. This negatively affects both the supply and demand of development finance as is evident in the low uptake of COVID-19 relief funds in 2021. There is currently an absence of a digital interface by which SMMEs and DFIs can interact and transact; this was confirmed through the embedded units as well as the literature review. The research study aimed to address a gap in the research pertaining to this topic. The subsequent research questions and objectives were informed by the identification of the factors that influence the success of information technology being used to streamline access to development finance to SMMEs in South Africa.

This study aimed to address the influence of information technologies, such as Fintech, in successfully streamlining the access to development finance for SMMEs looking for finance in South Africa. The factors that had a significant impact on the variables were identified and reported in Chapter Four (4) and the relationship was summarised in Table 1.6.2. The secondary research questions that were answered in the exploratory case study were listed and described in Table 1.5.1.1. The following section presents a discussion of the findings by addressing the propositions as presented in Table 1.6.2 with the interpretations and recommendations for each relationship being stated in the context of the research problem and supporting research questions.

5.4.1 Small, medium, and micro enterprises (SMMEs)

For the purpose of this exploratory case study, SMMEs are described as small, medium and micro enterprises. These are businesses that operate within the South African economy and have been identified as a key component to advancing inclusive growth and development in the country. Previous studies have shown a positive relationship between SMME growth and economic growth. Furthermore, these types of enterprises have been noted as being a useful tool to elevate poverty, create employment, and drive economic growth. The empirical findings of this study have shown that for SMMEs to fulfil their intended role in the economy, they need access to finance. The empirical findings showed that there is a misalignment regarding what SMMEs require from DFIs and what DFIs require from SMMEs. Therefore, it was established that there is a positive relationship between SMMEs and the success of information technology being used to streamline access to development finance for SMMEs in South Africa.

5.4.2 Development Finance Institutions (DFIs)

For the purpose of this exploratory case study, DFIs are described as state-owned financial institutions, mandated to provide finance to SMMEs in South Africa to drive economic development. Economic development is driven by providing financial and non-financial support to SMMEs as a catalyst to accelerate industrialisation, and economic growth, and to create jobs. Previous studies have indicated a positive relationship between DFIs and economic development, while a lack of access to finance has been noted as one of the key factors that result in failed SMMEs. Furthermore, the lending criteria of commercial banks have been noted as stringent with high requirements of collateral and own contribution to access finance. DFIs, such as SEFA, NEF, SEDA, and IDC, were created specifically to bridge this gap. The empirical findings of this study indicate that DFIs have the financial resources to fund SMME and that there is a significant demand for development finance in terms of SMMEs. Nevertheless, supply is still constrained by outdated funding methods, lengthy processes, and bureaucracy. Therefore, it was established that there is a positive relationship between DFIs and the success of information technology being used to streamline access to development finance to SMMEs in South Africa.

5.4.3 Financial technology (Fintech)

For the purpose of this exploratory case study, the term "Fintech" represents a combination of the words finance and technology. It is the resulting combination of the financial and technology sectors and relates to all technology used in finance to facilitate trade, corporate business, or facilitate interactions, and services provided to the retail consumer. The empirical findings of this study have shown that technology can be successfully used as a catalyst for the automation and streamlining of processes. Therefore, it was established that there is a positive relationship between Fintech and the success of information technology being used to streamline access to development finance for SMMEs in South Africa.

5.4.4 Access to finance

For the purpose of this study, access to finance is described as the ability of SMMEs to obtain financial services. These include credit, depositing of funds, and payment of funds. Access to finance has been noted as one of the factors that affect SMME growth as well as economic development. The empirical results noted that although finance is available for SMMEs through the sampled DFIs it is not easily accessible for several reasons. Furthermore, it is noted through the empirical results that access to finance can be improved using financial technology such as banking apps and mobile payment services. Despite the potential role of SMMEs in accelerated growth and job creation in developing countries, a few bottlenecks affect their ability to realise their full potential. This was confirmed in the empirical results. and it was established that there is a positive relationship between access to finance and the success of information technology being used to streamline access to development finance for SMMEs in South Africa.

5.4.5 Alternative credit scoring

For the purpose of this study, alternative credit scoring is described as obtaining diverse types of data from diverse data sources and using more contemporary analysis methods to determine credit scores. Traditional financial institutions, such as banks, have historically relied mostly on the historical transactional records of SMMEs to assess whether to extend funding to SMMEs. As such, SMMEs and lenders have been looking for new ways in which loan applications can be assessed without compromising the quality of the assessment, which could lead to reckless lending and impairments. The empirical results also noted that alternative ways need to be used to score SMMEs for credit. It was, therefore, established that there is a positive relationship between alternative credit scoring and the success of information technology being used to streamline access to development finance for SMMEs in South Africa.

5.4.6 Investments

Investment can be defined as an action of purchasing an item such as an asset to be used not for consumption but for income generation. In this regard, the empirical study noted a need for investment in financial technology as well as enabling infrastructure, such as connectivity and electricity, to include SMMEs located in remote areas of South Africa. Furthermore, it was found that there is a positive relationship between DFIs and the success of information technology being used to streamline access to development finance for SMME's in South Africa.

5.4.7 Peer-to-peer (P2P) lending

P2P lending is described as a method of people lending money to individuals or businesses. The empirical results suggest that the advantages of P2P lending are that it provides access to finance to previously excluded members of society, and can provide reduced transactional costs to credit consumers while being much faster and more agile than traditional financial solutions offered by banks due to technical innovations. This form of lending is often done via online platforms. In addition, it was found that there is a positive relationship between P2P lending and the success of information technology being used to streamline access to development finance for SMMEs in South Africa.

5.4.8 Alternative payment services

Alternative payment methods are described as using diverse methods to pay for goods and services. The empirical results indicated that Fintech companies are developing everywhere, especially in the payment market and have developed innovative ways for consumers and businesses to transact by using mobile technology apps such as the FNB app, Vodacom, and M-Pesa. The empirical data further indicates a positive relationship between mobile money use and the probability of a firm's purchase of a fixed asset in three East African countries, namely Kenya, Tanzania, and Uganda. International trading aids SMMEs, start-ups, and local businesses to extend their distribution channels and reach more customers on a more global scale. Therefore, it was found that there is a positive relationship between alternative payment services and the success of information technology being used to streamline access to development finance for SMMEs in South Africa.

5.5 THE DEPENDENT VARIABLE: THE PERCEIVED SUCCESS OF INFORMATION TECHNOLOGY BEING USED TO STREAMLINE ACCESS TO DEVELOPMENT FINANCE TO SMMES IN SOUTH AFRICA

The research study established that the success of information technology being used to streamline access to development finance to SMMEs in South Africa has several positive factors, including SMMEs, DFIs, Fintech, access to finance, alternative credit scoring, investments, P2P funding, and alternative payment methods.

To meet SMMEs' perceived demands in development finance required from DFIs, such as SEFA, SEDA, NEF, and IDC, the researcher proposes that a strategic partnership be formed between DFIs and all relevant stakeholders to create a centralised database or depository that can be shared and be accessible to all. Consequently, it can be used by DFIs to draw source documents for SMMEs to streamline the clerical and administrative work. Source documents should include SMMEs' company documents, bank statements, identity documents, proofs of residence, ITC checks, criminal records, and all existing credit agreements entered into by the applicants.

The researcher also recommends the use of available mobile technology currently being used by the banking sector to streamline access to finance particularly on credit applications that are less than R1 000 000. This technology is currently being used by FNB to provide instant approvals or declines to clients without them having to go into a branch or deal with a consultant. It is also being used internationally by the Chinese company, Alibaba, which is the world's largest e-commerce company, as well as by Business Fuel, South Africa's leading e-commerce company. These companies offer customers instant access to finance through their existing Fintech. The researcher also recommends that the investment in Fintech by DFIs move away from the paper-based systems currently being utilised and not only use information technology for records keeping and management. Finally, the researcher recommends that DFIs should explore the use of alternate scoring methods to assess credit applications as the over-reliance on historical data, such as financial statements and bank statements, lead to certain SMMEs that do not use bank accounts being excluded.

5.6 SUGGESTIONS FOR FUTURE RESEARCH AND CONCLUSIONS

The South African SMME market, DFIs, and financial technology industries at large are new industries and no extensive research has been conducted on them. There is an opportunity for further research since information on the topic under discussion is not readily available. More research should be conducted on how the use of fintech can streamline access to development finance and to test the effectiveness and the magnitude of the effect that fintech have on improving access to development finance for SMMEs in South Africa. Furthermore, a pilot fintech solution may be developed and tested in a DFIs to evaluate the study's results, specifically relating to reduced turnaround times and increased supply of finance. If pilot provides positive results, it could possibly be replicated throughout the whole sector. Following this, researchers may collect data from the DFIs to assess the effect on economic development, job creation, and poverty alleviation.

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ANNEXURE A: ETHICS APPROVAL

NELSON MANDELA

UNIVERSITY

PO Box 77000, Nelson Mandela University, Port Elizabeth, 6031, South Africa mandela.ac.za

Chairperson: Faculty Research Ethics Committee (Human)
Tel: +27 (0)41 504 2906

Ref: [H20-BES-BUS-046] / Approval]

26 June 2020

Prof C Arnolds
Department: Graduate School

Dear Prof Arnolds,

TITLE OF STUDY: EXPLORING THE EFFECT OF INFORMATION TECHNOLOGY IN STREAMLINING THE ACCESS TO DEVELOPMENT FINANCE FOR SMALL MEDIUM AND MICRO ENTERPRISES (SMME's) IN SOUTH AFRICA (MBA)

PRP: Prof C Arnolds
PI: B Giyose

Your above-entitled application served at the *Faculty Ethics Committee of the Faculty of Business and Economic Science*, (*8 May 2020*) for approval. The study is classified as a negligible/low risk study. The ethics clearance reference number is **H20-BES-BUS-046** and approval is subject to the following conditions:

1. The immediate completion and return of the attached acknowledgement to Lindie@mandela.ac.za, the date of receipt of such returned acknowledgement determining the final date of approval for the study where after data collection may commence.
2. Approval for data collection is for 1 calendar year from date of receipt of above mentioned acknowledgement.
3. The submission of an annual progress report by the PRP on the data collection activities of the study (form RECH-004 to be made available shortly on Research Ethics Committee (Human) portal) by 15 December this year for studies approved/extended in the period October of the previous year up to and including September of this year, or 15 December next year for studies approved/extended after September this year.
4. In the event of a requirement to extend the period of data collection (i.e. for a period in excess of 1 calendar year from date of approval), completion of an extension request is required (form RECH-005 to be made available shortly on Research Ethics Committee (Human) portal)
5. In the event of any changes made to the study (excluding extension of the study), completion of an amendments form is required (form RECH-006 to be made available shortly on Research Ethics Committee (Human) portal).
6. Immediate submission (and possible discontinuation of the study in the case of serious events) of the relevant report to RECH (form RECH-007 to be made available shortly on Research Ethics Committee (Human) portal) in the event of any unanticipated problems, serious incidents or adverse events observed during the course of the study.
7. Immediate submission of a Study Termination Report to RECH (form RECH-008 to be made available shortly on Research Ethics Committee (Human) portal) upon unexpected closure/termination of study.
8. Immediate submission of a Study Exception Report of RECH (form RECH-009 to be made available shortly on Research Ethics Committee (Human) portal) in the event of any study deviations, violations and/or exceptions.
9. Acknowledgement that the study could be subjected to passive and/or active monitoring without prior notice at the discretion of Research Ethics Committee (Human).

Please quote the ethics clearance reference number in all correspondence and enquiries related to the study. For speedy processing of email queries (to be directed to Lindie@mandela.ac.za), it is recommended that the ethics clearance reference number together with an indication of the query appear in the subject line of the email.

We wish you well with the study.

Yours sincerely

Prof S Mago

Cc: Department of Research Capacity Development
Faculty Research Co-ordinator: Lindie van Rensburg

ACKNOWLEDGEMENT OF CONDITIONS FOR ETHICS APPROVAL

I, **Prof C Arnolds** (PRP) of the study entitled **EXPLORING THE EFFECT OF INFORMATION TECHNOLOGY IN STREAMLINING THE ACCESS TO DEVELOPMENT FINANCE FOR SMALL MEDIUM AND MICRO ENTERPRISES (SMME's) IN SOUTH AFRICA (MBA) (H20-BES-BUS-046)**, do hereby agree to the following approval conditions:

1. The submission of an annual progress report by myself on the data collection activities of the study by 15 December this year for studies approved in the period October of the previous year up to and including September of this year, or 15 December next year for studies approved after September this year. It is noted that there will be no call for the submission thereof. The onus for submission of the annual report by the stipulated date rests on myself.

2. Submission of the relevant request to Faculty RECH in the event of any amendments to the study for approval by Faculty RECH prior to any partial or full implementation thereof.

3. Submission of the relevant request to Faculty RECH in the event of any extension to the study for approval by Faculty RECH prior to the implementation thereof.

4. Immediate submission of the relevant report to Faculty RECH in the event of any unanticipated problems, serious incidents or adverse events.

5. Immediate discontinuation of the study in the event of any serious unanticipated problems, serious incidents or serious adverse events.

6. Immediate submission of the relevant report to Faculty RECH in the event of the unexpected closure/discontinuation of the study (for example, de-registration of the PI).

7. Immediate submission of the relevant report to Faculty RECH in the event of study deviations, violations and/or exceptions.

8. Acknowledgement that the study could be subjected to passive and/or active monitoring without prior notice at the discretion of Faculty RECH.

Signed: ______________________ Date: 26 June 2020

ANNEXURE B: INTERVIEW SCHEDULE

NELSON MANDELA UNIVERSITY

• PO Box 77000 • Nelson Mandela University
• Port Elizabeth • 6031 • South Africa • www.mandela.ac.za

INTERVIEW SCHEDULE

Dear Respondent

I am studying towards my MBA (Master's in Business Administration) degree at the Nelson Mandela University's Business School. I am conducting research to explore the effect of information technology in streamlining the access to development finance for small medium and micro enterprises (SMME's) in South Africa. I believe that my study will make an important contribution towards policy and framework development for assisting entrepreneurs in South Africa.

You are part of our selected sample of participants whose views we seek on the above-mentioned matter. We would therefore appreciate it if you could take some time to participate in an online recorded interview and answer a set of pre-set interview questions with the interviewer. It should not take more than thirty minutes of your time and we want to thank you in advance for your co-operation.

Please interact with the interviewer in depth and as freely as you possibly can. Please note also that your participation in this study is entirely voluntary and that you have the right to withdraw from the study at any stage. We also guarantee your anonymity and the confidentiality of information acquired by this interview. Neither your name nor the name of your institution will be mentioned in the study.

Thank you very much.

....

Bongo Giyose

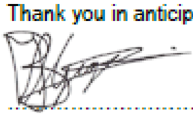
MBA candidate

EXPLORING THE EFFECT OF INFORMATION TECHNOLOGY IN STREAMLINING THE ACCESS TO DEVELOPMENT FINANCE FOR SMALL MEDIUM AND MICRO ENTERPRISES IN SOUTH AFRICA

What is the demand for development finance by SMME's looking for finance in South Africa?
What is the supply of development finance by DFI's to SMME's looking for finance in South Africa?
What information system is your organisation currently using and what are the benefits and short comings of the system?
Which information technologies are available in the financial services market now?
What is your perception of the following fintech? • Alternative credit scoring • Peer to peer lending • Mobile payment technology (M-pesa)
What is your perception towards the said information technologies, can they streamline the supply of development finance to SMME's looking for finance?
What is your perception towards the said information technologies, can they increase the demand of development finance by SMME's looking for finance?
What are the constraints within your organisation that limit the development of these technologies?
What are the constraints within your organisation that limit the implementation of these technologies?
What are the constraints in the South African market that limit the adoption of these technologies?
How can the application of information technologies assist DFI's to fully play their role as catalysts of economic development, job creation and poverty alleviation?
How can fintech be used to integrate all stake holders from both the demand and supply side of development finance to eliminate information asymmetries?

Your written consent via an e-mail response or by filling out the consent form, to participate to the interview is highly appreciated

Thank you in anticipation



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Bongo Giyose

MBA Candidate

ANNEXURE C: TRANSCRIPTIONS

Title: Unstructured Interview

Published on 13/10/2020 by Bongo Giyose

Platform: Microsoft Stream – Meeting Recording

Time: 14:43 UTC

Participants: Bongo Giyose **(Interviewer);** Mr RM **(Respondent)**

Duration: 38:35min

Interviewer: Let me share the consent form with you.

Respondent: Yes, it's in front of me. I am watching it now.

Interviewer Oh, it's in front of you. I'll just follow it with you. On the first line, the title of the research is *"Exploring the Effect of Information Technology in Streamlining Access to Development Finance for Small to Medium Enterprises*." I am the principal investigator. If you scroll down on Section A1, you can do this at a later stage, confirm that I am the one who is conducting the unstructured interview and that I am from the Nelson Mandela, Business School.

Respondent: Ok

Interviewer: The study aims to identify information technologies that are in the financial sector today and explore how these technologies can be integrated into DFIs, and SMME's, to streamline access to development finance to SMME's in South Africa. The information is used to assist in further understanding how information technologies can improve access to development finance in South Africa. The procedure will be an unstructured interview conducted on an online platform, Skype or Zoom or Microsoft Stream in this case, and it will be through the pre-set questions that I sent to you before. The interview will be recorded to assist me in narrating the research at a later stage.

Respondent: Ok.

Interviewer: The next step is that the next one is the risks, knowledge of my experiences in development finance or financial technology and availability thereof will be exposed. So, I am going to test what you know about the info tech industry or development finance. The benefits will be that I will be able to identify strengths and weaknesses in your organisation and financial technology and also learn about more available technologies in the market. Please be advised that this interview is strictly confidential, and your identity will not be revealed in any way. Details of your organisation will not be revealed either, this is purely just for research purposes. This interview will be stored by my supervisor and it will only be available If people test my research at a later stage, it will not be shared publicly at all.

Respondent: OK

Interviewer: Point 2.6, you will have to tick there that your participation is voluntary, and you are free to stop at any given time. In section three (3) you will tick that we have done our interview in English and IsiXhosa, depending on how we go, and no pressure at all was exerted on you to consent or to participate in this study. You are free to withdraw at any given time.

Respondent: Ok

Interviewer: Ok, so that is basically the main part of the consent form so can you please just sign it for me at a later stage, and you can just email it back to me.

Respondent: Alright, I will do that.

Interviewer: Ok, so I will go straight into the interview questions. Would you like me to share them on the screen okanye (or) have you got them in front of you as well?

Respondent: Yeah, I just opened the page now.

Interviewer: Ok, we can start with the first one (1). So, {Question one (1)}
with regards to exploring the subject topic which is “exploring the effect of information technology in streamlined access to development finance for small to medium enterprises in South Africa, in your opinion, what is the demand for development finance by SMEs looking for finance in South Africa?

Respondent: Bongo, thank you so much for the opportunity to participate in your research study. I mean your first question reading about the demand for development finance by SMEs, and I am really talking here as one of the small medium enterprises within the tech space. There is a huge demand for these SMEs to be financed through a number of additional financing houses like your banks and all those kinds of things because, as you know historically in this country, we don’t have wealth that has been passed on from generation to generation due to Apartheid.

Interviewer: (Agrees)

Respondent: As one of these {SMEs}, we are in need of development finance, which can help us to progress the entrepreneurship agenda because it plays a significant role in driving employment in this country. So yeah, in short really, I mean we will dig deeper into this topic but, the demand is very, very high.

Interviewer: Alright, thank you. And in your opinion, as a follow-up question, {Question two (2)} what do you believe is the magnitude of the supply of finance, by DFIs to SMEs looking for finance in South Africa? Taking into consideration that there is a huge demand, do you feel that the supplier is meeting the demand?

Respondent: Yeah, so I mean, that is a very important question. In this country, there are a whole lot of DFIs or organisations, both supported by the government and some of them obviously from private venture capitalists or private financial institutions. In theory, there is adequate supply, in theory. The challenge is the bureaucracy and the challenges that people like myself face when they want to apply for this development finance. So, in theory, the supply seems to be adequate but in reality, when an entrepreneur wants to apply for finance, you find yourself in a predicament where you hear these institutions like IDZ, you hear the institutions like… this one that is run by Pilisile Buthelezi, I can't remember the name, but IDZ is one of them. And, of course, every major bank comes out and says they are in support of small entrepreneurs in terms of giving you finance. But, when you have to go through that process of accessing the finance, you actually realise the supply that the finance houses are talking about is not geared to support SMEs. The case in point is now with Covid-19 where the government encouraged the banks to support SMEs with 200 billion, but the banks all in all actually disbursed about 20 to 30 billion out of that 200 billion. So, there are lots, are lots of small businesses that are closing doors as they can't access that fund. By the way, this is the fund that the government is actually guaranteeing 96% of the value, but the finance houses or the development finance houses are still giving people this much. By the way, it's IDZ and NEF that mentioned finance houses that are actually meant to support SME's but in reality, it's tough to apply for this finance

Interviewer: Do you think that the constraint in the supply is due to red tape or information asymmetries in terms of what the funders want and what the SMEs have? Is it sort of misaligned or do you think it's from a budgetary perspective?

Respondent: That's a very good question Bongo, so this question for me is in two (2) folds. These are finance houses or development finance houses. They have got processes that they need to follow for them to grant finance to small and medium enterprises and the SMEs have got challenges from different compliance routes that they need to fulfil. So, for example, if a development finance house says "we want to borrow R50 000 to XYZ and for us to borrow R50 000 to XYZ, XYZ must generate revenue of so much, and share profit margins of XYZ. If you as an SME are not generating that revenue, already you are kicked out of the system because of the processes that have been put in place. And, you will find that the people who are designing processes don't understand the SME's challenges, you know, that is one (1) issue. The second issue from a [SME] point of view, you will find that the guys are not compliant for example with pay-as-you-earn labour UIF payments, their taxes are not in order, record keeping, and which prevents these SMEs to provide the documentation that is required by these development finance institutes to advance those loans to them. So, the problem is multifaceted, it's not just on the development funds because remember, they also want to make money by financing these people because they get interest, or they get stock or liquidity in the business. So, there is this big mismatch where business persons or SMEs don't know or don't have the documentation that is required to support their application. On the development finance side, they have all these processes and red tapes that are actually preventing these SMEs from fulfilling the application requirements.

Interviewer: Ok thank you, thank you very much. I think the next question is something that would obviously follow-up on that, to say, {Question three (3)}

Which information technology is available currently in the financial services market that could perhaps help to address some of the compliance issues, the credit scoring issues, and the document requirements, that are staggering or rather, are constraining the supply or the demand and supply of this critical development finance that is needed by SME's?

Respondent: Yeah, I mean… You know, some of the banks are very advanced in terms of supporting SME's and one of the banks is FNB. I don't bank with FNB in my business, but the people that are SME's that bank with FNB are very praising of it saying, they have tech tools that actually help SME's to simplify their lives. For example, you can actually go into your FNB app and print your revenue and expenses. It automates your financial statement basically, one (1) of the Apps within the FNB space. I think for me, that is a very powerful technology because whenever you are applying for funding, what the funders want is your financial statements comprising of your income statement, your cash flow statements, and your balance sheet, and the FNB app provides that technology at the press of a button. I think that for me is very important. I also understand that there are some financial institutions or tech companies that actually offer, not necessarily similar technologies, but business intelligence, applications, and tools that could actually be used by SME's to do focused accuracy. For example, from their revenue point of view, Power B Point is one (1) of those. Those are some of the examples that I can think about. I can't name the FNB app that a lot of small businesses use to press or to generate their financial statements, but I know that these could be very helpful for SME's if they actually want to apply for this financing.

Interviewer: Ok, thank you. I have also heard some… coincidently, the previous participants I have spoken to have also been praising FNB and their innovative ways, that they are assisting SMEs and helping to reduce costs when looking for funding and all of that, so you are not the first person to praise FNB.

Respondent: Yeah

Interviewer: I think the follow-up question would be {Question Four (4)}

What is your perspective on the following 'Fintech'? The first one (1) would be an alternative credit scoring model. I have seen in research that there are Fintech start-ups that are experimenting with alternative credit scoring methods that are not the same as our traditional banks where they purely look at your transactional history, your balance sheet as you said, your cash flow statement. What is your perspective on that?

Respondent: Yeah, I mean I think if you look at the country where we are, you know and certainly, where we are going, taking into account where we are coming from. The traditional credit scoring models still play a critical role in the financial industry in advancing loans or credit to not only SMEs but individuals. But if you look at the type of businesses that we run as SMEs it actually renders the traditional credit scoring system useless and they prejudice the new technology businesses that we are running. I mean, I will give an example, a company like Uber for example, or Airbnb. These are companies that if you had to follow a traditional credit scoring model, a bank would not give them money because they are not profitable, right… but you do have venture capitalists who are pumping money into those businesses because they are not looking at what the business is doing now or the profitability of the business over the last two (2) or three (3) years. They are looking at the network effect and the future value of what that business could achieve, and the traditional credit scoring mechanisms are not designed for that. They are designed for your credit history based on your correctability and your revenue and all those kinds of things. So, my perception when it comes to alternative credit scoring is a positive one (1). I think it's a step in the right direction and it will help disruptive business models or business technology that are coming up. To be able to participate in the market of getting funding without being prejudiced by your traditional credit scoring systems. I mean, P2P lending, definitely this is the way to go. You are an entrepreneur, I am an entrepreneur, I see potential in your business, and we can do the cross-lending through equity and collaboration and all those kinds of things. I think it's also great, I think it is something that is not very big in South Africa

Interviewer: (agrees)

Respondent: But as time goes on, I think it is important to adopt that as more entrepreneurs. Mobile technology, from a payment point of view, and you are using M-Pesa as an example. M-Pesa failed in South Africa but it did very well in other countries, I am sure you are aware of that. Most of the technology companies like MTN, do have all these mobile payment technologies like your MOMO and all that. So, these are playing a huge role in guiding not only entrepreneurship in the tech space but also the transfer of cash. We want to live in a cashless society because paying is also high risk. So, these mobile payment technologies play a big role in driving different behaviour in different places. And I mean, especially for people who are immigrants working in this country and they want to send money to their families in their African countries. These mobile technologies are playing a huge role in driving that economic revolution so to speak. So, my perception regarding alternative technologies is positive and they are a step in the right direction.

Interviewer: Ok, thank you and a follow-up to that would be {Question Five (5)}, your perception again on the set ‘Fintech’ solutions or technologies. Do you believe they can help streamline a supply of developing finance to SMEs who are looking for finance?

Respondent: Yeah, even though I have a positive perception of these technologies that we have discussed, but if you look at the way the development finance houses operate, they are suffering from what is called amnesia. They are not moving with the time Bongo; they are still using the old traditional models of funding you know. “Give us your financial statement”, in some cases they want collateral and remember these tech enterprises are run by young people who don’t have the collateral you need. They don’t have a house; they don’t have a daddy who is going to give them a million rand as collateral or a house as collateral. If you look at the topic at hand which is driving tech entrepreneurs or Fintech entrepreneurship and look at the traditional financiers. They have a huge gap that needs to be closed. They need to gear up their system and understand we are financing Fintech companies and that the business model for a Fintech company is not a traditional one. It’s not a construction company where you win a tender for R100 million, then you come to me and I borrow you the million based on the value of the deal, no. These ones are network effects who might not an award for 100 million but if your technology or payment platform has got the ability to have 50 million subscribers, that is where you monetise the data from these people and your projections from a cash point of view might be difficult. A simple model is, I want to make one (1) cent every day from these 50 million people and your traditional financers don’t grasp it, they don’t understand these technologies and these business models. So, we still need to bridge the gap between these traditional financers and SMEs looking for funding. But right now, the perception is very negative because of the big gap that exists between the two (2).

Interviewer: So, the follow-up question would be then, {Question 6 (six)}

On the demand side, do you think, or rather your perception towards that, these Fintech solutions… Do you think they would increase the demand for development finance by SMEs? You have said already that you don’t think the supply would increase because there is a big gap between SMEs and the DFIs. Do you believe that if they would use these technologies, would it increase the demand?

Respondent: So, the development funding houses look at these as a disruption. So, imagine P2P lending using mobile payment technologies and, taking into account, alternative credit scoring. It actually renders the traditional finance house obsolete. Actually, I think that the traditional funding houses see these as a threat more than an enabler. Up until this development, funding houses can actually change their mindset and say, “where are we now?” “What solutions do we need for us to advance credit to these ‘tech-preneurs’ and ‘Fintech’ companies?” this perception is not going to change. There will still be a huge gap but it’s important these financing houses probably, maybe acquire equity in these ‘Fintech’ companies so that they can understand how they operate, and then they can change their models from then to now, to be able to take part in this new age economy because it’s a shared economy by the way.

Up until that exists, there will continue being this tug of war between SMEs in the Fintech space wishing for funding in the traditional houses saying, we do need the money, but these guys are not taking advantage of this because there is a huge gap. A tech-entrepreneur in a Fintech space, let me tell you, they don’t want to fill out 55 pages for funding. They want to go and pitch to venture capitalists like… who is this FNB guy? FNB’s CEO who funds small tech companies?

They want to go and pitch their idea to this guy and they want someone to believe in them and then give them the seed funding, instead of them applying for credit with 55 000 forms and putting collateral and putting your blood type as security.

Interviewer: (Chuckles)

Respondent: They don’t want that. They want to pitch their idea, someone to believe in them, give them their capital and say guys go and implement and execute. They go and blow that money in one (1) month, they go to the next venture capitalist to pitch their idea but, now they are more informed right? By the time their business actually takes off, they have actually sold 80% of the increment. But they have made errors, they have made mistakes, they have corrected them, and they get more funding from other people, they make mistakes up until they have a sustainable solution. The traditional funding houses don’t have room for that kind of error. For them, it’s very difficult to justify lending to a business like that because of their legacy system process.

Interviewer: Ok, and then I guess a follow-up question would be, {Question Seven (7)}

I think you have touched on them a little bit, what are the constraints in your organisation that limit the development of these technologies? I think you have touched on it.

Respondent: Yeah, I did.

Interviewer: From an access point of view.

Respondent: So, I think for me, I am very big on AirBnBs. The platform is a marketplace for people who want to travel and people listing their homes on the platform. I mean really, the constraints, especially in this country, is the skillset. I cannot get a developer who can come into my business and help me revolutionise my platform to take advantage of the current opportunities. So, skillsets are a huge constraint in my opinion. Funding is not really much of an issue but if I want to hire, for example, a finance person who will understand the financial models for the kind of business that I run. Over the last year, I had three (3) finance people and they couldn't cut it. So, skillset is one of the big issues in my organisation, and that is a constraint.

Interviewer: Ok, and I think then on the other side of the Fintech is to say, {Question Eight (8)} what are the constraints then within your organisation which limit the implementation of these technologies?

Respondent: Again, it will go back to skillset. If I can't find a Bongo to come and develop a platform for me, I cannot get another Bongo to come and do the implementation. First, you have got to develop something before you implement it. So, skillset is the common thread across these constraints.

Interviewer: Ok, and the last constraint would be in the broader macro environment in South Africa, {Question Nine (9)} what do you believe are the constraints in South Africa that limit the adoption of these technologies as well?

Respondent: Yeah, I mean here, as someone who lives in this country and we spoke about M-Pesa being a failure a couple of years ago. For me, I see a number of issues. Firstly, it is connectivity, I mean these technologies operate on bundles, right? You have got an app that needs to be downloaded. Downloading an app consumes a lot of data, and even when you have downloaded the app, just logging into the app consumes data. So, connectivity and broadband are a big issue that is causing huge constraints. The second issue as well as education and education on how these technologies can simplify people's lives. The third one (1) is the language. Most of these apps are developed in

English and not everybody in South Africa, I mean the population that speaks English in this country is lower. Why can't we develop apps that are locally relevant, and that can speak in the native language so that people can adopt because the success of an app is dependent on the people who are downloading and using it? It's one (1) thing to download it but you actually have to use it. So, for me, those are three (3) scenarios that could be constraints in the adoption of these technologies in this country.

Interviewer: Ok, thank you very much. I think the follow-up question for that would be to put it all together and say {Question Ten (10)} How can the application of technologies assist DFIs to fully play their role as a catalyst of economic development, job creation, and poverty alleviation?

Respondent: I mean, that is a really relevant question by the way. As I said earlier on if you look at the people that are running these DFIs, I mean we would not expect Buthelezi at the NEF, you also work at an SME development agency and if you look at the leaders running these organisations, how technologically astute and advanced are they? They say leadership at the top drives the strategy. If the leader at an organisation is not pro-technology, it will be very difficult to transform an organisation from its legacy operations into a digitally transformed organisation. So, I think for me that is very important these DFIs can see the value that technology can play once they bring applicants into their pool. So, think of someone wanting to apply for funding within your organisation. If they want to do it digitally within your website, first they've got to log in and download the application form right?

Interviewer: (Agrees)

Respondent: And you have got to fill in the details and if you are for example a foreign person who doesn't have an ID document. You put your passport number, but your form is not designed to put a passport number as a form of identity, it is designed to accept 13 digits. Already by doing that, most of the people who are running businesses here in South Africa are foreign people who left their countries in Africa or even outside of Africa. They cannot apply because they have a passport number that is not designed to fill in your form, already you are on the backburner, right? Your pool starts shrinking and another thing as well, when it comes to technology, people need to understand that technology has to be an enabler. It should not be seen as a barrier but right now the perception of the SME is, when I go into your website to apply, already in my mind… the answer is a no. If I am going to continue or finish with the application for that loan, I am applying for it with you guys. If it doesn't kick me out, something goes wrong with the system, unfortunately. So, I think it's important that we learn, technology if used properly, could be a catalyst and a driver for job creation in this country through SMEs.

Interviewer: Alright, thank you. I think the last question is to just sum everything up.

{Question 11}

What do you think would motivate all stakeholders both from the demand and supply side of development funding, to eliminate information cemeteries, meaning that what you have raised previously in our interview is that, there is a big gap in-between from the SMEs to the DFIs to all the people involved in our economy? How can we use Fintech to integrate all the stakeholders?

Respondent: I think first, communication needs to be very clear across all stakeholders that, financial technology will be the future. That for me is the parting shot. Guys, let's look at the trend, where we are coming from and where we are and where the future is going right? In the US there is an app called Venmo.

Interviewer: Yes, I have heard of it.

Respondent: Venmo is an app for payment to payment. It's an app, I download it and when you have got it, I take a picture of yours then I have got all your details. I can transfer money to you, instantly you get the money right. And with that, it doesn't matter where in the world you go. If you leave South Africa and you go to the UK, I can transfer your money in my local currency in South Africa. When you receive it, it will show up in dollars and you can continue transacting. We need to simplify, and we need to educate people on the importance of financial technology. Everybody needs to know that, guys, this is the future. We need to gear up towards that band then we must educate people on how this technology works. MTN has got mobile money, the concept is brilliant, it's a mobile application where you can use, spend, and send money to each other but, it's limited because I can only use it if I am MTN. We must build open platforms across all networks so that there are no barriers. At first, it was a Vodacom thing, imagine if these mobile operators can actually build open platforms regardless of which network you are with. They need to create open platforms so that can transact regardless of which network you are using. I think for me that is very important and data is key right? An app is an app but when downloading an app, you input certain information there, it's called data mining. Companies mine the data and they use the data for a whole lot of other things, but it should be done in a way that benefits everybody. Right now, people use your data or companies use your data for their own benefit and you don't benefit. They bombard you with all these advertising messages, customised advertising and all those kinds of things but do not benefit you as the person whose data is being used. So, for this to work, everybody needs to know and understand that I am going to benefit if I adopt Fintech. How am I going to benefit? Through XYZ… but right now, the benefit seems to be one (1) sided, seems to be on the person who is actually mining the data from me and that builds resistance from people adopting certain financial technologies. If I download a MOMO app and I am not getting anything, MTN does not give me data, for example, to use on their mobile money app then why should I use it? If I am upgrading the app, it chows my data, and I am still limited to whom I can communicate. So, I think we need to build financial inclusion to be able to drive this Fintech adoption.

Interviewer: OK, so what you are saying is there needs to be more inclusion and an ecosystem between all the stakeholders so that we are all benefiting from this new Fintech platform, not just the competitive environment that some of the Fintech start-ups are doing and your network providers like MTN and Vodacom.

Respondent: If MTN wants me to download their MOMO app, they must give free data to do it. I shouldn't be charged. If I am on the mobile app, I should have free access then it will drive me to use it more but if I am not using it then it's useless. So, you want people to use the app to know the network effect. I use it, my friends use it, and at the end of the year MTN has got 200 million subscribers and you have 100 million people using your app. Ideally, you want 200 million subscribers to use your app and do transactions, right? If you charge one (1) cent per transaction, every day you might make a million rand in easy cash but if you have got no one using the app…. Well… you are not happy.

Interviewer: Ok. Thank you very much, this is the end of our interview. Thank you for engaging with me, I have learned quite a bit from your insight. Is there anything else you would like to say before we close?

Respondent: No, all good. And all the best for your research. Good Luck.

Interviewer: Thank you very much and you are welcome to contact me at a later stage if you want to find out how the research is going or what my finding was from the other participants.

Respondent: Ok, you can close the recorder there and I will chat with you offline.

Interviewer: Chuckles. Alright.

Respondent: Thank you and all the best with your research.

TRANSCRIPTION

Title: Unstructured Interview

Published on 14/10/2020 by Bongo Giyose

Platform: Microsoft Stream – Meeting recording

Time: 08:09 UTC

Participants: Bongo Giyose (**Interviewer**); Mr OS (**Respondent**)

Duration: 40:38min

Interviewer: Again, thank you Mr OS for agreeing to this unstructured interview. Your insight is going to help me tremendously to complete my research. Before we start the interview, there are a few compliance issues we need to get through. I have emailed you my informed consent form.

Respondent: Yes

Interviewer: This form is to verify that indeed, you do know what the study is about and that I “Bongo Giyose” am the principal investigator. I am from the Nelson Mandela Bay, Business School. If you scroll down to part two (2) of the form under 2.1 it says, “the aim of the study is to identify information technologies that are available in the financial sector today and to explore how these technologies can be integrated into ‘DFIs’ and SME’s to streamline development finances to SME’s. The information will be used to assist in further understanding how information technology can improve access to development finances for SMEs in South Africa. The second portion is that you do understand that the interview is semi-structured, it will be done over online platforms such as Zoom or Skype and you will participate by answering preset questions and also sharing your insight, knowledge, and experience, which may not be part of the set questions but you can share outside of the set questions. 2.3 states that knowledge about your experience in development finance or financial technology and the vulnerability thereof will be exposed so, we want to know a little bit more about what you know. You need to share your experiences. 2.5 says, your identity will be kept anonymous. This study is purely for academic purposes. Your name, your organisation, or anything that may describe you or make you identifiable will be kept completely confidential. The only person who will see this interview is my supervisor and the recording will be kept safe. In my research, your name will, or the name of the organisation will not be anywhere in there. Under 2.6, you need to confirm that your participation is completely voluntary and that you were not pressured in any way to participate. So those are the main points of the informed consent form. Once the interview is done, please fill it in and return it to me so that I can keep it for record keeping.

Is there anything you would like to ask in terms of the form? Is there anything that you are not clear about?

Respondent: No. I am fine.

Interviewer: Ok, thank you very much. So, we can go straight into our interview questions. I think… I don't know how you would like to do it. Would you like me to share the questions on the screen? Or do you have them in front of you?

Respondent: You can share them on the screen.

Interviewer: Ok. Let me know as soon as you can see them.

Respondent: Yes, I can see.

Interviewer: Ok, so again my study is about exploring the effect of information technology in streamlining the access to development finance for SMME in South Africa. To answer that research question, I have got the following questions that I am hoping you can share some of your insights and please feel free to share freely because your insights are quite valuable for our study. The first question would be, what is the demand for development finance by SMEs looking for finance in South Africa? This is of course in your opinion.

Respondent: What is the demand for development finance?

Interviewer: Yes, what is the demand for finance by SMEs in South Africa? In your experience, in terms of SMEs looking for help. We have just had Covid-19 just now, there was a huge demand and not everyone got assistance.

Respondent: I think for me, this whole Covid thing actually… well I am in IT, so we have always been conscious of such, especially with the fourth industrial revolution, so I will give an example. We had an SME, while I was still at Amathole District Municipality, who was looking for finance in structuring their systems. So, the company name is DLK Group (if I may share), which I am currently a partner with. So, basically, DLK Group wanted to have their systems replaced which means that will be your finance systems, HR, and your ERP systems. The need for their finance was basically to ensure that they are a more paperless based environment now because they have got projects all over the country. So, for them to manage people using pay files and everything else was very limiting for them. Basically, what they wanted to do was to have an automated or integrated system which would then speak to each other.

Interviewer: So, like an ERP system of some sort?

Respondent: Ya, like an ERP of sorts but obviously we know the biggest ERP giant is the SAAP, which is a bit expensive. So, the idea now was to look for other systems which would actually also be part of ERP. So, they were looking for finance in order for them to develop kind of a copy of what ERP can do. So that is what the funding was for. So basically, the funding was for creating a South African integrated service system we did an application for them and then they had their own people that were doing the application. So, they wanted the funds for them to be able to procure some of the things that the applications wanted to do, which had a tremendous value add in terms of them having a minimal human intervention, and also having a structured approach in terms of presenting. At the same time, when you are integrating, your services are easy for reporting and it's also easy for example if we have to onboard someone new. Everything is stored on a central database, which is one single source of truth, instead of having different files sitting in someone's computer like what they had before. Before, what they had was an excess of reports sitting with the HR manager, the other one (1) had their own type of reporting which was not speaking to each other and was easily manipulated. As a result, they had a huge penalty with SARS because of the way they could manipulate. I mean, EXCEL can be manipulated very easily whereas, with the new application, it was controlled at least.

Interviewer: Ok, and maybe the follow-up question would be;

What, in your opinion, is the supply of development funding to SMEs by DFIs? So perhaps the question would be, did those guys receive any funding? In your opinion, is the supply sufficient to meet what the market was demanding?

Respondent: I think for me in this case the supply of finance was not sufficient for what they were looking for. But I think that's actually one (1) of the biggest challenges we have, especially in South Africa. You might have an idea of the things that you want to do as an SME but then there are not enough channels where you can get enough funding. Some people don't even know where to go for funding for example. There is no transparency as well in terms of if you have a certain kind of business, these are the kinds of funding that are available for you. So, I think for them, they did receive a sort of funding but they had so at the same time pockets to compensate the remainder. Which I think is still a challenge because I believe, if they were funded fully, they would have probably got a better system, compared to what they had to settle for at that time. Now looking at the changes with the Covid. Now that system that they have actually has gaps because of Covid because of the system that they have currently needs someone to be logged on at a station. Now we are at home, and the station is in the office. So, it becomes a hindrance. That is why I am saying, if the funding was more sufficient then it would have actually been a contingency plan when Covid came.

Interviewer: Ok, thank you for that. I think the next question is a nice follow-up to that, it's that;

What information system is the organisation currently using and what are the benefits and shortcomings of that system? Perhaps you could just touch on our current situation because our new normal is now living within Covid. What are the benefits and the shortcomings of the system that you are using currently?

Respondent: The system that we are using currently is basically, we source data from your supplier central database where you have to be registered with the treasury and then we also go to CIPC to check in terms of if your company is registered. So actually, there are prerequisites for us. We actually even source the information. Once we meet those prerequisites we are then suitable to be taken into consideration. But, I think for me also again, there is a gap there again because you have a business that has been running for five (5) years, they have got let's say turnover off a million, plus per annum. You have got a guy who has got a brilliant idea, but his company is only six (6) months. The current system obviously will look at the guy who has been in business longer, which is unfair for the new guy because, at the end of the day, it's "what value can the new guy bring"? that is important, besides the money that the other one is making. I mean, you can be in business for only a month and maybe you've made no money at all because obviously you only have your operational costs, you don’t have anything that you have made. But, when we do the system that I am talking about, we look at your financials and then once we have looked at your financials, we then see if this is suitable for viable business which is unfair for the new person who has only been active for one month. The new person has a brilliant idea, and even more than the other one's idea for that matter. The problem now is that he has not proven that idea.

Interviewer: What do you mean?

Respondent: It becomes unfair for him because we eliminate them based on that you they have not been in business for long. Similar, when you go to a bank for a business loan, they will ask you how long you have been in business and for your financials when you are looking for a business loan to kind of assess a business. So, the system is actually unfair. It’s almost like there is a place and that’s place is where they will put orders to say such and such people and the privileged who are selected. Which then defeats the purpose of helping the underprivileged.

Interviewer: Ok, sorry. Can I ask, am I correct in assuming that your system is sort of like… like it acts as a screening system to link businesses that need finance or need work with service providers that need people to work for them.

Respondent: Yes. So basically, the database we have is a number of potential clients that will need your service based on the nature of the business they do. Typically, it will be someone who is in digital marketing for example. We then look at the client in digital marketing and look at their scope of work. Do they have any evidence of doing this kind of work? So that is why I am saying, it is unfair for the new person who has no track record of some sort.

Interviewer: Ok.

Respondent: Because for us we are not basing it on individuals, we base it on the business because you might be in digital marketing for 20 years but now your business has only been there for a month. So, the current way of scoring is actually unfair because we don’t look at the individual's background.

Interviewer: Ok, thank you for that. I think my next question now is a nice follow-up to say; I have noted the shortcomings of the system but what other information technologies are available in the financial services market right now that could perhaps bridge that gap or try to close that gap that you have identified earlier?

Respondent: I think there is software that is basically used mainly by the City of Cape Town and the City of Johannesburg and what the software does is… it's called a vendor evaluation or something… I can't remember the name now, but I will send you an email. So, what the system does is first check on the database if the company is registered, it looks at who is the director of the company and it does a background check in terms of their qualification. Once it does that, it's not now only based on the business itself, it also looks at the director or the directors of the company. So, I think if we would have something similar to that or if that could be applied, things would be different because you will find, those are major cities. In Johannesburg, you will find a guy who has only worked five (5) years but already has a tender or maybe he has got funding from his business. It's not only because he is in JHB, there is nothing wrong with being in the Eastern Cape. So, we need to bridge the gap by asking why those systems are only available in JHB and CPT and making them available in the Eastern Cape.

Interviewer: Ok, perhaps you are right. Maybe it is just the procurement issue or… I don't know. But ok, and then a follow-up question would be; Focusing on what you have said, in terms of alternative ways of scoring people, what is your perspective with the following Fintech, if you are looking at alternative credit scoring that speaks to using new ways of screening and scoring people to give them access to finance or opportunities, P2P lending as well as the mobile payment technology? And in this case, this one was actually brought by Vodacom M-Pesa. What is your perspective of these FinTechs?

Respondent: I think for me with credit scoring, I always say this to people. At times you might be able to afford something, but a bank can tell you your credit score is low. Even though you know that you can afford it. So, I think for me SMEs to be able to get funding, the credit scoring has to be kind of fair. They have to not only look into what you couldn't pay because I think what is important is what other things can you put in place as a surety for example. Let's say a person has a house. You can see that person is financially stable in that way because your credit score can say something while your financials are saying something else. There is a difference between your credit score and your financials. Financials can say, you make about four (4) million, but your credit score can be low because you have defaulted on one (1) thing. So, I think we need to look deeper into credit scoring and find what is important. What other means of finance do they have because funding an SME and then they decide to go and buy themselves X5s and then close the company? So, when you do your risk analysis you have to check in terms of any assets they have or any other income and investments that will make money because at times you don't know what will happen because you are trusting people and they might use the funding for something else. Sitting with that again, you have to make sure your risk analysis is also fair.

Interviewer: Ok, and with regards to P2P lending and mobile payment technology?

Respondent: The mobile payment technology, the M-Pesa one?

Interviewer: Yes, the Vodacom one. In terms of FinTech, that is used because currently the DFIs are using very old and outdated ways of reaching people. People have to come all the way into people's offices to access finance and you know, these technologies are around, and they are very successful in the lesser developed countries in Africa where SMEs and Micro enterprises are using mobile payment technologies to conduct business and to transact with each other, buy stock, and all those things. Yet, in South Africa, this is not being used a lot.

Respondent: Yes, I was going to say now, I think that maybe even now if you would go to one of the SMEs, especially in East London, they wouldn't know what's best. I think for me it goes back to how you reach out to people. Social media these days is digital marketing. There you can market your technology. M-Pesa, for example, is a good application I won't lie but, did it reach the target market? Because we are not in the States, for example, we still have problems with technology and I think Covid has actually woken up a lot of people. If you can look at the people who are in business, you will find that most of them are very technologically disadvantaged. The guys who are working with electricity and your construction guys, they are very reluctant to use technology which is where the bulk of your SMEs are and I think it's something that needs to be done. Trying to mobilise things like M-Pesa, for example, to be downloadable when you go to your google chrome and have a pop-up or get and send an SMS on your phone that will take you straight to the database or give you more tools that are available.

Interviewer: Thank you for that. So, I guess the next two (2) questions would follow-up there and in this case, I would like to group them because they are kind of the same thing. Considering these information technologies, we have mentioned above, do you believe that they can streamline the supply of development finance to SME's and do you think they can increase the demand for developing finance to SMEs because you spoke earlier about accessibility? Do you think that if these technologies were readily available, could they increase first the supply? (The DFIs being able to fund more people) and demand in terms of SMEs having access to the DFIs or being able to ask for the assistance that they need.

Respondent: Definitely, both the demand and supply should increase. In terms of the demand, more SMEs will then have visibility of it, which means they will be more aware instead of currently the selected few. Then in terms of the supply, yes, the supply should increase because there will be more people in the demand so obviously the supply should then increase.

Interviewer: Ok, and the follow-up to that would be, I will group these as well because it's much better if we do so; What in your opinion are the constraints for organisations like yourselves to develop these kinds of technologies and to implement them into DFIs and SME's? What are the constraints people like yourself experience in terms of first developing these technologies and then implementing them in SMEs and DFIs?

Respondent: I think again one (1) of the biggest constraints would be, especially on the development of it, the support. We don't have enough support, first of all, to actually be able to undertake this development. So, what I mean by support… we have a number of skills and I feel we have too many skills in South Africa but in terms of support, we don't have enough support to be able to reach out and develop these so that would be one (1) of the things concerned.

Interviewer: By support, are you talking about financially? Or are you talking technology-wise? Or infrastructure? What exactly do you mean by support?

Respondent: The support I am talking about is in terms of finances and infrastructure because you mentioned, for example, the system that they have in JHB and in CPT that is not available in the EC. If you look at it now in terms of, how you reach an SME in eNgqwushwa where the infrastructure is not conducive compared to JHB. It goes back to what I mentioned about the fourth industrial revolution so we need to before we can say we are ready, improve the infrastructure first. I see that with Covid, it has shown to someone who was used to going inside the bank, now we are saying that now the banks will be mobile very soon. But before you can say that the banks will be mobile very soon, you have to have the infrastructure in place because we can develop these systems, but they won't reach the majority. Those are the constraints I can highlight there in terms of the technology, and then the implementation thereof would be, besides the finance, the infrastructure again because these are similar questions. We can develop but how do we roll it out? Is the infrastructure set up? In this case, you have your areas that don't even have a network, for example?

Interviewer: Ok, then I think the last question is one (1) that sums up our whole interview and it is just to say that; How can the application of these technologies assist DFIs to fully play their role as a catalyst of economic development, job creation, and poverty alleviation? And how can Fintech integrate all the stakeholders from both the demand and supply sides of development finance to eliminate the information asymmetries in terms of the way people are missing each other and in terms of information that is required and information that is supplied? Do you think that information systems such as Fintech can be able to capacitate DFIs to play their role and can Fintech also integrate all the stakeholders?

Respondent: Yes, I think Fintech can integrate all the stakeholders and I think what is important is basically, more analysis has to be done. I think one (1) of the biggest challenges in IT is coming up with the technology without understanding what the requirement is among SMEs. What is important is that we first need to map the needs and requirements because once we have the requirements it is easier for you to come up with a solution. After all, now, you develop a solution and it only ends up reaching 5% instead of 100%. So, I think what is important here, before you understand anything, you have to know what the needs are. Most SMEs might be financed but some of them also need business coaching which is not necessarily financed. So, in this case, if you integrate all your stakeholders you will need to understand some stakeholders need business coaching which is actually different from finance. That is why I am saying; the first point would be to make sure we have the requirements and needs analysis where you recognise the needs of SMEs because not all SMEs will need finance. At some point, some will have a business, but they actually don't have any financial background. So, some need training instead of money. One of the projects I am busy with at the moment, I call it semi-business-Uber. This is basically where I create a database of all the SMEs to list what skills they have, and what they offer and to build a database for each of them. Once I build a database for each of them I can find potential customers for them. Basically, the customers would request a service and say, I am looking for someone who can create an application for me. Then on the database, based on a scoring system I will create, you pick five (5) people who would then do a bid. The first can say I will charge you R10 000 while the other can say I will charge you R16 000, then from that, the potential customer will choose the necessary person. So, what it will do, the minute you give us the scope of work, we then calculate for you based on the scales that are configured on the application. So, if you put in that you would like someone who can create a website, already we know a website takes a day or two, and we know how much it is, so we can tell you that information. E.g. "A website will take two (2) days, we have five (5) people who will charge you between R2000 and R5000. Once they accept the bid they start doing the work, then in the background, the two (2) people will be connected because the customer will be required to pay 50% for the SME to start the job so that they are secured if the person decides to not do the job. That money is then held in our account as a third party and the minute they complete the job and upon the request of the customer who would indicate that they are satisfied, we then release the funds in full. I think for law studies you have something similar to what I am currently busy with. This thing started in Durban, but it is not fully developed. The idea is to bring it to the Eastern Cape to assist SMEs. I call it SME Uber and I think for me; such technology would add value at the same time let's say a service provider wants someone to build an application but these people do not have enough funds. The service provider would be to say, can you do the job? If yes, then we will be able to fund you for whatever you need.

Interviewer: So, it's a nice sort of ecosystem that links the customers to the service provider, to the funders, to create a nice ecosystem where people can interact. It's wonderful.

Respondent: Yes, so basically what it does in terms of your question around credit scoring, we will integrate with Home Affairs to validate the identity of the person who is saying “I have this business”. It will identify if they are still alive or not because of fraud, then will go through other databases to validate that they have no criminal record and be able to do those kinds of background checks. With credit checks, we will do the normal check of the person with no judgements. Whether the person has 400 or 300 as a score it won’t matter as long as there is no criminal record. So that is what I am doing, and I intend to complete it by the end of the year.

Interviewer: Wow, that is exciting stuff, I can’t wait to see it when it is ready, and you start piloting it.

Respondent: And just to answer your question where you mentioned the M-Pesa’s and visibility. We have also created it as an app, so basically what will happen is once you open the website, it will link you to that application. That application is downloadable as well and you can use it as an app. In terms of digital marketing, we will be doing that via social media platforms to make sure everybody knows about it. We also want to utilise WhatsApp so that even those who do not have access to data all the time can still access it as it will be embedded into WhatsApp. That will be phase two (2), and phase one (1) will be to launch it then once it is launched we can do the WhatsApp installation. So, once I have completed these projects I will share what I have done.

Interviewer: That is exciting stuff

Respondent: Too much

Interviewer: Ok, thank you very much for your time in conducting this interview, I have learned quite a bit and your insights are quite valuable especially the last two (2) questions. It really shows that there are people who are already trying to do the things that I am thinking are just still concepts. People are trying to create integrated platforms to allow consumers, service providers and funders to interact in a different way than what has traditionally been done. So yeah, your input has been quite valuable, and it is going to help me a lot in my research.

Respondent: And I will send you the consent form.

Interviewer: Once you have signed it, you can just email it back to me and I will keep it for records purposes. Alright, thank you very much. This is the end of the interview and I will stop the recording now.

Respondent: Thank you.

TRANSCRIPTION

Title: Unstructured Interview

Published on 05/01/2021 by Bongo Giyose

Platform: Microsoft Stream – Meeting recording

Time: 14:36 UTC

Participants: Bongo Giyose (**Interviewer**); Mr M (**Respondent**)

Duration: 38:36min

Interviewer: Afternoon Mr M, thank you for joining and being part of my research. As we discussed before, your opinion and your expert opinion are quite valuable and I think it will be quite a positive contribution towards the research, particularly in the info tech space and finding tech solutions to your everyday business problems. As you know, my topic is revolving around exploring how information technology, particularly Fintech, can streamline the access to finance for SMEs and also streamline the supply of development finance to SMEs that are looking for funding.

Respondent: Ok

Interviewer: I did send you a consent form, so I just need you to confirm that indeed you are happy to participate in the study and that you have read the consent form

Respondent: Yes, I have, and I am happy to participate.

Interviewer: Thank you, Sir. I am going to go straight into the questions. This should not take us more than 30 minutes. Would you like me to share the questionnaire or do you have one open in front of you?

Respondent: Let me quickly open it.

Interviewer: Or I can just share it on the screen.

Respondent: Ok, sure.

Interviewer: Ok, just let me know when you can see it… you should see it now.

Respondent: Yes.

Interviewer: Alright, so this is an open-ended question unstructured interview. You are encouraged to share and interact as much as you can, you do not have to stick purely to what I have asked you. The questions are designed in a nature where you can share beyond the prescribed question that I have asked you and please feel free to add your own personal experience and business experience to the questions. Alright, so the first one (1) is; In your opinion, what is the demand for development finance by SMEs looking for financing in South Africa?

Respondent: As in the magnitude of the demand?

Interviewer: Yes, just in your opinion, do you think the demand is great? Do people need finance?

Respondent: Yes, it is because I forgot what the stat is in terms of the conversion of people with entrepreneurial intent to people who actually go ahead and actually open businesses in that space because one (1) of the biggest factors that are hindering the potential entrepreneurs from starting their small businesses is financial support. I think that also then translates to when the businesses finally do operate, you will find that they do have that struggle to get finance. I think that's why we do have institutions like the IDC, SEDA, SEFA and all those other organisations because there is that need for financial support for small and medium businesses.

Interviewer: The second question touches on what you have already started to talk about in the previous one (1), now that you have mentioned that there are these financial institutions, your DFIs, IDC, and SEFA, which are out there that have been created by government. In your opinion, what is the supply of development finance by the DFIs to the SMEs in South Africa that are looking for funding? Now that there are those institutions, do you think that there is an adequate supply of funding?

Respondent: Well, yes and no. Yes, in that the money is there but I just think that there is a lot of, in my experience in interacting with businesses and small businesses alone, bureaucracy and red tape in these funds getting out. I remember a friend of mine and I went to the NEF to see exactly what we could do to try and get financing for our business and the documents there were so scary, it was more than what you would sign for in life insurance. It was so daunting and the formal documentation that you need to actually get to a point where you get that funding has a lot of hurdles which stop small businesses from accessing this finance. That is why you will find some people, there are guys that I know who are now informally offering small businesses money, almost like a micro-lending business, to these small businesses to get them going because they do not require as much documentation, hurdles, and hoops as these formal institutions offer. I just forgot the name of this fund, but they lend to restaurants and other retail businesses between R50 000 and R100 000. Once you pay it back, I think 50% to 80% of the money, you can access an additional R100 000 again. So, you do find these other informal small businesses coming up which are trying to financially support other small businesses because they require less red tape than other institutions which are supposed to be supporting SMEs.

Interviewer: Ok, so then the next question is more leaning towards the proposed solution. Just to give us an indication, and again as we said in the consent form you do not have to reveal where you work or any kind of [personal] details, what kind of information technologies in your current organisation is being used and what are the benefits and shortcomings of that system?

Respondent: FinTech?

Interviewer: Yes, Fintech and any kind of business solution that streamlines your process to be able to meet the demands of your SMEs or your clients.

Respondent: Well, we are actually about three (3) years, into building a transactional bank. It didn't start off like that, it started off as just a pocket where an individual (I work for a rewards company but I won't mention which one it is) can get cash back in some pockets but through the years it has grown and now we run a fully-fledged transactional bank where you can transact, you have a card and it is a bank effectively. It is for individuals; we do not support businesses, but that same tech can be used for businesses. I think where tech can play a role in this is the transactional part of it, not necessarily access to funding. I do believe that even these businesses that I have just spoken about, which are offering a microloan to other businesses, can link and it is all online. There is also another business called Mix that has a platform where investors and these businesses that are vetted, and debt funders can meet on that platform. You can then as a debt funder or as an investor, choose which business you want to invest in or lend money to. So, I think it can be very simple and you can do everything online that way you can access your apps.

Interviewer: The next questions I am going to put together because you have covered a lot of the questions I was going to ask later on and I don't want us to repeat ourselves. I can tell you are quite familiar with what is in the market at this point in time in terms of Fintech. I just want to get your opinion as to what your perception of Fintech such as the alternative credit scoring, and P2P lending which is similar to what you said this small company does, but I guess that would be from business-to-business lending, as well as your mobile paying technologies like M-Pesa. What is your perception of those FinTechs? Do you believe these can really streamline supply and demand by developing finance institutions and SMEs that are looking for finance? It is a bit of a double-whammy question. The first part is, what is your perception of these FinTechs, for example, your alternative credit scoring where they use other ways to calculate your score, it is not purely based on your transactional records like your traditional banks and DFIs. Or your P2P lending where you lend business-to-business purely based on the relationship that is built and not necessarily on transactional history. As well as your mobile payment technologies which allow you to transact from anywhere from cell phone to cell phone and you don't have to go pay someone at their premises or make an EFT payment. What is your perception of those and do you believe those could streamline access to finance for SMEs?

Respondent: So, let me start with the alternative credit scoring and P2P lending. It is important. As I said in the beginning that when you go to traditional financial institutions, banks, or other financial institutions which are run by the government, there is a lot of red tape and credit scoring is part of it. Unfortunately, if you are going to be an entrepreneur and you are going to run a small business, chances are that you have quit your job and your credit scoring for a lot of South Africans who do that is not going to be great. Even for people who are now on their second, third or fourth attempt at running a business and have failed, which is fine and normal for these kinds of people, are they now written off forever? So, you do need something, and I guess it is called alternative credit scoring, where someone will look at your situation differently and can tell that this person is in this situation because of this and take your situation with its merits. P2P, I am not quite familiar with it. Would it be me in my personal capacity helping out someone that I know personally, who is running a business and let's say a friend of mine is distributing wine and I give them R50 000 to buy the stock, is that what you mean?

Interviewer: That is an element of it, but it can also be business-to-business where your business will lend to somebody else purely based on the relationship you guys have. It is not based on anything like traditional credit scoring and all of that. It eliminates a lot of the red tape as you have mentioned before which is a problem.

Respondent: No, for sure. I think those kinds of transactions if you can leverage those types of relationships then by all means.

Interviewer: Thank you. Then I think the next one (1) because you have covered a lot of the questions within our discussion already…

Respondent: I mean, we need to get other ways to fund businesses

Interviewer: Yes, that is true. So, having identified that we do need to find a different way of supplying credit lines to SMEs and individuals, and also different ways for the DFIs or financial institutions to find different ways to supply the money. What do you believe are the constraints? Maybe in two-fold, within your organisation, because you did say that you guys are three (3) years into developing your own Fintech.

Respondent: Please give me a second, I think the line is very bad. I am going to try and switch to…

Interviewer: No problem.

Respondent: Ok, let's try that. So, you were saying… asking about constraints?

Interviewer: Great you are much clearer now. Yes so, this question is also two-fold. You did mention earlier that within your organisation you are two (2) or three (3) years in creating your own tech solution to run your transactional banking. What are the constraints that you guys are experiencing in developing that and also in your opinion, what are the constraints within the South African market that limit the creation and the adoption of these technologies that could really streamline the access and the supply of much-needed finance to SMEs?

Respondent: Ok, I wasn't very close to the building of that transactional bank, so I can't really tell you all of the constraints in building the bank but, from what I know, if you aren't a bank and if you are trying to build one (1), you will need to partner with an already established bank. For instance, like how discovery had to partner with FNB when they offered the credit card solution in the beginning. The company needed to do something similar and I think we are on our third bank now because those partnerships have not been smooth. I think that was an issue and also just getting the licence, a fully-fledged banking licence which we now have after working for an entire year. Just to make sure that I answer your second question properly, you asked me about the constraints…

Interviewer: In the South African market what limits the adoption of these technologies

Respondent: Yes, so strangely I did some research on the tech industry last month and the problem is infrastructure, in South Africa. You can have the greatest solution but if you go to Kromehoek Kamagato where my grandfather is from, it is going to be useless because there is no connectivity. What I learned as well is that South Africa is generally about five (5) or seven (7) years behind in their general tech solution than other countries or let me say first-world countries. So, we don't have infrastructure Bongo, in terms of connectivity. Even if we do have these solutions, we can't roll them out where you really need them and where the small businesses can actually use and adopt them. That is number one (1) and I think number two (2), is scepticism among a lot of people, especially in the more rural areas, who are still more sceptical about how they are getting paid if it is not cash-in-hand. But I think those things, through education and coaching, can be overcome however, as South Africa we have a serious infrastructure problem. I think you have heard also in the past couple of months or years actually, the telecom companies have been fighting with the government about releasing more spectrum. So, we do have those infrastructural problems which are a big challenge in South Africa.

Interviewer: Ok, and then our second last question kind of puts everything together to say; How can the application of information technology assist DFIs to fully play their role as catalysts of economic development, job creation, and poverty alleviation? How can Fintech really assist DFIs to play that role in your opinion?

Respondent: Sigh… (out of words)

Interviewer: this is purely based on I would say, touching on what you said before, eliminating the whole bureaucracy and red tape, a hundred application forms and all of that.

Respondent: That was going to be my thing and that is why I am kind of sighing…Do we have a Fintech problem or do we have a problem with red tape? Because even if you never have to see a person and you do everything digitally, you still have to spend 45 hours on your computer filling in these forms. Its defeats the purpose. It's a tough one but

I reckon we can get creative here, so what this fund does is (I will give you their name afterwards) lend to businesses which can show their revenue via speed points. So, all they want is access to the data on their speed points, so they know how much money is coming into the business. So, we can be creative and use that for instance, as a proxy where maybe each business has a certain code which identifies their speed point. We can then integrate with any speed point company and in your application, all you are meant to do is the ID of your speed point so that I know how much money you are making as an earner and I can just give you funding based on that. And again, I can collect, let's say a percentage we agree on, every month for the next two (2), three (3) or five (5) months. It will cut a lot of the red tape, financial statements and collateral needed. You can do a lot through Fintech to know how much a business is earning based on the transactions coming through the speed point and we can get into an agreement that whenever a customer swipes into your business, a percentage of that money comes to me as a form of repayment. It can make access easy and it can make repayment easy so that we can take many things in the chain of transacting digitally and we can take the different features and build something that can make it easier. I think there is a lot of room for creativity in this space and I don't think it is being done now, honestly. There is room for people to be creative and say "how can we take these and put them together to make life easier for small businesses".

Interviewer: Ok, thanks. I think the last question also ties up with what you just said but just for the protocol I think let's delve into it. You have mentioned already how you think Fintech can integrate stakeholders from both the demand and supply side, which are the lenders and the SME's using your examples of access to the speed point and all of that. Do you believe that can ultimately eliminate these information asymmetries in terms of what SMEs want, what lenders are willing to give you, what the lenders are looking for and what the SMEs have to show you in their records? Do you believe Fintech can help to bridge the gap and eliminate those misalignments between lenders and SMEs?

Respondent: Well… (chuckles) can you please give me an example because what I am thinking is that if you are a lender who wants to be paid back, you should not want more than what a business can pay you back.

Interviewer: Correct. So, with information asymmetries we found that, while doing the research, somebody would spend so much time going to the IDC to pick up the forms, do their business plan and then when they return to submit, they are told that the IDC does not fund their kind of project. Now you have really gone to task trying to comply with what they have but they don't fund those kinds of projects. And vice versa where you have institutions that have money in them however, they are funding projects that are not needed at this point. For example, we found that there is a huge demand for manufacturing businesses yet the other funding organisations are not interested in funding manufacturing. It presents a misalignment of the demand and supply side of development finance. Now introducing Fintech to that where you have a system that learns to see the demand for the development finance within different sectors, do you believe if there were a Fintech like that, would it help to eliminate the misalignments that we are seeing in the market today?

Respondent: So, you are saying that if there was tech that could identify what the market needs?

Interviewer: Yes, to align the market needs to the market supply. For example, what you mentioned with the small company…the market needs money quickly. They need no red tape, they need quick fast money and solutions like the speed point solution but, the supply side of the market does not know that. As you pointed out, that is why it has created a niche market for all the micro-lenders that are lending money to these SMEs. But capacity-wise, I would assume the small lending institutions don't have the billions of rands that your IDC or PIC may have. In your opinion, don't you think that represents a misalignment in terms of market needs and what the finance institutions are supplying?

Respondent: Yes, but I don't think that is a problem that tech can actually solve because if I have my money and I am a fund and I only want to fund tech start-ups, maybe because that is my passion, then that is all I am going to fund. You can come up with the greatest idea of building the greatest mall but if I don't see a tech element to that then my money is not going to come to you. But, maybe you are right in that, now I don't know what kind of intelligence the DFIs use to know what the country actually needs or what market industries are blowing up at the moment. So, the intention of the funds is where the problem is because if I have a business that the IDC does not fund then it does not matter what I do, they will not give me funding. The mandate is where the problem lies. Maybe tech can help in feeding their intelligence to know that now they should pull back in funding movies and fund manufacturing or construction infrastructure. Maybe in that leg, tech can help but, if they have a mandate and they are sticking to it, I don't think it is going to help a small business if it doesn't change.

Interviewer: Alright thank you Mr M. we have come to the end of our interview. You have shared some good insight regarding the Fintech space, SME space and your experience in the different sectors. Thank you very much, a copy of my research will be available once it is done if you would like to read it.

Respondent: Yes, please.

Interviewer: And again, your name, organisation, and identity will not be revealed, and you will remain anonymous. This recording will be stored for records purposes by my supervisor in case somebody wants to verify if indeed we did conduct this interview.

Respondent: Ok, not a problem.

Interviewer: Thank you very much

Respondent: Thanks, take care, bye.

TRANSCRIPTION

Title: Unstructured Interviews

Published on 06/01/2021 by Bongo Giyose

Platform: Microsoft Stream – Meeting recording

Time: 08:15 UTC

Participants: Bongo Giyose (**Interviewer**); Mr LMi (**Respondent**)

Duration: 29:19min

Interviewer: Good morning Mr LMi, again thank you for being part of this research. As discussed with you before I selected you as part of the sample of experts within the SME space and the DFI and Tech space and believe that your insight will be quite valuable for our research. I did email you my questions as well as an informed consent form. We can go through that a bit later but first, let me just welcome you here and thank you for availing yourself to be part of this research.

Respondent: Thank you Mr Giyose.

Interviewer: Alright, so as I said, you would have received the two (2) attachments. One (1) is a consent form, after this interview would you please fill it in, sign it, and send it back to me? We can go straight into the questions, would you like me to share the questions with you on the screen or do you have them open In front of you?

Respondent: That's fine, I will open now. Ok, we can start.

Interviewer: Alright, so as you would know my research topic is "Exploring the effect of information technology in streamlining access to development finance to small, medium and micro enterprises". So, essentially, we want to find out what effect would information technology, and particularly Fintech, have in streamlining access to financing for SMEs by DFIs. The first question here would be; In your opinion, what is the demand for development finance by SMEs looking for finance in South Africa?

Respondent: So, let me start by putting it this way. In the SMME market, you find that there are a lot of people who have entered the market purely because they have not been successful in the job-hunting space. So, you would find that there are a lot of people who are leaving school, have no credit record, no financial backing of any kind, that is getting into the SMME market. Secondly, you have got people who are pure entrepreneurs who have ideas but have no finance to actually carry out and develop their ideas. So, you would find that the demand for development funding is very high and taking into consideration that most of these people are historically disadvantaged people who have come into this market. So, you find that with the previous regime there is no history in their families of finance and now it is difficult for all of them to actually develop anything from their own background or their own platforms. Now the demand for development finance is very high as a result of that.

Interviewer: Alright, thank you very much. A follow-up question would be on the supply side; In your opinion, what is the supply of development finance by the DFIs to SMEs looking for finance? You did state in your previous answer that there is a lot of demand. Now in your opinion, what is the supply, and is it adequate?

Respondent: So, when you talk about supply I always try and categorise. You would find that there are institutions that are put in by the government to assist SMMEs. You will find that there are banks and private institutions that have seen, because of the demand, an opportunity in this development finance space. The biggest problem is that there are a lot of suppliers or people who say that they supply development finance however, (maybe it is coming in the following questions) it's always the steps and the rules of how to get engaged and how to access it that is the problem. I will give you an example, Vodacom also offers development finance, so you will find a lot of people have entered this space.

Interviewer: Ok, so you are saying the institutions are there, the money is there however it is the access to it that is limiting the supply. And maybe it that's the red tape or different lending criteria and things like that?

Respondent: Yes.

Interviewer: Ok, and then a follow-up question to that would be; What information systems in your organisation or that you know of and that you are currently using, what are the benefits and the shortcomings of that system?

Respondent: So, we use a lot of the CSD system, a supplier database system that the government has developed. The government developed a very efficient system which is the CSD however, how they use it is different. In CSD you get any company's or entity's information in real-time. So, from the fact that you want to develop the company and if it is up to date in terms of annual returns, if the tax clearances are up to date and valid, who the directors and shareholders are and all the information we are required to put as part of the application you get as one single document. So, from that document, you can do a lot of your analysis. For example, if an SMME says "I am a government supplier", there is a section there that can tell you exactly how many orders or how much business the person is doing with the state. So, you would find that this one system can tick a lot of boxes but however, but you'd find that a lot of people either do not know how to access this information or do not want to use it in the appropriate ways. So, you will find that instead of using the system, people are still relying on a paper-based system which now takes longer for the finance to be developed and because of the paper-based system, things can fall through the cracks. You would find that now you have a situation where I can't find the ID and those are things that can delay access to development funding.

Interviewer: Alright, and in your opinion and your expert knowledge, what kind of information technologies are available in the financial services market now?

Respondent: There are a couple of available systems but what you find is that they are all working in silos. That is the biggest issue we have because you will find that one (1) system will only give you a certain portion of what you require, the other system will give you something else and the main issue is not that the technologies are not there, it is how they are used to meet up with your criteria as the lender.

Interviewer: Alright, and the next question would be; What is your perception of the following Fintech? Your alternative credit scoring is scoring people in an alternative way, against what the banks are doing where they are scoring you according to your transactional history. Your P2P lending is where one business can lend to another, eliminating the red tape that you mentioned before. And your mobile paying technology, for example, Vodacom's M-Pesa, where you are able to pay people through cell phones and send people money via cellphone banking and you do not have to go physically give them cash. What is your perception of these FinTechs?

Respondent: Alright, let's start with the first one (1). I am a big advocate of alternative credit scoring. Let's take a scenario, you find that there are certain people who all they know is being an entrepreneur. With entrepreneurship, you will find that there are a couple of things… you do business with the state, people don't pay you on time and as a result, now you pay late with your own creditors and now your credit score is bad. It's not that you don't pay but it's the way or how you pay. Sometimes you pay more, sometimes you pay less due to the fact that you have not received any funds. Now, the system itself is what works against you because it's not that you don't have an intention to pay, it is the fact that one creditor has not paid you. And alternatively, you will find that with the banks, when you say transactional history, it also goes back to what they do as well. I have had a situation where I had to wrestle with one of the banks asking them, "with all the systems that you have, especially with debit orders where they can hold off until such a time that you have money, why can't you hold off on bank charges until some money comes in"? as a result, we got them to the point where they said, "we will take it up with higher management" because it was making sense to them. I am saying that now, you are giving us a bad record and when you are an SMME and your bank statement is reflecting, it will have a negative purely because of bank charges. So, something as small as that could hinder someone's credit scoring. So, it's one of those things where alternative credit scoring would… if there was a for SME's and entrepreneurs could be given their own scope of how to be scored, it would make a better fit. P2P lending works to a certain point. The biggest problem with P2P lending is the return on investment for the lender and security. Unfortunately, nowadays, it is difficult for anyone to just lend money because they will end up not returning or having too many creditors because they will always be waiting for some cash flow from their clientele.

Interviewer: So, what you are saying is that with P2P lending it would fall under the last resort because, by the time somebody comes to you looking for P2Plending, you are thinking that that guy is already up to his neck in debt?

Respondent: That is exactly it because you will find that everyone runs around looking for finance and with the red tape, certain places will tell you that it is a six (6) month waiting period, some places will tell you there is a three (3) month waiting period and you will find that now you are so desperate that you will go with the P2P. With P2P I believe that if one could able to structure it so that if we are in the same industry, then we are striking a binding agreement. If we are in the same industry that means that I have suppliers or agreements with suppliers that you don't. It might not have to be physical cash that is passing but I can give you access to my credit.

Interviewer: Hmm... Ok, I hear you and that would be quite an innovative way of doing it. Ok and regarding the mobile payment technology?

Respondent: With the mobile payment technology, what it has done is give access to banking technology for a lot of people who did not qualify before however, with the mobile payment technology, what it has also done is that certain people are just being paid via this mobile and they have no banking history. Which goes back to the credit score, how do you now say this is the history of this guy because you are being paid using mobile technology and there are no statements or anything that can show that this guy is able to settle his obligations in this way?

Interviewer: Ok, with the following question I guess you have covered it but just for protocol's sake I will say it again; Regarding these information technologies that we have spoken about, do you believe that they can streamline the supply of development finance to SMEs looking for finance? Meaning that we use an alternative credit scoring if we would use a P2P or a business-to-business. Lending model or mobile payment technology, do you believe that it could increase or streamline the supply of development funding to the SMEs

Respondent: Yes, I do believe so, I believe that we need to think out of the box now. I also believe that with technology comes efficiency, the more we automate certain processes, the easier it will become and the simpler it will become for people to access this development funding. Also, for the lenders to maintain to see who is creditworthy. And looking at alternative crediting as we had discussed before, for a business to survive it can't be measured the same for an individual's funding. What you find is that it is always the same system disguised differently. What I mean by that is in a business they will look at your balance sheet or assets. In your personal life, they will ask you what assets you have as well. At any given stage everyone is looking for security more than viability so, that is the key thing. Understanding yes, you want returns on your investment or your loan but somewhere we need to draw a line where we say the viability of the business has to matter.

Interviewer: Ok, so then a follow-up question would be on the demand side. If we could implement these technologies, for example, alternative credit scoring, P2P lending, and your mobile payment services into DFIs, do you think that could increase the demand for funding? Do you think more people would come out and say listen I want to be funded for this and this? Could it stimulate the market and increase the demand for funding?

Respondent: Not really, I think the demand is high now purely because there is no access. You will find that once people have access to certain things, your biggest problem with the high demand is the financial management of these SMMEs. There is a big problem where people are not able to manage their finances, so they fall into the trap of reoccurring debt. If we had to employ financial technology in development finance, it would also be able to streamline these regular lenders to see what our alternative solutions can offer them. Instead of them always being the ones being lent, how do we assist people in terms of managing their finances because I always believe that, you want to access finance when you are moving into the next step. So, if you are still at the same level to gain yourself finance the first time, it means you made a profit and that profit is supposed to sustain your business until you want to expand. Then you need finance again. If you are still on the same level I don’t understand why, unless for unforeseen circumstances like Covid and so forth. I believe that in a theoretical environment, the demand will not increase.

Interviewer: Ok, so then the follow-up question would be; Having talked about these financial technologies, what do you believe the constraints are? Let’s say within your organisation and within the South African market at large, what are the constraints that limit the development and the implementation of the adoption of these technologies? Because as you said, they are there. These technologies are there around the world but for some reason, they are not being taken up in the mainstream markets and companies are not taking up or developing new technologies. What do you think are the constraints behind that?

Respondent: So, the biggest development financiers in the country right now are government parastatals of government subsidiaries. So now they come with all the red tape of being a public state-owned entity. Now with these public state-owned entities, they love paperwork. You look at companies like Lulo funding, their applications are 100% online, and you can track your application without ever interacting with someone. So, until such a time the main DFIs are able to say that they are walking away from the paper-based application form, then we will still have these constraints. I will give you some names: IDC, DTI, and SEFA. Those are your main three (3) DFIs. They are all linked to the public sector so now it is difficult for you to say they must implement these technologies because anything they do has to go through parliament. Even if they had to say this is what we want to do, it has to be approved and that is a process on its own. So, all these processes that are at the back end are influencing what we see as SMME's are what SMMEs get to see. For example, there are a lot of committees that have to go through your application versus a system which goes according to what they are looking for. Then, however, technology takes away the human touch of being able to interact because technology only scores on what it sees and that is another constraint on the technology side.

Interviewer: Ok, the next question you have touched on is a little bit but; How can the application of information technologies assist DFIs to fully play their role as catalysts of economic development, job creation, and poverty alleviation? How can the information technologies help the DFIs become more efficient so that they can play their intended role?

Respondent: It's about turnaround time. As I indicated earlier, there are private lenders out there who within three (3) days, they let you know if they are going to fund you or not. With the big guys, it takes two (2) to six(6) months for you to know if they are going to fund you or not. With the turnaround time, a lot of changes and a lot of jobs are at stake. You get a project that would have employed two (2) hundred people but doesn't have the finance. The finance eventually gets approved and the project has been taken away from you. You find that the whole thing is about time. If we have become more efficient using technology and the time between application approval or decline is decreased, then at that your economic development and your poverty alleviation would be addressed properly.

Interviewer: Alright, and the last question is How can Fintech be used to integrate stakeholders from both the supply and demand of development finance, and eliminate information asymmetries? Information asymmetries are just a fancy way of saying the misalignment of market needs and the DFIs supply. How can Fintech align what the SMME market wants versus what the DFI is supplying?

Respondent: Earlier on when I started I spoke about a government central supply database. The reason that I alluded to the central supply database is that it was a system that was designed to take all the information and it puts it under one (1) hub (if I can put it like that). So, at some point, there has to be a technology that says these are the lenders and this is what they are looking for so that all applicants can do one application which can go to all the different lenders. So, someone can say, you don't fit my criteria then I am out and the system filters that. Currently speaking if an SMME is looking for finance, they have to do separate applications for all these institutions and you will find that 90% of what they are looking for is the same but it is always the 10% here and the 10% there. The running around, the copying, it's costing someone who does not have money and that is the reality of it.

Interviewer: Ok, so essentially what you are saying is that, have an integrated system that aligns all the DFIs and the lenders so that when you submit your pack with your ID, proof of residence, and things like that which are what all the lenders want anyway, it should be stored on that system and if there is a lender that cannot assist you they should be filtered to another one without having to recollect all of that information again?

Respondent: Yes

Interviewer: Alright, I understand. Mr LMi. we have come to the end of our interview. Again, thank you very much for participating. A copy of my research can be made available to you once it is done if you request it and would like to read it. Again, the name of your organisation will not be put into the research and you will remain confidential please remember to email me a copy of the consent form once you have had a chance to sign it. Thank you very much for your time.

Respondent: Thank you.

TRANSCRIPTION

Title: Unstructured Interview

Published on 06/01/2021 by Bongo Giyose

Platform: Microsoft Stream – Meeting recording

Time: 10:02:15 UTC

Participants: Bongo Giyose (**Interviewer**); Mr Y (**Respondent**)

Duration: 18:26min

Interviewer: Good Afternoon Mr Y, and again, thank you for availing yourself to be part of my study. I think your input and your expertise will be quite valuable for our research topic. Just for protocol, I did email you our consent form so after the interview will you please fill it in and email it back to me? It's just to confirm that you agreed to do the unstructured interview and to participate in the study.

Respondent: Ok, cool. That's fine.

Interviewer: Alright. So, I have got the questions on me, do you want me to share them on the screen or have you got them open on your side?

Respondent: I don't have it open on my side.

Interviewer: Alright let me share it, it will be easier… just let me know when you can see it.

Respondent: Yes, it has come up.

Interviewer: Alright. So as discussed before the topic of our research is "exploring the effect of information technology in streamlining the access to development finance for SMMEs in South Africa.

Respondent: Ya

Interviewer: So, essentially, we are trying to explore how information systems or Fintech can streamline access to development finance for SMMEs by DFIs. So, the first question in that line would be; In your opinion, what is the demand for development finance by SMMEs looking for finance in South Africa?

Respondent: It's quite large. So, I can talk to you from two (2) angles for this one. One (1), from my current business where we get approached by a lot of SMMEs looking for finance for certain types of projects. Then secondly, from research that I was supervising, my student did a similar initiative where they were looking at financing specifically for SMME's and what we saw is that there is a lot of demand but obviously there are challenges in terms of how these SMME's can access these finances but, we were specifically looking at access or applying for finance through digital channels as opposed to just going to a bank and engaging with a relationship manager etc. So, definitely, there is a major demand.

Interviewer: Ok, and I guess you touched on this a little bit, but the second question would be; What is the supply of development finance by DFIs to SMEs for finance?

Respondent: I think there is probably a mismatch at the moment in terms of supply. You have a lot of SMMEs that are not getting the required finance. Whether through they don't meet certain scorecards or whatever it is. So, in terms of supply, we would have to say it is extremely low at the moment.

Interviewer: Ok, and you know the third question would be perhaps a follow-up on that; Looking at the market out there, what kind of information systems, perhaps in your organisation or in the market, are you currently using and what are the benefits and shortcomings of that system in terms of giving people access to finance?

Respondent: So, in my current organisation we do not really give finance but maybe let me talk from the perspective of when I used to work at the bank. It is quite a challenge because, it is still a new environment in terms of user information systems for customers to try and access finance but, what is happening is that a lot of banks are trying to integrate a type of finance function into their Internet banking which them streamlines the process. But also, the only way that can work quite well is for an organisation or bank to have as enough information about the client as possible. I think that one of the challenges that a lot of banks have, is that they have information about the client, but the information is all over the place in different types of systems and not in a centralised type of location. I think what a lot of banks are trying to do is to centralise the information so that when customers apply for finance, it makes it easier for the decision maker and the credit guys to decide on the application.

Interviewer: Ok, now a follow-up question would be; What is your perception of the following Fintech? Alternative credit scoring would be a different way of scoring outside of the box of these normal transactional history kinds of credit scoring, your P2P lending or your business-to-business lending, or your mobile payment services where for example, Vodacom's M-Pesa, where one can transact from anywhere whether on a cell phone or laptop. What's your perspective on these FinTechs?

Respondent: I think that that's where the market is going. So, I will immediately talk about your P2P. There was another one (1) that we partnered with and these guys were based in the Western Cape, I have just forgotten the name of the Fintech but, basically, that is where it is going because there is obviously a large demand for finance and then on the supply side there are probably private individuals or institutions that are willing to put money up for some kind of return. And, I think that that's where it is going in terms of the P2P, a lot of FinTechs are popping up where people looking for finance, on the one side, can access and people who have excess money and are looking to fund some type of project, I think that is definitely where it is going in the future. Obviously, all of this comes with developments in tech.

Interviewer: Alright, and do you believe that these FinTechs can really streamline the supply of development funding to SMMEs looking for finance?

Respondent: I think they can. If you look at your traditional organisation, it's really just an organisation that has funds specifically to finance individuals, businesses, or projects. What the FinTechs are doing is creating a platform and allowing access to a whole lot of different potential funders to access that individual so, I think it creates an opportunity for a wider supply of finances.

Interviewer: Alright, and in your opinion, what are the constraints within the South African market that limit the development and the adoption of these technologies, both by SMMEs, DFIs, and in the market in general? What are the constraints that are limiting firstly the development of this Fintech, and the adoption of them?

Respondent: there are a couple of things right. Let me start from an organisational point of view. One (1), I think a lot of these projects are pretty technical, so it is really around, do we have the technical skills to develop these types of platforms? And they cost a lot of money. Knowing from my experience has been in the bank, these projects cost quite a bit of money and then obviously your executives have to prioritise these types of projects versus a whole bunch of other projects going on in the back. That is one of the big challenges that a lot of organisations are facing. I think two (2) are around the fast ever evolving things around tech. If you develop something now, then in a year it could be outdated. So, it's really just about a lot of organisations trying to keep up with the current trends and obviously, all of that encompasses quite a lot of research development and recourses into it, so it is quite a bit of money. From an SMME side, what I have picked up is around one (1), a lot of security. A lot of people, when it comes to information systems and all of that, security becomes quite a big conversation because now people are concerned about their information and all of that. The other thing is that looking at SMMEs and the technology itself, do they know much about using technology to try and access funding and all of that? So, I think there is a big education piece that needs to come into play there as well because what I find is that a lot of guys or SMMEs don't know how to access funding through digital channels, even though there are some platforms available where people can go and apply, but they wouldn't even know where to start. I think those are probably the key things I can think of for now.

Interviewer: Ok, and a follow-up question would then be; in your opinion, how can the application of information technologies assist DFIs to fully play their role as catalysts of economic development, job creation, and poverty alleviation? How can Fintech help DFIs to become more efficient and really play the role that they were put in place by the government to play?

Respondent: (chuckles) [wow] that is a heavily loaded question.

Interviewer: (chuckles)

Respondent: I think it is probably two-fold here as well. So, one (1) is access to information. In terms of financial institutions, one (1) of the key things is understanding your potential customer. FinTechs could play a role in enabling these institutions to have a good view of customer behaviour and patterns for the organisation to make a better decisions. But, I think what it also does is create, on the demand side, an opportunity for organisations to look at opportunities from a wide variety of sectors because on the demand side. What I am trying to say is, what FinTech would do is open up the market a lot more which then would enable your organisations to gain opportunities or have a look at opportunities across a larger range of sectors.

Interviewer: Ok, now the last question would be a follow-up on that. Perhaps you did touch on it a little but just for protocol's sake, let's just go through it; How can FinTech be used to integrate all stakeholders from both the demand and supply side of development finance to eliminate information asymmetries? So essentially, how can FinTech help integrate all the stakeholders, that's the lenders, the funders, the SMMEs, your SARS, local municipalities, and all the stakeholders from both the demand and supply side to sort of eliminate the information asymmetries?

Respondent: Look, I think the keyword here is information and I think if you look at all the stakeholders in that value chain, information is key. It's about having the right type of information and consistent information and I think the FinTech and their platforms are in a good position to enable that and obviously enable all the stakeholders to dig into one centralised platform which would then create consistency across the board.

Interviewer: Alright, thank you, Mr Y, we have come to the end of the interview. Thank you very much for participating again and a copy of my research will be available if you want to read up on my other people's interviews and how other people answered these questions. It should be ready around Feb/March if everything goes well and I will definitely send you a copy once it is done.

Respondent: All the best.

Interviewer: Alright, thanks a lot.

Respondent: Cheers

TRANSCRIPTION

Title: Unstructured Interview

Published on 08/01/2021 by Bongo Giyose

Platform: Microsoft Stream – Meeting recording

Time: 09:24 UTC

Participants: Bongo Giyose (**Interviewer**); Mr LY (**Respondent**)

Duration: 28:34min

Interviewer: Thank you again for availing yourself for this unstructured interview for my research. As I said earlier, with you being a specialist in the SMME field I felt that your input will be quite valuable for this research. I have received your signed consent form so thank you for that. Is there anything you would like to raise before we start?

Respondent: No, I am good, so we can start.

Interviewer: Alright, thank you. I am going to share our document quickly and then we can start… just let me know when you can see it.

Respondent: Ok, I can see it now.

Interviewer: Alright, so as discussed, my research is about exploring the effects of information technology in streamlining the access to development finance for SMMEs in South Africa. Please feel free to share your knowledge, you don't have to stick purely to the questions themselves, you are welcome to elaborate on each question. So, the first one is; in your opinion. What is the demand for development finance for SMMEs looking for finance in South Africa?

Respondent: Could you please unpack the meaning behind the word demand?

Interviewer: So, when I say demand, I am meaning SMMEs that need finance. In terms of SMMEs looking for finance like start-ups, new ventures, and people who have existing businesses, who need funding. Do you think there is a big demand or moderate demand? In your opinion, what do I demand in development finance by SMMEs?

Respondent: Ok, thank you for that. Look, I think the demand varies between the various stages of SMMEs. Obviously, there is a bit of higher demand for start-ups. One (1) could say that is mainly driven by unemployment so therefore you would find a lot of people wanting to start businesses. There is a moderate demand for SMMEs that want to expand their existing business. I think on the expansion and the acquisition, the demand would more or less be the same in terms of if one were to give a percentage or number but in essence, the demand is moderate in expansions and acquisitions, a bit higher on the start-ups. I'm not sure if that answers it.

Interviewer: That answers it, thank you. The follow-up question I think is on the supply side. In your opinion, what is the supply of development finance by DFIs to SMMEs looking for finance in South Africa? So, you have established in your previous question that there is a huge demand but, do you think the supply is adequate? And what is the supply?

Respondent: I think in a simplistic response, the supply is not sufficient, meaning that one would realise that it would mainly be concentrated in the urban areas. So, in terms of supply, your rural and township areas would be lagging. So, the supply is still more towards your urban town and areas which then leaves a gap for access to such supply in the rural and the township areas.

Interviewer: Ok, and then in your opinion, or in your current employment (you don't need to reveal where you are working) what kind of information systems is your organisation currently using and what are the benefits and the shortcomings of that system?

Respondent: We do have an information system that is more geared towards reporting more than the actual application process. As with any system, it would store the information as it should but, I don't think that benefit is more on it giving a reporting than the system actually assisting in the application process. Perhaps one could say that the benefit is that it can extract whatever information that is required but, then again, the system depends on the information loaded onto the system. But, as I said earlier it's more for reporting than assisting with the actual application process of lending towards a decision to be made. I think the decision part is still more on the manual side and more on the competence of the expertise and the experience of the people that are entrusted with doing the application process and ultimately making the decision. So, the shortcomings are that it does not assist much in the decision-making so that will take time because everything is driven by warm bodies.

Interviewer: Ok, and having looked at the market outside of your organisation and having looked at other available information technologies;

In your opinion, what kind of other information technologies are available in the financial sector in our market at the moment, if you know of any?

Respondent: Look, I think it's more on the credit scoring models you know, which every institution would want to tailor-make those for their benefits and their business. So, I wouldn't say there is one that I know by name, but I know the purpose and the functionality of such a system, having spent some time in the bank myself, I know there is a credit scoring model which is based on a number of modalities behind the system. Again, it's more banking related than your normal SMME.

Interviewer: Ok, then the follow-up question would be, I think you have touched on the different scoring models; What is your perception of the following FinTech? Alternative credit scoring, P2P lending which can also be business-to-business lending, and your mobile payment technologies, for example, Vodacom's M-Pesa. What's your perception of these FinTechs and what they do?

Respondent: Look, I think the alternative credit scoring should be able to allow for a quicker decision to be made, especially for the smaller businesses who do not have the luxury of time and recourses. In most cases, your smaller businesses want the decision and the money in a relatively short space of time so, ideally, the alternative credit scoring should be able to facilitate the approach where the decision and money is released to the businesses in a much quicker period. Then in terms of your P2P lending which you said is your business-to-business lending, again one would have to assume and think that there would be some analysis done by the lending business to the other business. So, again it will then be driven by the appetite of the lending business which probably would then be driven by their appetite towards the other business. It definitely works in the instance where both businesses share the same interest and both businesses share the same appetite. Obviously, one for venture lending who trusts and believes that the businesses they are lending their money to will make it happen. Again, one would assume that it should be accompanied by some sort of support for mentorship for formal enterprise development because it's from business-to-business, not a funding institution to business. Then on your mobile payment service, I don't think there is enough noise made about the benefits of M-Pesa, especially for small businesses in terms of cash management and in terms of abiding their banking profile with the relative institution. So, I still believe there is quite a big space for noise to be made in as far as benefits for businesses to be using those payment platforms. Which, again one of the benefits would be low cash reserves kept, because mostly those small businesses are one-person-owned and everything is cash… but, as I said earlier, there is not enough noise that is made about the benefits of payment technologies for small businesses.

Interviewer: Ok, I think you have touched on the next question in your response to the previous one but, just to sum it up; Do you believe that these information technologies can streamline the supply of development finance to SMMEs looking for finance?

Respondent: Yes, the short answer is yes, in that it banking sector in South Africa is driven by a lot of presenting evidence. If an institution has to give you the money you need to show them that one, you have some form of track record and you have some form of performance record. Particularly with the M=Pesa where you are able to say “this is my presentation in the form of money that I have made, in the absence of your traditional financial statements. So, for smaller businesses, such technologies can streamline the information required by the DFIs which would then inform those institutions how they would streamline their supply towards those businesses. So, I do think there is a benefit in the adoption and use of those technologies, which again I said that in South Africa, a lot of institutions require certain information that a lot of small businesses do not necessarily have or do not necessarily record. But, if there is an embedded system that pushes them to recall the information, then I do think there could be some benefits and it could streamline the supply of funding.

Interviewer: Ok, and then I guess the next question is a follow-up then on the demand side. Do you think these said information technologies can increase the demand for development finance?

Respondent: I don’t think that they would necessarily increase the demand but, I do think they would increase the awareness in terms of the availability of supply. I am not sure if they would increase the demand because I am of the view that demand is not necessarily driven by any technologies, just by the needs of the business. Perhaps maybe it could to some degree where the businesses would then say, this is the streamlined process that would allow me to access such money. Maybe there would be that kind of appetite, but I do not believe necessarily that it would be the overall demand.

Interviewer: Ok, and the next question is; Within your organisation, what are the constraints that organisation which limit the development of these technologies? For example, your Fintech can streamline the application process and increase the supply of finance. What are the constraints, from a micro and macro level within your organisation, that limit the development of these technologies?

Respondent: Funny enough, I don’t think that finances are the constraint, when I say finances I mean in terms of developing or acquiring such technologies, I think the issue is more on the model of how the institution is structured from a decision-making point of view. A lot of it, but not all of it, is person orientated and its committee driven which means a number of people have to congregate to assess and make a decision. So, I don’t think it is the technology but rather the business model itself. It certainly does not allow enough room for these technologies to be applied and used in making the decision. Perhaps if the business model and strategy could be changed, then there would be a great need for such technologies to be applied and implemented. Perhaps a starting point would be on our entry point loans of R50 000, where these technologies could be gradually introduced. Like paying these small fees as a learning curve until the applications then increase to the larger boundaries.

Interviewer: So, do you think this is the case? Because you have already touched on this next question, which is the implementation and the adoption of these technologies, do you think the constraints are the same? In terms of the make up of the organisations, call it bureaucracy, these decisions need to be made by multiple people. Do you think that it is the same in terms of the implementation of these technologies within organisations in South Africa, and the South African market as a whole?

Respondent: It’s two-fold really, as I said in our conversation earlier, there is a lot of information that is required from SMMEs for a decision to be made. So, one (1) of the constraints could be the lack of authenticity with the information provided for those systems to be applied and for a decision to be purely based on the systems because it would rely on the information it is given by the prospective client. During that process, verification needs to be conducted to verify that the information given is authentic. So, I would think that is one (1) of the constraints within the South African market, that link the adoption of such technologies. Perhaps how the South African information system is set up, is not supporting such technologies whereby if a client gives us financial statements for example, how then we verify that the information is correct and authentic because we would then be relying on such information to process and make a decision. So, I think it's more on the verification and authenticity of such information and if the systems could then talk to each other from a verification point of view, and when I say system I mean your bank system, financial system, tech system; so they can be a base for providing information to related institutions that use the same information to get to a decision. So, If I want a tax clearance certificate, I should be able to access a system that would be able to verify what is given by the client is correct, without questioning the motives of the client. Those could be the constraints that limit the implementation of such technologies but there is room for growth with the 4 IR and other technologies coming through, there is definitely a scope for growth in that regard.

Interviewer: Thank you. I think our next question as well is just to bring it all together; How can the application of information technologies assist DFIs to fully play their role as catalysts of economic development, job creation, and poverty alleviation?

Respondent: I think the approach would be more of a pool system because often in the South African market or context, everything is sort of a push system that society has to shed themselves into what they are given. Perhaps the DFIs, in order to fully play their role, need to better understand the market and the dynamics and take a pull approach that says, let's get from the market as to what is it they want, and him the challenges they are facing. Versus currently where I would give a client a list of 20 things to bring me before I can help them. Then the question there is, do I understand the clients' market for me to even request such information? Because if I don't understand his market I would then be taking a blanket approach. But, if I understand his market I would then be able to understand what sort of information I need to ask from him because his particular market or market space does not provide such information. So, I don't think that for the technologies to be fully effective in assisting the DFIs to play their role, they would need to be structured in such a manner where they use more of a pull factor and not to push to extract information on how the market is behaving.

Interviewer: Ok, and our last question is; In your opinion, how can Fintech be used to integrate all stakeholders from the supply and demand side of development finance, to eliminate your information asymmetries? So essentially, how can Fintech integrate the DFIs with the SMMEs and your SARS, Banks, and Home Affairs? How can we integrate all these stakeholders to eliminate the misalignment of information, market needs, and all of that? How do you think Fintech can be used to do that?

Respondent: The first step would be the correct schedule of information, consistent evaluation of information that is available, and changes in the information set up. For example, if my organisation has changed the approach in certain provinces then we need to inform our partners and other role players in our space and say “look, we have changed our approach, this is how we are structuring, and this is the direction that we are taking. This should then allow Fintech to integrate the new information into their system which would be used by a number of role players in the space like SARS, the banking system and all of those things. So, I am thinking the best approach would be the correct schedule of factual information, a consistent update of information, and linkages within the various systems to allow the role players to have access to each other’s information while protecting confidentiality so that at any given point if any of the role player in the chain requires such information, they are able to access a system that would be able to access live information. So, I think that access to each other’s information systems and provision of accurate and factual information would be a good start because Fintech would then be able to have a global view of what’s happening in the market space and the role players. I think one of their responsibilities is to be able to provide factual information to the South African SMME’s and they can only do that if they have the correct information before they can pass it on. So, I do think such an approach would eliminate those [information] asymmetries.

Interviewer: Alright, Mr LY we have come to the end of our interview. Thank you very much for participating I will definitely make a copy of my research available, if you would like, at a later stage when it is done, so that you can also see [how] the other interviews went and other people's opinions. Thank you very much for being part of this research.

Respondent: It’s a pleasure, Sir.

Interviewer: Alright, thank you. Bye.

Respondent: Bye.

TRANSCRIPTION

Title: Unstructured interview

Published on 08/01/2021 by Bongo Giyose

Platform: Microsoft Stream – Meeting recording

Time: 14:35 UTC

Participants: Bongo Giyose (**Interviewer**); Mr TM (**Respondent**)

Duration: 26:25min

Interviewer: Alright, Good Afternoon Mr TM, and again, thank you for agreeing to be part of this research and availing your time. I did email you our consent form so after this interview, can you please sign the consent form and return it to me? Just to reiterate what is on the form, everything we say here is purely confidential, you do not have to reveal where you work or who you are, and it will not be revealed in the study as well, so you will remain absolutely anonymous. Please feel free to share beyond the questions that I am asking you because your expert opinion and insight are really valuable for the study. So, I am looking forward to interviewing you so please relax and we should not take longer than 30 minutes. Welcome.

Respondent: No problem, thank you.

Interviewer: Alright, so I am going to share the interview questions on the screen so that we can follow them at the same time. Just let me know as soon as you can see it.

Respondent: Ok, I can see now.

Interviewer: Alright, so as discussed, my research is about "exploring the effects of information technology in streamlining access to development finance for SMME in South Africa". So, the whole study is around using Fintech or information studies and seeing what the effect would be in streamlining the access to finance for SMMEs. The first question would be, just as a foundation; In your opinion, what is the demand for development finance by SMMEs looking for finance in South Africa?

Respondent: Ok, I think the demand is vast. The country we are in and the narrative that is being pushed by the government is that SMMEs are major sources of employment currently and it is something the government is trying to push. There are lots of people with ideas and entrepreneurial spirit, but I guess it's the implementation where maybe we are falling short but, the demand is massive.

Interviewer: Alright, the second question is something you have touched on a little bit; In your opinion, what is the supply of development finance to SMMEs by the DFIs? You have responded to the first question that there is a big demand and now on the supply side, what is the supply of development finance to SMMEs?

Respondent: So, I think the supply side would be ECDC and NEF.

Interviewer: Do you think they are doing an adequate job and is there an adequate supply that is meeting the demand?

Respondent: No! I think there is a massive lack of skill in the industry. I think the institutions are there, are they enough? Well, I think that is up for debate but, first of all, the ones that are there need to work properly. So, I think there is a massive lack of skills and maybe a footprint in certain areas. Honestly, no I don't think the supply is sufficient.

Interviewer: Ok, and then within your organisation, what information systems are being used currently in your organisation and what are the benefits and shortcomings of that system? Remember, you don't have to reveal where you are working but just in general, what kind of system are they using to try and streamline the supply to SMMEs?

Respondent: Ok, there are various platforms. I work for First Rand for example, which is a massive group. So, part of the group and the main funding entities or subsidiaries within First Rand are obviously FNB and West Bank. The West Bank side uses an online platform where guys can go and get pre-approved for funding, that's on the SMME side. Now we need to obviously define what an SMME is, in terms of turn over but obviously, there are various segments in there. For the smaller ones, what we call a growth section, is more online-based. You can go on your app and apply for finance instead of going into a branch to speak to a banker or anything like that. In the higher turnover space, you have the same options but if you've got a banker then you can go via your banker and West Bank, for example, has what they call scoring where essentially, they score you for your funding based on your financials or based on your bank statements. So, there are a lot of scoring options where you don't have to go into a branch and deal with a particular person. So, I think that is where we are using it quite a lot. It's mass production and can score you from property finance to a car, to an overdraft or a business loan, based on your bank statements or financials, without doing any judgemental credit (that's what we call it).

Interviewer: Ok, well I guess you have touched on the next question as well, but it was more specific to your organisation… But; what other kinds of information technologies do you know that are available in the financial market right now?

Respondent: Outside of mainstream banking, there is unsecured lending which is the main thing I know about. It's where basically, it's just mass production like I said. I am just trying to think about other companies but, I know FNB would have a direct access type of thing.

Interviewer: Alright, I guess the next question would be; What is your perception of the following Fintech? Alternative credit scoring which does not use your traditional transactional records to score you, P2P lending which could be business-to-business lending or entrepreneur to entrepreneur, or your mobile payment technology like Vodacom M=Pesa. What is your perception of those Fintechs?

Respondent: Alternative credit scoring would be what? … can I please get some clarity on that?

Interviewer: That would be credit scoring not using traditional means. Like your ITC, and bank statements and it's basically looking at your buying patterns or maybe you have a contract that you have just gotten, they look at other means of scoring the entrepreneur and not purely based on their transactional history. So, essentially what it does is bring people that wouldn't normally be financed through mainstream banking, into the fall.

Respondent: Ok, yeah. It's something for me that would be a lot of work because in that particular situation there is a lot of performance risk. If you are not relying on ITCs and stuff like that and relying purely on this guy's ability to perform for a particular contract… for example, let's say contract funding. There is a lot of performance risk so your due diligence on whether these guys can actually do this thing and going into the company and understanding the controls that are in there, I would assume you have to do a whole lot of work and actually deep diving into the whole operation of the entity. Whereas in a more mainstream where you use transactional history and things like that, it might not because you don't have to go into so much detail. So, I would assume that there is a lot of due diligence that goes into that particular process otherwise, you are taking a shot in the dark.

Interviewer: Ok, and your P2P lending where we purely lend based on our relationship or on what I know about you?

Respondent: I think we call that… I forget the name… But anyways, I don't think there is enough of that, to be honest with you. Within the market, I don't know I guess it might be social issues and lack of trust, but I don't think there is enough of P2Plending within the market because everyone is out to get something out of the deal. So, everyone is still looking at mainstream banking or mainstream ways of raising funding, or maybe within families; but a business-to-business in my experience, there is not enough of that.

Interviewer: Alright, and your mobile payment technology? Where you can make payments from your computer or cell phone and don't have to make payments physically?... well, I don't even think there are cheques anymore…but just a mobile payment service?

Respondent: Ya, I think that is a great thing. I know, for example, we are driving -which is in Africa, it's going to be rather difficult- but obviously, in the future, there is talk about a drive for cash to disappear and for everything to be electronic. But, in Africa and our economy as well, I think this is very new. Something like that in the Transkei for example, you would never get rid of cash in the Transkei, or you will die trying. Those platforms are still very new in our market. There is a lot of development going on in the background but where we are falling short maybe, is upskilling the user and the market in terms of security with these things and just building trust in them, until people start using them more. I think that's where we also falling short.

Interviewer: Ok, and then I guess the follow-up question to that would be your perception now, towards the said information technologies; Do you think they can streamline the supply of development finance to SMMEs looking for finance?

Respondent: Definitely. I think development finance is a rather difficult and wide range. In development finance, there are a lot of start-ups for example. Whereas existing entities usually start with their banks. To do that purely based on an online application is rather difficult than thought because obviously, the due diligence involved in a start-up is different when you have historical numbers to actually look at. So, along the line you will always need human intervention otherwise you are going to have a big black debt book if you just streamline things and finance start-ups on online applications, or, online scoring of some sort. So, from what I have seen, I might be wrong. There are a lot of guys with dreams, that go to DFIs so, so if you have historical financials and you have got a bank account then I assume your first point of call is the bank. I guess DFIs provide cheap money as well. It's a difficult one for technology to fully be operational in a DFI, I would like to see how they would put it together. I guess that is where AI would come in.

Interviewer: Ok, then I guess a follow-up to that would be on the supply side; Do you think the implementation or the adoption of these technologies could increase the demand for development finance for SMMEs?

Respondent: Ya, definitely. The easier it is to apply for funding, the better. That is a no-brainer but obviously, on the DFI side, it's managing the quality of those applications and assessments. The easier it is, the more people will apply and that is where I guess you have to keep your wits about you because you could be getting a lot of chance-takers in that process as well. But, what can you do?

Interviewer: Ok, so again, within your organisation; What do you believe are the constraints that limit the development of these technologies?

Respondent: Within my organisation, I honestly think we have been winning innovation awards worldwide, it's what the company is about. There is a massive innovation drive within the company so, the drive is there. The only thing is obviously people because everyone might think that people might start losing jobs. So, it's getting the employees within the company to buy into it and to upskill and change their skillset, so they can be part of the solution and not be scared to lose their jobs. I think that is the biggest challenge within our organisation, otherwise, the drive for technology is there… it's massive.

Interviewer: So, I guess then a follow-up for that, because you have already responded to this one; Do you believe the implementation of these technologies is also constraint by literally just getting the buy-in of the staff and the organisation is a leader in the innovation space, the only constraint that you see would be the people and the staff buying into the new technology and upskilling them so they can be able to maximise the effect of them. Would that be true?

Respondent: True.

Interviewer: Alright, in your opinion I guess now we are looking at a macro level; What are the constraints within the South African market that limit the adoption of these technologies? Because the technology is there… you have highlighted it and we see it around, Fintech is out there but for some reason, it is not fully being adopted in the South African market. What do you believe the constraints are there?

Respondent: In DFIs or just in general?

Interviewer: In DFIs, in the banking sector, both in the SMME demand and supply side.

Respondent: Again, in the banking sector I know, for example, Standard Bank and ABSA are undergoing a massive restructure because they realise they have left FNB with First Rand as a group way ahead of them and only now they are starting to buy into the technology thing and hire more data analysts and and and. So, a massive thing with information technology is the data and the quality of that data. And then the dissemination of that data in terms of using it intelligently to make intelligent and correct decisions. So, that is a massive constraint in the South African market. There is a whole lot of data, but some people don't know how to use it. That is the first thing. So, it's getting the right data from the right places. For example, on our scoring [system] we can even ping ITC just to check if the business is not going through deregistration or something. So I don't have to go into their website and download the form, it's getting access to all these things. For example, with CIPC for company records. All these people who should have access to Home Affairs, you ping Home Affairs there and they send you the ID instead of you having to ask the client for certified copies. So, it's getting buy-in from government institutions just to cut down on the amount of documentation that needs to be provided because all these things are available. So, it's those types of things which are a massive constraint because you have got to basically coordinate a lot of people to get a lot of buy-ins. But if the government's admin is bad then that constraints the private sector in terms of getting the information from them. So, there is a lot of development that needs to be done first and making sure the infrastructure is there for all these things to work, and for them to work properly before they get rolled out to the general public.

Interviewer: Ok, I guess then the follow-up would be; How can the application of information technologies assist the DFIs to fully play their role as catalysts of economic development, job creation, and poverty alleviation? So, I guess we are zooming it in now to the DFI space of how do you believe information technologies or Fintech, can assist DFIs to fully play their role as intended by the government when they set up these institutions.

Respondent: I am not sure what the current set up is right now, but they need to make it easier for people to apply for funding. That is basically it, and that is what technology will do. It can make it easier for people to apply for funding and to track their applications if that is possible to stop the back and forth. For example, you can't submit your application if you don't have all the documents. Instead of someone going to drop it off at reception, then the receptionist needs to go through the [application] and make sure that everything is there. If it's not there, they have got to call the client and the client has got to come back. So, it's just that the whole process of just collecting the information could take two (2) weeks or a month, or whatever it is. Whereas if someone is online and they have not submitted the documents, it does not allow them to move forward. That is just a simple example but it's those types of things which frustrate people. So, it's easier access, and quicker decision-making, whether it's a yes or a no.

Interviewer: Ok, and the last question would then be; How can FinTech be used to integrate all stakeholders from both the demand and supply side of development finance to eliminate the information asymmetries? I think you have touched on this a little bit but perhaps you could just elaborate.

Respondent: It goes back to what I just said now… But, also if on the demand side, for example, DFIs are part of the government. They need to petition the government to get their house in order and to give them access to Home Affairs and all these places so that the paper process can be easier. So that is just one (1) part of it. Then obviously the documentation required, where a client can go online to supply their documentation then they can't move forward if they have not supplied all of their documentation and then maybe allow them a way to track their application (Your application is now with so and so or at this point) or for example, something that FNB is moving towards where you would be able to talk to your business banker… because I can already talk to my banker on my app but now businesses will be able to send their information and talk to their business banker on the FNB app, no more emails and all of that stuff. Upload everything on the FNB app, and I do everything on the FNB app, I talk to them on the App. We are going towards a platform-based future basically, similar like they like to say on Uber, both the user and the driver are on one platform. You can talk to the guy directly when he is on his way so, it's all platform-based and that is where I know we are going. We are moving towards that. It's that type of thing. Maybe get a SEFA app or DFI app or something along those lines to make communication easy. I don't know if that is viable based on just the pure number of people but… That is just an example.

Interviewer: Alright, thank you Mr TM Your input has been quite insightful, thank you for your time. A copy of my research can be made available to you upon request. I should be done by the end of February and you can also see how the other people responded to the same questions you responded to, just to get some perspective. Thank you very much for availing the time for this interview.

Respondent: No problem, anytime.

Interviewer: Thank you.

Respondent: Bye

TRANSCRIPTION

Title: unstructured interview

Published on 12/01/2021 by Bongo Giyose

Platform: Microsoft Stream – Meeting recording

Time: 08:02 UTC

Participants: Bongo Giyose (**Interviewer**); Mr Nt (**Respondent**)

Duration: 37:10min

Interviewer: Alright, Good morning Mr Nt again, thank you for agreeing to be part of my study and availing yourself for this interview. I emailed you our consent form, but I can send it to you again after this meeting. It's just a short form that you need to fill in that [says] indeed you did do the interview. The form will also state that this interview is strictly confidential, your name and your organisation will not be featured anywhere on the research study, you will just be known as respondent 6 or 7. If you have got anything that you want to say before we start, you can go ahead.

Respondent: No, nothing on my side. Thanks.

Interviewer: I have shared the questions, I don't know if you can see them yet.

Respondent: I can see them thanks.

Interviewer: Alright let's start then. So, my research is about essentially "exploring the effects of information technology in streamlining access to development finance for SMME in South Africa". So, to put everything into context for you, I work in the development finance space and I found that a problem for us what that, a lot of the processes are still paper-based and need a lot of human intervention so this is stifling to access development finance. So, that is where this research question stems from and all of the questions I will be asking are just to gain more knowledge and perspective of people who are experts in this field and can lend some insight so we can have some kind of recommendations as to can information technology really streamline it or not… we will see how you respond to that.

Respondent: sure.

Interviewer: Alright, so the first question would be; In your opinion, what is the demand for development finance by SMMEs looking for finance in South Africa?

Respondent: I think there is a huge demand in terms of development finances. A lot of small businesses out there, let's start with individuals who have got ideas and have initiative and want to get their businesses off the ground, they see opportunity in the market, but they just don't have either the capital to get going as well as contacts within the space. But, from an accessing finance perspective, there are a lot of small businesses, including myself, that are looking for funding from NEF etc. whether it be historical business or finance books for their business, they don't have the acumen in terms of filling in those tedious forms, from an NEF perspective. There is also the mindset that things get given to certain people and that will always be there, but there is a massive demand for development finance as well as just access to finance for small businesses that are just trying to deliver solutions or products in the market.

Interviewer: Ok, I think then the next question is a follow-up to that, looking at the supply side, now that we have noted there is a huge demand for development finance. What is your perspective in terms of; What is the supply of development finance to SMMEs looking for finance? There is a demand but are the institutions that have been put in place providing an adequate supply of development finance to SMMEs?

Respondent: I think there may be, but people don't know of these institutions that are supplying finance. You can google them but there is no repository or platform where you can go and see all of these and what kind of information you are required to provide in order to get finance and what are the thresholds, etc. So, from a supply perspective, I know of individuals and some venture capitalists but not from a government organisation's perspective. So, from a supply perspective, visibility – if there is any, is very low.

Interviewer: Ok, so you speak about platforms that could help bring everyone together. In your experience; What kind of information systems are available in your organisation or perhaps in the market, and what are the benefits and shortcomings of these systems

Respondent: I just don't remember the name now, but there is one platform that is, for lack of a better word, a marketplace where businesses can go register. There are corporates and other entities that are looking for suppliers that have registered there already. A small business can then register on the platform and then hope that they get a request from the cooperate or the supplier. The other one is a government one….

Interviewer: I think it is called the CSD platform

Respondent: Yes, but even then, you can't approach a company or institution where you potentially see an opportunity indirectly. You have to wait for them to release a tender and whether you know or not if there is a gap in a certain organisation, for example, I know there is a big gap in certain government municipalities from a digital perspective during and post-Covid; where people are having to work remotely but, I don't see any tenders in that regard but I know that there is this opportunity for enabling government institutions to be able to work remotely. So, from an information systems perspective, CSD is a good platform but it is limited in the sense that it is an ad-hoc platform, there is no activity in it. So, I would say maybe there could be an additional suggestion box where an individual or small business or an administrator for one of the government institutions could submit that there is a gap that we see in this institutional organisation. Someone can tend to it and see if it is indeed a requirement, and then there can be some sort of tender process built around it and released onto that platform. For now, it is very reactive, you hope and wish…and being on CSD myself, I often get tender requests where I know this is way different to what my business specialises in, even though I have captured in detail what my business does. Being that details are selected in a check box, it should be easy enough for a system to collect that information and say for tenders that have this requirement, you send them to businesses that have selected these specialities. So, it's very reactionary and it is almost like a black box. You submit your information but the only purpose it serves, for now, is from a governance perspective. Otherwise, I don't see anyone getting business from CSD without approaching a certain organisation directly. So, there is that and there also needs to be a sort of marketplace built. Some platforms are available, but they are very limited from a government perspective. Perhaps government wants some kind of control in terms of who applies and gives out tenders… I don't know but there is a gap for a marketplace platform.

Interviewer: Ok, then a follow-up question would be looking at Fintech itself; What is your perception of the following Fintech? Alternative credit scoring, P2Plending, and your mobile payment technology like Vodacom M-Pesa. What is your perception of these Fintechs?

Respondent: I think they are the future. From P2P lending, there is a project that I am busy with for my business, on that. There are constraints in terms of when peers borrow money from each other on a platform, if the lending is recurring, they need to register as a credit provider. I think P2P lending and money transfer platforms, are the future of Fintech, no doubt about it. I myself am busy in that space even though I don’t have something that is out there in the market now, but I have been working on it for the last two (2) years. It’s definitely the future. If you look at the market in Africa, in 2012 only 13% of Africa was banked. If you extrapolate that and take people who have got access to banking so that meant that 87% of people didn’t have access to banking and beyond that, people who don’t have access to credit because banking is one (1) thing, but credit is another. When you want access to credit you have to have an address, bank account, and credit record. The majority of South Africans and Africans do not have those three (3) things all at once. In South Africa, there are a lot of people who live in rural areas and informal settlements where there are no addresses, there are gardeners, domestic workers, and wage earners, and they don’t have a record of employment. So, there are all of those constraints from a consumer's perspective. And then if you expend that to the expense of banking, people go to the bank just to withdraw their money but if there was a way where they could bank from home because the fees are one thing but the travel expense to go and bank is another. If you link that with smartphone tech, (which is sitting at about 70% the last time I checked, so a lot of people have got smartphones) people do have the ability to bank digitally but the solutions just aren’t there for them. So, there is a big gap in that market, it is the future, and people want convenience. {Sorry, I just want to sort my son out}

Interviewer: Ok, let me know when you have sorted your son out.

PAUSE

Respondent: Alright, I am back.

Interviewer: Alright. Thanks for the previous question, you gave quite a comprehensive answer there. Now a follow-up to that would be trying to link it to the DFI space; What is your perception towards the said information technologies? So that is your alternative credit scoring, P2P lending, and your mobile payment technology. Do you believe they can streamline the supply of development finance to SMMEs looking for finance?

Respondent: So, it depends. If I am an SMME and you are scoring the individual then, of course, it can but, I am not quite sure if they would be scoring a business. With a business, if you are scoring the directors then you could get an immediate answer. Let's take, for example, someone who has a spaza or is selling fruit, they want capital of maybe R10 000 so that they can cater to a larger market. Those people may not be in the banking environment and don't have a credit record but want the ability to be scored and to get a quick result without using the conventional scoring methods. Sorry can I please take a call from my wife, she has been calling and I think it is urgent –

Interviewer: No problem

PAUSE

Respondent: [Hi] can you hear me? Sorry about that.

Interviewer: No problem… (repeats question)

Respondent: So, any business in the corporate, private, or public sector. Currently, you fill in a lot of documents and there is someone that needs to vet everyone, and if someone needs shortlisting, someone needs to go through every criterion, and deem this business qualifies for each criterion and that is currently manual. I have been at private organisations (banks) where we go through a potential supplier who wants to supply resources and we sit down with procurement and literally go line for line. So, from a Fintech perspective, if those selection criteria can be put on a simple platform that creates a checklist, the visibility for providing proof or uploading a document, and in actual fact nowadays you can create a way for OCR where the information on the document can be extracted and verified as well as the necessary criteria populated. So, if Fintech can do that then that information is summarised and businesses shortlisted then it is up to the supplier to choose which one is the best but the businesses that he is sitting with, all meet the criteria required then definitely it could streamline the process.

Interviewer: The follow-up question to that would be on the demand side; Do you believe these Fintechs could increase the demand for development finance by SMMEs? Essentially, if we streamline the process, do you think it would increase the demand for development finance.?

Respondent: They will both increase because from a demand side if there is an easier way to access funding then more people will use that process because currently, you have to submit so many documents, there is so much information that you need to fill in and a lot of it is duplicated from one page to another. So, people become discouraged, it’s a tedious process and whenever you apply for funding again, you have to fill in that information again. So, definitely from a demand side, if you fill in something once and just amend it as and when situations in my business improve or change, that will definitely increase in demand as well as make me as the person who is applying for development finance, more accepting to the process.

Interviewer: Ok, so what are the constraints within your organisation that limit the development of these technologies? Remember, you don’t have to divulge your organisation details.

Respondent: From my side, there are no limitations. If we are talking about my business and the ability to develop these technologies?

Interviewer: I am talking from a resource perspective because these technologies are there. We see them in the market internationally and nationally but for example in the government DFI space, these systems are not being used. So, what do you think the constraints are for them to develop their own systems, and implement and adopt them?

Respondent: Well for example, for me as a business, I am not aware of these systems and that is why I don’t use them. From a supplier’s side, if they have got these then they are just not divulging the information on where to get access to these platforms. A lot of SMMEs don’t know about them. Whether you are tracing government or private business, we’re just not aware of all of these because we get different information and you speak to someone who’s not necessarily in procurement from the different organisations, you don’t get told about the easier process and even the easier process is not trustworthy because you are thinking that you are just dropping your information in a black box. So, from my perspective, I am just not aware of these platforms existing.

Interviewer: Ok, then a follow-up to that would be; How can the application of information technologies, Fintech in this instance, assist the DFIs to fully play their role as catalysts of economic development, job creation, and poverty alleviation?

Respondent: You know, Fintech can serve multiple purposes more than providing a core solution to streamlining and managing the process. So, it can play a role in marketing, and information sharing to all the suppliers so that if the government has a repository with contact information, all those businesses can have visibility of what is out there and Fintech can play a role in that. Whether it's direct marketing, and not in the sense of giving tenders directly but, all the ITCs out there, this is the kind of work that is out there, and this is what we are looking for. Basically, marketing is an industry. If you've got a Fintech platform that you can sort of push information to a list of companies, then that will go a long way. There are social media and a lot of businesses and individuals are on social media. So, from a Fintech perspective, you can do a lot of marketing and use what is out there to market to businesses and individuals and give them all the access points that are available over and above just providing the core solution of access to funding. It can do a lot more. If I could just capture or upload something from my business which feeds suppliers, potential service providers, SARS, and all the entities that are relevant to me running my business, both from a supply and a governance perspective (red tape that you need to do in South Africa). If there is one access point that can integrate into different organisations and then all that information is there, I don't have to be requested for things I am not needed for like the ad-hoc thing. So Fintech could add value to the current process in terms of what's there at the moment.

Interviewer: Ok, thanks. I think the last question you have touched on a little bit but maybe you can just elaborate on it; How can Fintech be used to integrate all stakeholders from both the demand and supply side of development finance to eliminate the information asymmetries? So, all the misalignments that are currently in place.

Respondent: So, obviously there needs to be a partnership with all the stakeholders involved. So for example, if we start with the most important one, FinTech companies can attack them one by one, especially from a tax perspective. CSD already integrate with

SARS but I am not sure if the integration is fully automated, but when you submit something at SARS, it feeds through to CSD which tells you this company is in good standing and can operate. `So, that is a start and it is something that exists already, so it says that there are integration points that your different organisations can supply to a FinTech that can create a platform that consolidates all information and is used as one single point of entry. So if you can have one interface that I can submit my information on and it then feeds all the integration points, your SAPS, SARS, suppliers, and for example in a municipality, if as an IT manager I can get all the suppliers in my area that meet certain criteria to supply services and know they are in good standing, I can target a certain tender to a group of suppliers instead of just shooting in the dark. As a business that is looking to supply these services, I can suggest things… just as I touched on, to say there is this gap in this organisation and we do this which is not out there in the market, can you look into this, to add this much value and streamline this service… so feedback form both sides is received and as an organisation I know there are these companies that do A, B, C, and D, and I know that from a strategy perspective, we need to be here in the next three (3) to five (5) years. So, we need to start looking at these requirements and these are companies that do this. So, from an audit perspective, it will go a long way. Now it’s not just your companies that get created today to subcontract. It means all projects that are undertaken are with suppliers that have “paid their school fees” in terms of providing documentation, information, and proof of what they do and if something is subcontracted at least the core company that gets the business Is a specialist in the field that it’s working in.

Interviewer: Alright, thank you, Mr Nt, we have come to the end of our interview. Thank you very much. A copy of my research can be made available to you upon request. I should be done by the end of January/ beginning of February and you can also see how the other people responded to the same questions you responded to. Thank you very much for availing your time, I will email you that consent form so when you have time please sign it and email it back to me.

Respondent: Sure, I think you did

Interviewer: Yes, I did but if you can’t find it I can send you another.

Respondent: Ok, don't worry I think I did see an attachment in your email. I will fill it in during the course of the day and send it through.
Interviewer: Alright, thank you very much.

TRANSCRIPTION

Title: unstructured interview

Published on 12/01/2021 by Bongo Giyose

Platform: Microsoft Stream – Meeting recording

Time: 12:04 UTC

Participants: Bongo Giyose (**Interviewer**); Mr R (**Respondent**)

Duration: 26:49min

Interviewer: Alright, afternoon Mr R. Thank you for agreeing to participate in this study. We did believe that being a professional in the finance space and your perspective on some of the questions will be very insightful. Please feel free to answer fully, you don't have to stick to the scope of the question itself. If you have got more information to add that perhaps was not directly asked, please feel free to do so. It is an unstructured interview so it's open for you to express yourself beyond just the scope of what we are asking.

Respondent: Ok.

Interviewer: Alright, I had previously emailed you our consent form, can you please when you have time, fill it in and send it back to me?

Respondent: Alright.

Interviewer: Alright, is there anything you would like to ask before we start? I am going to share the questions on the screen.

Respondent: Ok, just remind me [of] your topic.

Interviewer: Ok, I will go through that just before we start. Just let me know as soon as you can see the questions

Respondent: Yes, I can see.

Interviewer: Alright so, the research essentially is about "exploring the effects of information technology in streamlining access to development finance for SMME in South Africa". So essentially, we want to explore how information technology and Fintech can help to streamline development finance to SMMEs by DFIs, that is our topic. So, the first question then, as maybe just a foundation; In your opinion, what is the demand for development finance by SMMEs looking for finance in South Africa?

Respondent: Indeed, there is quite a lot of demand for development finance in South Africa, particularly among the historically disadvantaged groups that were excluded from the mainstream of the economy. You find that those types of individuals with limited balance sheets or limited asset bases, tend not to qualify for finance within mainstream commercial banks. In the view of DFIs which are owned by the government as sort of the alternative source or the only source in that regard because commercial banks in the main would require collateral which these types of individuals would not have, so they would then view the development finance as the only option that is available for them. So, because these individuals are the majority of the population, it then increases the demand for development finance because there they feel they get a chance because of the lack of focus on collateral. As long as someone presents a viable business then they feel they do have a chance to access funding. But how easy it is to get that funding is a story for another day or another debate that one would want to get into. So, because of those factors, my view is that it increases the demand for this type of finance because also, the development finance institution’s approach is more partnership based, they tend not to be the first to pull the plug when these SMMEs hit a setback, which is what the perception is with these commercial banks. So, DFIs tend to give people a chance to try and turn the business around if things don’t go according to plan, which is a good attraction. Particularly with someone wanting to do start-ups, which is where the biggest demand is in my view. There is a lot of demand for start-up capital and commercial banks don’t normally have an appetite for such in any case.

Interviewer: Ok, thank you for that. I guess then the next question is a follow-up on the supply side; In your opinion, what is the supply of development finance by DFIs to SMMEs looking for finance? Having established that there is a huge demand, do you think the supply is adequate? And what is the supply, in your opinion?

Respondent: It would be difficult to comment on the adequacy thereof but indeed the government has made significant efforts to try and get DFIs to focus on these types of funding. We have seen efforts recently by the department of small business which has made significant efforts in trying to capitalise an institution like the SEFA by giving it budget and money to try and finance SMMEs. We've got IDC which does focus on SMMEs, to a significant extent. With a recent strategy coming out they streamlined the process of realigning their business. Having formed a small business finance unit that focuses solely on funding these SMMEs. You still have your NEF which funds predominantly this sector and there is a whole range of other private sector initiatives. You have got your LULA Land FinTechs that have been recently formed to look at this sector. I have seen an article even [about] Vodacom setting up Vodaland to look at specifically funding this sector. I have also seen some private funds like the SMME fund which should also take the development finance type of approach, where money has been raised together to put together to focus on the sector. So, I think the supply is definitely there in my view. Perhaps it would be difficult to quantify in monetary terms, but I think in terms of efforts, we all agree that South Africa has got an unemployment problem and one (1) of the highest unemployment levels and there is definitely a school of thought that says SMME's are best placed to help to solve that unemployment problem. So, there has been a lot of focus by the government, DFIs, and even the private sector to put nice funding products looking into this sector.

Interviewer: The next question would be then more on the information systems side; What information system is your organisation currently using and what are the benefits and shortcomings of this system? Now before you respond please remember that this interview is completely confidential. Your organisation and your name will not appear anywhere and you don't even have to mention the name of your organisation in your response.

Respondent: The system that we use is SAPP, but I am not sure if your question is directed at maybe the assessment part of our business.

Interviewer: Yes, it is the assessment part.

Respondent: In terms of assessment, SAPP we rarely use it for our purposes. We use it mainly to store information for our business partners. As opposed to using it for assessment purposes because our assessment process is still predominantly manual, our due diligence process is done on-site and it is still a very manual process. We don't really use these systems with complex AI built into them to help us assess, which is really something we have been looking at. I know there is a company-wide digitisation process currently taking place to try to look exactly at that aspect of our business and our assessment process. Obviously, our assessment process is critical in processing funding applications quickly and efficiently, which is an important aspect of financing in this sector. So, there is some focus on it but at this time, it is still predominantly manual, and we only use SAPP for storing information and such type of things. But, I think what I have seen in the market, a lot of institutions now especially in the private sector use IT to really help them become more efficient because you have to be efficient in this sector and process applications as soon as possible.

Interviewer: Ok, thank you for that. The next question I think we have already covered. The next question would have been; What information technologies are available in the financial services market you have mentioned some of them in the previous question.

Respondent: Alright, but maybe I can just talk about it more at length. We have been on an exploratory journey looking at what is available out there and we have seen a lot of systems that are available out there. I mean, I wouldn't want to name all of them, but I have seen some from credit rating agencies, that really do a lot that would be done manually by an institution of government. They are able to read financial statements just by scanning and putting them into a standardised financial model instead of you punching in the numbers themselves. So, there are a lot of information systems with built-in efficiencies that really reduce the assessment process and allow the credit analyst to focus on interpreting the information as opposed to coming up with the information through your excels and those kinds of systems. There are a lot of those that are built with AI which I am sure banks use quite a bit and I know the commercial banks use it quite a bit. Some of them even have built-in capabilities to evenly divide the costs. So, there is a whole range of systems that are available out there.

Interviewer: Thank you. Then a follow-up question would be; What is your perception of the following Fintech? Alternative credit scoring, P2P lending, and your mobile payment technology like Vodacom M-Pesa. What is your perception of these FinTechs?

Respondent: I think each one has got its own objectives that it is trying to achieve but obviously the key is efficiency. From what I have seen, I have been really impressed with the type of capabilities that these systems have. To the point where I think professionals within this space would get intimidated in terms of these capabilities in that it makes one feel redundant because these systems can really do anything. So, yes there will always be that human aspect needed but these types of systems can even, based on the kind of information that you input, give you different types of risks. So, it is really amazing what kind of systems are out there and gone are the days where one has to input functions on excel to calculate ratios. Those can be done readily, and one can just focus on interpreting the information. I mean this thing even writes your report for you, it's really amazing what capabilities we have out there.

Interviewer: So, the next question would be; What is your perception towards those information technologies? Do you believe they can streamline the supply of development finance to SMMEs looking for finance?

Respondent: Certainly, they have a huge role to play. One (1) of the key pieces to the development financial institutions has been efficiency, we take too long to make decisions. I think the big value in these systems add is to really cut down on that because SMMEs and especially existing businesses that find themselves in distressing situations. They don't have days and weeks to wait and they have very little room for error so if there are significant delays in getting finance, those could result in businesses shutting down very quickly. Also, in terms of those that are in the expansionary stage or the start-up phases looking for opportunities, these opportunities shouldn't wait. The biggest criticism of DFIs has really been the time it takes to make these investment decisions. So, if these technologies could be adopted, they can make a big difference in terms of getting access to this funding and I think that is where the private sector institutions have differentiated themselves. In that now it takes hours, they talk about 24 hours or 48 hours to make decisions, especially for businesses that are low risk. There is no need to go through a whole due diligence process, which is what development funding institutions do. Whether it's a low or high-risk business, the process is predominantly the same and there is always that thing that says, because we don't really rely on security, so we have to satisfy ourselves, then the business will be viable. So, this informs why they go through all of these very stringent assessment processes for SMMEs. But, I mean, technology can take away a lot of that, especially on the clerical task that I have mentioned, where you get a system that you can quickly input financials into a financial model, which that alone can take up a day or two if you do it manually. So, it's such small things that can really make a difference in the end and cut down the time it takes to make investment decisions efficiently.

Interviewer: Ok, then the next question would be on the supply side; What is your perception of information technologies? Do you believe they can increase the demand for development finance by SMMEs?

Respondent: Again, even there, a huge role but, there seems to be quite a bit out there in terms of supply of information technology. If these systems could be adopted by DFIs it could change the perception of SMMEs on the assessment processes of the DFIs and could increase demand and people having confidence in the DFIs to meet their needs in terms of access to funding. That could really increase demand because some people give up without even trying because they know that they are going to take three months before they give you an answer on investment decisions. So, I think those could improve the perception that people have of the DFIs and thereby increase the demand for DFI funding quite significantly.

Interviewer: Ok, now in your opinion; What are the constraints within your organisation that limit the development, implementation, and adoption of these information tech solutions or Fintech solutions? What do you believe are the constraints that prohibit or slow down the development, implementation, and adoption of these techs in your organisation and South Africa as a whole?

Respondent: It’s really difficult to tell because as I was saying to you, right now we are currently going through a process of trying to determine…. I think one (1) of the things is cost. Maybe these can be viewed as quite costly to procure and implement, and also, it’s not only the cost of the CAPEX but the cost of maintaining these systems and the cost of maintaining the backup of these systems. I guess there is also the worry about the security of this information. There is cyber security crime at the moment. But. I think also it’s just that mindset shift that people struggle to get through. Us marrying to the old way of doing things, you just need new people who are willing to have that mindset shift that says “guys, let’s just embrace technology”. You really don’t have to do a deal that is worth R1 000 000.00 in the same way that you do a deal that is worth R100 000.00 because people think they are at managing risk, but at the same time, you need to strike a balance between efficiencies and risk. So, I think, that mindset shift is critical because as I said before, this thing of thinking technology is here to take our jobs, because some people feel really intimidated. But I guess, one can embrace technology into their system and still be able to maintain their job numbers but at least we will be able to do things much quicker to reach out to more projects.

Interviewer: I think the follow-up question, which you have already touched on; is how can the application of information technologies assist the DFIs to fully play their role as catalysts of economic development, job creation, and poverty alleviation?

Respondent: Yes, I have spoken about this quite a bit. For us, I think the biggest value add would really allow us to focus our energies on risk litigation as opposed to making sure the formula works for instance or that you have calculated the formula correctly. The system could do that for you and you could rely on the system to do the clerical work and focus on you mitigating risk and really reducing your time of doing that, which will improve the perception of the organisation itself. And also, through that, be able to reach out to more people because easer you are able to utilise your resources much better in that way and therefore you are able to spread your wings and assist more people, which will create jobs and result in better economic development as and poverty alleviation. So, there is a big role in it, we must just embrace it.

Interviewer: Ok, and the last question would best sum it all up; How can Fintech be used to integrate all stakeholders from both the demand and supply side of development finance to eliminate the information asymmetries?

Respondent: I think it can play a critical role because through IT, we are rightly saying, in no time you can be able get someone’s information ‘status from SARS and all this information because technology has that ability to store data and these systems can talk to each other, which can cut out the manual process that we get to do. If one can use technology to integrate information from SARS, banks, and DFIs, which could mitigate a lot of your risk assessment process and give you comfort with regard to the vetting process.

Interviewer: Ok, Thank you, Mr R, we have come to the end of our interview. A copy of my research can be made available, at your request, once it is done. I should be done in early February, so I am almost there.

Respondent: Very good. Thank you for also allowing me the opportunity to engage. I wish you all the best for the research and look forward to the final product. It definitely will be of interest.

TRANSCRIPTION

Title: Unstructured interview

Published on 14/01/2021 by Bongo Giyose

Platform: Microsoft Stream – Meeting recording

Time: 12:04 UTC

Participants: Bongo Giyose (**Interviewer**); Mr B (**Respondent**)

Duration: 37:30min

Interviewer: Alright, morning Mr B. and again thank you very much for availing yourself to participate in my research. As stated before, the research is voluntary, and your name or organisation will not appear anywhere in my research. You will remain anonymous and you will simply be referred to as respondent 10. Thank you for sending the consent form. Before we start, I would just like to check with you, do you have any questions before I introduce the topic and start with the interview?

Respondent: Thanks Mr Giyose, I do not have any questions at the moment. We can proceed.

Interviewer: So, the research topic is about "exploring the effects of information technology in streamlining access to development finance for SMME in South Africa". So, with you being a specialist in the development finance space, we thought that your views would be quite insightful and helpful in us uncovering this topic. So just to start the first question is; What is the demand for development finance by SMMEs looking for finance in South Africa?

Respondent: If I were to use a scale of 1 to 10. 10 is high in terms of demand, I would put it at 9. The reason for saying this is that, given where we come from as a country, the majority of the population was excluded from participation in the economy. I think, having transformed from the old regime to the new regime, there is a lot of initiative by the government to try and include black people – in terms of participating in the economy. So, I think the demand has shot through the roof. We are seeing a lot of young, up-and-coming, educated entrepreneurs coming up from the rural areas, the townships, and the urban areas. People are trying to start their own businesses as opposed to following the employment route. With the demand in my view for finance in South Africa, the only issue that I have noticed is that there is a lack of uniformity in terms of how the DFIs have been set up by the government. Many things overlap and the communication with the general public is not great, and they don't know where or what sets apart one DFI from another. So, those are some of the things that make access to finance a little bit tricky for an entrepreneur. But, there is great demand because there is a lot of understanding in our population that it's not necessary to just go the employment route where you just get an education, get a degree, or even an honours degree and get employed. People go and get their education, but they want to use that to start their own businesses in the areas that they live in or in other areas as well. So, there is a great demand in my view.

Interviewer: Ok, and a follow-up question to that is; What is the supply of development finance by DFIs to SMMEs looking for finance in South Africa? You have noted that the demand Is quite high, what is your perception in terms of the supply towards meeting that demand?

Respondent: There have been many great initiatives that have been set up by the government. So, for example, they have set up many DFIs such as your NEF, which looks at funding ranging from R250 000.00 to R75 000 000.00; there is SEFA which has almost a similar range maybe up to R50 000 000.00; there are provincial development funding institutions here in the Eastern Cape like ECDC; in Gauteng, you have your Gauteng propellers; in KZN you have ITHABA or something…I just don't remember the name. So, you have all these provincial institutions that have been set up by the provincial government and at your national levels, you have your NEF and IDC…. So, there is a high supply of funding. However, it would be amiss for us not to acknowledge some of the bottlenecks that exist out there. If you ask the same question to entrepreneurs you will definitely get a different answer, they will say, there aren't any, and it's not because there are no institutions to supply the funding. They are there, it's just that people find it difficult to access the funding that is available out there. So, I think in summary my answer is, there is given initiative by the companies that have been set up by the government to supply finance to entrepreneurs. I think the supply is high, but the only issue is that there are bottlenecks and people find them. Either they have problems with application forms or the information required by the funders is too stringent, or there are certain exclusions in terms of which markets will be financed by these different DFIs. So those are some of the challenges, but the government has tried their best to set up all these DFIs that operate on national and provincial levels. But, as I said there are some challenges in terms of availing the funds to entrepreneurs.

Interviewer: Ok, the next question would be, what information technologies are available in your organisation currently and what are the benefits and shortcomings of these systems

Respondent: We use CRM which stands for “customer, relationship management system. That is the backbone of what we have in terms of IT infrastructure. Then have a system called Credit Ease, which is a loan management system to calculate interest rates or interest that we charge to the client, and we use it to monitor the repayments. it’s like an (inaudible) table if I may put it that way. It’s Credit Ease, adjusts interest rates as they change and issues out statements automatically to our clients. The shortfall of this system though is that it is not a live system. You cannot go into the system and check what the interest rate was yesterday, it is always a month behind. So, if you go and check a statement today, it will show you as of 31 Dec 2020. And I have noticed that many DFIs that I have interacted with, have a similar system and, I find it problematic in that the technology exists today so that we can check today, what the outstanding balances were yesterday. Just like if you were to go to your own bank and request a statement. They will show you information as at today so, as DFIs we need to move towards being on par with the banks in terms of having up-to-date and live loan management systems. Where we are lacking also is that we do not have a live portfolio management system, we rely a lot on excel. And you know, excel is not a great tool for this purpose of managing portfolios. So, if you want to know where most of your investment is in terms of sectors, whether it's petroleum or CSR or property and so forth. We don’t have a system linked to Credit Ease that can, at the click of a button, produce this information where you would see where your money lye’s and then be able to make informed and strategic decisions based on that. Those are some of the areas that I feel are lacking in our organisation and I think, it’s something we are going to work on going forward. The drawback of excel is that it’s garbage in, garbage out. It depends on whoever is inputting the information. So, it can be manipulated easily, susceptible to human errors, so if someone is trying to put a million and they put an extra zero, all of a sudden you have 10 million and that information would be incorrect. I hope that makes sense… So, that is the drawback of relying too much on excel. It's a huge risk for an organisation of our size, to be relying on excel when it comes to portfolio management. But, for loaning systems as I said, we use Credit Ease

Interviewer: Alright, I think the next question you have touched on so perhaps you can just elaborate; What information technologies are available in the financial services market at the moment that you know of?

Respondent: One (1) that I know of is Credit Ease, which is a loan management system. And then when I worked at business partners, we had a system called Orion which was a system produced to create legal documents. So, your term sheets, and loan agreements are not written as the deal is done, by someone. There is a system where you input certain things and it produces a legal document. The benefit of using such a system is that you don't find situations where you thought you were looking at a property deal but somewhere on page seven (7), you find that there is a clause talking about a service station. Those things happen when you don't have a system and you are pushing high volume, in terms of deals. So, people copy and paste from old agreements to new legal agreements, so there will be errors that you find in those legal agreements where it's talking about something else, but the deal is not about the same property. So as an answer to your question, there is a load agreement system called Orion that business partners use. Then there is Excel's CRM which is a customer relationship management system which we use to register new applications. We register enquiries on the system, contact DDs, or record the risk assessment that we do of applications. It's a really useful system that we rely on, definitely.

Interviewer: Ok, thanks. The next question would be; What is your perception of the following Fintech? Alternative credit scoring, P2P lending, and your mobile payment technology like Vodacom M-Pesa. What is your perception of these FinTechs?

Respondent: In terms of literacy, I don't think our market is advanced to a point where we can say we will rely on all these alternative financial technology systems. But, in terms of credit scoring, I think for your advanced institutions like your NEF and SEFA, IDC, these are some of the things we should be exploring and using in our day-to-day activities. The P2P lending, my view is that it won't make a huge change because if we are talking about Silicon Valley which is an advanced place where people come up with new IT ideas and there is money floating around. It is easy to do P2P, one just comes up with an app and then you speak to the next person who is available to finance further development or to finance the commercialisation of the app. In such a vibrant market it is easier because there is lots of money floating around. In South Africa we don't have "rich uncles" that can lend you money for a business, you still have to speak to a financial institution if you are trying to start something new. Even though it's an alternative, I don't think it's going to move the middle much. Mobile technology such as M-Pesa, I think it is almost dead in South Africa and I doubt they still use it in Kenya and Tanzania. So, I don't know if that will make a huge dent or inspire alternatives in the future, but…I can't say we must not come up with mobile technologies that will assist people. We have the eWallet which is doing well but I don't think they will do big things.

Interviewer: A follow-up question to that, I want to link it to the DFIs; What is your perception towards these information technologies? Can they streamline the supply of development finance to SMMEs looking for finance?

Respondent: They can, there is huge potential. If you think back about our own organisation where we say we rely too much on legal advisers to start new agreements from scratch, every time there is a new transaction. So, if you replace that with a technology system that will manage and produce accurate legal agreements with the relevant information to the deal, at a fraction of the time that a legal adviser would have spent typing that document out, the productivity increases and you can help more people. We have that resource which is the legal adviser, who is available to advise on other things as opposed to sitting down for two (2) to three (3) days, and even sometimes a week, writing one legal agreement. So, I think technology can be used to streamline the process and make it shorter. Secondly, if you remember I mentioned something about Credit Ease which is not a live system and it's not useful for managing portfolios. If the decision-makers were to have a system where, at the press of a button, it could tell you how much is invested into petroleum, how much is invested in property student accommodation and so forth; the decision-makers at EXCO and even at board level would find it a lot easier to make a strategic decision about where the organisation needs to go. So, these are some of the benefits that I see if we are using relevant and good information technologies, that can assist in managing a portfolio. We would be able to make the decisions quicker and release some of the payment resources to do other things such as deal sourcing and so forth, as opposed to having this person bogged down writing a legal agreement for a week. So, there are some benefits we can derive by using reliable information technologies and we can be in a position to finance more deals, instead of doing 60 deals a year, that means 60 agreements written by legal advisers… maybe we can produce double that if we were to rely on information systems.

Interviewer: Ok, and then a follow-up question to that would be; What is your perception towards the same information technologies? Can increase the demand for development finance by SMMEs looking for finance? You have noted that you believe the supply would increase, but do you think these information technologies would increase the demand as well?

Respondent: I don't necessarily think that it would increase the demand because the demand is already incredibly high. I just that don't think that the supply is able to meet the demand because of the constraints that we have discussed already. So, I certainly think that it would increase the happiness of the beneficiaries because if we were to improve the supply side and make it easier for people to access the funding, then they start businesses and you might find less irate and critical entrepreneurs because some of them are very critical of government initiatives. After all, they believe that government does not help and instead puts stumbling blocks in front of them when they come looking for finance. So, I don't know if it would increase but we would find a much happier and more vibrant group of entrepreneurs that are able to access the funding pickup. It will certainly improve jobs because the more sustainable business that gets started or bought by entrepreneurs, the more jobs will be created and so forth, and all these other nice things will come.

Interviewer: Ok, the next question would be; What are the constraints within your organisation that limit the development of these information tech solutions or Fintech solutions?

Respondent: Sigh… there are a few. Number one (1) is that sometimes it is difficult to get buy-in from top management. So, as a person who sits on the ground dealing with applicants of dealing with other DFIs, you get to see a lot of things out there. You meet someone with a very nice technology that you think could benefit the organisation and you take it to the decision-makers that are responsible for acquiring these new technologies and if they don’t believe in it or you find people are comfortable using the ancient systems that we are using currently, then you find that there is resistance in terms of changing and moving to new technologies. So that is one side of it, the buy-in from top management is something difficult to obtain. The other side has got to do with financial resources. Some of these IT systems are very expensive so the cost to acquire can sometimes be very expensive or sometimes it is cheaper, but you find that you would rely on the manufacturer of the system for the maintenance. So, the maintenance contracts become very expensive and the update you find that if they give you a system to use today, you could use it for two (2) years then they tell you… we have the same system but not it is version 2.0 and it is going to cost you another million rands. So, maintenance and updating the system becomes very expensive so which is another constraint that is there. The other one (1) would be, you might find that the whole organisation has to be trained on the new system and the cost of training all these people becomes enormous, such that it becomes a deterrent when making a decision. So, for me, those are the top three (3). Lack of buy-in from top management, the new cost of the new systems including the maintenance cost, and the cost of training the users.

Interviewer: Ok, I think the next two (2) questions you have touched on them but maybe you can just confirm if your views are the same regarding the constraints in your organisation regarding the implementation of these technologies and the adoption. Is it the same or would you like to elaborate on that?

Respondent: It’s the same, the constraints are really what I mentioned earlier. The adoption is linked to the buy-in issue that I raised, where you find that management believes that what we have is the best and that there can’t be anything better than what we are using currently. So, I think what I am hoping for that the future management of these DFIs would be people that have a high inclination of using IT systems and relying on IT systems. Once you have management that believes that IT systems, irrespective of the cost, are enablers of productivity – then you are likely to have easier conversations with management when you say let's update these systems or move on to what is available out there that will help us make our decisions or even streamline our processes.

So, I am hoping that as time goes on, we will have younger management at these DFIs, so things will start to change. It is very hard to convince these sixty-year-olds.

Interviewer: Ok, and then the next question would be; How can the application of information technologies assist the DFIs to fully play their role as catalysts of economic development, job creation, and poverty alleviation?

Respondent: The simple answer would be streamlining processes. That's the "how" part because what we go through is that, we receive an application at a regional office level, we register that application on our system called CRM and then we load it there. Once we have loaded, assessed, and ticked all of our boxes on the checklist, we then have written a five (5) page document making a recommendation to head office saying, there is a deal here can we look at this? Then head office will go to the system and check and if they need additional information they will come to us and say give us this additional information. By that time, it's already a month and a half down the line. If they are happy they will say ok, we are coming down for DD on this date and maybe they set it two (2) weeks ahead and then after that DD then they write a paper which goes to the credit committee for a decision. You are already now two and a half months down the line, depending on the size of the deal it could go to more than one committee. So, you have already spent a three (3)-month process and you don't even have a legal agreement at that time. If the deal is approved then it will be allocated to a legal adviser who is probably sitting with other files for transactions and legal agreements that you are working on, and yours become the fifth and it will sit there until he/she is done with the four (4) that were on their desk at the time they were allocated the new transaction. Once they get to yours they will take another week to write legal documentation so now you are four (4) months down the line. Now, my view is… If this person had Orion, which is the legal system that business partners uses, that legal adviser could do five (5) agreements in one (1) day, it doesn't have to take them a week. So, you have shortened the process by just introducing these legal systems. Then the communication between the regional office and head office will have uniformity if you have a system that just needs you to collect the information and it starts processing the information that is collected, you could maybe cut down another week from that process. So, what I am trying to demonstrate by making this example is that using information technologies would definitely assist DFIs in streamlining the process and making the turnaround time shorter. The consequence of that is that it takes less time for people to access the funding and can start their businesses sooner, operate them sooner, jobs are created now, and once these businesses do well and generate profit, the employees together with the owner of that business's lifestyle will improve and poverty is alleviated there... and it becomes a vibrant economy. So, the issue that I have is that it processes takes so long that by the time the person accesses the funding, chances are for some of them the window of opportunity is long gone. By giving him/her that 10 million bucks four (4) or five (5) months down the line when the opportunity is gone, you are not really helping them because by the time they start that business, it is likely to fail and then we are back to square one (1) and there is no economic development and there is no job creation but you have a person sitting with a 10 million rand debt. The main reason we are in this situation is that we are not exploiting the information technologies that are out there, in my view.

Interviewer: Ok, then our final question would be; How can FinTech be used to integrate all stakeholders from both the demand and supply side of development finance to eliminate the information asymmetries? So, to eliminate the misalignment, I am talking about linking your SARS, CIPC, suppliers, funders, and SMME's to eliminate the misalignment that we are seeing today.

Respondent: I think the starting point would be who is going to be the host of all that information? If the government were to answer that question for us we would have a much easier job. At the end of the day, if you are going to create a system that links all of these stakeholders, it needs to be hosted by someone and someone needs to be accountable for all of that information. The idea that we have a database that links all the different stakeholders is a great idea because what it does is allow a potential investee to go to one central point or one database to look for information. So, at the click of a button, they get what is needed. If NEF wants a tax return from SARS there can be a button on the same system, that links the person to SARS to get a list of all that is required to get a tax return, that would make the job of the funders and other stakeholders a lot easier and would eliminate the information asymmetries that you are talking about. But, I think the first question for me would be how much does it cost and who will be the one responsible for hosting such a database. But, the idea is a great idea and I think it is something that needs to be explored by all the relevant government departments, together with the DFIs. As long as it’s done correctly because there is nothing more irritating than going to SEFA for funding and they tell you, you need a tax return. Then you must drive to SARS to get one and stand in the queue for 14 hours only for them to tell you that you did not bring your proof of residence. Now you must go and get the proof of residence in order to come back and apply. I think that could be avoided by having this central database where irrespective of where I am in South Africa, I will know what is required and hopefully be able to submit everything electronically instead of knocking on their doors and queuing for hours on end.

Interviewer: Alright Mr B, thank you very much we have come to the end of our interview. You have shared a lot of insights and thank you for your time. A copy of my research can be made available to you once I am done, at your request. I think it will be interesting for you to see how the other respondents responded to the same questions that were posed to you and also for you to see the finding and the completion of the study itself. If you are interested, you can just request it. I should be done with the research in early February then by all means I can send you a copy to read.

Respondent: Alright, I appreciate that.

Interviewer: Alright, thank you very much.

Respondent: Thank you, Sir.