THE EFFECTS OF MOBILE CLOUD ACCOUNTING ON THE OPERATIONS OF SMALL, MEDIUM AND MICRO-ENTERPRISES IN SELECTED CAPE TOWN MARKETS

By

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DECLARATION

I, Aziza Fortuin, declare that the contents of this thesis represent my own unaided work, and that the dissertation/thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

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ABSTRACT

The fourth industrial revolution (4IR) has arrived, yet many SMMEs are struggling to embrace this technological revolution. Transition from a paper-based financial recordkeeping to digital platforms is tardy in the informal economy, yet transformation is crucial for businesses to remain competitive, particularly in a post Covid-19 era. This study investigated the extent of usage of mobile cloud accounting applications on the operations of the business of SMMEs at selected markets in Cape Town.

Mobile cloud accounting technologies can have diverse benefits to offer the small and micro industry because of its flexibility and scalability. It can be used to record and generate financial information, or as a management tool for the business. The study followed a mixed method approach and data was collected from 121 participants around Cape Town and surrounding areas. The study was based on the Perceived Characteristics of Innovation (PCI) model by Moore and Benbasat (1991). The quantitative data collected was analysed and presented in the form of pie charts and tables, while the qualitative data was analysed via themes and codes.

The findings revealed that many SMMEs in the informal sector are not aware of mobile cloud accounting and the advantages it offers. The study suggests that consultants of vendors must come on board to assist in providing training and awareness in the attempt to transform the informal sector into a digitalised informal sector.

Keywords: mobile cloud accounting, awareness, SMMEs, Cape Town, South Africa

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DEDICATION

I dedicate this work to my children, Nasreen and Athrah Fortuin, and my husband Rushdie Fortuin. They have encouraged me to be my own competition and to fulfil my dreams.

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GLOSSARY

4IR	Fourth Industrial Revolution
CC	Cloud Computing
CPUT	Cape Peninsula University of Technology
E-invoice	Electronic invoice
GEM	Global Entrepreneurship Monitor
ICT	Information and Communication Technology
MaaSB	Mobile-as-a-Service-Broker
MaaSC	Mobile-as-a-Service-Customer
MaaSP	Mobile-as-a-Service-Provider
MCC	Mobile Cloud Computing
NSBA	National Small Business Amended Act
SaaS	Software as a Service
SARS	South African Revenue Service
SASSA	South African Social Security Agency
SMEs	Small, Medium and Micro-sized Enterprises
SPSS 26	Statistical Package for the Social Science version 26.0
TAM	Technology Acceptance Model
TBP	Theory of Planned Behaviour
TRA	Theory of Reasoned Action

CHAPTER ONE – INTRODUCTION

1.1 Introduction

The small business sector is a major contributor to the growth of local economies, especially in South Africa, as many people of working age are employed in this sector (Tawodzera, 2019; Shabalala, 2014). In addition, this sector continues to be part of the economy that people fall back on to earn a living when there are little or no work openings in the larger businesses or in the public sector (Charman, Petersen, Pipers, Liedeman & Legg, 2017). While the small businesses in general play essential roles in economic and local development, Woodward, Rolfe, Ligthelm and Guimaraes (2011) note that the total number of workers in this industry cannot be assessed accurately because their activities are mostly unrecorded and undetected. This is supported by a study conducted by Nasir and Talib (2018), which highlights these entities' inability to generate an accurate account of the gains or losses produced. Scholars such as Nyathi (2017) claim that most small businesses base their decisions on incomplete accounting records, for various reasons. Furthermore, Nyati (2017) argues that failure to have proper accounting or financial records is a problem for many organisations, and is worse within the small business sector, since they do not account for the money that flows into and out of their entities in most cases.

The challenge forms the basis of this study and an investigation is carried out within a niche in the small business sector, namely small, medium and micro-sized enterprises (SMMEs). To begin with, Fatoki (2018) describes SMMEs as autonomous, non-subsidiary firms that employ less than a given number of workers. This number varies across countries, with 250 employees being the most common upper limit for designating an entity as a SMME. In most cases, SMMEs face many technological and managerial difficulties, including poor – or a lack of – accounting expertise to sustain their businesses professionally (Fatoki, 2018). A study conducted by Grande, Estébanez and Colomina (2011) found that SMMEs operating in the contemporary market environment face many obstacles, including the fact that they must maintain appropriate accounting records while keeping up to date with the competition. Narrowing down the challenge to South Africa, Gunasekaran, Rai and Griffin (2011) found that SMMEs often compete with global rivals because similar goods or services are purchased at affordable rates and delivery times through e-commerce. In light of these difficulties, Amoako, Marfo, Gyabaah and Gyamfi (2014) note that, owing to the high costs of quality accounting software, SMMEs do not keep appropriate accounting records.

In addition, with the emergence of 4IR and the advancement of technology, the introduction and application of appropriate technology in every sector has become imperative, regardless of form or scale (Bhagat & Sambargi, 2019; Choi & Choi, 2020). Organisations traditionally purchase accounting software as a tangible product to be installed on their mainframe, which is an example of traditional on-site infrastructure accounting methods. Cloud-based accounting software, on the other hand, requires the consumer to buy the right to use the software via the internet, through a subscription model known as Software as a Service (SaaS) (Agarwal, 2018:1041). Cataldo, Sepúlveda and McQueen (2012) conclude that with less red tape, SMMEs can easily adapt to technology, regardless of their size. Therefore, SMMEs should adopt cost-effective strategies such as cloud computing (CC).

CC is a term that can be defined as a virtual server computer network capable of configuring a wide variety of specifications (Jouini & Rabai, 2019). It has various technological advantages, which include data storage, energy consumption, flexibility and hardware optimisation (Sandu & Gide, 2019). Khan (2011) found that CC is more useful for the execution of risk and cost accounting in SMMEs. Other scholars associate CC with economic advantages such as its reliability, coupled with its ability to be utilised by multiple consumers at a low cost (Özdemir & Elitas, 2015; Dimitriu & Matei, 2014; Wyslocka & Jelonek, 2015; Khan, 2015). Shreyas and Divakar (2017) further note that the main advantage of storing data in the cloud is that it reduces the expensive communication and computation burden on users.

This system, when conceptualised via a mobile network using cloud technologies, is known as mobile cloud computing (MCC) (Tudoran & Ionescu, 2014). MCC, a term also used interchangeable with Mobile Accounting Apps, allows a user to integrate all the capabilities of cloud computing into the mobile environment. Donner and Escobari (2010) assert that by using mobile devices, SME owners embrace digital capabilities, bringing the industry a new dimension. The use of mobile phones has evolved to the extent that smartphones can be used to simplify the purchase and payment of transactions. These findings are supported by a study conducted by Poushter (2016), which asserts that 37% of South African mobile phone users use smartphones, while 52% use non-smart cell phones. Dahlin Ivarsson (2014) and Larsson and Svensson (2018) also found an interesting trend of increasing recording and transacting using mobile banking among small-scale traders in South Africa. Consolidating all these changes with other developments across the world, mobile apps are mainly due to their reliability and capabilities in performing the required function tool (de Sena Abrahão, Moriguchi & Andrade, 2016; Karlsson, 2017). Additionally, due to the use of a mobile device, data can be stored on the internet (in the cloud) (Jiang, Ma & Wei, 2016; Raja, Chitra & Jonafark, 2018).

Using CC or MCC, SMMEs will be able to integrate their bookkeeping and other accounting practices.

Bookkeeping is the methodical practice of tracking financial transactions using source records, detailed income statements and financial status statements (Bouwer & Schauten, 2019). Integrating bookkeeping activities into the business sector in question can be a challenge and burden for the SMMEs owners and managers, especially because the publishing of annual financial statements by these organisations is not mandated by statute. However, for the purpose of tax accountability, the responsible revenue authority in any designated country requires SMMEs and other related micro-enterprises to have basic bookkeeping and accounting records (Carsamer & Abbam, 2020; Dlamini, 2020). The South African Revenue Service (SARS) in South Africa requires SMMEs and other micro-organisations to register revenues and expenditure to file annual tax returns (SARS, 2020). For this purpose, to be able to file annual income tax returns, SMMEs require some source of permanent tracking routines. Therefore, for different organisational and regulatory purposes, a cloud-based framework may support these organisations with profit and loss statements and other operational statements.

To meet these obligations, modern-day SMMEs have realised the need to adjust to the 4IR and adopt other information and communication technology (ICT) frameworks (Fadewar & Aher, 2020). For example, Nasir and Talib (2018) highlight that an accounting application called MASMe was developed in Malaysia to record income and expenditure, particularly in the informal sector. Nasir and Talib (2018) further noted that this application allows users to manage their expenses more efficiently. However, although this is a perfect application for small businesses, the study was conducted in Malaysia and based on the Malaysian small business market specifications. These specifications will differ in South Africa and other countries, due to market conditions and legal frameworks. Additionally, Mramba, Mikko, Emmanuel and Erkki (2016) highlight that many micro-enterprises continuously face challenges in developing information infrastructure, and overall, their bookkeeping and financial reporting tends to suffer as a result.

Nonetheless, in view of these readily available and user-friendly cloud technologies, the researcher assumes that MCCs or CCs can be useful for SMMEs to satisfy their tax obligations and other commitments in South Africa. In selected markets in Cape Town and the surrounding areas, SMMEs consist of a variety of retailers selling items in a craft market setting while shoppers enjoy music, relaxed atmosphere and free parking. Customers at Kirstenbosch Craft and Food Market can use on-site credit and debit card facilities (SANBI, 2017). In comparison,

many SMMEs and other micro-enterprises perform their business on the streets and pavements in diverse sub-districts of Cape Town.

1.2 Statement of the problem

Studies undertaken in a South African context by Kalan (2016) where the researcher studied adoption of mobile payments in an informal sector in Cape Town. The study found that micro-entrepreneurs used banking apps because of ease of use and convenience while hesitancy in adoption includes trust and security. Furthermore, Khadim and Choudhury (2019) found that there is a positive relationship between good recordkeeping habits and growth in the business, however very little recordkeeping and compliance occurs in SMMEs (Yap, 2019; Azevera, Gariba, Offeh, Agyeiwaa, & Kwakye, 2012), which led to a misconception that the reason for the lack of financial recordkeeping may be linked to the "know-how-factor", or the awareness of suitable accounting applications in the market (Myeko & Madikane, 2019). Rahmayanti & Rahmawati, (2020) suggests that efficient mobile accounting applications should be hassle-free to use and implement in small businesses. Nasir and Talib (2018) developed a mobile accounting prototype (MASMe) designed for SMMEs, as a financial management tool to aid their business effectively. Philip (2018) studied the efficacy of cloud accounting in Bangalore and found that most small businesses were unaware of the benefits of cloud accounting. Furthermore, inefficient recordkeeping and inadequate compliance plays a significant role in business failures. All the studies mentioned above, except Kalan (2016) was in a non -South African context and focussed on cloud accounting while, Kalan's (2016) focused on the adoption of mobile banking apps and not mobile cloud accounting.

Considering Philip (2018) findings there is a reasonable assumption amongst SMMEs that reliable and timely financial statements could only be maintained for major corporations with huge income. My thinking, though, is that SMMEs can learn from and apply better decision-making and increase profitability from all the accounting software technologies available. This will counter the misconception that SMMEs are not familiar with the use of mobile cloud technology in business. Subsequently, this study intends to investigate the extent to which SMMEs use mobile cloud accounting applications to improve their business operations in selected markets in Cape Town.

1.3 Aim of the study

The main aim of this study is to determine the extent of the use of mobile cloud accounting and its effects on the performance of SMMEs in selected markets in Cape Town, South Africa.

1.4 Research questions

1.4.1 Primary research question

i. To what extent do SMMEs use mobile cloud accounting to improve their business in selected markets in Cape Town, South Africa?

1.4.2 Sub-research questions

i. To what extent do SMMEs in selected markets in Cape Town, South Africa use mobile cloud accounting to generate financial information for decision-making?
ii. What is the level of awareness of SMMEs in selected markets in Cape Town, South Africa, on the use of mobile cloud accounting to generate information for decision-making?
iii. What significant effect does the use of mobile cloud accounting have on the financial information of SMMEs in selected markets in Cape Town, South Africa?
iv. What factors may inhibit the use of mobile cloud accounting to generate financial information for decision-making among SMMEs in selected markets in Cape Town, South Africa?

1.5 Research objectives

1.5.1 Primary research objective

To determine the extent to which SMMEs use mobile cloud accounting to improve their business in selected markets in Cape Town, South Africa.

1.5.2 Secondary research objectives

i. To determine the extent to which SMMEs in selected markets in Cape Town, South Africa use mobile cloud accounting to generate financial information for decision-making;

ii. To establish the level of awareness of SMMEs in the selected markets in Cape Town, South Africa, concerning the use of mobile cloud accounting to generate information for decision-making.
iii. To ascertain the significant effect of the use of mobile cloud accounting on the financial information of SMMEs in selected markets in Cape Town, South Africa; and
iv. To establish the factors that may inhibit the use of mobile cloud accounting to generate financial information for decision-making among SMMEs in selected markets in Cape Town, South Africa.

1.6 Significance of the study

Yap (2019) established that most SMMEs perform bookkeeping functions on an ad-hoc basis. These results are also consistent with Muchira's (2012) report, which argues that these companies keep inadequate reports and are unable to assess the company's financial output. This also limits the ability of the owners to measure profit, product costs, expenditure and revenue reports.

Walsham (2017) researched ICT for development within the small businesses sector and found that technological development is needed for success, with more engagement from stakeholders. Access to technology opens opportunities to the poor and may lead to the exploration of a wider market, increased innovation and a more efficient business (Shymanska, 2020). The advent of mobile technologies and their related low costs gives rise to greater inclusivity within the SME industry (Ndemo, 2020). This, according to Ilavarasan (2019), is likely to play an integral part in small and other microenterprises currently and in the future. In another study, Rahman, Taghizadeh, Ramayeh and Alam (2017) argue that technology readiness amongst the underprivileged is needed to reduce global poverty. The authors conclude that the poor are ready to embrace technology, as it has the potential to contribute to social upliftment and development. This can helpful in the SMME sector in South Africa and beyond.

As a result of the sparse literature, the researcher realised the need to examine the utilisation of MCC by the SMMEs in recording the transactions of their businesses and how it influences their performance. This study is therefore significant in the sense that it tries to find out the extent of usage of cloud accounting technologies at markets in Cape Town. In doing so, the study tries to bring awareness to the SMMEs about CC, MCC and other accounting applications available to generate financial information. This research will allow these

organisations to either continue as they have for the past decades or embrace technology to improve their business operations. Policymakers such as the South African government can use the results of the study to implement effective intervention methods, which could include assessing the skills base assessment for small businesses.

1.7 Overview of the research methodology

1.7.1 Empirical study

This study uses an empirical research approach to study the extent of usage of MCC in the operations of the SMMEs in selected markets in Cape Town. Saunders, Lewis and Thornhill (2019) are of the view that the empirical research approach is a combination of quantitative and qualitative data collection methods. In addition to this research approach, the researcher had to choose an appropriate research paradigm for this study. Saunders et al. (2019) define a research paradigm as a method of gaining insight by examining a social phenomenon. This research uses a combination of positivist and interpretive research paradigms. According to Tracy (2013), the positivist research paradigm is seen as a means to measure and predict a phenomenon, while the interpretive paradigm is used to understand that particular phenomenon precisely.

1.7.2 Research design

A research design is a plan, structure, or strategy used to study a specific phenomenon, to test relationships or to examine cause and effect (De Vos, Strydom, Fouché & Delport, 2011). According to Saunders et al. (2019:313), an exploratory study is undertaken “to find out what is happening, to seek new understanding, to ask questions and to assess the phenomena in a new light.” Likewise, it is a design that establishes causal relationships between variables. This study followed a mixed method approach, which enabled the researcher to provide unbiased information to answer all the research questions and objectives.

1.7.3 Population and sample size

Population as a term in research refers to a collection of units to consider for study (Antonius 2013:10). These units must have characteristics relevant to the research at hand. In this study, the population consisted of SMMEs in selected markets in Cape Town, South Africa. The total population for this study was 310 SMMEs. A sample size of 121 SMMEs was randomly selected for the survey, while 14 were purposively selected for the interviews.

1.7.4 Data collection instrument

This study made use of a mixed method approach to achieve its objectives by utilising a questionnaire, interview schedule and secondary data. The paper-based questionnaire was divided into five sections. Sections A, B, C & D are comprised of quantitative (closed-ended) questions. Section E consists of qualitative interview questions, whereby the researcher interacted with the participants to gather information on how SMMEs make use of MCC applications. The interview process allowed the researcher to explore how participants felt about using mobile accounting applications for their business and what impacts these technologies have in their operations. Information was also gathered on the possible challenges that affect the use of MCC technologies by SMMEs. All the interviews were recorded using recording devices to make the analysis easy.

1.7.5 Data analysis

The data was analysed using descriptive and inferential statistics, as well as thematic analysis to analyse quantitative and qualitative data. Firstly, quantitative data was coded from the questionnaires to an MS Excel spreadsheet, while audio data was transcribed from audio to text. Descriptive and inferential statistics were analysed using the Statistical Package for the Social Science, version 26.0 (SPSS 26) as it was the latest release of this software. To test the relationship between the use of MCC applications and other variables, regression analysis was used as the main method of analysis. Thematic analysis was used to generate different themes on the variables under study. These findings are presented in Chapter Four.

1.8 Delimitation of the study

This research focussed on SMMEs in selected markets in Cape Town, South Africa, as it was not feasible to incorporate all similar organisations in all the markets across this region. Moreover, the study focused on the use of MCC applications, and the level of awareness concerning them, amongst SMMEs. All the SMMEs in this market in Cape Town were part of the population frame, regardless of the gender or population group membership of the owners or managers. Importantly, the respondents were chosen based on the order of their stall numbers and their willingness to participate.

1.9 Limitations of the study

The first limitation encountered in this study was the Covid-19 pandemic. This affected the researcher’s contact time with various traders’, due to social distancing regulations of standing

1.5 metres apart. A further limitation was that due to the Covid-19 lockdown rules, many of the intended markets were not open and the researcher did not have access to a more diverse sample. In addition, the traders who could trade were on edge because of the dire economic situation in the country, and many were not really interested in participating in this study because they saw little utility in it. Finally, not all interviews were recorded because of difficulties sanitising the microphone to the degree required by government regulations, the necessity of speaking through a mask, and retaining the required social distance when interviewing.

1.10 Ethical considerations

In this study, data was collected via paper-based questionnaires, computer-based (Google forms) questionnaires and face-to-face interviews. The Ethics Committee of the Cape Peninsula University received consent letters from the market organisers on whom the researcher intended to do the research (see appendices). This consent letter was to protect the researcher and the university from any harm that could arise from the research. The researcher explained the process, the aims, and the objectives of the study to the respondents. Participation was entirely voluntary; the traders could remain anonymous and the participants were told that they could withdraw at any time during the process. Importantly, no remuneration was attached to their participation in the study. A number of face-to-face interviews were recorded. The researcher also implemented several measures to guarantee the confidentiality of the participants. For this reason, no names, surnames or contact information were requested on the questionnaires or in the face–to-face interviews. Once the questionnaires were completed, they were kept in a sealed envelope and the audio recordings were saved to the researcher's Google drive.

1.11 Contribution of the study

As previously alluded, the literature shows studies completed by Wolcott, Quereshi and Kamal (2007), Qiang, Clark, and Halewood (2006), Bharati and Chaudhury (2006), Rahman, et al. (2017) and Nasir and Talib (2018), which indicated that there is a need to implement technology into the small business sector. However, these studies were conducted in business environments different from South Africa, which implies that the implications of the implementations of the identified MCC technologies may be different. Consequently, when conceptualised in South Africa, there is a void in the literature on the factors that influence SMMEs to utilise MCC to generate financial information. This research was therefore

conducted to cover this gap and the empirical research site was selected markets in Cape Town, South Africa which is characterised by a significant number of SMMEs.

1.12 Definitions of terms and key concepts

Table 1.1: Definitions of term and key concepts

Terms	Definitions
Small business sector	Refers to privately owned corporations, partnerships, or sole proprietorships that have fewer employees and/or less annual revenue than a regular-sized business or corporation.
SMMEs	Refers to small, medium and medium-sized enterprises. Businesses are defined as 'small' or 'medium' in terms of being able to apply for government support and qualify for preferential tax policy, which vary depending on the country and industry. Micro-enterprises are usually very small in nature and are predominantly informal. The basis used in South Africa to define SMMEs is related to their size, number of employees per enterprise, annual level of sales as well as gross assets (Mahembe, 2011; Ferreira, 2007). SMMEs employ up to 200 employees, are mainly owner-managed and operate from fixed premises with all formal requirements.
Cloud Accounting:	An accounting system whereby the application is accessed through an internet browser and hosted in the cloud with no need to install software (Dimitriu & Matei, 2014).
Cloud Computing	A system whereby users can store data and utilise applications through multiple devices at remote locations (Jeevitha & Athisha, 2020). In addition, it also provides various on-demand services.
Mobile Cloud Accounting	The use of accounting applications via cloud technologies using a mobile device (Tudoran & Ionescu, 2014).

Source: adapted from various authors as indicated and tabulated by the author

1.13 Structure of the study

This research consists of six chapters:

Chapter One – Introduction

This chapter introduces the aim of the study, which was to investigate the extent to which SMMEs in the selected markets in Cape Town, South Africa use MCC in their operations. In addition, it includes the study background, statement of the problem, the aims and goals/objectives of the research, study rationale, the research methodology and the study limitations.

Chapter Two – Literature Review

The second chapter provides a theoretical framework which informs this study. The theoretical framework proposed for the study is the Technology Acceptance Model and the Theory of Planned Behaviour. This is followed by the various studies performed on the composition of SMMEs and cloud technologies and the benefits of implementing cloud technologies.

Chapter Three – Research Methodology

This chapter provides insight into the research methodology that was undertaken in the study to collect data to answer the research questions and to gain a better understanding of the extent of usage, awareness, constraints and benefits of using a mobile cloud accounting system. The research methodology employed was a mixed method, which is both a quantitative and qualitative approach. The research sample is emphasised, placing special emphasis on the sampling technique and the methods used the study population. The data collection is discussed based on the questionnaire, pilot study and the supervision of the questionnaire.

Chapter Four – Findings, Analysis and Discussion of Quantitative Data

This chapter presents an analysis of the findings of the study collected through self-administered questionnaires and online questionnaires (Google Forms). The findings are presented based on the questions asked to support the objectives of the study: extent of usage of mobile cloud accounting, motivation for using mobile cloud accounting, level of awareness and the constraints of mobile cloud accounting in selected markets.

Chapter Five – Findings, Analysis and Discussion of Qualitative Data

This chapter provides a presentation, analysis and discussion of the research findings obtained through the interviews. The chapter mainly focus on the in-depth information about the reasons why SMMEs do not use mobile cloud accounting technologies. Thematic analysis is used in this chapter in the presentation and discussion of these findings.

Chapter Six – Summary, Conclusions and Recommendations

This chapter provides a summary of the research findings based on each objective. The chapter also provides recommendations to enhance the usage of mobile cloud accounting applications among SMMEs. Lastly, the chapter provides suggestions for future studies.

1.14 Summary of the thesis

overview of the research methodology employed in this thesis, followed in turn by a discussion of the significance of the study, the delimitations of the study, and the limitations of the study. The chapter also This chapter presents the introduction of the thesis, the statement of the problem and the aims, the applicable research questions and objectives, as well as the significance of the study. What follows is an provides an outline of the ethical considerations involved and concludes with an outline of the chapters.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter examines the theoretical framework, and related theories used to ground this study. It provides the definition of the SMMEs and their roles in South Africa and beyond. It reviews how SMMEs currently record information. The last section of the chapter covers the benefits and risk factors of using mobile cloud technologies. It identifies gaps in literature where research questions remained unanswered.

2.2 Theoretical framework

A theoretical framework is the foundation that binds a together, because it connects the academic framework to existing knowledge (Adom, Hussein & Agyem, 2018). It introduces and describes the theories and explains why the research problem of the study exists. In order to bind this study together, the researcher adopted two theories, the Theory of Planned Behaviour (TPB) and the Technology Acceptance Model (TAM).

2.2.1 Theory of Planned Behaviour

TPB, according to Ajzen (1985), is when the intention to perform behaviour of different kinds may be predicted based on attitudes towards the behaviour, subjective norms and perceived behavioural control; and may account for variances in actual behaviour. In the TPB model, it is believed that people have full control over a situation. In other words, the theory assumes that the best prediction of behaviour is to ask people if they intend to behave in a certain way. The primary function of the theory is to provide an explanation as to why the individual did or did not perform the desired behaviour and to put forth strategies to change the behaviour (Ajzen & Fishbein, 1980). Consequently, the researcher predicts that SMMEs do not use mobile cloud accounting applications to transact in their daily business activities, and thus, a business pattern of manual record keeping has been created through generations of mismanagement.

2.2.2 Technology Acceptance Model

The second theory discussed in this study is the TAM model, which was first researched by Fred Davis in 1989. The TAM is made up of combined theories from Davis, Bagozzi and Warshaw (1989) and the Theory of Reasoned Action (TRA). TAM, an extension of TRA, was initially designed to address the reason for the acceptance or rejection of information technology (Davis 1986:320). Cooper and Zmud (1990) highlight that in order to capitalise on

the advantage's technology has to offer, organisations must understand how to implement the technological processes. When fresh technology is introduced, a psychological theory is addressed to reveal the perceptions or behaviour to address the response towards technology.

Davis (1986; 1989) defines 'perceived usefulness' as occurring when a person believes technology can improve their job function. Similarly, Davis (1986) benchmarks usability as an important component to accept technological systems. It is the researcher's view that mobile cloud accounting can be useful to the SMMEs for improved decision-making based on financial data generation. In addition, the easier the system is to use, the wider will be its adoption. The easier the SMMEs find it to navigate the cloud accounting application, the more likely they will be to use the application to generate financial information. Braun (2013) found that TAM was a useful framework, because it was consistent with a matured person's intention to use technology. The table below represents perceived characteristics of innovation, based on Moore and Benbasat's (1991) work.

Table 2.2: Perceived characteristics of innovation

Main Construct	Definition
Relative advantage	The degree to which an innovation is perceived as better than its antecedent.
Compatibility	The extent to which an innovation is perceived as being consistent with the existing values, needs and past experiences of potential adopters.
Tri-ability	The degree to which a potential adopter believes that the innovation can be adequately trialled before the adoption process.
Ease of use	The degree to which innovation is perceived as being easy to use.
Image	The level to which the use of an innovation is perceived to enhance one's social status in a social system.
Visibility	The extent to which an innovation is visible during its diffusion through a user community.
Result demonstration	The degree to which the advantages and utility of an innovation are readily apparent to the potential adopter.

Sources: Original table adapted from Moore and Benbasat (1991)

It is rather challenging to quantify actual adoption behaviour, especially within the small business sector. SMMEs that have not yet adopted mobile cloud accounting can be assumed

as an approximation of actual behaviour. Thus, the research focus on an intention to adopt as the key dependent paradigm because it suggests a suitable proxy for actual behaviour (Plouffe, Vandenbosch & Hulland, 2001b).

2.2.3 The unified theory of acceptance and use of technology

Unified theory of acceptance and use of technology (UTAUT) theory provides a background which may be suitable to explain the use in this study (Venketesh et.al. 2003) because it integrates different theories and measures acceptance of Information Technology through several different theories. Some of these theories are the TRA, TAM, TPA, combined, TRA and TAM, the cognitive and innovation diffusion theory etc. Researchers such as Khalilzadeh et al. (2017) and Kabra et. al. (2017) has found that the model possesses external variables such as trust, enjoyment, and habits to enhance the use of IT. Khalilzadeh et al. (2017) explains that trust is an imperative factor for adoption of technology.

2.3 Definition and classification of SMMEs

SMMEs are defined in South Africa by the National Small Business Act of 1996, and amended by the National Small Business Amended Act (NSBA, 2019) as:

> *a separate and distinct business entity, together with a branch or more, predominantly carried on in any sector or sub sector of the economy of the schedule and which can be classified as a micro, very small, small or medium business.*

This research is conducted in the small business sector; hence the retail SME's are defined by the National Small Business Amended Act (NSBA, 2019) as:

- Micro-enterprises are those entities with less than five employees. The annual turnover and fixed asset turnover should be less between R0.10 million and R0.15 million.
- Small businesses are an industry with less than 50 employees. In addition, the annual turnover and fixed asset turnover should be between R2.5 million and R15 million.

From the above, enterprises with less than five employees can be classified as micro-entrepreneurs. A micro-entrepreneur may be registered or non-registered (NSBA, 2019). The abovementioned definitions would be the basis of classifying enterprises as micro-enterprises

for the purpose of this study. The study includes both registered and unregistered micro-entrepreneurs trading in the informal economy.

2.3.1 The role of SMMEs in South Africa

Since the global economic crisis in 1997-1998, the economies of developing countries were a serious cause for concern (Chen, Mrkaic & Nabar, 2019). In addition to the world global crisis, South Africa experienced waves of political instability and corruption, much of which has come to light during the past decade (Bhorat, Buthelezi, Chipkin, Duma, Mondi, Peter, Qobo, Swillin & Friedenstein, 2017). In 2020, the Covid-19 pandemic began (Ozili & Arun, 2020). These events contributed to the unfavourable labour market in South Africa, so much so that by Quarter 1 of 2020 the unemployment rate was 30.1% (Stats SA, 2020). As more formal businesses close their doors in developing countries, the informal sector becomes larger, with less fiscal space and weaker governance (Loayza & Pennings, 2020); yet this sector receives relatively few governmental support programs in South Africa (Mahambehlala, 2019). Due to various physical challenges, more informal trade is happening through cyberspace (Wrigley-Asante & Agyemang, 2019). As previously alluded to, SMMEs play an important role in job creation, poverty reduction, fostering of local economies and the building of communities (Abisuga-Oyekunle, Patra & Muchie, 2019). Hence, government is reviewing competition and empowerment policies in the hope that it can enhance informal economic activity (Mazwai, 2020).

2.4 Management accounting systems and their functions

Breuer, Frumusanu and Manciu (2013: 355) state that “management accounting is an important part of an economic information system, with a key role in decision making.” Also, SMMEs in Salgueiro recognised the significance of a good management accounting system in their businesses (Ferreira et al. 2019). A good management accounting system can influence decisions, change business strategies and affect the performance of the small business (Uyar, 2019). According to Drury (2008), the functions of a management accounting system include providing appropriate information for decision-making, planning, control and evaluation, and these are discussed in the following sections.

2.4.1 Collection and storage of data

Data is gathered from various sources and for various reasons, but the short-term use is often for decision-making by lower-level managers. Examples of these decisions could be:

- What selling prices should be set?

- How many units of production should be produced for each product?
- What level of service should we offer customers in relation to after-sales services?
- What is the selling price of the competitors' products?

Thereafter, the data should be stored until it is required.

2.4.2 Modification and processing of data

The collected information is known as raw data and must be processed or modified to be useful to management. If the management accounting system does not record data accurately, this will result in distorted reports and inaccurate decisions. This is especially true when using a system to determine selling prices of goods to be sold. Also, data should be organised and presented in a readable format for stakeholders to use for decision-making.

2.4.3 Analysis and interpretation

Once the data is in a readable format and organised, it becomes easier to analyse and interpret the data for use in making strategic business decisions.

2.4.4 Communication

When the data is analysed and interpreted, it is communicated to the relevant stakeholders in the form of reports, graphs and/or charts. Reporting is an essential function of a management accounting system, and it is essential that when the reports are communicated, such communication is user-friendly and the relevant role players can understand the reports. Examples of management reports are:

- Margin analysis reports to determine the profit generated per product.
- Breakeven analysis reports to indicate at which point the company makes neither a profit nor a loss.
- Capital budgeting reports to determine the long-term assets required and the financing options to be employed.
- Trend analysis reports to identify unusual variances over a period so that they can be investigated.

2.4.5 Monitoring and control

As previously alluded to, management accounting plays a crucial role in providing managers with the required information to monitor and control performance within their organisation. It is important that non-conformities must be reported to the appropriate stakeholders in a timely

manner to allow for corrective actions. Control is a process of ensuring that the actual results lead to the planned results.

2.4.6 Strategic decision-making

Management is often faced with complex decisions. If data is analysed and applicable appraisal methods are employed, the management accountant can prepare useful reports to assist with decision-making.

2.5 Existing methods of recording financial data by SMMEs

Vast amounts of research have been conducted over the past two decades on the recording of financial data within the small business sector. For instance, Firmansyah et al. (2020) found that SMMEs compiled income statements based on cash sales, while omitting to compile a statement of financial position and statement of cash flow. Ahammed et al. (2019) found that SMMEs in Scotland used the single-entry method and cash basis accounting method, and owners of the SMMEs often calculated their profit or loss incorrectly as a result. Barata et al. (2001) recognise that manual recording of financial data by SMMEs poses various challenges. These challenges include loss of data, errors and searching problems. In addition, these methods are extremely tiresome, and often inept invoices are produced, posing challenges when trying to keep track of cashflow, and when making strategic decisions for the business. Duli (2019) studied SMMEs using the double system and they complied to monthly, quarterly and annual bookkeeping practices.

Chelimo and Sopia (2014) illustrate that although recording of financial data does indeed take place among SMMEs in the town of Kabarnet, it primarily takes the form of the recording of sales. The study highlights the direct correlation between bookkeeping, profitability and growth. Sanga et al. (2014) cite the general attitude adopted by SMMEs that the recording of financial data is mainly a waste of time and has no value in terms of the business' sustainability. Without maintaining a proper set of books, the business lacks financial planning and hard-earned money cannot be responsibly accounted for (Sungkawati, 2020). Bookkeeping is the initial step in classifying and recording business transactions (James & Peter, 2019). Receipts are recorded as income, and withdrawals are entered as expenses (Abdul-Rahamon & Adejare, 2014). These are just about the only financial record practices happening in the micro-enterprise: cash in and cash out (Pertiwi & Hidayah, 2019). Hasanah et al. (2019) highlight that although the purchase book is the most common book used, SMMEs are open to learning the income statement, because they view this as the most important statement to their business. Senzu and Ndebugri's (2017) study showed that 81.2% of MSME owners kept a

receipts book and 12.8% kept a general book for accounting purposes. Approximately 60% of these participants noted the main reason for these practices was to determine the profit of the business. These findings concur with Dawuda and Azeko (2015), who state that only a small portion of MSME's keep accounting records. Furthermore, Adeoti and Asabi (2018) found that 28.8% of micro-enterprises updated their sales book, cash book and purchase book, which is also consistent with the findings of Nyathi (2017).

Another challenge is the mind-set of SMMEs in the informal sector, who finds that recordkeeping is a waste of money and they would not spend additional money on it (Aladejebi & Oladimeji, 2019). There is a need to transform the single-entry method to a double-entry method of accounting in the informal sector (Onaolapo, Fasina, Opoola, & Olatunji 2011). The double-entry system is a method with built-in cross checks, automatically balancing it, because it requires two entries for every transaction (James & Peter, 2019).

Earlier studies by Barte (2012) and Roslan et al. (2018), examined accounting literacy among SMMEs and the authors found that the business owners did not even separate business and personal accounts which, as previously discussed, is consistent with findings from Nasser and Talib (2018).

2.6 Impacts of keeping financial information

2.6.1 Advantages of generating financial information

Nketsiah (2018) concludes that 85% of SMMEs in Ghana keep records on trade receivables and 81% declared that the asset register was the most neglected record. There is a need to educate and upskill business owners on basic computer assisted software. Small and medium businesses must prepare adequate financial statements, because it will enable them to make adequate business decisions and attain business success (Nassar et al., 2020; Maseko & Manyani, 2011). Furthermore, accurate financial record management enhances effectiveness and efficiency in small and micro-enterprises (Kahsay & Zeleke, 2019).

According to Williams et al. (2008) and Ademola et al. (2012), the following advantages of recordkeeping should be kept in mind:

(1) Provides an accurate picture of the operating profit or loss.

(2) Facilitates preparing a budget based on accurate results.

(3) Aids comparison between industry trends and times.

(4) Allows preparation of financial statements for internal and external stakeholders.

(5) Necessary to prepare the annual tax return.

(6) Facilitates tracking of fraud, errors and waste.

(7) Provides data for microfinancing, should the need arise.

(8) Helps to avert business failure and is critical for business survival.

(9) Aids good financial planning and control and decision-making.

(10) Assists with business strategy and changes.

2.6.2 Challenges of not generating financial information

Generating financial information is necessary for expansion and development, and in the case of lending money from the bank for capital requirements (Nino et al., 2019). Therefore, if the records are non-existent or incomplete, the bank will reject the application for funding (Sari & Pahlawi, 2019).

According to Saidu (2019) some of the challenges that affect businesses with inefficient or absent recordkeeping are, the high costs associated with recording and maintaining the financial data, as well as the knowledge or 'know-how' factor. Approximately 50% of participants in Nigeria did not have basic accounting knowledge, thereby affecting the maintenance of accounting records. As previously stated, the high costs associated with adequate financial recordkeeping were too high for a small business to absorb into their business, and the absence of government regulations made it infeasible for a small business.

Amoako (2013) found that business owners are afraid of documenting their business transactions, due to the fear of being exposed to tax payments, and therefore choose to rely on their memory (Musah & Ibrahim, 2014). Besides, most business owners do not feel the need to make their business public, as they view it as a private affair (Okafor, 2012). Another challenge the informal sector faces, is the "Entrepreneurial Myth" that an expert in the given field will excel at a business because of their operational capabilities. However, this is untrue, because a small business owner needs business skill to succeed (Tefera, 2019).

2.7 Use of technology to generating financial information among SMMEs.

Mobile technologies are well known for their flexibility and cost-effective solutions (Varshney & Vetter, 2000; Gikenye & Ocholla, 2014). By 2020, more than one third of South Africans had access to mobile devices, thus affording these individuals the opportunity to conduct business using mobile technologies, even though many are not computer literate (Hyde-Clarke, 2013;

Statista, 2020). Mobile technologies remain the ideal use of all Information and Communication Technologies employed by informal businesses, for many reasons (Deen-Swarray et al., 2013; Gikenye & Ocholla, 2014). Wambua and Wamuyu (2020), explored the use of mobile apps to save and invest money in what is known in South Africa as a “stokvel” and to overcome snags associated with manual saving and found that mobile apps were a probable solution to overcome challenges associated with informal savings. Henceforth, current technological solutions are available and adequate, versus traditional or outdated IT solutions to assist the informal sector (Seetharaman, Cunha & Effah, 2019).

2.7.1 Financial information

SMMEs are an imperative part of the value chain within the economy, especially among previously disadvantaged people in South Africa, owing to various reasons such as a lack of poverty reduction or job creation (Fatoki, 2012 & Chimucheka, 2014), yet approximately 70% of small businesses close within 7 years of start-up in South Africa (Bushe, 2019). Similarly, the amount of start-up’s is low (Goodall,2006). There has been a significant decline in the number of entrepreneurial start-ups since 2013, and foreign national entrepreneurs have started filling the gaps in entrepreneurial activities to stay afloat themselves (Global Entrepreneurship Monitor [GEM] 2017). Besides, the economy is relying on entrepreneurial business growth as a plan B for job recovery and economic growth (Vorley & Williams, 2017).

Okoli (2011) argues that there is a crucial link between profitability and good financial recordkeeping in small-scale businesses in Nigeria, because it is very challenging to carry out thorough performance assessments within the enterprise. Correspondingly, Onaolapo and Adegbite (2014) emphasise that financial recordkeeping provides considerable information about the current performance and financial strength of the business.

Financial management can be defined as analysing cash, non-cash and investments to facilitate better business decisions and reach short-, medium- and long-term goals (Gitman, 2007; Oduware, 2011). Management accounting follows a different set of rules and dynamics than financial accounting (Songini et al., 2013). Financial accounting is concerned with the reporting of financial transactions of a business (Kolitz, 2016), while management accounting is primarily used for planning, cost control and pricing decisions to name but a few (Fotache et al., 2011).

Orford et al. (2003) researched financial administration practices of black-owned businesses in South Africa and found that when the owner of the business kept a daily cash book, a trade

receivable record, inventory record and a system of reminding debtors when their obligation was due, it resulted in an improvement in the cashflow of the business. These findings acknowledge the importance of recording financial data, which is vital for decision-making and improving the sustainability of the business (Ajibade & Khayundi, 2017).

A study performed in Ghana by Senzu and Ndebugri (2017), reports that 58.7% of the participants agreed that high-quality recordkeeping attracts investors to the business. In truth, accounting records or transactions that were performed in the business were either incomplete or inadequate to tell the whole monetary story of the business. Transactions in the SMMEs would typically consist of the following:

2.7.1.1 Recording of revenue

Revenue is defined as the “inflow of economic benefits in the forms of cash, receivables or other assets, arising from the ordinary operating activities of an entity” (the sale of goods or services, interest or dividends (Kolitz, 2016). According to this principle, revenues are recognised when they are realised or earned, irrespective of the time when the cash changes hands. Income increases the economic benefit of an entity during the accounting period in the form of inflows which enhance assets and decrease liabilities (IFRS for SMEs, 2016). Robertson (2003:35) and Service (2011:629) corroborate this definition, and the authors explain that economic value is increased through enhancement of assets and reduction of liabilities. Revenue is an important line item on a statement of profit and loss, because internal and external stakeholders use the statements to analyse sales trends and growth in the business, and it can serve as the company’s barometer for past and future forecasts (Turner, 2001). Lastly, it is important to mention that revenue must be recorded at the time that the revenue was earned (Kolitz, 2016).

2.7.1.2 Recording of expenses

Expenses are defined as decreases in economic benefits and result in an outflow of economic benefits (Conradie et al., 2014). Expenses are costs associated with selling or producing goods (Collier, 2009). Under the accrual method of accounting, an expense must be recorded at the same time the expense was incurred. Expenses appear as line items in the statement of comprehensive income and other profit and loss, and they are divided into operating expenses (cost of goods sold, general administrative expenses) and non-operating expenses (finance costs) (Kolitz, 2016).

2.7.1.3 Monitoring influx and outflow of cash

Cash is often referred to as “king”, a quote used in the commercial world to accentuate the importance of cash, irrespective of the size of the business (Abioro, 2013), because without cash the business cannot operate as a going concern, seeing as it will soon be unable to pay its debts (Enow, 2015). According to Du Plooy et al. (2005), the importance of the cashflow statement in the business is often downplayed. The cashflow statement provides information on all cash inflows (collection from debtors) and cash outflows (loans). Effective cash management has many advantages (Merchant Factors, 2013; Gyebi & Quain, 2013; Uwonda et al., 2013):

(1) It may attract investors to fund the business.

(2) it increases the survival chances of a business.

(3) it gives the business a competitive advantage over other businesses.

(4) It allows for speculative undertakings.

(5) It allows you to negotiate for better cash discounts.

Uwonda et al. (2013) found that approximately 41% of the entities studied did not prepare a cashflow statement, while approximately 20% did not even pay attention to their cashflow. Pietersen (2012), found that SMMEs were ignorant regarding how to compile a cash budget and how to reinvest the surplus cash. These studies are consistent with Biljon (2015) and Bruwer (2015), who found that many SMMEs in South Africa have challenges managing their cash or are ignorant to their cash situation. In contrast to the abovementioned findings, Enow and Kamala (2016) found that SMMEs in South Africa manage their cash effectively, but the SMMEs do not hold cash for investment purposes. Also, only a small minority of participants use technology to manage their cash. These findings of Enow and Kamala (2016) are indicative of a lack of technical know-how regarding how to manage a business.

2.7.1.4 Keeping track of the accounts receivables

According to Kolitz (2016) the sale of goods forms a vital part of the economic cycle, and quite often a business will sell on credit, which forms part of a current asset on the statement of financial position, seeing as there is a contractual obligation to pay the client. This subsequently gives rise to risk factors, such as credit losses, since not all clients will eventually pay their debts.

2.7.1.5 Keeping track of the accounts payable

Similarly, to accounts receivable, the purchasing of goods forms an integral part of the economic cycle; and businesses will often purchase on credit. This forms part of the current liabilities on the statement of financial position (Kolitz, 2016). Trade payables are money owed to a supplier for goods or services bought or used on credit. Corresponding to accounts payable, it is a legally enforceable claim for payment held by a business for goods supplied.

2.7.2 The importance of a sound inventory management system

An inventory system is an organisational system that monitors and records stock movement from the date of acquisition until the stock is sold (Conradie et al. 2014). The importance of good inventory control should not be underestimated (Kruger, 2005) because good inventory policies and management will contribute to the longevity of the business. Good inventory policies are likely to encompass the following:

(1) Inventory must be carefully managed, because mismanagement of inventory causes a cashflow shortage which threatens the survival of the small business.

(2) It reduces excess inventory, because surplus stock will increase the possibility of theft, damage and losses (Mbonyane, 2006:23);

(3) Keeping optimal levels of inventory is good business practice, because a shortage of inventory may result in a loss of sales and revenue, either leading to disgruntled customers or customers leaving the business (Rajeev, 2008).

Therefore, keeping the correct inventory on hand to counter the abovementioned will contribute to sound inventory management (Rajeev, 2008). Moreover, the bulk of a micro-entrepreneur's current assets is in the form of stock, and inadequate inventory management practices may negatively affect the business's profits (Pietersen, 2012). As mentioned earlier, SMMEs in South Africa have a dismal survival rate, coupled with the fact that most South African SMMEs are not applying sound inventory management procedures (Mbonyane, 2006), as they view them as tedious and costly (Chikán & Whybark, 1990).

Kanguru (2016), studied the challenges experienced by SMMEs in South Africa regarding inventory management and found that entrepreneurs were generally practicing good inventory control, but the entrepreneurs suffered challenges like inventory shortages, theft and damages. The author recommended that government intervene with short courses to upskill entrepreneurs with inventory management policies and procedures.

The purpose of financial reporting is to provide useful information to internal and external stakeholders for decision-making (Obaidat, 2007). Examples of stakeholders are trade unions, creditors, management or government, in the case of outstanding taxes. A significant objective of financial management is improving the entity's economic performance (McMahon, 2005). As mentioned earlier, certain individuals are interested in the financial records of the business, hence the records must display some level of user-friendliness. Wang (2012) argued that one of the characteristics of decision-making usefulness is making financial statements valuable to MSME owners. Further, Kolitz (2016) suggests that relevance and faithful representation are fundamental qualitative characteristics of good financial information. These characteristics determine the content of financial reporting information and are very important to users (Beest et al., 2009). Obaidat (2007) further explains that for information to be relevant to all stakeholders, the information must have the power to affect the outcome of a decision. Relevant information must possess characteristics such as the ability to make predictions about the future and must aid decision-makers to confirm or correct previous beliefs.

Palser and Marsden (2011) researched mobile bookkeeping applications for SMMEs in a South African context, whereby the mobile shop owner could use their mobile device to record financial data. Although the study proved successful, the application was not hosted in the cloud. This represents a flaw, because if the application is hosted in the cloud it is safer for data storage, and the application is not rendered useless when the mobile device breaks or gets stolen.

According to Githinji (2018) the adoption of IT in the millennial context entails that online banking and bookkeeping will have a far-reaching positive effect on the profitability of SMMEs, despite initial costs**.** Evans et al. (2005) mention the strong link between business failure in small and microentrepreneurs and inadequate or absent financial recordkeeping. These findings are consistent with Muchira (2012) and Butler (2009), who state that inefficient financial recording will result in failure of the small business. Financial recordkeeping simply cannot be ignored, because doing so impairs the business and potentially leads to business catastrophe within months of it starting (Germain, 2010). Tefera (2019) found that microentrepreneurs have no basic knowledge of keeping records because they view it as a laborious task.

Studies conducted over the past 19 years indicate that SMMEs continue to record financial data using legacy methods that cannot sustain the business in the long run. This led the researcher to explore more practical and modern technologies to assist with recording of permanent financial data, for ease of access, for decision-making and to improve profitability.

Examples of mobile cloud accounting packages are Xero, Fresh Daddy and QuickBooks, all of which are currently on the market.

2.8 Empirical evidence on the studies conducted on the use of cloud accounting

In early information technology sketches and schematics, the internet itself was often represented as a cloud-like object, which is a likely origin for the use of the term 'cloud computing' (Saleem, 2011). Since the dawn of cloud computing, many definitions have been put forward for it. Jouini and Rabai (2019) describe CC as the virtualisation of resources, and provision of scalable ICT resources using the internet. The difference between cloud accounting and previous software models is illustrated as: "traditionally, an entity would buy accounting software as a 'tangible' product and install this onto their mainframe. With cloud-based accounting software currently available on the market, the user simply purchases the right to use the software over the internet via a subscription model, known as Software as a Service (SaaS)" (Andrikopoulos, 2017:7).

Huang et al. (2013) and Tudoran and Ionescu (2014:298) classified mobile cloud computing into the following constitutive elements:

- Mobile-as-a-Service-Customer (MaaSC) is a term derived from the conventional client-server prototype plus the introduction of virtualisation and other cloud-based technologies in the embryonic stage. Mobile devices can outsource their computing functions and cloud storage to accomplish improved results.
- Mobile-as-a-Service-Provider (MaaSP) is a function that allows the mobile device to be transported from one service user to a service provider.
- Mobile-as-a-Service-Broker (MaaSB) can be considered an expansion of MaaSP, as it provides networking and data transport services to other devices. The mobile device can be programmed as a proxy to provide network services. These network services include Wi-Fi and Blue tooth or 4G/5G serving as additional security.

CC possesses several idiosyncratic characteristics. These include fewer IT skills and human capital required for implementation, sharing of costs and resources and reduced maintenance (Jadeja & Modi, 2012:877). Vasiljeva et al. (2017) studied CC in the SME sector and found that 84% of SMEs were already using CC services. The authors recommend that the SME must align itself with the need for CC services to gain the maximum benefits derived from CC. While Tarboush (2017) explains that CA is a relatively feared concept, it is nonetheless here to stay. CC still has work to do to perfect its role and deliver full benefit to the business.

Recent studies on cloud accounting completed by Kumar and Aurora (2018) found that in a developing country like India, CA showed a high adoption rate, which resulted in business growth. The Indian government expects SMEs to adopt CA to grow the SME market and thereby the economy. While Tudoran (2018) compared CA applications to some traditional accounting software in the Romanian context, the afore-mentioned researcher shares a conclusion on the study that accountants preferred mobile applications and that browser-based software was more convenient than traditional on-site software. E-invoicing is an example of a cloud-based electronic transfer system of invoicing between the supplier and the buyer (Korkman et al., 2010). An advantage of this system is cost efficiency because of a reduction in errors and stationery costs such as postage, paper, envelopes.

According to Donner and Escobari (2010), small business owners are embracing digital capabilities by using mobile devices, bringing a new dimension to the business. This means that people may rely less on the traditional way of managing their business and accessing financial or business data in the future. The user benefits of CC involve cost competence (Özdemir & Elitas, 2015) improved staff management tools (Brandas et al., 2015), improved flexibility (Dimitriu & Matei, 2014; Wyslocka & Jelonek, 2015), reduced ICT focus and increased flexibility and access (Dimitriu & Matei, 2015). In recent times, it has become necessary for businesspersons or employees to adopt mobile capabilities so that they can do their work away from the office as well (Danielsson & Bodin, 2008). People can now store their data on remote servers rather than on a fixed server in an office (Duan, 2013), which can be useful for informal traders, as they are more likely to be mobile businesses and often shift their place of trading. Traditional accounting requires more people, additional infrastructure and planning than is the case when using CA (Dimitriu & Matei, 2014). In addition, the CA method is more cost, time and energy-efficient than the traditional way (Ghasemi et al., 2011).

The SaaS model is an alternative to traditional on-site software. Antecedents of CC research, Madisha and Van Belle (2011), studied factors which influence SaaS adoption, and it was determined that awareness was a key determinant for adoption and usage, followed by availability of resources and market forces. The aforementioned findings are consistent with those of Mohlameane and Ruxwana (2014); and Carcary et al., (2014) who recommend that government should enforce a legal framework that encourages competition and fosters innovation; and that intervention is needed to support and encourage SMMEs to use CC. Moreover, Carcary et al. (2014) found that 48% of participants did not use CC, because they simply did not have the time, while 32% claimed that they lacked the technical IT skills. The abovementioned authors also found that although awareness was a key determinant for adoption, a lack of technical knowledge was also a contributory factor to not using CC.

Mohlameane and Ruxwana (2014) are in agreement with Carcary et al. (2014), finding that less than 40% of participants in South African SMMEs were confident about what CC encompassed, while 7% had no idea what the concept of CC entailed.

Sobhan (2019) and Islam et al. (2015) studied cloud accounting adoption and implementation in Bangladesh, and found that although developing countries have adopted it, they still lag developed countries in adoption. Sobhan (2019) suggests that the government prioritise taking steps in making Bangladesh a digital country to encourage start-up companies, generate employment and protect the environment. This can only be done by changing the citizens' perception, by tutoring and providing skills base training in Bangladesh. Islam et al. (2015) suggest that implementation should be adopted in a four-stage process; feasibility studies, development, implementation and renewal.

Wahyuni (2018) studied why micro, small and medium enterprises should adopt cloud accounting. The study found that the main factors for adoption were ease of use, reliability, collaboration, and security and privacy. Shana and Abulibdeh (2017) agree with the findings of Wahyuni (2018), that when ease of use occurs, users become comfortable as soon as they can use the technology without any complications, and adoption will, in general, follow. For instance, when a user registers, gets confirmation and can transact in a short space of time, it will encourage the adoption of the technology (Buyya et al., 2009). The cloud platform utilises Windows-based applications which are relatively easy to use (Biswas, 2011b). Ease of usage is related to the reduction in the ownership of the responsibility of hardware and software maintenance, and management of the cloud service is performed by the service providers, which reduces the engagement of IT professionals (Wahyuni, 2018). It is easier for the business owner when they do not have to meet the technological obligations themselves, as these come with many responsibilities which the business owner is not always competent to perform.

Đorđević, Radović and Bonić (2018) studied the benefits of cloud accounting in Serbia and encourage implementation and adoption of cloud accounting. In Serbia, only 9.3% of enterprises use cloud accounting to generate financial information. In addition, small and medium enterprises reacted negatively and focussed on the risks and harm they perceived cloud accounting to have, rather than the benefits derived from the system to enhance the growth of the business. The study highlights the need for awareness concerning the urgency of adopting and implementing cloud accounting in the business world. This finding has a close relation to the study conducted by Vasiljeva et al. (2017), who found that 8% of the enterprises would consider using cloud computing in the future, 50% concluded they have no intention to

use it at all, and the balance of the enterprises were in two minds about adopting and implementing cloud computing.

Rao et al. (2018) studied the impact of cloud accounting from the accountant's perspective. They found that accountants in India are aware of the benefits of cloud accounting but has not implemented or adopted cloud accounting.
Wolcott et al. (2007) argues that micro-enterprises are willing and ready to adopt ICT technology but listed some challenges when implementing ICT. These challenges include:

(1) Many microentrepreneurs lack the motivation to accept change and learn and choose the easier option of asking others to do it for them.

(2) Confidence also affects the ability to accept ICT implementation, where other parties are viewed with suspicion.

(3) Entrepreneurs experience infrastructure challenges because they are not capable of purchasing data or lack connectivity in their areas of operation.

(4) Entrepreneur's technical skills are variable.

(5) Entrepreneurs often lack the time to learn to use new technology, which leads to frustration.

(6) The biggest barrier is fear.

2.9. Drivers of adoption and use

The main drivers of adoption and use are represented in the table below:

Table 2.3: Key drivers of usage of mobile cloud accounting

Main construct	Related Factors	Key studies
Relative advantage	Benefits, efficiency, scalability, time saver, cost, environmental, data protection	**Efficiency**: Al-zoubi, 2017; Master, 2018; Rath et al. (2012) **Scalability**: Khanom (2017) **Time saver**: Paychex (2019) **Cost**: Ahmed (2020); Sandu & Gide (2019) Brandas et al. (2015); Christauskas & Miseviciene (2012)

		Environmental: Cubitt et al. (2011); Buyya Yeo et al. (2009) **Data protection**: Mukherjee (2019)
Complexity (ease of use)	Flexibility, accessibility, user-friendliness.	**Accessibility**: Lawler et al. (2012); Sobhan (2019); Dimitriu & Matei (2015), Mukherjee (2019)
Collaboration	Multi-tenancy, virtualisation.	**Multi-tenancy**: Master (2018); **Security**: Sobhan (2019) **Virtualisation**: Sobhan (2019); Khanom (2017)
Competitiveness	Competitive advantage; data security	**Competitive advantage**: Truong (2010); **Data security**: Kaufman (2009)

Source: Adapted from Kalan (2016)

2.9.1 Benefits of cloud accounting

Efficiency is synonymous with cloud technologies, considering it has a positive effect on all the elements of financial accounting information (Al-zoubi, 2017). This relates to the unique characteristics that will be listed below. As businesses migrate toward cloud accounting it has a significant impact on the financial system of the business (Master, 2018). Rath et al. (2012) points out that many small and medium businesses in India are excited to explore cloud computing as opposed to the traditional software models, which tend to charge exorbitant monthly fees. The advantage is further compounded now that bandwidth has become cheaper and more accessible in India.

2.9.2 Efficiency and scalability as a driver

According to Khanom (2017), business owners suddenly realised that they need to concentrate on their operations to remain profitable. Using cloud technology to remain competitive will allow the microentrepreneur to reallocate their limited resources to their business needs. Sandu and Gide (2019) found enhanced performance to be one of the key factors amongst the various economic benefits associated with the adoption of cloud technologies.

2.9.3 Efficiency as a driver of timesaving

To ensure that information is up to date, traditional accounting software requires constant maintenance. Where errors occur, changes must be rectified manually in the ledgers as well as in the location where the figure appears. Cloud accounting allows changes to be made to each location in the relevant journals. This saves time and money, because it eradicates the potential problems if a subsequent location is missed (Paychex, 2017).

2.9.4 Efficiency as a driver to accessibility

An important characteristic is the ease of use of cloud accounting. Once the software is set up, the user can gain access to information almost immediately, another advantage over traditional accounting software. With cloud accounting there is no on-site installation, setup and configuration (Lawler et al., 2012). This scenario creates ease of access, a key advantage of using cloud accounting. The system can be accessed from anywhere in the world by using a mobile device, which allows remote or virtual access at any given time and from any type of hardware or location. When traditional accounting methods are employed, the business owner's financial information is only available when the owner is physically in the office to access the records. Some examples of mobile devices are tablets, smartphones and laptops (Sobhan, 2019). Dimitriu and Matei (2015: 843) state, "This is the reason why CC could be a form of ubiquitous computing".

2.9.5 Efficiency as means of cost a driver

Brandas, Megan and Didraga (2015) found that more businesses are integrating smartphones accessing CC as an infrastructure preference for their commercial needs, because of the benefits of improved mobility and reduced maintenance costs. This could potentially lead to a significant impact on the business in terms of cost saving. CA uses the "pay-as-you go" model while the traditional on-site accounting software requires a capital expenditure and users are often bound by tiresome contracts (Almulla & Yeun, 2010). Basically, the user rents a service which contributes positively to the cashflow of the organisation (Christauskas & Miseviciene, 2012). CA also offers competitive packages, because of the "pay-as-you-go subscription model", necessitating no upfront charges for installation, or setup and configuration fees, hence making CA a more efficient user option (Mukherjee, 2019). There are no additional costs for updates, because updates are part of the subscription service. Monthly costs increase cashflow and provide a significant cost saving on maintenance and initial cost of capital equipment (Ahmed, 2020). Maintenance challenges, such as servers to host the software, are not a user problem, therefore operational costs related to IT staff will potentially be reduced

(Lawler et al., 2012). A thought-provoking benefit of cloud accounting is that the user is allowed a trial period of approximately 30 days to test if the software is worthwhile purchasing, as opposed to making an investment and finding out later that it does not meet the users' needs (Christauskas & Miseviciene, 2012:15). CA users are not limited to a specific number of users, as opposed to traditional on-site software requiring per-user licencing.

2.9.6 Efficiency as a driver of productivity

Productivity is increased through performance of the cloud accounting system because of its flexibility (Dimitriu & Matei 2015). Flexibility is a key benefit of cloud accounting (Mohanty & Mishra, 2017), because it is well-suited for different web browsers and diverse operating systems. For example, it can be accessed on mobile devices such as Android or iPhone or using a Chrome browser to enable data transfers in real time (Sobhan, 2019). Another benefit is that "lessons learned" in one environment will be applied in cloud computing and will benefit all customers.

2.9.7 Efficiency as a driver of multi-tenancy

Multi-tenancy is a term defining the process where multiple applicants operate in a shared environment, often allowing significant benefits in terms of resource sharing, price structures and scalability (Thimmaraju et al., 2019). Cloud accounting allows the users to host multiple consumers by using shared resources (Master, 2018). Often small businesses have limited resources and rely on innovation and collaboration as a sensible cost-saving measure (Truong, 2010). The shared resources allow the small business and their partners to join forces for the benefit of both businesses.

2.9.8 Efficiency as a driver of security

Data security is a real concern in the world of cloud computing, seeing as it could offer hackers the opportunity to attack and hold the company at ransom (Giannakoulias, 2019). Financial information is regarded as confidential information, and a data leak can cause a huge loss of revenue to the business. Mukherjee (2019) points out that data may be protected by implementing data encryption on the device or server and by removing sensitive data in the cache. Cloud computing protects the data by adding a multi-layer protection, like requiring passwords and safety checks to gain access to data (Sobhan, 2019). Sobhan (2019) explains that automatic back-ups to an offsite location are also included in the service, so this means that an IT official does not need to do scheduled backups of data, thus saving the business money. Also, cloud accounting allows the user to store and maintain large quantities of

valuable data without the risk of employee error or accidents. Furthermore, automatic back-up features make cloud accounting a reliable and safe way to store data.

2.9.9 Efficiency as a means of virtualisation

Virtualisation is technology that allows businesses the option to pool or share the creation of IT services, using resources that are traditionally hardware-bound (Xian & Mugen, 2019). The benefits of virtualisation lead to widespread adoption of CA, because it is easier to migrate to the cloud, there is less investment in hardware, the solution is comparatively lower-maintenance, energy costs are lower, and it is more environmentally friendly (Kumar & Charu, 2015).

2.9.10 Environmental benefits of using cloud accounting

Green cloud is a slogan associated with the environmental benefits delivered over the internet (Ravi, Chinnaiah & Abbas, 2019). There is a need to incorporate sustainability principles into digital products and this is becoming increasingly popular (Preist et al. 2016). Sustainability will only be achieved once our species realises that the internet is not a bottomless pit of information (Cubitt et al., 2011). CC is a technology that conforms to green ICT (Westphall & Villarreal, 2013). Beloglazov et al. (2012) accentuate that although CC has several operational cost saving benefits, the impact on the environment should be considered. Various researchers have put forth their arguments on the environmental impact of CC. Steenhof et al. (2012) as well as Buyya et al. (2009) agree that CC is an environmentally friendly system and could reduce the carbon footprint of businesses. Cloud technologies are reducing the level of emissions considerably by saving 30000 metric tons of C02 emission in five years, which is equivalent to 6000 cars less on the road per annum (Sobhan, 2019). Williams et al. (2018) estimated that CO2 levels will decrease by 4.5 million tons by the time CC reaches approximately 80% of its market share. Markovic et al. highlight that CC is more efficient than traditional computing. Balasooriya et al. (2016) argue that it is possible to adopt green CC by relocating the data centres and making use of renewable energy, which will lead to competitive pricing.

2.10 Risks of cloud accounting

Cloud accounting shares similar risks to cloud computing and suggests that policy development and training should be a factor to consider when adopting this system (Yau-Yeung et al., 2020). The potential risks can be summarised as follows:

2.10.1 Data security

As technology evolves, emails, personal information storage or photo albums become increasingly impossible to store in conventional methods; and it is advisable to outsource that information storage to the cloud, due to the various benefits listed earlier (Master, 2018). However, with the large amounts of data transmitted via the internet these data storage centres become a target for hackers. Kaufman (2009) explains that well-established ICT brands like Microsoft and Amazon could easily survive a cyber-attack, because they have more functionalities/capabilities than a smaller service provider. There is also no guarantee that having an IT division in the company is more secure than using the cloud, seeing as both utilise the internet (Biswas, 2011a). When the users no longer have control over this information, the users' data is potentially at risk (Ren, Wang & Wang, 2012).

2.10.2 Standard agreements between user and service providers

According to Ren et al. (2012) cloud service providers are separate entities and have no affiliation to the user. This poses a potential risk because the users have no control over systems that manage their data or their applications (Heiser & Nicolette, 2008). Although the service providers have undertaken all measures to ensure secure management solutions, the cloud platform still faces internal and external privacy threats, administrator errors and malicious software bugs. These issues can lead to data manipulation, fake websites and potentially resulting in financial loss to the client (Cloud Security Alliance, 2010).

2.10.3 Internet challenges

Internet connectivity is crucial in using cloud technologies, as it requires a constant, high-speed and stable internet connection (Dombrowski et al., 2019). The Internet of Things (IoT) allows internet connectivity to devices such as mobile devices, laptops, smartphones, sensors and even smart vehicles (Mollah et al., 2019). Transmitting data via the internet using a mobile device could pose extreme security risks to users (Abuagoub, 2019).

2.10.4 Client lock-out

Cloud computing is becoming a modern-day business tool, and as the number of subscribers increase, the challenges increase exponentially for the service providers (Heiser & Nicolette, 2008). The potential challenges could include bankruptcy, a hostile takeover, or a merger and acquisition. Therefore, users must ensure that service-level agreements must be well thought through in the event of the abovementioned potential challenges. Risks include the availability to transfer data to a service provider of the client's choice. Scheier (2009) suggests that

customers should interrogate the service provider's stability before signing up with the cloud provider and back up their data as often as possible on local servers, if available. Contingency plans should include data and application porting with technical support services. The cloud system is designed to make it difficult for clients to migrate from one platform to another.

2.10.5 The regulatory challenges to consider

Data centres located in high-risk countries, which include those that do not have much cyber security, pose significant risks, as privacy regulations vary from jurisdiction to jurisdiction and the risk can be damaging to users when the government passes laws that permit state access to user information (Heiser & Nicolette, 2008; Biswa, 2011 b).

2.10.6 Investigative support

According to Heiser and Nicolette (2008), if the business relies on cloud services for business records, it must be open to accepting that the service provider might not be willing to assist with releasing the information, especially during investigative circumstances. Therefore, contingency plans should include a well thought-through service level agreement in the event of the abovementioned circumstances.

2.11 Conclusion

In conclusion, this chapter discusses benefits and risks to the user when utilising CA and CC. Yan Yeung (2017) suggests that before adoption and implementation happen, planning, research and adequate policies must be set up and put in place. The risks can be alleviated with the correct measures in place. The primary benefit, according to Ahmed (2020), in utilising cloud accounting is the reduced costs.

CHAPTER THREE – RESEARCH METHODOLOGY

3.1 Introduction

The preceding chapter covered an in-depth literature review and was structured to speak to each objective individually to give the reader a general idea of the business enterprises in South Africa. The current chapter highlights the details of the research methodology that was adopted in the study to gain a better understanding of the effects of MCC applications on the operations of SMMEs in selected markets in Cape Town, South Africa. This study employs an empirical research methodology which incorporates both a qualitative and quantitative approach. This approach is explained in this chapter. This is followed by a discussion on the research design, namely; triangulation, which was used in this study. The discussion includes the basis on which this design was selected as appropriate as well as how it was implemented. The chapter also provides an explanation of the data collection processes followed in this study using the questionnaires, interview schedules, secondary data and observations. The ways in which the research instruments were tested for reliability and validity also forms part of this chapter, including the data analysis methods and ethical considerations observed by the researcher and the sample elements.

3.2 Research approach

This study relied on evidence acquired through scientific data collection and participant observation. Hence, the empirical research approach was applied to study the effects of using MCC and other technological accounting on the operations of SMMEs in selected markets in Cape Town, South Africa. According to Creswell et al. (2004), empirical research allows for procedural, rigorous and sound investigations.

3.3 Research paradigm

In conducting research, it is important to select a research paradigm. According to Saunders et al. (2019), a research paradigm is used to gain insight into a study by examining a social phenomenon. In this light, Saunders et al. (2019) states that a research paradigm constitutes the abstract beliefs and principles that shape how a researcher sees the world, and how s/he interprets and acts within that world. This paradigm can also be seen as a conceptual lens through which the researcher examines the methodological aspects of their research project to determine the research methods that will be used and how the data will be analysed. This researcher made use of both positivist and interpretive research paradigms.

3.3.1 Positivist paradigm

A positivist research paradigm is regarded as a research strategy and approach that is rooted in the ontological theory and doctrine that truth and reality is independent of the spectator and observer (Khaldi, 2017). A positivist investigator has an idea or notion that the universe or world conforms to laws and rules of causation and events (Lauder and Marynissen, 2018). Consequently, they hold the belief that reality can be observed without influencing the variables being studied. Since this study was conducted to ascertain the impact of the use of MCC and other technological applications by SMMEs in selected markets in Cape Town, the positivist paradigm was deemed appropriate, because it enabled the researcher to understand these phenomena without influencing the participants in any way. This was carried out mainly using the survey method through a questionnaire.

3.3.2 Interpretivist paradigm

The interpretive research paradigm, on the other hand, runs contrary to the beliefs of the positivist paradigm. According to Žukauskas et al. (2018), an interpretivist research paradigm believes that reality is multi-layered and complex, and a single phenomenon can have multiple interpretations. In this way, interpretivist research assumes that social reality is not singular or objective, but is rather shaped by human experiences and social contexts (ontology) and is therefore best studied within its socio-historic context by reconciling the subjective interpretations of its various participants (epistemology) (Choi et al., 2018; Žukauskas et al., 2018). Because interpretivist researchers view social reality as being embedded within and impossible to abstract from its social settings, they ‘interpret’ the reality though a ‘sense-making’ process rather than a hypothesis-testing process. As a result, instead of being solely depending on the quantitative data through a survey method, the researcher also engaged in in-depth interviews with the participants in the study area, to determine the extent of their use of MCC and accounting technologies and how this impacted on their operations.

3.4 Research design

Research design is described by Tuffour (2017) as the criteria implemented in an analysis or review to provide guidelines for any investigation underway. Creswell (2013) sees this type of study as a worldview that implies that, based on one's logical beliefs; the study should be carried out. There are three kinds of research design, namely qualitative (interpretive paradigm), quantitative (positivistic paradigm) and mixed methods (also known as triangulation). The selection of the research method depends on the scope of the work being carried out and the presentation and documentation of the data. As already noted in this

chapter, this study made use of mixed-methods (triangulation) research design. Triangulation is when the researcher collects both the qualitative and quantitative data concurrently and then compares the data to determine if there is convergence, difference or a combination thereof (Creswell & Creswell, 2017:213). Researchers often prefer this method, due to its familiarity and because it can validate and substantiate findings. In order to answer all the research objectives of the study, the mixed method was applied.

3.4.1 Triangulation of quantitative data

The study employed both quantitative and qualitative research methodology. According to Muijs (2010), quantitative research can be defined as collecting quantifiable or measurable data that can be statistically or mathematically analysed. It is generally used when the researcher requires a numerical answer, to note a numerical change in data, to establish the state of something or to test a hypothesis. Sarantakos (1993) posits that the quantitative approach emphasises quantification and measurement, behaviourism, and positive epistemology. In this study, quantitative data was collected using survey questionnaires. The main advantage of using the questionnaire was to quantify the data collected. Additionally, as noted by Maree and Pietersen (2007) and De Vos et al. (2011), the quantification of the current research enabled the researcher to have more control over how the information concerning MCC by SMMEs in Cape Town was gathered, in larger samples and with less bias.

3.4.2 Triangulation of qualitative data

Qualitative research, on the other hand, is generally presented in words, often subjective and more in-depth than quantitative research (Saunders et al., 2019). Qualitative research is about acquiring first-hand knowledge, understanding human behaviour and remaining as free from personal bias as possible (Neuman, 2014). This research method seldom uses tables, graphs and charts; but mainly transforms data or words into narrative themes (Neuman, 2014). In this study, qualitative data was collected using in-depth interviews. The interview data was then used to supplement the quantitative data in the process of data analysis. This was mainly carried out through thematic analysis.

3.5 Target population and sampling

A relevant population has to be identified in order to be able to give answers to the research questions raised. The term *population* is used to denote a collection of units to consider for a study (Antonius 2013:10). All the members of the population should have a comparable set of attributes needed to complete a study. The population of this study was made up of SMMEs

in selected markets in Cape Town, South Africa. According to the information provided by the division responsible for small business development in Cape Town, the total number of registered small businesses operating in the selected market was around 250 at the time of this study. The researcher also observed that there were +/-60 unregistered small businesses in this region. At the end, a population frame of 310 participants was considered for this study. An appropriate sample had to be chosen from this population.

3.5.1 Sample size

From the population identified above, an appropriate sample size had to be selected. It would be both time and resource consuming for the researcher to include the whole population in the sample (Sekaran & Bougie, 2016:241; Matlala et al., 2014; Neto, 2017)). Due to the mixed nature of this study, probability sampling was one of the sampling methods used to select the respondents. From the total of 310 participants that formed the population frame, a sample size of 121 was deemed appropriate. Raosoft's sample size calculator was used to calculate the appropriate sample, as shown in the following table:

Table 3.1: Sample size calculator

Population size	**310 SMMEs**
Margin of error	5%
Confidence level	95%
Response distribution	50%
Sample size	121 SMMEs

Source: adapted from Raosoft (2004)

The population size of the participants, as seen in Table 3.1, was 310. In this analysis, a margin of error of 5% was tolerated. In addition, a 95% confidence interval was also applied in the sample estimation, which is the amount of volatility a participant can handle (Raosoft, 2004). Finally, the distribution of responses, which effectively balances/centralises the skewness of the responses, was set at 50%. It was then decided that a sample size of 121 participants was sufficient to achieve representative study findings through survey; 14 participants were purposively selected for the interviews. The process used in the selection of these two groups of SMEs is outlined.

3.5.2 Probability sampling of the respondents

Dubey et al. (2017) and Tracey (2013) describe probability sampling as a process that gives each member of the population a chance to be chosen to represent the sample for the analysis. This approach gives each member of the population an equal probability of being chosen, and the selection relies on a reasonable chance. Various methods are used to pick respondents, including simple random sampling, stratified random sampling and systematic sampling (Matlala et al., 2014; Neto, 2017).

Simple random sampling requires the random collection of participants in the sample frame. The sample elements are assigned to random numbers and a random list of these elements is made (Dźwigoł and Dźwigoł-Barosz, 2018). Stratified random sampling means splitting the population into separate homogeneous classes called strata, based on age, sex and/or occupation. The respondents are then randomly chosen from these strata to constitute the research sample (Creswell, 2013). Systematic sampling is a method that begins by assigning random numbers to sample elements and the starting point is then randomly selected. Each n^{th} number from the starting point is chosen to engage in the analysis (Ghauri et al., 2020). All these probability sampling techniques are used to eliminate bias in the collection of elements, as each member is similarly chosen.

Simple random probability sampling was used to select 121 participants. Using this method, the participants were assigned random numbers which were then randomly picked to participate in this study. The main advantage of using this approach was that it gave each member of the population an equal probability of being chosen, and the selection relied on a reasonable chance.

3.5.3 Non-probability sampling of the participants

Non-probability sampling, on the other hand, refers to the selection of a research sample based on individual intuition (Matlala et al., 2014). The researchers choose the participants that were convenient to them in this process. Various non-probability sampling methods can be used, including snowball sampling, purposive sampling and convenience sampling (Dubey et al., 2017). Snowball sampling is a method by which the researcher gathers data from one participant and then forwards it to the next respondent who has the characteristics needed for the analysis (Creswell, 2013; Taherdoost, 2016).

A purposive sample, also referred to as a judgmental or expert sample, is a type of non-probability sampling technique whose key goal is to generate a sample that can theoretically and logically be believed to be representative of the population (Park & Park, 2016).

Convenience sampling is the method used to pick the items that are convenient for the researcher (Bradley, 2009). This involves individuals who are close by, or who have the relevant intellectual capacity to respond to the questionnaire. The downside of non-probability sampling methods is that they are subject to the bias of the participant, which then influences the results of the study.

In this study, purposive sampling was used to select 14 participants, which participated in the interviews. Specifically, this research used a purposive sampling technique to choose the participants which were deemed appropriate for the study at hand. Consequently, this sampling technique required the discretion of the researcher to pick the subjects deemed suitable for a test study. Since this study focused on SMMEs within a selected market in Cape Town, the researcher used purposive sampling to choose these participants.

3.6 Data collection

The data was collected and completed by the researcher and three research assistants between 20 June and 10 July. Three assistants were employed to support the researcher during the Covid-19 pandemic for health and safety purposes. The tasks of the four people collecting data were as follows:

- The researcher mainly completed the observations and conducted some interviews.
- One research assistant was responsible for the sanitising of the stationery and transferring the completed stationery to appropriate files.
- One research assistant approached the participants to administer the questionnaire and conduct interviews. The assistant also explained the definition of mobile cloud accounting, MCC, CC and other technological infrastructure to eliminate any confusion. It was explained as an accounting application used on a mobile device which required internet connectivity. The researcher gave examples such as QuickBooks to remove all confusion on the part of the respondent.
- The last research assistant completed the open-ended interview questions when it was deemed safe, while the first research assistant audio-recorded the interview and the other completed the manual form.

3.6.1 Non-participant observation

One of the research instruments used was non-participant observations. This was mainly carried out by the principal investigator. The researcher introduced herself as the main observer in the process and predominantly observed what technology was being used at the

markets. The two main banking applications observed were SnapScan and PocketPOS. The researcher also observed that many traders did not even record their sales or issue a cash invoice. This realisation guided the researcher to determine whether all the questions were applicable. In addition, attention was paid to the physical setting, the main participant and their daily business activities. Observations were made and noted immediately, while the reflections took place later in the evening. The notes were made on the back of the questionnaire to correlate them with the answers given. Observations were useful to gain an understanding of each respondent's business model and when and how to do the interviews. It also informed an appropriate time and place to conduct the interview and in some instances, led the research to return later when the participant was less busy and in a better space. These observations gave the researcher a better understanding of the tools used to generate financial information, which was previously almost non-existent.

3.6.2 In-depth interviews

Interviews were conducted to collect qualitative data using an interview schedule (See Appendix 1). They were conducted on a one-on-one basis and primarily on Thursdays and Friday mornings, although some were completed on Mondays. This flexibility in the dates allowed the researcher and her assistants to make appointments and visit various traders in the selected markets in Cape Town, South Africa. The markets were also not trading at full capacity, and it was less busy than on a Saturday. The interview schedule was designed in the sense that the participants who responded to the questionnaire were given the opportunity to explain their status quo with regard to the use of MCC and other cloud technologies in their operations. To enhance the credibility of the study, the interview schedule had two questions used to inspect bias, clarity and face validity. Two open-ended questions about the participants' feelings and possible barriers preventing participants from embracing the mobile cloud technologies were asked. These two questions were designed to address the last objective of the study and to triangulate it with the last question of the questionnaire. In-depth interviews or conversations were imperative in this research, as they enabled the researcher to explore the SMMEs' limitations concerning the use of mobile cloud technologies.

3.6.3 Survey questionnaire

Saunders et al. (2019) define a questionnaire as a data collection technique where a respondent is asked to answer questions in a set order. Questionnaires may be self-administered (internet, postal or hand-delivered) or interviewer administered (telephonic or face-to-face structured interviews). The questionnaire used for this study consisted of four sections (See Appendix 2).

- **Section A** – questions were asked to seek the extent of usage of MCC amongst SMMEs. The logic behind asking these questions was to firstly distinguish whether the SMMEs used mobile cloud accounting or not, and, if not, how they recorded financial information. It would be pointless to continue with all the questions if the SMMEs did not use mobile cloud accounting. Therefore, if they indicated that they did not use mobile cloud accounting, as stipulated in Section A, they had to skip Section B and moved on to Section C, Questions 3 and 5.
- **Section B** – questions were asked to seek MCC and mobile cloud accounting competence information regarding ease, flexibility, time and costs. This section spoke to the second objective of the study, namely, what motivates traders to use mobile cloud accounting. The rationale behind this section was to determine the benefits of using mobile cloud accounting to the SMMEs.
- **Section C** – questions were asked to seek information about awareness concerning using mobile cloud accounting as a tool to generate financial information for decision-making. This section consisted of mixed and various sub-questions, ranging from numbers 3 to 5. Question 4 was a general question to determine the extent of usage of cloud accounting in order to address the first objective of the study. It sought information on what functionalities of the application were used by the trader. Question 5 of the questionnaire spoke to the last objective of the study. The researcher needed to know which factors inhibited the use of mobile cloud accounting, in order to address the last objective of the study.
- **Section D** – questions were asked about the demographic particulars of the participants. This consisted of seven questions and was included in the questionnaire to ensure that the study was aligned within the pre-determined boundaries.

With the sections above, the questionnaire addressed specific research objectives. It was designed in such a way that if the SMME did not use mobile cloud accounting technologies, the study would not disintegrate. The questionnaires catered for different awareness levels and the possibility of using this technology in the future.

3.6.4 Pilot test

A research instrument also needs to be pilot tested in order to assess its suitability in the collection of required data. According to Neuman (2014), this is a process where a run of the draft questionnaires or interviews is undertaken to ensure that they are ready for execution. The aim of the pilot study is to test the feasibility of the questionnaire and the open-ended interview, to either confirm that the questions are aligned with the objectives and/or to make

sure the necessary adjustments are made before the questionnaires are administered. In this study, pilot tests were conducted with 10 SMMEs in the study site from the 1st to the 5th of June 2020 (see Appendix 3 for the summary on the changes made). This was carried out using paper-based questionnaires and Google forms. The follow up interviews were carried out with three participants. Importantly, these 13 participants did not participation in final data collection in order to avoid bias.

The following challenges were encountered during the pilot study:

- The paper-based questionnaires were rather long and did not give proper direction for navigating around the questionnaire.
- Question 1.1 needed to be clarified with a marker (If “YES” answer: Q 2.3 & 4 and if “NO” answer: Q 1.3 & 5).
- Google forms kept the same questions, though the researcher had to create more sections to follow a specific path if the participant answered yes or no to Question 1.1. This would ensure the participants would then answer the correct set of questions based on Question 1.
- Google forms had two additional questions added to the questionnaire, namely whether the SMMEs traded in Cape Town. These questions were excluded from the analysis because they were intended mainly to get the right participants to answer the questions relevant to the study.

3.6.5 Administration of the questionnaires

Due to the lockdown regulations, markets such as Root 44, Kirstenbosch Craft Market and Lourensford were only scheduled to open at the end of August 2020. This would set the researcher back an entire year. Therefore, 12 market organisers were approached and asked to send the questionnaire to the vendors trading at their markets. This method was chosen to comply with the PoPI Act, which states that it is law for South African organisations to protect their clients’ personal information. Contact details are considered personal information under this Act. In total, 121 questionnaires were emailed, and the link sent to them to complete the survey, either through the computer (market organiser) or through paper-based questionnaires. Innovativeness of South African SMMEs were displayed, because they soon opened virtual markets and started selling the goods on Instagram, WhatsApp groups and so forth to stay afloat during the lockdown. The paper-based questionnaires were completed by approaching stallholders who were willing to participate in the study after the trading ban was lifted. The questionnaires were checked thoroughly before leaving, to ensure that the team would not need to return during the peak of the virus. If it was not filled in, the researcher

probed whether it was due to negligence or due to the entrepreneurs' reluctance to fill in the information.

3.6.6 Administration of the interviews

The interviews were conducted physically. This was the most daunting part of the research because of the social distancing issue. Many stallholders who participated in the interviews did not want to be recorded for personal reasons. Only two of the 14 interviewees answered the interviews via voice-notes sent to the researcher. The voice recording software on the researcher's phone was used as a voice recorder and once completed, the conversation was saved on Google Drive. The research assistant explained the terms and conditions of participation in the interviews at the beginning. The research assistant in question conducted the interviews, but helped in taking down the notes for those who did not want to be recorded.

3.7 Data analysis

3.7.1 Quantitative data analysis

Data analysis is the ultimate step in finding answers to study questions. This process is described by Patten and Newhart (2017) as the methods used to structure and organise raw data in order to extract valuable information from it. Several steps were taken in this study to analyse the results. When the completed questionnaires were obtained from the respondents, they were subject to cleaning, checking, editing, elimination, data coding and, finally, analysis (Van de Ven & Poole, 2017). Data cleaning is the method of separating all missing and spoiled questionnaires from the completed questionnaires. Data editing is the method of reviewing questionnaires to ensure that they follow the predetermined requirements for gathering the necessary data. Data coding is where replies are transformed into electronic copies using a Microsoft Excel spreadsheet (Meister, 2018).

Based on the quantitative methods used in this report, SPSS26 was used for the analysis of research results. The data was analysed using descriptive statistics and inferential statistics. Descriptive statistics is a research tool that investigates the distribution score for each variable and evaluates the relationship between the calculated variables (Cypress, 2018). Results were published in the form of bar graphs so that they could be easily understood and related to empirical literature. Bar graphs were developed using a Microsoft Excel spreadsheet. On the other hand, inferential statistics were analysed using regression analysis. The different scores were then reported as a way to come up with informed findings.

3.7.2 Qualitative data analysis

Thematic analysis was used to analyse data collected through the interview process. This analysis is a common form of analysis used in qualitative research and it involves the process of data reduction by focussing on repeated words or phrases in respondents' responses (Saunders et al., 2019; Guest et al., 2006). Tesch (2013) provides insight for the coding process which was applied by the researcher as follows:

Step 1: The researcher tried to get an overview by reading the entire transcript and jotting down some ideas about the themes that came to mind.

Step 2: The researcher chose one document (either field notes or transcripts) and paid careful attention to the content. The researcher tried to make sense of this by applying some meaning to it. Thoughts were jotted down on an Excel spreadsheet.

Step 3: The researcher then created themes (See Appendix 4). The themes were arranged and placed in columns.

Step 4: The researcher then made the list and returned to the data. The topics were abbreviated as codes and the codes were written next to the appropriate segments. The researcher tested this initial scheme to verify if new categories or codes emerged.

Step 5: The researcher tried to locate the most descriptive wording for the topics and turned them into categories. By grouping topics relating to each other, the researcher reduced the total list of categories.

Step 6: The researcher made a final decision on the abbreviations of each category and alphabetised these codes.

Step 7: The researcher assembled the data material belonging to each category in one place and performed a preliminary analysis.

Step 8: The researcher recoded the existing data.

3.8 Reliability and validity of the measuring instrument

3.8.1 Reliability of the instrument

Reliability refers to the degree of similarity of information obtained when the measurement is repeated on the same subject or the same group of people (Patten and Newhart, 2017). Differently stated, the same value should be arrived at every time the measurement is taken.

This means that the values should not vary significantly on repeated tests. The reliability of a measurement instrument is the stability or consistency of the measurement. This means that if the same variable is measured under the same conditions, a reliable measurement will produce identical (or nearly identical) measurements. In other words, it refers to a measuring instrument's ability to yield consistent numerical results each time it is applied (Slater, 2018; DeCuir-Gunby & Schutz, 2018). More important, however, is that reliability is concerned not with what is being measured, but with how well it is being measured.

Reliability of data collected in this study was tested using Cronbach's alpha to test the internal consistency among different items. The Cronbach's alpha is the technique used for questions using the Likert scale (Sreejesh et al., 2014). In this study, 13 statements used the Likert scale; therefore, the researcher used this method to do the data reliability check, and the score for the items was 0.803. By applying these methods, the researcher could yield consistent findings in her study.

3.8.2 Validity of the instrument

According to Etikan and Bala (2017), Patten and Newhart (2017) and Paul and Vogt (2007), validity in quantitative research refers to the extent to which an empirical measure accurately reflects the element it is intended to measure. In addition, as stated by Apuke (2017), the validity of a measurement procedure is the degree to which the measurement process measures the variable it claims to measure. Therefore, validity should measure the concept in question, and the concept should be measured accurately. Thus, the measure lacks validity if an observer or instrument measures the characteristic in the same individual or group repeatedly at a level higher or lower than the real value. There are different levels of validity, namely construct validity, face validity, content validity and criterion validity.

Out of these three measures, this study made use of content validity. Content validity assesses whether the test is indicative of all facets of the construct (Etikan & Bala, 2017; Apuke, 2017). In order to obtain valid measurements, the content of the test, survey or measuring tool must cover all applicable sections of the subject to be measured. If any aspects of the measurement are absent, or if insignificant aspects are used, the validity of the measurement is threatened (Walliman, 2017). Through content validity, the researcher was able to ensure that the content of the measurement instrument was sufficiently valid to capture different variables about the extent to which SMMEs make use of cloud accounting technologies, and to what effect. The instrument used was adapted from previous studies carried out in this research field, and this ensured that all the important facets were captured during primary research. The validity of the questionnaire was enhanced by the fact that it was pilot tested beforehand.

3.9 Ethical considerations

Neuman (2014) emphasises the importance of ethics when drafting a proposal, as it will assist the researcher to shape sound ethical practices into the research design. Ethical issues could arise out of how the researcher conducts his or her research. Once the Ethics Committee of CPUT granted the ethical clearance, data was collected for the pilot study and then for the study itself. Due to Covid-19 numbers peaking, some of the data instruments were emailed to the market organisers to distribute to the participants to complete. The instructions were stated in the body an email and typed into Google Forms, stating that participation was voluntary, no remuneration was granted, and that the participant would remain confidential and anonymous, should the latter be chosen. Correspondingly, information was used for academic purposes only, and should they wish to withdraw at any stage they were free to do so. The respondent had the choice to complete the questionnaire or not, and the returned response represented an implied consent. Signatures were not required due to the nature of the business, and this would defeat the purpose of the option of choosing to remain anonymous. The same protocol was considered for the paper-based questionnaires. In doing so, the researcher considered the ethical implications of conducting physical research during times of Covid-19. The researcher made sure that there was regular sanitisation of the hands of the researchers and tools used during the interviews and survey, there was social distancing, and all the participants were asked to wear masks. As already noted, not all interviews were recorded because it was difficult to sanitise the voice recorder to the degree recommended by the government, speak through a mask and retain the required social distance when interviewing.

3.10 Conclusion

This chapter discussed the methods adopted to perform the research. The chapter discussed the difference between the qualitative and the quantitative methods and covered the research design applied. A discussion of the research method and the research design followed. Furthermore, it discussed the research population, the sample techniques used, the data collection instruments and methods applied. Lastly, the ethical considerations were elaborated in this chapter.

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CHAPTER FOUR – FINDINGS, ANALYSIS AND DISCUSSION OF QUANTITATIVE DATA

4.1 Introduction

This chapter analyses and discusses the research findings obtained from this study using survey, self-administered questionnaires and interviews. The reader should recall that the main aim of this study was to determine the extent of the use of mobile cloud accounting and its effects on the performance of SMMEs in the selected markets in Cape Town, South Africa. To accomplish this aim, this chapter provides an analysis of the first three of the four objectives of this study as outlined below:

i. To determine the extent to which SMMEs in selected markets in Cape Town, South Africa use mobile cloud accounting to generate financial information for decision-making;
ii. To establish the level of awareness of SMMEs in the selected markets in Cape Town, South Africa, concerning the use of mobile cloud accounting to generate information for decision-making;
iii. To ascertain the significant effect of the use of mobile cloud accounting on the financial information of SMMEs in selected markets in Cape Town, South Africa; and
iv. To establish the factors that may inhibit the use of mobile cloud accounting to generate financial information for decision-making among SMMEs in selected markets in Cape Town, South Africa.

The findings are presented based on the objectives outlined above. Firstly, results are presented to determine the extent of the usage of mobile cloud accounting by SMMEs that participated in this study. This is followed by the ways in which SMMEs use these applications. The chapter also provides an analysis of the impacts of mobile cloud accounting applications on the SMMEs and then analyses the factors impeding the SMMEs in using the named technological tools. Importantly, this chapter provides an analysis of quantitative research findings only.

4.2 Response rate

It was important to determine the number of participants in this study. This is presented in the table.

Table 4.4: Response rate

Calculated sample size of SMMEs	Number of SMMEs eligible for this study	Response rate
121 SMMEs	101 SMMEs	83.47%

As Table 4.1 shows, the goal was to collect data from 121 participants. However, 101 participants were eligible for the analysis based on the following criteria:

- Thirteen (13) participants did not complete the questionnaires. These participants were even approached by the market organiser and they either ignored the request or were not interested in participating in the study; and
- Seven (7) participants that did not complete 50% of the questionnaires, including their demographic information and those of their business, were removed.

Overall, a response rate of approximately 83.47% was obtained. This response rate was deemed appropriate for analysis, as it was higher than the 50% threshold (see Taherdoost, 2016). Taherdoost (2016) is of the view that a survey response rate of 50 % or more is deemed excellent as it is likely motivated by a high degree of commitment to complete the survey or a close relationship between research participants. This is in line with Musando (2013), who is of the view that a response rate of 50% to 70% is adequate to represent the entire population of the study. In terms of the face-to-face interviews, a 100% response rate was obtained, since all the 14 participants were interviewed.

4.3 Reliability of the findings

Reliability was tested using Cronbach's alpha to test the internal consistency among different items. Cronbach’s alpha is the technique used for questions using the Likert scales (Sreejesh et al., 2014). In this study, 13 statements used a Likert scale; therefore, the researcher used this method to carry out the data reliability check, and the average score for the items was 0.803, as shown in the table. However, four items were removed because they had a Cronbach’s alpha that was less than 0.7.

Table 4.5: Cronbach's alpha for the Likert scale variables

	Cronbach's alpha
Average Cronbach's alpha for the variables tested	.803
Stock control	.776 (.735)
Checking outstanding accounts	.753 (.683)
To do invoices	.913 (.957)
To do bank reconciliations	874 (.838)
To order products	.866 (.751)
To pay suppliers	.881 (.643)
To record sales	.750 (.854)
To track on the products being sold	.770(.727)
To record expenses	.757 (.861)
Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization. A rotation converged in 14 iterations.	

4.4 Demographic profiles of the respondents

In order to have an understanding of who really participated in this study, demographic details were inquired. The demographic particulars which were specifically collected from the participants were their gender, age groups, educational qualifications, types of businesses they ventured into, including their target market and number of years they had been operating, as well as types of goods sold.

4.4.1 Distribution of the respondents by gender

The figure below shows the gender profiles of the respondents'.

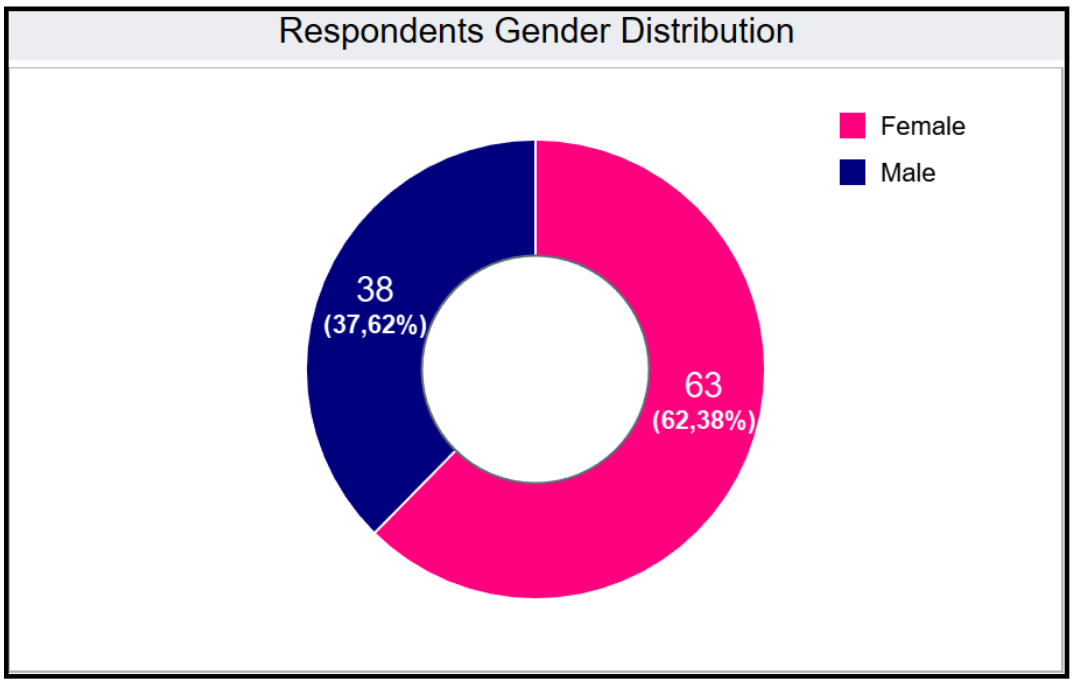

Figure 4.1: Respondents' gender distribution

As shown in Figure 4.1, most of the respondents were female. These were $^{63}/_{101}$ of the participants and they represented 62.38% of the total participants that participated in this study. The remaining $^{38}/_{101}$ of the respondents were male participants and they represented 37.62% of the total respondents. The reason for there being a majority of female-owned or -managed SMMEs could be due to the fact that there are many initiatives under the division of Small Business Development in several municipalities in the Western Cape which promote women in business. Consequently, this gender distribution, to a great extent, implies that the viewpoints or overall conclusions of this research are likely to be distorted or biased towards female respondents, since they were significantly more numerous than their male counterparts.

4.4.2 Distribution of the respondents by age groups

The age groups of the respondents which formed part of this study are presented in the figure that follows:

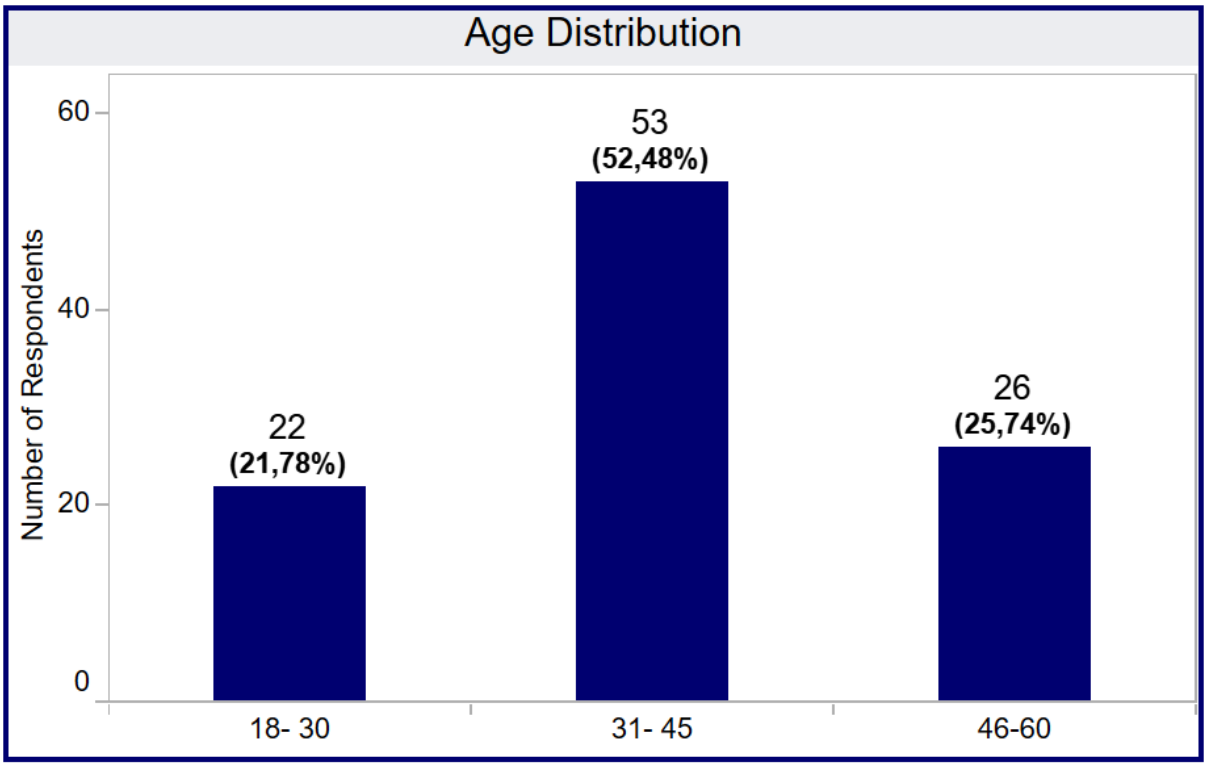

Figure 4.2: Respondents' age distribution

The findings presented in Figure 4.2 above show that the respondents that participated in this study were distributed in a range from 18 to 60 years old. The majority of these participants – $^{53}/_{101}$ of the participants – were in the age group 31-45, representing 52.48% of the total respondents. This age group was followed by $^{26}/_{101}$ of the respondents, who were in the age group 46-60. This age group represented 25.74% of the total number of people who formed part of primary research. 21.78%of the participants were in the 18-30 age group and they represented $^{22}/_{101}$ of the total participants. Overall, these age dynamics indicate that all of the sample participants were above the minimum age (18) required to partake in a study. In addition, given that age plays an important role in the answers given, the results obtained are highly likely to be accurate and consistent.

4.4.3 Distribution of the respondents by educational qualifications

The educational qualifications of the respondents are presented in the figure:

Figure 4.3: Respondents' educational qualifications

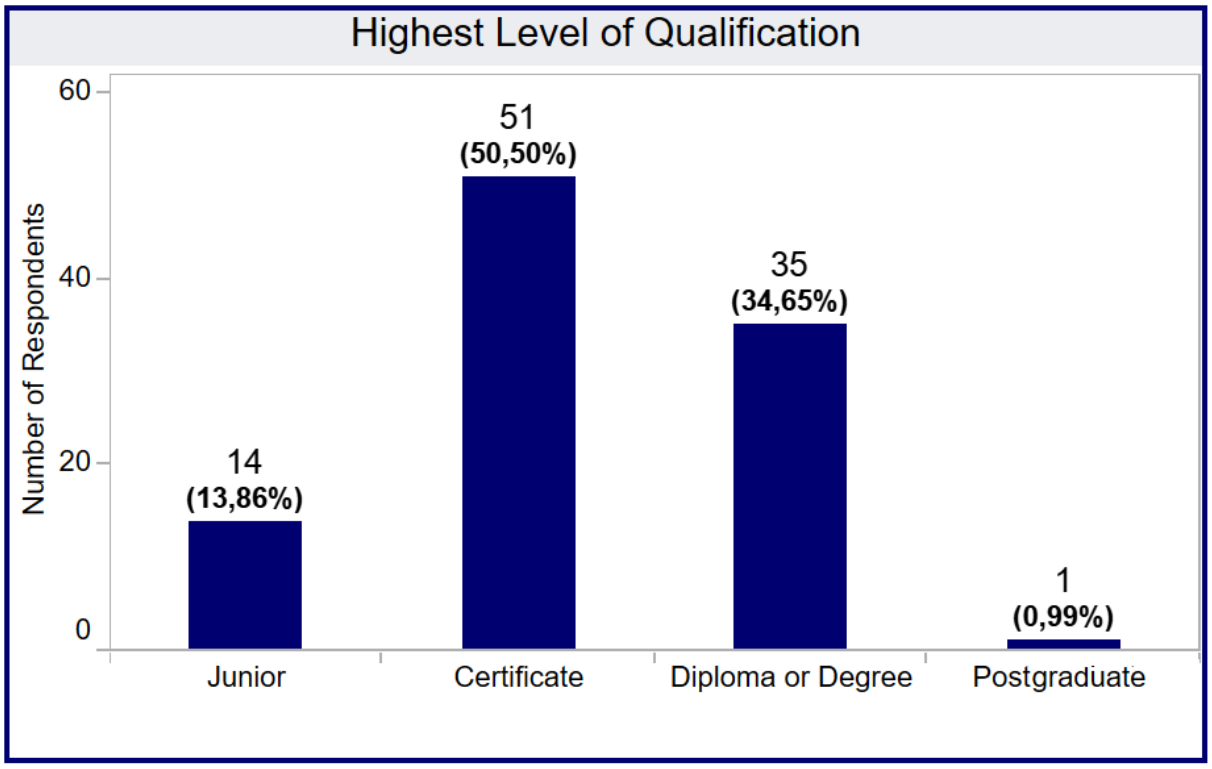

Figure 4.3 shows that the highest educational qualifications of the respondents that participated in this study ranged from junior qualification (including matric and below matric) to postgraduate degrees. The majority of these participants – $^{51}/_{101}$ of the respondents – indicated that they had certificates as their highest level of qualification. These participants represented a significant 50.50% of all the respondents. "Certificate" in this regard included any recognised and valid certificate that the participant obtained before or after matriculation. These participants were then followed by $^{35}/_{101}$ of the total respondents, who indicated that they had diplomas or degrees as their highest educational qualifications. This category represented 34.65% of the total participants. 14 participants possessed only junior qualifications, and they represented 13.86% of the participants. Lastly, only one of the respondents, which is equivalent to 0.99% of the total participants, indicated that they had postgraduate qualifications. Figure 4.3 shows that all of the participants were literate, based on their educational qualifications. Thus, it is presumed that the participants who formed part of primary research had the educational capacity which enabled them to understand this research and all the variables under study.

4.4.4 Distribution of the respondents by trading types

The figure shows the types of traders that participated in this study:

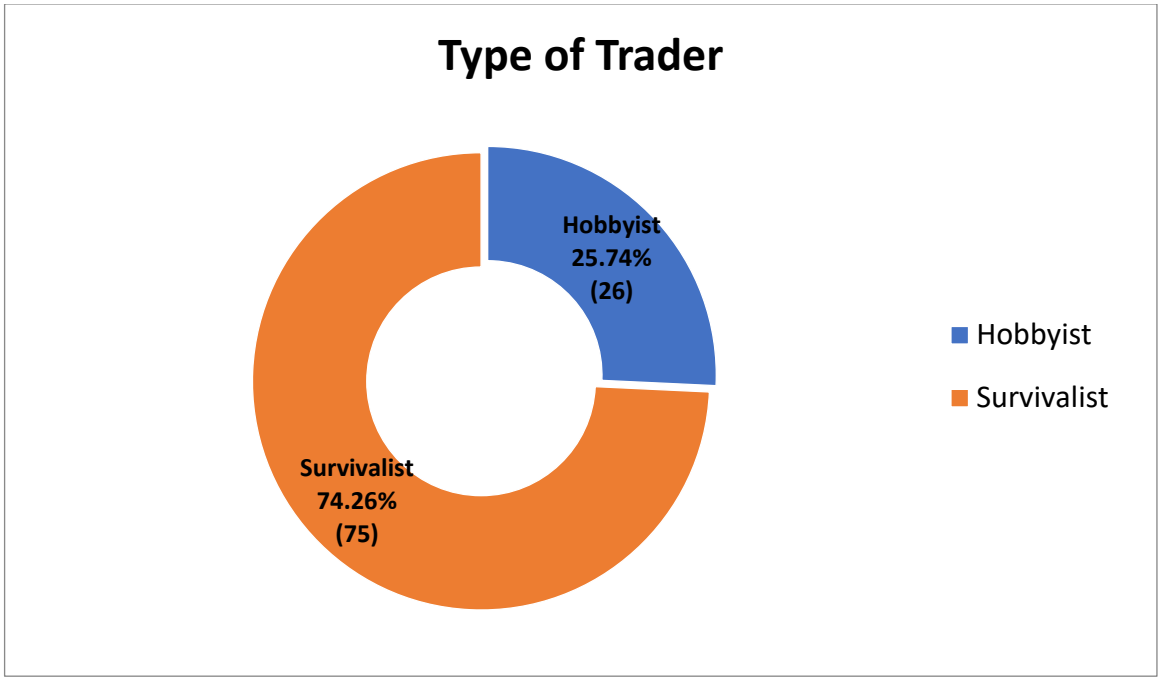

Figure 4.4: SMMEs' trading types

An inquiry on the trading types which the respondents in this study fell into came to the categorisation of the SMMEs into Hobbyists and Survivalists. An example of a hobbyist is an individual who does something for a hobby and resells it for a profit, while a Survivalist is an individual who tries to ensure their survival by selling items in markets. As Figure 4.4 shows, the majority of the participants – $^{75}/_{101}$ – were survivalist SMMEs. These formed 74.26% of the total participants. The remaining $^{26}/_{101}$ of the participants indicated that they were Hobbyists. The reason why the majority of the participants were survivalists may be explained by with Bhorat et al.'s (2018) study, which concludes that SMMEs in general try to strive through difficulties they face in the operating environments to the extent that the majority close down before they reach three years in operation. In addition to that, these findings can be validated by Bushe (2019), who is of the view that the majority of SMMEs in South Africa rarely produce adequate returns to sustain themselves over a long period of time. Thus, the SMEs continue to operate as survivalists.

4.4.5 Distribution of the respondents by types of goods sold

The respondents indicated that they sold a variety of goods, as shown in the figure:

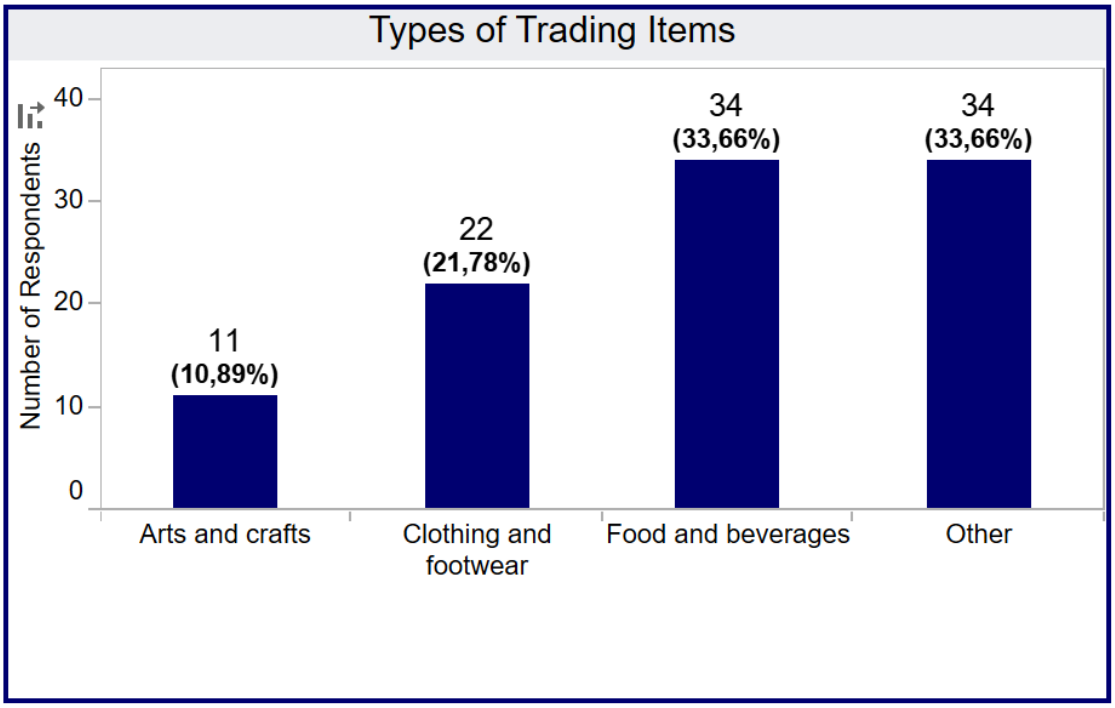

Figure 4.5: Types of goods sold by the SMMEs

Information was also provided on the goods sold by the SMMEs that participated in this study. Of the total participants, 11 indicated that they sold arts and crafts. Additionally, 21 of the participants, or 21.78% of the total SMMEs that participated, were selling clothing and footwear. 34 sold and/or distributed food and beverages. These represented 33.66% of the participants. The remaining 33.66% indicated that they fell into other categories of business apart from those already identified. This category included electronics sales and distribution, fruit and vegetables, home accessories and other products. These demographic particulars are important in this study, because they show that different SMMEs from a variety of categories were included in this study. This is important, as it enables the overall findings to be generalised across different SMME types in the study site in question.

4.4.6 Distribution of respondents by number of years in business

The figure shows the respondents' years of experience:

Figure 4.6: Respondents' number of years in business

Figure 4.6 shows that the majority of the participants that formed part of primary research had between 5 and 15 years of experience. These participants represented $^{42}/_{101}$ which is equivalent to 41.58% of the total participants. Importantly, $^{21}/_{101}$ of the participants had been in business for a period longer than 15 years. These represented a significant 20.79% of all the respondents. On the other hand, a significant number of participants indicated that they had been in business for less than five years. These were $^{37}/_{101}$ = 36.63% of the total participants. The number of years in business of the remaining person, which is equivalent to 0.99% of the total participants, was unknown. Overall, the fact that most of the participants were experienced traders is important because it is indicative of the extent to they had been exposed or had access to different mobile accounting applications and other technological infrastructure to record their business transactions. It was assumed that those participants that had been in business for a long time would have higher exposure and access to different mobile accounting tool than those with less experience.

4.4.7 Distribution of respondents by market share

The following figure presents the market distribution of the respondents:

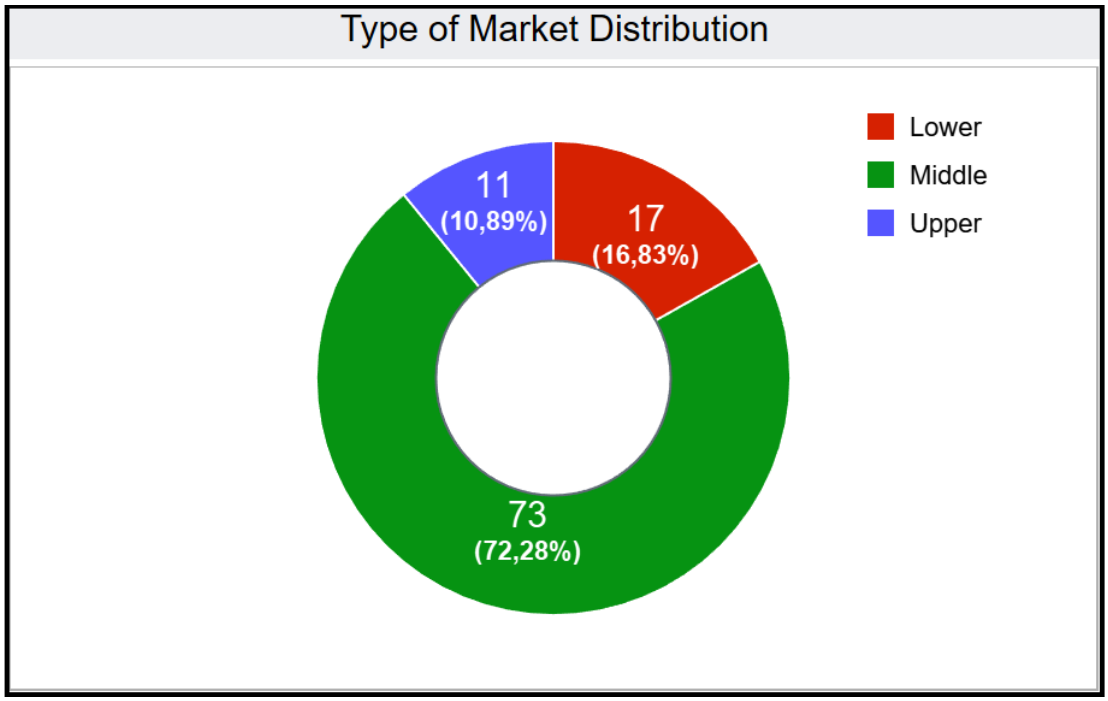

Figure 4.7: Respondents' market distribution

Finally, as part of the demographic details, the participants indicated the extent to which their market was distributed. Three categories of clients served by SMMEs were provided, namely; lower-income earners, middle-income earners and upper-income earners. As Figure 4.7 shows, 73 of the total 101 participants indicated that their products mainly catered to the middle-income earners. Thus, 72.28% of the target market that participated in this study catered to middle-income earners. This was followed by 17 of the 101 participants, which is equivalent to 16.83% of the total participants, who were of the view that they catered to lower-income customers. The remaining 11, or 10.89%, catered to the high-income customers. These findings on the different income-earning categories are important in this study because they attempt to explain the usage of mobile applications by different market classes among SMMEs (see Munoz-Leiva et al., 2017). Richmond et al. (2017) second these findings and indicate that the mobile device accounting applications are normally used by small businesses targeting middle- to high-income earning customers, as opposed to the businesses targeting low-income customers, who normally make use of traditional recording programmes. This situation, according to Richmond et al. (2017), is normally the case in the majority of rural SMMEs, who don't see the need to use mobile applications to record their business transactions.

4.5 The extent of usage of mobile cloud accounting by SMMEs in selected markets in Cape Town

This section provides answers obtained for the first research objective, which was to determine the extent to which SMMEs in selected markets in Cape Town use mobile cloud accounting to generate financial information for decision-making. To find answers to this research objective, a closed-ended question was asked, where the participants had to indicate whether they used the mobile applications under study. The findings obtained are presented in the figure:

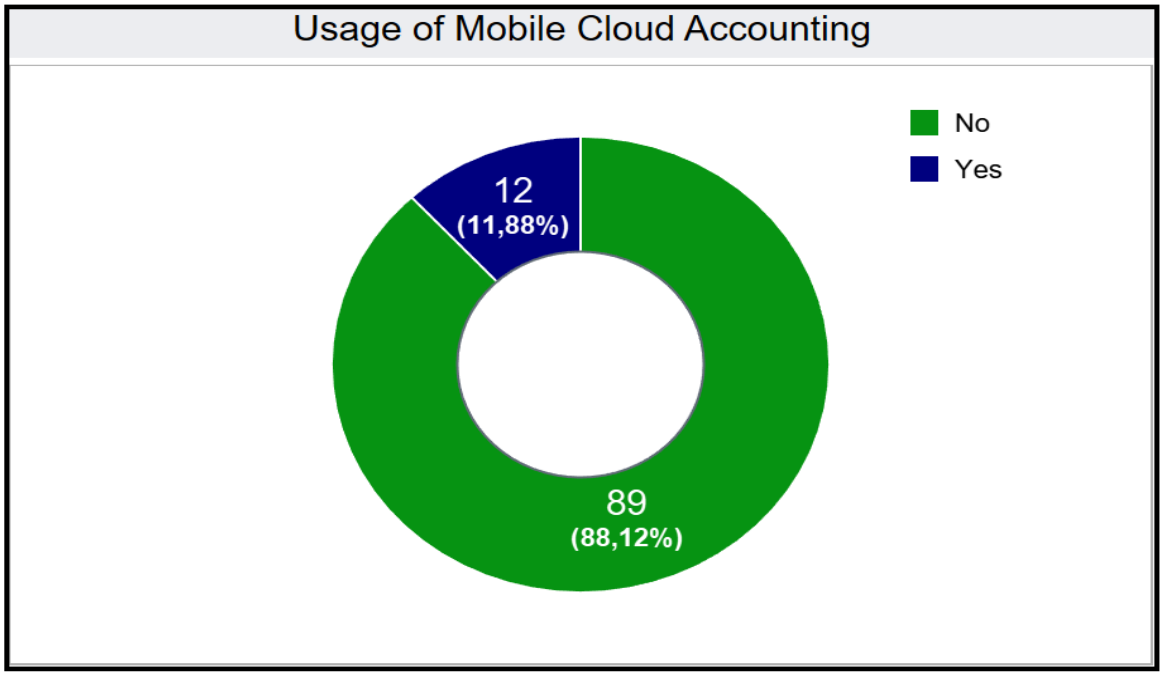

Figure 4.8: Extent of the usage of mobile cloud accounting by SMMEs

Figure 4.8 shows that the majority of the SMMEs participating in this study did not make use of mobile cloud accounting. This was indicated by 89 of the participants who represented 88.12% of the total. The remaining 12 reported that they made use of the technologies in question in their businesses. These participants were equivalent to 11.88% of the total number of participants that formed part of the primary study. The findings suggest that most of the traders were using alternatives to mobile cloud accounting during the time of data collection. This may be due to lack of knowledge of cloud accounting applications and their benefits. General observations found that the traders were using banking applications which enabled them to see their income and expenses.

The abovementioned findings validate the findings of Myeko and Madikane (2019) that the majority of SMMEs in South Africa do not understand the role and significance of recordkeeping. Okafor and Daferighe (2020) found a strong linear relationship between

accounting and the performance of SMMEs. Additionally, the extent of usage of mobile technologies is consistent with studies conducted by Munoz-Leiva et al. (2017) and Richmond et al. (2017) who conclude that various factors determine the use of different technological applications by SMMEs in running their organisations. These scholars indicate that factors such as location of the organisation, the level of competition, the customers targeted, and the complexity of the goods and services sold at a particular time significantly determine the SMMEs' adoption of technological applications. Additionally, in reference to the findings pertaining to those SMEs making use of mobile cloud accounting, Tarmidi et al. (2014) claim that only 30% of SMMEs are familiar with CA, but only 7% are knowledgeable about cloud accounting. However, Van den Bergh (2016) found that firms in Cape Town were aware of cloud accounting software and that smaller firms were more positive in their attitude towards using cloud accounting.

Importantly, the findings presented in Figure 4.8 are essential in this study, because they indicate the level of awareness about the use of mobile cloud accounting by SMMEs in selected markets in Cape Town, South Africa. Additionally, an inquiry was carried out on the reasons why some SMMEs did not make use of the mobile accounting applications.

4.5.1 Uses of mobile cloud accounting by SMMEs

Following the determination of the extent to which SMMEs make use of mobile cloud accounting, an inquiry was also conducted to determine what exactly the respondents used this mobile tool for. Several closed-ended questions were asked using a five-point Likert scale to determine the extent to which SMMEs made use of mobile cloud technologies for different purposes. The findings obtained are presented in the sections that follow.

4.5.1.1 Application of mobile cloud accounting to order products online, make payments and record expenses and sales

Firstly, the information on the extent to which mobile cloud application can be used to account for the amounts paid for the goods and received from sales is recorded in the figure that follows:

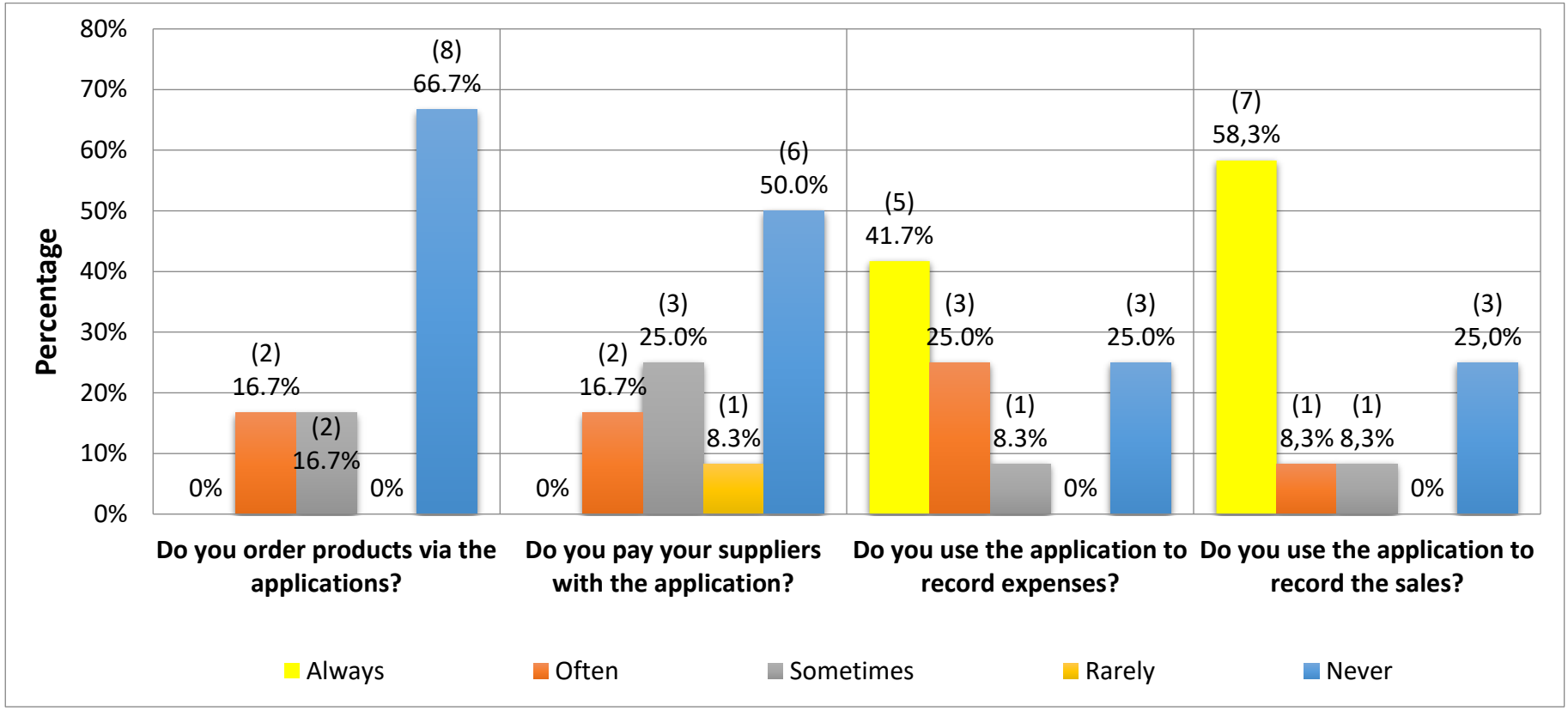

Figure 4.9: Use of mobile cloud accounting and the impact of mobile cloud accounting to order products online, make payments and record expenses and sales

Figure 4.9 shows the different ways in which the SMMEs that formed part of primary research make use of mobile cloud accounting to account for cash inflows and outflows as a result of sales and purchases, respectively. As the figure shows, of all the participants that make use of these technologies to record their business transactions, eight of the 12 indicated that they never used this application to order products for resale. These participants formed a significant 66.7% of the total participants. On the other hand, two noted that they often used mobile cloud accounting for the same function, while the remaining 16.7% were of the view that they only used it occasionally. Importantly, a significant 66.7% of the participants who indicated that they never used this application to make purchases validate the findings of this study that mobile cloud accounting applications are not common among up to two-thirds of the participants.

Additionally, an inquiry was made to ascertain the extent to which the SMMEs used mobile cloud applications to pay their suppliers. Predictably, the majority of the participants indicated that they never used this application to pay their suppliers. This is evidenced by 50.0% of the participants. One participant noted that they rarely used the application to pay their suppliers. Only 25.0% reported that they sometimes used the mobile cloud applications in question, while the remaining 16.7% often used them. The 16.7% of the participants who indicated that they used the mobile tools to pay their suppliers represented two of the total 12 participants that formed part of this study. These findings validate the findings obtained from this study which show very low levels of use of mobile cloud applications in recording their business transactions.

However, contrary to the findings presented above, there was a significant number of SMMEs that made use of mobile cloud accounting tools to record their expenses. These findings are evidenced in Figure 4.9, where five of the participants noted that they always used them for this purpose. These participants represented 41.75% of the total participants. In addition, 25.0% of their counterparts noted that they always used mobile cloud applications to record expenses, while a significant 25.0% never used them. These positive findings also validate the usage of mobile cloud technologies by SMMEs as noted by seven of the participants who indicated that they used tools to record their sales. These were in addition to 8.3% (one participant) who used the applications regularly and a further 8.3% who sometimes used them. In the main, Figure 4.9 presents interesting findings were there were mixed findings regarding the different functions for which the SMMEs used mobile cloud accounting tools.

4.5.1.1.1 Results pertaining to the impact of mobile cloud accounting applications to order products online, make payments and record expenses and sales.

The following tests were conducted in order to derive informed findings on the usage of mobile cloud accounting applications to order products online, make payments and record expenses and sales.

Table 4.6: Results on the application of mobile cloud accounting to order products online, make payments and record expenses and sales

Variable	Obs	Mean	Standard Error	Standard Deviation	95% confidence interval	Interval
Ordering online	$^{12}/_{89}$	1.75	0.05	1.40	0.95	3.600
Paying suppliers	$^{12}/_{89}$	2.23	0.05	1.39	0.95	3.682
Recording expenses	$^{12}/_{89}$	4.01	0.05	1.37	0.95	5.335
Recording sales	$^{12}/_{89}$	3.98	0.05	1.29	0.95	5.298

t = 0.762 Pr(/T/ > /t/) = 3.600 – 0.5335

The table shows the inferential statistics that were run to determine the incidence of mobile cloud accounting to order products online, make payments and record expenses and sales. The table above shows that the p-value associated with the t-test is statistically significant, with a 5% level (p>0.05) for the two variables, namely; recording expenses and recording sales. P values less than p>0.05 were obtained for the use of mobile cloud accounting applications in ordering online and paying suppliers. Therefore, a conclusion can be made that there is a significant positive relationship between the application of mobile technologies and incidence of recording expenses and sales.

The findings of the preceding sections on the use of mobile cloud accounting applications are consistent with studies explaining the functionalities of tools such as QuickBooks Online, which is a cloud-based tool aimed at improving the recording of financial transactions. According to Carlberg (2011), these applications can significantly assist small enterprises in recording their business transactions and accounting for their cashflows. This is supported by Galesso (2017) who is of the view that these mobile cloud tools enable SMMEs to make use of the basic

functionalities that can be used to track inventory, monitor their cashflows, track how the businesses are performing and provide a general overview of income, expenses and outstanding invoices. The main advantage of these applications is that they are user-friendly and allow smart decision-making in managing the business (Carlberg, 2011).

4.5.1.2 The use of mobile cloud accounting for administration purposes

In addition to the findings presented above, the study found that mobile cloud accounting applications were also used for administrative purposes. The findings are presented in the following figure.

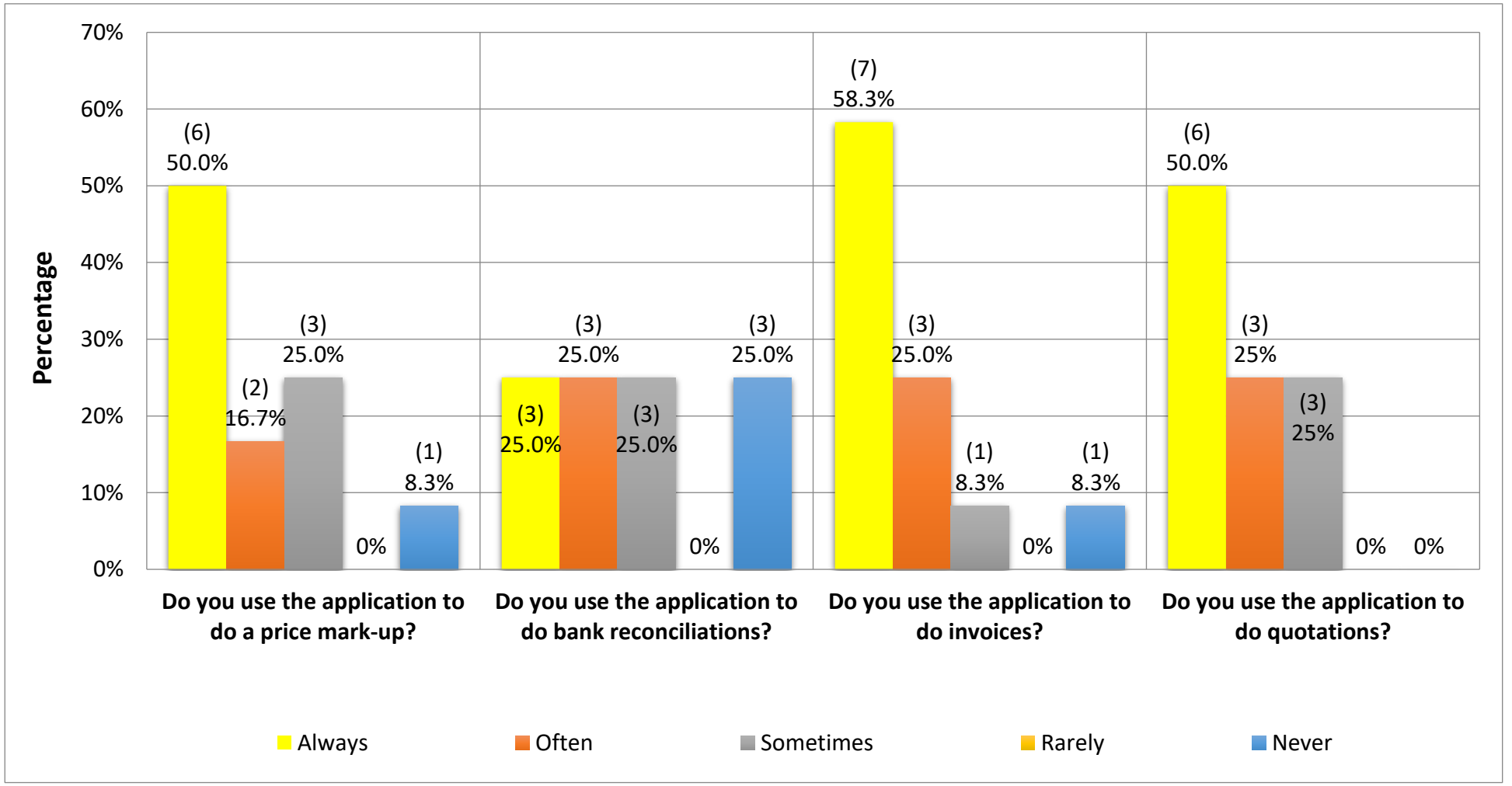

Figure 4.10: The use of mobile cloud accounting for administration purposes

The findings presented in Figure 4.10 show that even though there were low levels of usage of the mobile cloud accounting among SMMEs, these are mostly used for administrative purposes. For instance, the figure shows that 58.3% of the participants used them to create invoices for the customers. Three participants, or 25.0%, were of the view that they often used mobile application devises to make invoices and distribute them. The remaining 8.3% used these applications sometimes, while 8.3 never used them.

These participants were all approached by participants who indicated that they used mobile cloud application tools to make quotations for their customers. 50.0% of the participants noted that they always used mobile cloud technologies to generate quotations. Additionally, 25.0% of the participants noted that they often used these applications, while the remaining 25.0% used them once in a while. Overall, these findings are important because they indicate that the mobile cloud technologies were mainly used to generate customer quotations.

A significant number of participants also indicated that they used mobile cloud technological tools to calculate and assign appropriate mark-ups on the cost of their purchases. This was evidenced by six of the participants, or 50%, who noted that they always used this application for this purpose. Additionally, two participants noted that they often used the application, while three reported sometimes using these mobile tools. On the other hand, there was a fair distribution of the participants who always, often and sometimes used mobile cloud accounting tools to do bank reconciliations. These were equally distributed (25.0% each), while the remaining 25% indicated that they did not use these applications. Overall, the findings presented in Figure 4.10 validate the claim that mobile cloud tools are mostly used by SMMEs for administrative purposes.

4.5.1.2.1 Results pertaining to the use of mobile cloud accounting applications for administration purposes

The table that follows shows the findings obtained on the types of administrative functions for which SMMEs used cloud accounting applications.

Table 4.7: Results pertaining to the use of mobile cloud accounting applications for administrative purposes

Variable	Obs	Mean	Standard Error	Standard Deviation	95% confidence interval	Interval
Do price mark-up	$^{12}/_{89}$	4.23	0.05	1.40	0.95	5.665
Bank reconciliations	$^{12}/_{89}$	4.40	0.05	1.39	0.95	4.862
Do invoicing	$^{12}/_{89}$	4.13	.005	1.37	0.95	5.950
Do quotations	$^{12}/_{89}$	4.01	0.05	1.29	0.95	5.756

t = 0.793 Pr(/T/ > /t/) = 4.862 – 5.950

The table shows the findings obtained on the use of mobile cloud technologies by SMMEs to do their administrative duties. As the results in the table above show, the t-test findings were statistically significant, with a p-value higher than 0.05. This was applicable to all the variables classified under administrative purposes. In this case, the majority of the participants reported that they used the mobile cloud accounting application to do invoicing. Overall, the conclusion can be made that there is a significant positive relationship between the application of mobile technologies and their impact on conducting administrative duties.

4.5.1.3 The use of mobile cloud accounting for management purposes

The participants that participated in this study also indicated that they made use of mobile cloud accounting for management purposes. The findings obtained from primary research are presented in the figure :

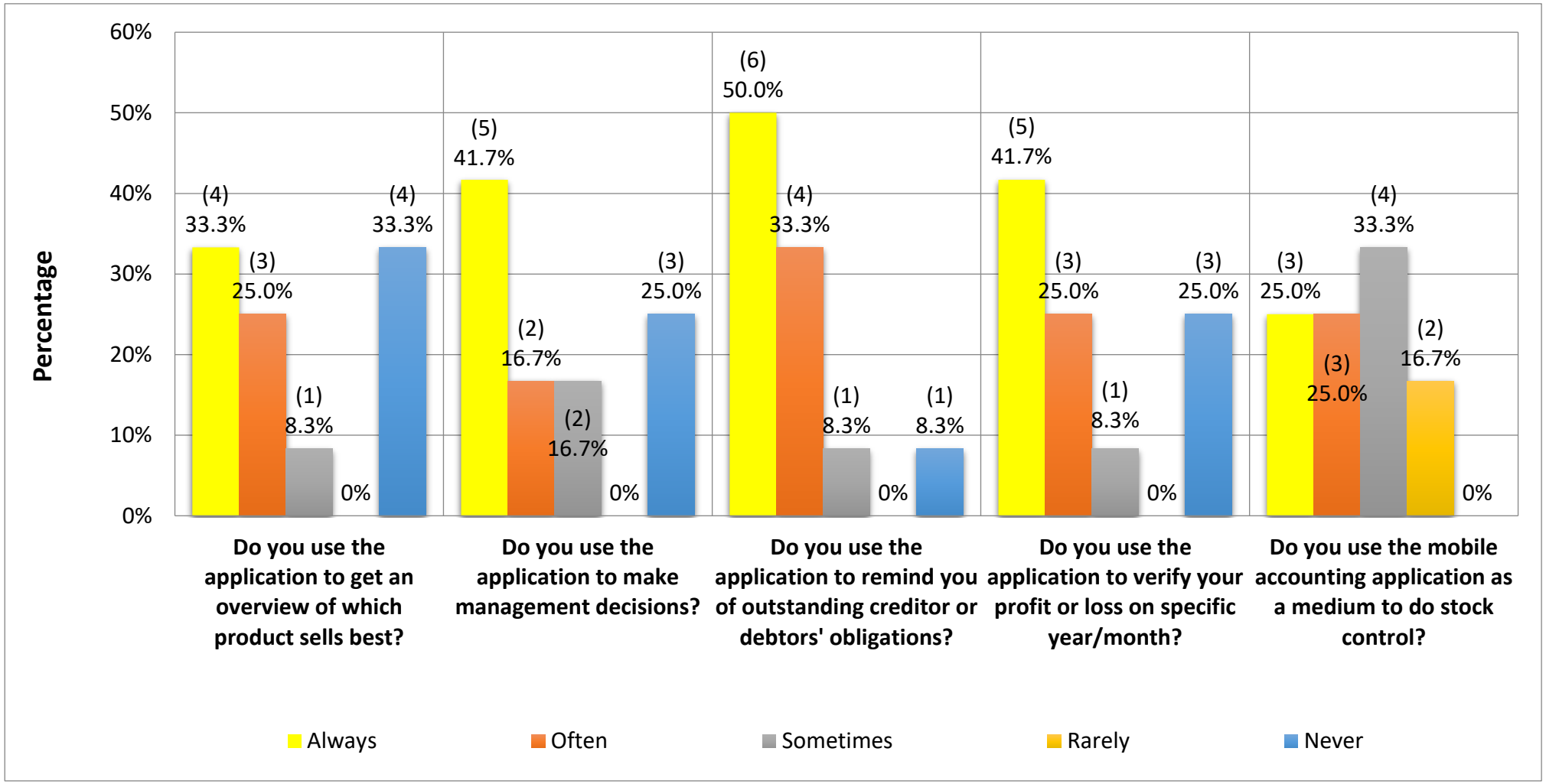

Figure 4.11: Mobile cloud accounting for management purposes

Figure 4.11 shows that the majority of the participants made use of mobile cloud application tools to track the outstanding amounts to their creditors and from their debtors. This is evidenced by 50.0% of the participants, who indicated that they always used this application to check the outstanding debtors and creditors' obligations. 33.3% indicated that they often used mobile cloud accounting applications for the identified purpose. A further 8.3% also noted that they sometimes, but not always, used the mobile applications to check the outstanding debtors' and creditors' obligations.

A significant number of participants also indicated that they used the mobile cloud accounting tools for other management decisions, including verification of the profits/losses at any period during the trading cycle. For example, 41.7% of the participants indicated that they always used mobile tools to verify profits/losses in a specific year/month. 25.0% of the participants noted that they often made use of these tools. Additionally, a significant number of participants noted that the mobile cloud accounting tools were continuously used for decision-making. Out of the total participants five of the participants (41.7% of the respondents) echoed this view and reported that they used these applications to make management decisions on a continuous basis. 16.7% often used this tool, and an additional 16.7% incorporated this application in management decisions once in a while.

On the other hand, a significant number of participants were of the view that they rarely or never used the mobile cloud accounting tools for management decisions. For example, 33.3% of the total participants indicated that they never used the mobile technological tools to determine which of their products were selling best. These were in addition to 16.7% of the participants indicating that they rarely used mobile cloud accounting tools as a medium to do stock control. The majority of participants, however, reported that the mobile accounting applications helped SMMEs to do stock control. These represented 25.0% of the participants, while an additional 25.0% used these tools often. In conclusion, a significant 33.3% noted that they used the mobile cloud technologies for stock control, but they did not always use these tools.

In summary, the findings presented in Figure 4.11 indicate that SMMEs used mobile cloud accounting tools for various reasons. Some of the participants used these tools to get an overview of which products sell the best, while others used apply these applications for management decision. Fifty percent (50%) of the participants noted that the applications reminded them of their outstanding amounts owed to them or to their creditors. Also, more

than a third of participants indicated that they used it to view their profit or losses for a specific period. Only one quarter always used it to do stock control.

4.5.1.3.1 Results pertaining to the use of mobile cloud accounting applications for management purposes.

The table that follows shows the findings obtained on the implication of the use of mobile cloud accounting for administrative purposes among SMMEs.

Table 4.8: Results pertaining to the use of mobile cloud accounting applications for management purposes

Variable	Obs	Mean	Standard Error	Standard Deviation	95% confidence interval	Interval
Tracking products	$^{12}/_{89}$	3.87	0.05	1.40	0.95	5.665
Management decisions	$^{12}/_{89}$	3.95	0.05	1.39	0.95	4.862
Outstanding accounts	$^{12}/_{89}$	4.25	.005	1.37	0.95	5.950
Check profits/losses	$^{12}/_{89}$	4.15	0.05	1.29	0.95	5.756
Check inventory	$^{12}/_{89}$	4.03	0.05	1.26	0.95	4.936

t = 0.698 Pr(/T/ > /t/) = 0. – 5.862

The table also presents some positive findings pertaining to the use of mobile cloud accounting applications by SMMEs for management purposes. A fairly significant high t-test was obtained after five variables were run to determine whether they significantly explained the use of the tool for management purposes. An average test of p=0.698 was obtained. This finding is important because it is more than 0.05. In this regard, the findings clearly indicated that they made use of the mobile cloud accounting application for management purposes, although the majority of them used it to check the outstanding payments and other payments in arrears. Overall, these findings are important because they show a significant positive impact of mobile cloud accounting applications and management processes among SMMEs.

The above findings are consistent with those of Ghasemi et al. (2011) who point out that mobile accounting systems allow for the creation of management reports at the touch of a button. Additionally, capabilities include improved accuracy (built-in internal checks and balances), enhanced processing time (large amounts of data can be processed at a faster pace), and enhanced financial reporting. Xero, an online accounting software solution which is described as a critical tool for the survival of the business, is a powerful accounting software application that allows the streamlining of financial reporting, management of inventory, invoicing and the simplification of accounts and bank reconciliations (Smith, 2019). Xero also allows for further modifications tailored to the customer's needs (Mauricette, 2019).

4.5.2 Methods used by non-users of mobile cloud accounting to generate financial information

As noted in the previous section, 88.12% of the participants indicated that they did not use mobile cloud accounting to record their financial transactions. The table below shows different methods used by these SMMEs to generate financial information for their businesses.

Table 4.9: Methods used by non-users of mobile cloud accounting to generate financial information

Ways to generate financial information	Number of responses	Total responses	Percentage
I record it in a book	43	89	48.31%
I make a mental note because I have a good memory	30	89	33.71%
I make use of a professional bookkeeper	10	89	11.24%
I use an accounting software package on a desktop when I get home	6	89	6.74%
Total	89	89	100.00%

Table 4.6 shows that the majority of the participants indicating that they did not use mobile cloud accounting to record financial transactions kept their financial information 'in a book'. These were $^{43}/_{89}$, who represented 48.31% of the participants. In addition to this method of saving transactional information, $^{30}/_{89}$ of the participants, who were equivalent to 33.71% of the total participants, noted that they recorded their financial transactions in their mind because they 'have a good memory'. On the other hand, even though some participants indicated that

they did not make use of mobile cloud accounting, they noted that they made use of professional bookkeepers and other computer devices. A significant $^{10}/_{89}$ of the participants, who represented 11.24% of the participants, noted that they had professional bookkeepers, while the remaining 6.74% of the participants reported that they used computer-based software package to track their financial transactions.

Literature reveals various reasons why SMMEs, among many business entities, do not make use of mobile cloud accounting and other mobile based technologies. To SMEs, these technologies are not only expensive, but they require skills which the majority of small enterprises do not have (Ayoob, 2019). Ayoob (2019) further notes that adopting regular accounting practices has been proven to have a positive effect on a business, but the challenge is that very few small businesses outsource contemporary bookkeeping services because of the lack of awareness, or inadequate knowledge of the importance of these services. Due to the potential advantage of contemporary bookkeeping applications such as mobile cloud accounting applications, Olajide and Obialo (2020) recommend that SMMEs adopt these technologies so as to keep accurate records of their books and prevent the demise of their businesses.

4.6 SMMEs' level of awareness on the use of mobile cloud technologies to generate information for decision-making

This section provides answers for the second research objective, which attempted to establish the level of awareness of SMMEs in the selected markets in Cape Town, South Africa, on the use of mobile cloud accounting to generate information for decision-making. This question was applicable to all participants in this study. Firstly, these participants were asked to indicate how they came to learn about mobile cloud accounting. The findings obtained are presented in the following table.

Table 4.10: Source of information about the use of mobile cloud accounting

Source of information about the use of mobile cloud accounting	Number of responses	Total responses	Percentage
I have never heard of mobile cloud accounting	56	101	55.45%
Internet and/or social media	28	101	27.72%
Television or radio communication	3	101	2.97%

Newspaper and magazines	1	101	0.99%
Fellow SMMEs	12	101	11.88%
Observation and general knowledge	1	101	0.99%
Total	101	101	100.00%

As shown in table 4.7, participants in this study indicated that they had heard about mobile cloud accounting from various sources of information. The majority of the participants, 56 of the 101, indicated that they had never heard about mobile cloud accounting. These participants represented a significant 55.45% of the total. A further 28 of the respondents, who were 27.72% of the total participants, were aware of mobile cloud accounting, and they indicated that they got to know about this application via the internet and social media. Of these 28 participants, only eight indicated that they made use of this application to record their financial transactions. Additionally, 12 of the participants reported that they had learnt about mobile cloud accounting through fellow owners of SMMEs. Out of these 12, only two (2) noted that they made use of these mobile applications in their day-to-day running of their businesses. One participant found out about mobile cloud accounting through the newspapers, while another knew about these applications through observations and general knowledge. The remaining six, equivalent to 2.97% of the total participants, maintained that they learnt about mobile cloud accounting through the television or radio.

The aggregated findings presented in the table above clearly show that more than half of the participants had never heard of mobile cloud accounting. On the other hand, only a few of those participants that had heard about mobile cloud application were making use of this technology to record their transactions in their businesses. These findings are important, because they shed light on the extent to which the participants were aware of the mobile technologies in question. This information can be used by policymakers in devising strategies that will help these business entities to embrace mobile cloud technology in their businesses.

The findings obtained about SMMEs' level of awareness of mobile cloud technologies are consistent with the studies undertaken by Philip (2018) which concluded that the majority of small-scale businesses were not aware of cloud accounting and its benefits. Philip (2018) indicates that many SMMEs are not aware of the effectiveness of cloud accounting in business, to the extent that they continuously make use of traditional business practices to record their transactions. In another study, Pulakanam and Suraweera (2010) conclude that many SMMEs

fail to implement standard accounting applications and software due to lack of training, user confusion and lack of support.

4.7 The effects of the use of mobile cloud accounting on the financial information of SMMEs

This section provides answers to the third research objective, which was aimed at ascertaining the effect of the use of mobile cloud accounting on the financial information of SMMEs in selected markets in Cape Town. The perceived effectiveness of mobile cloud accounting was classified into different categories such as its ease of use, flexibility and time and cost saving, among other variables. These findings are presented in the following section.

4.7.1 The ease of use, affordability and flexibility of mobile cloud accounting software

The implications of mobile cloud accounting applications were categorised in the form of ease of use, affordability and flexibility, and are presented in the following table:

Table 4.11: Ease of use, affordability and flexibility of mobile cloud accounting applications

Effects of the use of mobile cloud technologies by SMMEs	Number of responses	Total responses	Percentage
The software is easy to download	9	12	75.0%
The software is user friendly	7	12	58.3%
The software simplifies business	7	12	58.3%
I can use the software while I am at the market	5	12	41.7%
The application is relatively inexpensive	3	12	25%

Table 4.8 shows different effects of mobile cloud accounting on SMMEs. All these effects are then classified either as ease of use, affordability or flexibility. Firstly, nine of the SMMEs indicated that mobile cloud accounting applications were easy to download. These respondents represented a significant 75.0% of the participants that indicated that they made use of mobile cloud technologies in their businesses. An additional 58.3% of the participants maintained that these applications were user friendly. Additionally, due to several reasons, a further 7 participants claimed that mobile cloud accounting simplified their businesses.

Similar to those participants that reported that the mobile cloud applications were user friendly, 58.3% maintained that they simplify businesses. A further $^{5}/_{12}$ of the participants attributed the effectiveness of mobile cloud accounting to its flexibility. These participants, who were also equivalent to 41.74% of the total respondents, indicated that this application could be used while they were at the market. Thus, the application allowed them to record the business transactions as they occurred. Lastly, a quarter of the participants were of the view that the mobile cloud technologies were relatively inexpensive.

In the main, this section clearly shows that there was a significant number of participants who provided positive responses on the effectiveness of mobile cloud accounting. Overall, the findings validate the effectiveness of mobile cloud technologies in terms of their ease of use, flexibility and affordability. It was established that SMMEs which indeed used mobile cloud accounting applications found some benefit in using the application software for various reasons. The participants found that variables such as ease of use and user-friendliness were among the top three reasons for using mobile cloud accounting. These findings may be corroborated with the TAM model of perceived ease of use and perceived usefulness. E-invoicing was also mentioned as a benefit. This is because the majority of the enterprises that participated in this study did not have ready access to printers. The use of electronic invoicing and other similar technologies also has environmental benefits. The research also found that there was significant ease of use and flexibility of the mobile cloud applications, due to the fact that the application was easy to download, self-explanatory and flexible to use at the markets.

The findings presented above are consistent with the available literature on the impact of the use of mobile cloud technologies in managing business organisations. For instance, Suhayati and Riandani (2019) argue that the use of accounting applications in small businesses helps them to manage their finances easily and effectively with minor challenges. In terms of ease of access and affordability of these technologies, Sobhan (2019) validates these findings and indicates that mobile cloud software can easily be accessed, and the client can use all the available accounting information that comes with the applications. Sobhan (2019) also indicates that the user does not have to rely on financial statements or spot-checking of company records in order to have updated information about a business, as is the case with traditional accounting. This is because the users of these mobile cloud accounting applications can easily collect and monitor financial information sitting at home using their mobile phones of computers. Thus, mobile cloud accounting software is flexible in terms of its accessibility, and it is also compatible with different browsers and operating systems (Mohanty & Mishra, 2017).

4.7.2 Effects of mobile cloud accounting on sales and inventory management

The study also indicated that mobile cloud accounting has significant effects on sales and inventory management, as shown in the table:

Table 4.12: The impact of mobile cloud accounting on sales and inventory management

Effects of the use of mobile cloud technologies by SMMEs	Number of responses	Total responses	Percentage
I use it to do my quotations for my clients	10	12	83.3%
I can use it to print/send electronic invoices (e-invoices) for my clients immediately and it saves me time	6	12	50.0%
I use it as medium to monitor inventory/stock balances	4	12	33.3%
It allows me to input my sales and it shows me my sales history	3	12	25.0%
It allows me to see who owes me money from previous purchases	2	12	16.7%
I do not have to worry about my sales books getting damaged or lost while I travel for business	2	12	16.7%

Table 4.13 shows the implications of mobile cloud accounting for sales and inventory management. Of the different dimensions that assess the impact of mobile cloud accounting on sales and inventory management, the majority of the participants were of the opinion that the application enabled them to do quotations and send invoices to their clients quickly. For instance, 83.3% of the participants, were of the view that mobile cloud accounting gave them an opportunity to do quotations for their clients. This is an important move in any business as it is the starting point in retaining customers. 50% of the respondents noted that they could print or send e-invoices to their clients, thereby saving time that would be incurred if the traditional methods of recording financial transactions were used. On the same note, 33.3% of the participants also indicated that this was an effective tool that could help small businesses,

among other entities, to monitor their inventory/stock levels. Additionally, 25.0% of the participants indicated that they used mobile cloud accounting to record their sales on a daily basis. In doing so, the application allowed them to check and go over their previous records.

On the other hand, there were other participants who were of the view that mobile cloud accounting helped them to track the clients owing. These represented 16.7% of the participants. The remaining 16.7% noted that the application enabled them to save financial information in the form of electronic documents, therefore; they did not worry about their sales books being damaged or lost. To sum up, these findings reflect the importance of mobile cloud accounting as a medium of sales and inventory management.

4.7.3 The effects of mobile cloud accounting on pricing, costing and profitability

The table below shows the findings obtained in this study on the effects of mobile cloud accounting on the pricing, costing and profitability of SMMEs.

Table 4.13: Effects of mobile cloud accounting on pricing, costing and profitability

Effects of the use of mobile cloud technologies by SMMEs	Number of responses	Total responses	Percentage
I use it to do my price mark-ups on my products	4	12	33.3%
I can see my profit and losses for the month	4	12	33.3%
The software application allows me to see where I am overspending	3	12	25.0%
The application shows me if I am selling more high profit items versus low profit items	2	12	16.7%
I can see how much I can afford as a salary every month	2	12	16.7%

Table 4.14 above classifies the impacts of mobile cloud accounting based on pricing, costing and profitability. As the table shows, there was a fair distribution of the respondents who indicated that they made use of mobile cloud technologies to compute the mark-ups on the cost of the products they sell, and to check their levels of profitability. These participants each represented $^{4}/_{12}$ of the participants which is equivalent to 33.3% of the total respondents. A

quarter of the total participants that participated in this study, associated mobile cloud accounting with its impacts on tracking of their operational expenses. Using this accounting tool, these three participants noted that they would be in a position to ascertain whether they are overspending in their operations of not. On the other hand, a few participants, 16.7% of the total respondents, were of the view that they used mobile cloud technologies to track the goods being sold based on their levels of profitability. In this light, these participants indicated that they were able to identify if they were selling less profitable goods *versus* the profitable ones. Lastly, 16.7% of the respondents noted that the mobile cloud technologies helped them to determine how much in monthly salaries they would be able to pay. Overall, the findings showed the impact of mobile cloud accounting in the sense that the SMMEs were able to determine the correct mark-ups on their products and then follow up on their expenses, as well as levels of profitability. The abovementioned findings are consistent with perceived characteristics of innovation, according to Moore and Benbasat (1991).

4.8 Factors inhibiting SMMEs from using mobile cloud accounting to generate financial information – findings from quantitative data.

This section provides answers to the fourth research objective, which was to establish the factors that inhibit the use of mobile cloud accounting to generate financial information for decision-making among SMMEs in selected markets in Cape Town, South Africa. 89 participants, all of whom had indicated that they did not use cloud-based accounting applications, responded to this question. Each participant was asked to tick the top three reasons why they did not use the applications to record their financial transactions. The findings obtained from primary research are shown in the section that follows.

4.8.1 Common factors inhibiting SMMEs from using mobile cloud accounting

The table below shows the top five reasons reported by SMMEs:

Table 4.14: Common factors inhibiting SMMEs from using mobile cloud accounting

Common factors inhibiting SMMEs from using mobile cloud accounting	Number of responses	Total responses	Percentage
The cost of data is relatively expensive	37	89	41.6%
It is time consuming to input information because I am primarily interested in making sales	30	89	33.7%
The application is expensive or an unnecessary cost	27	89	30.3%
Connectivity issue is always a problem	21	89	23.6%
I have operated for the past 20 years like this, there is no need to change my system	17	89	19.1%

As shown in Table 4.15 above, 37 the participants that did not use these applications were of the view that the most inhibiting factor was that data was relatively expensive. Since these tools use mobile networks, the respondents indicated that the extra data costs incurred in their operation were prohibitive. 23.6% also noted that they had connectivity issues. In addition to this factor, 30 of the participants, representing 33.7% of the total non-users of the mobile applications were of the view that these tools were time-consuming, and that this time could be put to better use by making sales. This is a common case among small businesses, and specifically survivalists, because they tend to feel pressured to use all the time they have productively.

Nearly one-third of the participants, 27 of the total, associated the mobile accounting applications with unnecessary expenses and hence declined to use them. These participants, representing 30.3% of the total participants, also noted that the application was relatively expensive for them. These findings, however, contradict the opinions of the participants who did use mobile cloud accounting tools, since they cited the affordability of the applications as one of the reasons they used them. On the other hand, some of the participants noted non-technical issues inhibiting them from using the mobile cloud accounting application to record their business transactions. As Table 4.11 shows, 17 of the participants, or 19.1%, noted that they had been in business for a long time using traditional methods of recording, so they did not see a reason to adopt the mobile cloud applications. Overall, it is clear from these findings

that the most dominating factors inhibiting SMMEs from using mobile cloud accounting technologies are centred on the costs involved, as well as connectivity issues.

4.8.2 Other reasons inhibiting SMMEs from using mobile cloud accounting

In addition to the reasons inhibiting the use of mobile cloud accounting tools discussed in the preceding section, the following table also presents other factors that prevent SMMEs from using the tools in question.

Table 4.15: Other factors inhibiting SMMEs from using mobile cloud accounting

Other factors inhibiting SMMEs from using mobile cloud accounting	Number of responses	Total responses	Percentage
I have a bookkeeper who does everything for me	17	89	19.1%
I am technologically disadvantaged	15	89	16.9%
I am not interested in knowing my profit or loss on paper	10	89	11.2%
I do not possess a smartphone that allows me to download	10	89	11.2%
It only works on Android phones	2	89	2.2%

Among other factors inhibiting the SMMEs from using mobile cloud accounting technologies, $^{17}/_{89}$ or 19.1% of the participants noted that they had bookkeepers handling recording for them. Some of the participants, 16.9%, indicated that they were technologically disadvantaged, hence; they did not have the proficiency to use the mobile cloud accounting tools. Others, 11.2%, noted that they did not have smartphones to download the applications and utilise them in their operations. Another 11.2% indicated that they were not interested in knowing their profits or losses on paper. The remaining two participants were of the view that the mobile cloud accounting applications only worked on android phones, which they clearly did not possess. Overall, these findings collaborate the research findings obtained on the different factors that inhibit the participants from using mobile cloud accounting.

These findings are in line with the study conducted by Jasper and Anuradha (2017) to determine the benefits of smartphones in the micro-industry in New Zealand. Jasper and Anuradha's (2017) study concludes that mobile cloud accounting applications are important in

recording business transactions, but many small enterprises lack the required infrastructure to make use of these tools. Jasper and Anuradha (2017) specifically note that small enterprises often lack the requisite technological devices and strong network connectivity to accommodate technological applications required to record financial transactions in their businesses. Other studies have been undertaken on what prevents SMMEs from embracing technology. These include Majoni et al.'s (2020) study, which concludes that lack of community involvement often leads to the failure of technology projects. Jaiswal (2020) also concludes that SMMEs are slow to adapt to technological developments because they lack the funding required for such advancements. As a result, all the factors that appear to be inhibiting SMMEs from using mobile cloud accounting are attributable to the costs involved. The cost of data, money required to purchase the application, as well as the need to have the supporting smartphones, were seen as the biggest concerns.

4.9 Conclusion

This chapter provided an analysis of the quantitative data which was gathered through survey questionnaire. From the findings analysed and presented in this chapter, this study concluded that there was low level of awareness among the participants on the use and impact of mobile cloud accounting tools to record business transactions. In this light, the research concluded that the low levels of usage of these mobile applications were due to multiple reasons which ranged from the costs involved in purchasing and maintaining the software, the data and network issues, the complexity of the tools and generally the out-datedness of the SMMEs. There were, however, significant impacts observed by the participants who noted that they used the tools to record their financial transactions. These include its ease of use, flexibility, affordability and speed. The following chapter presents and analysis the qualitative data obtained using interviews.

CHAPTER FIVE – FINDINGS, ANALYSIS AND DISCUSSION OF QUALITATIVE DATA

5.1 Introduction

The main purpose of this chapter is to provide answers to the last research objective. The last objective was meant to establish the factors that may inhibit the use of mobile cloud accounting to generate financial information for decision-making among SMMEs in selected markets in Cape Town, South Africa. Thematic analysis was used as the main method of analysis. Qualitative data for this study was gathered from interviews conducted with 14 participants. These participants were numbered from one to 14 in order to make specific reference to them when analysing. For clarity purposes, some verbatim quotes are used to express the participants' perceptions on how they were prevented from, or inhibited in, using mobile cloud accounting tools.

5.2 Factors inhibiting SMMEs from using mobile cloud accounting tools– findings from qualification data

In order to have an in-depth understanding of the factors inhibiting SMMEs from using mobile cloud accounting to generate financial information, the following questions were asked during the interview process:

i. What measures prevented you from using mobile cloud accounting to generate financial information in your business?
ii. How do you feel about using this technology in the future?

From the first question outlined above, a range of responses was given by the participants. Most of the responses were overlapping, because the participants provided more than one answer based on their feelings towards the use of cloud technologies in their businesses. The following themes were formulated from the two questions:

- Lack of awareness about mobile cloud accounting;
- Lack of literacy about cloud knowledge;
- Financial costs, time management and security challenges of mobile cloud accounting tools;
- Relevance of mobile cloud accounting tools; and
- Affordability of the traditional methods of recording business transactions.

5.2.1 SMMEs' lack of awareness about mobile cloud accounting

Out of 14 participants, five indicated that they had never heard about mobile cloud accounting. These were specifically Respondents 1,4,6,8 and 10. The participants indicated that they had never heard about mobile cloud accounting prior to the interview. Respondent 10 specifically reported that he was not aware of the mobile cloud accounting tools under study. The participant indicated that an earlier introduction of these tools would have benefitted him. Overall, the findings on the low usage of mobile cloud accounting could be attributable to the fact that there was a low level of awareness concerning mobile accounting applications was among the participants operating within this study area. Lack of awareness about the potential impact of the application of mobile cloud accounting applications could be due to a lack of government programmes or intervention methods to assist the participants that participated in this study.

These findings are consistent with the studies conducted by Majoni et al. (2020) who conclude that the absence of involvement of the SMMEs in the design and implementation of technological developments is a major contributor to their failure to adopt them. In addition, other scholars such as Philip (2018) point out that small-scale business owners are not aware of mobile cloud accounting benefits and how effective MCA is within business organisations. In this light, many SMMEs are only familiar with traditional infrastructure used to record business transaction. Low levels of use of mobile technologies by SMMEs is also highlighted by Tarmidi et al. (2014), who claim that 30% of small enterprises are familiar with cloud accounting, but only 7% are knowledgeable about it.

Additionally, in a bid to improve the awareness of the SMMEs about mobile cloud technologies, Ahmed (2020) covers the most important cloud accounting programs that can be accessed via the internet. These applications include FreshBooks Accounting, QuickBooks Accounting Online and Wave. According to Ahmed (2020), FreshBooks Accounting is an accounting service for small businesses. This application allows users to send and manage invoices, track billable time and collect online payments. The service provider offers a straightforward solution that simplifies the billing process. On the other hand, QuickBooks Accounting Online is a SaaS version of the QuickBooks product and it includes automation, inventory, analytics and payment management tools (Ahmed, 2020). Ahmed (2020) also notes that Wave is a free, cloud-based accounting platform exclusively for small businesses to support double-entry bookkeeping and allows unlimited user access and invoicing. It can integrate with Wave payroll, invoicing and receipt scanning.

5.2.2 Lack of literacy among the SMMEs on the use of mobile cloud applications

The study also concluded that SMMEs lacked literacy on how best to use cloud technologies to record business transactions. However, only Respondents 2 and 3, who represented 14.23% of the participants, were of this opinion. These respondents lacked the ability to navigate a smartphone and use all its functions. The lack of awareness on how to use mobile cloud applications could be the reason why these selected SMMEs lacked the required level of literacy.

The findings presented above on the poor usage of mobile cloud technologies by SMMEs are consistent with other studies conducted in this field. For instance, Bvuma and Marnewick (2020) note that, despite the importance of adoption of ICT infrastructure in recording financial transactions in businesses, SMMEs often face difficulties in implementing these, because they lack the required skills, despite having basic education. Additionally, scholars such as Yeboah-Boateng and Essandoh (2014) also highlight that the acceptance of the cloud technologies amongst SMMEs is relatively slow, due to different barriers which include knowledge challenges as well as technological aspects such as poor internet connectivity to implement cloud technologies. To solve these challenges, argue Yeboah-Boateng and Essandoh (2014), SMMEs must be given adequate training to allow them to fully understand and appreciate cloud applications.

5.2.3 Financial costs, time management and security challenges of mobile cloud accounting tools

The study also concluded that the adoption of mobile cloud accounting application is hindered by the financial and time costs involved, as well as its perceived security shortcoming. In support of this conclusion, three participants, who represented 21.43% of the respondents, noted that moving to cloud technologies was an additional expense for the business. Moving from a paper-based system to a digital platform requires capital expenditure. Small businesses usually trade on small mark-ups and do not make large enough profits to switch to cloud technologies.

One of the participants, Respondent 7, indicated that he did not have a smartphone because he saw no need to have one. In his opinion, smartphones are more costly than standard cellular phones. On the other hand, Respondent 12 was of the view that connectivity and the cost of data was a real concern in their business, and that they therefore found it difficult to adopt cloud accounting technologies. This respondent noted that she was a survivalist micro-enterprise trading in remote sites on days when the South African Social Security Agency

(SASSA) grant pay-outs occurred. Network connectivity is costly in these remote areas, and this problem is compounded by poor coverage. Respondent 3 indicated that she was not interested in using technology in her business. She was of the view that the costs of acquiring a smartphone were too high and that she therefore preferred to use the book method. Elaborating on this, she noted that:

> *…..the method has been working for many generations and my family's livelihoods have always been sustained using this method. Besides, my mobile is used for incoming and outgoing calls and not for the business transactions*.

One respondent noted that the use of mobile cloud accounting was time-consuming. She noted that the market was too busy and recording information was a waste of selling time. In her own words, Respondent 5 noted that:

> *I do a recount and take stock of my goods and cash my money to know what is going on in my business. I have been doing this for long. I do not need to use other tools that will consume my time*.

Overall, the costs that are faced by SMMEs that participated in this study included purchasing handsets and the mobile cloud applications themselves, data costs, recharging the phones, time management costs, as well as effort and time required to participate in training to use the tools. On the other hand, some respondents noted security factors as heavily influential in their decision not to use mobile cloud accounting in their operations. Respondents 9 and 10 were sceptical about using online technologies, as they were concerned about security breaches due to the vulnerability of internet tools.

Some literature has identified costs and security issues as some of the factors that lead to low levels of usage of technological devices by SMMEs. Business Insider (2020) supports the findings presented above and notes that South African data prices are exceptionally expensive for the poor. South Africa is ranked 148th out of 228 countries in terms of data prices, and data is more costly in South Africa than most other countries in Africa (Business Insider, 2020). This makes it difficult for SMMEs to adopt mobile technologies. However, while SMMEs noted high costs involved in the adoption and maintenance of mobile cloud technologies to record financial transactions, studies conducted by Barbera, Kosta and Mei (2013) found that mobile cloud technologies costs are reasonable in terms of bandwidth and energy costs, provided the synchronisation intervals are not too short. Synchronisation is the time interval between the device and the server to which it connects. Additionally, Khanom (2017) addresses one of the

major drawbacks of cloud accounting in the sense that it requires a constant internet connection, which may not always be possible. Sobhan (2019) explains the cost saving of using cloud accounting, because the client will not invest in infrastructure and software licences. The customer can ‘pay per use’ which is more cost-effective for the SMMEs owners.

On the other hand, Rozmi et al. (2020) allude to the fact that most small enterprises have had bad experiences with ICT systems, to the extent that they become reluctant to use these applications. One of the common challenges is that large amounts of data transmitted via the internet might become a target for cyber hackers. Kaufman (2009) also explains that well established ICT brands like Microsoft and Amazon could easily survive a cyber-attack, because they have more functionalities than a smaller service provider. There is also no guarantee that having an IT division in the company is more secure than using the cloud, because in the end both utilise the internet (Biswas, 2011a). When the users no longer have control over their information, the user’s data is potentially at risk (Ren et al., 2012).

5.2.4 Relevance of mobile cloud accounting tools

Four of the participants (28.57%) noted that they did not make use of the mobile cloud accounting application because of lack of its relevance in their organisation. Respondents 5 and 9 noted that they only based their businesses on cash; therefore, they did not see the need to incorporate the cloud tools in their transactions. This, however, was a typical case of lack of literacy about cloud technologies, because they are not only applied in situations where non-cash transactions are involved. Respondent 10 indicated that he participates in underground activities like the selling of counterfeit products and would not like to record any income and expenses due to his illegal activities. He also indicated that he would never document evidence which could get him into trouble.

Additionally, Respondent 6 maintained that the application is not a necessity in his business because he has a bookkeeper who records of all the business transactions. The researcher also observed that Respondent 6 uses an easy ‘booking in’ and ‘booking out’ system; therefore, the bookkeeper is satisfying his needs. He notes all his sales in a black journal and gives his invoices to the bookkeeper. These findings are consistent with the TPB, in which it explains that customary codes of behaviour in a group of people or larger cultural context. This is well aligned with earlier studies, as previously alluded to, making it impossible to accurately assess the total workforce within the informal sector in South Africa, because their activities are often unrecorded and undetected (Woodward et al., 2011).

5.2.5 Affordability of the traditional methods of recording business transactions

Two of the participants also noted that they preferred to use traditional methods to record business transactions because they were cheaper than mobile cloud technologies. Traditional methods, in the context of these respondents, means recording all the transactions (sales, purchases and inventory update) in a book. These participants, Respondents 13 and 14, found that traditional methods were more useful than integrating technology into the workplace. Participant 13 felt that when she goes bigger with self-branded items, she would transition from the traditional systems because of more inventory and sales and the various product lines she anticipated acquiring. This method would be more accurate, and the researcher observed that the respondent had a good working knowledge of the relevant technology.

These findings connect to the construct of perceived behavioural control in the TPB, where a person's perception of the ease or the difficulty of the interest. Participant 13 indicated that she would use certain functionalities of the application, for example the inventory function, which would streamline the business. The age of the respondent played a role in using the applications, and how user-friendly or challenging the application was perceived to be. The researcher observed that Respondent 14 made a large number of sales. However, she did not record those sales anywhere. Furthermore, she offered discounts without recording them.

The existing literature supports the findings presented above, though focus is mostly on the fact that there exist many advanced mobile cloud technological tools that can help SMMEs to record their transactions in a more effective way than traditional tools. Current technological solutions versus traditional IT solutions are available to assist small business owners (Seetharaman et al., 2019). However, many small businesses are reluctant to adopt such technological tools, for to various reasons. Barte (2012) states that some small business owners end up temporarily recording their transactions either their palms or other parts of their bodies before they permanently record using traditional methods. Some of the studies indicate that SMMEs do not use mobile cloud technological applications because they are mostly not comfortable doing so. This is consistent with the study conducted by Agus et al. (2020), which concludes that the adoption of the software is most likely to happen when the user becomes comfortable with the technology (or ease of use) and when the client views the applications as useful to the business (perceived usefulness) within their business environment. However, contrary to what Agus et al. (2020) believes, Matias and Hernandez (2019) maintain that competitive pressure and governance play a significant role in encouraging SMMEs to make use of cloud computing, particularly in developing countries. The authors contend that perceived usefulness is not regarded as a factor for adoption.

5.3 Future prospects of using mobile cloud accounting tools.

The following closed-ended question was asked during the interview to get in-depth information on whether the SMMEs would use mobile cloud accounting technologies :

- How do you feel about using this technology in the future?

In order to provide answers to the following question, the section below provides an analysis of the responses combined.

5.3.1 Future growth and sustainability will determine use of mobile cloud accounting.

According to the information gathered through in-depth interviews, nine of the 14 of the participants were of the view that they would consider using this application to record their business transactions. Respondents 2, 6, 8, 11, 13 and 14 responded that, should the business grow, there would most definitely be a need to adopt mobile cloud accounting as a business system. Respondents 4 and 10 found it to be a great tool to use in their businesses in future. Respondent 10 was not aware of the application's existence, but feels it would have benefitted him. The respondents suggested that MCA will only work if they expand their current business. Respondent 7 was very intrigued with this technology, as it had the potential to make their life simpler and they showed great interest in it.

These findings substantiate the following studies. Cost-effective ICT solutions are imperative for microenterprises to improve and sustain their business to compete in the local and global markets (Sandberg, 2020). Miti (2019) analysed ICT within microenterprises in Cape Town and found that they were investing in ICT to enhance performance and. The study highlighted the alignment of the business and ICT as a key determinant that needed to be addressed in order to increase productivity and performance of microenterprises in Cape Town. Evidence from the 2008-2009 financial crisis reveals that ICT-intensive companies were hit less hard than labour-intensive companies (Bertschek et al., 2019). This is well aligned with Moore and Benbasat's (1991) theoretical construct of PCI, which states that the degree to which it benefits and the utility of innovation, are readily ostensible to the potential adopter. The respondent 7 was very optimistic in trying this software because he believed it would improve his business. Putra (2019) illustrates that price, performance stability, flexibility, implementation and customisation are the main reasons to embrace technology and to use accounting software.

5.4 Conclusion

In conclusion, the study found that there were different factors that inhibited the SMMEs from using mobile cloud accounting tools. The main reason was the lack of awareness, followed by cloud accounting literacies (or lack thereof), and various costs of moving towards a digital platform. The participants also noted that they were sceptical of moving to a digital platform soon because of security and risk issues. Nonetheless, the participants noted that in the future, they would incorporate these mobile technologies into their operations, as and when they had been proven to have potential positive impacts. The following chapter presents conclusions and recommendations.

CHAPTER SIX – SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The aim of this thesis was to investigate the extent of the usage of mobile cloud accounting tools by SMMEs in the selected markets in Cape Town. Given the fact that this is an under-researched topic within the small business sector, this makes the research valuable to cloud accounting users and to policymakers in South Africa. This chapter is structured into the following facets:

- Summary of the research problems, aims and objectives;
- Summary of the research findings;
- Limitations of the study; and
- Recommendations and suggestions for future studies.

6.2 Summary of the research problem, aim and objectives.

There is a perceived dearth of the utilisation of digital platforms in SMMEs in selected markets in Cape Town, South Africa. This perceived low level of use of digital platforms could be a reason for business struggles and slow growth in the small business sector. Remaining on a non-digital system may present a challenge to maintaining financial records, improving performance, highlighting cost inefficiencies and so on, especially with the South African economy in the rather desperate state in which Covid-19 has left it.

This study was therefore carried out to determine the extent of the use of mobile cloud accounting and its effects on the performance of SMMEs in the selected markets in Cape Town, South Africa. Four objectives underpinned this study. Firstly, the study determined the extent to which SMMEs in selected markets in Cape Town, South Africa use mobile cloud accounting to generate financial information for decision-making. Additionally, the study established the level of awareness of these businesses about the use of mobile cloud accounting to generate information for decision-making. Further, an inquiry was carried out on the effect of the use of mobile cloud accounting on the financial information of SMME's. Finally,

the study established the factors that may inhibit the use of mobile cloud accounting to generate financial information for decision-making among SMMEs in selected markets in Cape Town, South Africa.

6.3 Summary of research findings

The findings obtained from this study are summarised based on each research objective.

6.3.1 Summary of findings on research objective one

The first objective of this study was to determine the extent to which SMMEs in selected markets in Cape Town, South Africa use mobile cloud accounting to generate financial information for decision-making. The study found a very low prevalence of usage of mobile cloud accounting among the SMMEs that participated in this study. To be precise, the study concluded that only 11.88% of the total participants made use of these mobile technological tools to record their business transactions.

The findings suggest that most of the participants were using other alternatives of recording financial transactions during the time of data collection. The study also unveiled the different ways in which those who do not utilise mobile cloud accounting generate financial information. The majority of these participants indicated that they recorded information in their books, while some did not have any form of recording at all. Some participants noted that they used the services of professional bookkeepers, while others owned computer devices to record such transactions.

A further analysis concluded that the few SMMEs that made use of mobile cloud accounting applications applied them for different purposes. The dominant use of the mobile cloud accounting applications by SMMEs was found to be ordering products for resale. The participants also indicated that they used these tools to pay their suppliers, as well as to record their operating expenses. Additionally, the participants also indicated that they used the applications for administrative purposes. Most of them noted that they used the mobile cloud technologies to make invoices that they later distributed to their customers. Others indicated that they used the tools to calculate the mark-ups for their products, while the remainder noted that they could carry out bank reconciliations on these applications.

Lastly, the participants that participated in this study noted that they made use of the mobile cloud accounting tools for management purposes. The majority noted that the applications reminded them of outstanding obligations to their creditors or from their debtors. This was

followed by a significant number of participants who noted that the application enabled them to verify their operational profits or losses. Additionally, they were also in a position to track the performance of their products using these applications. Thus, the mobile cloud accounting application tools enabled them to track which products were doing well on the market and those that needed particular attention. The participants also noted that they were able to do stock control using the application. Thus, their overall management roles were enhanced through the use of the contemporary mobile cloud technologies.

6.3.2 Summary of findings on research objective two

The second objective of this study attempted to establish the level of awareness of SMMEs in the selected markets in Cape Town, South Africa, concerning the use of mobile cloud accounting to generate information for decision-making. This objective was important in this study because it shed light on the extent to which participants that participated in this study were aware of the mobile cloud accounting applications under study. The study revealed that more than 55.45% were not aware of the application whatsoever.

About 45% indicated that they were aware of the mobile cloud accounting application, though not all of them were using it to record their financial transactions. Out of those participants who were aware of the mobile cloud accounting applications, the majority noted that they learnt about them through the internet and/or social media. This group of participants was followed by those who got to know about the mobile technological applications through the television or radio. Others heard about it from their fellow participants. The smallest number of respondents reported that they learnt about the applications through observing other participants, while others noted that their awareness was simply a result of general knowledge.

6.3.3 Summary of findings on research objective three

The third objective of this study was aimed at ascertaining the effect of the use of mobile cloud accounting on the financial information of SMMEs in selected markets in Cape Town, South Africa. The impacts of the use of mobile cloud accounting were classified into different categories such as ease of use, flexibility, time management, and cost saving, among other variables. The majority of these participants indicated that the application was easy to download. Due to the ease of use of this application, some of the participants reported that it was relatively inexpensive to use and download. Some participants noted that the application was user friendly and made it easy to work on transactions. Other participants noted that the mobile cloud accounting tools simplified their businesses operations compared to the case

when traditional methods were used. The study also found that the mobile cloud tools could be used while the participants are at the market. Thus, it was established that the SMMEs could multitask, trading their products and recording the transactions using the mobile cloud applications at the same time.

In addition to these findings, the study also noted that the participants made use of the application to do quotations and electronic invoices for their clients. Thus, they could print or send the invoices or quotations to their customers using the application. Additionally, as also noted in the first objective, the mobile accounting applications were important in the sense that they enabled the SMMEs to monitor their inventory/stock levels. In this case, the SMMEs were able to track their current sales as well as historical transactions they had with their customers. Other impacts of the mobile cloud accounting tool were that it enabled the users to track the amounts outstanding and how much they owed to their creditors. This is in addition to the fact that the records were stored electronically, hence; they are easily and safely stored in the cloud.

Lastly, the study concluded that the mobile cloud accounting applications had a significant implication on the pricing, costing and profitability of SMMEs. The application allowed them to check their mark-ups in terms of their sustainability and profitability. In this light, the SMMEs would be able to track the levels of their profits or losses and also determine whether they were overspending or not. In this light, the SMMEs could use these cloud technologies to determine which products were producing high profits and which were not performing well on the market.

6.3.4 Summary of findings on research objective four

The last objective of this study was to establish the factors that inhibit the use of mobile cloud accounting to generate financial information for decision-making among SMMEs in selected markets in Cape Town, South Africa. In order to understand these various factors, answers were elicited from the 89 out of 101 participants who indicated that they did not use mobile cloud applications. The factors that inhibited the use of mobile cloud accounting applications were classified into two categories:

- Common factors inhibiting SMMEs from using mobile cloud accounting; and
- Other factors inhibiting SMMEs from using mobile cloud accounting.

Common factors inhibiting SMMEs from using mobile cloud accounting.

These factors had the highest frequency and thus were the main reasons why SMMEs did not use mobile cloud technologies in recording their transactions. These factors were as follows:

- The cost of data is relatively expensive;
- It is time-consuming to input information because I am primarily interested in making sales;
- The application is expensive or an unnecessary cost;
- Connectivity issue is always a problem;
- I have operated for the past 20 years like this, there is no need to change my system.

Other factors inhibiting SMMEs from using mobile cloud accounting

Although these were identified as factors that inhibited SMMEs from using mobile cloud accounting tools, they were not the main reasons why these business entities did not use the technological innovations in question. These factors were as follows:

- I have a bookkeeper who does everything for me;
- I am technologically disadvantaged;
- I am not interested in knowing my profit or loss on paper;
- I do not possess a smartphone that allows me to download; and
- It only works on Android phones.

6.4 Limitations of the study

This study encountered a few significant limitations. Firstly, the main population of this study was SMMEs in the selected markets in Cape Town, South Africa. While the findings can be generalised to the SMMEs in the selected areas, they cannot be generalised to the entire population of SMMEs in Cape Town and beyond, because of different market settings and other variables. The researcher also faced challenges in collecting data, because primary research was undertaken during the peak of the Covid-19 pandemic. This made it difficult to get participants to answer questions and maintain the social distancing required by the lockdown regulations in South Africa.

6.5 Recommendations to the stakeholders

Based on the findings obtained in this study, the following recommendations can be provided to the SMMEs pertaining to the usage of mobile cloud accounting applications:

- There is a need for intensive institutional stakeholder intervention in order to improve the usage of mobile cloud accounting applications among SMMEs.
- With reference to the above recommendation, the private sector can assist the SMMEs through different initiatives such as provision of the software at subsidised costs and induction training so that the SMMEs will understand how to apply the tools to their advantage.
- The government, on the other hand, can make use of its agents to ensure that the SMMEs are provided with necessary infrastructure that can enable them to benefit from the use of mobile cloud accounting applications in their businesses. For instance, the Small Business Enterprise Agency can come to the fore to assist small enterprises in the adoption of mobile cloud accounting applications.
- The network providers should also assist SMMEs by introducing special network/data packages to encourage them to use the mobile applications in their businesses. As the study noted, a significant number of SMMEs did not use mobile cloud accounting applications either because data costs were too high, or the networks were not strong enough to support their usage. As a result, the local network service providers should consider introducing special programmes for small enterprises.
- The few SMMEs that were already using the mobile cloud accounting applications are recommended to devise strategies that can improve the current status of these mobile technological tools. In doing so, the SMMEs will be in a position to understand where they are in terms of the application of mobile cloud technologies, what challenges they are facing, as well as their own recommendations to improve their usage. In doing so, there will be a combined effort from both the users and suppliers of the software which, in turn, is beneficial to a lot of stakeholders.
- The SMMEs that make use of mobile accounting technologies should also recommend their use to other SMMEs. This enables these small enterprises to collectively benefit from the positive offerings of the applications. Such a move can be beneficial in the small business sector because the majority of the entities in this industry face significant challenges, including those aligned to recording financial transactions.

6.6 Suggestions for further studies

Given that the study was conducted on the extent of usage of mobile cloud accounting and that very few SMMEs were aware of the financial recordkeeping applications available, it is

prudent that further studies should be conducted on the challenges of adoption and implementation, and the effects on the operation of the business within the informal sector.

6.7 Conclusions of the study

Mobile accounting applications are very important tools for a business, given that they can be used to general crucial financial information needed for sustainability. This includes the ability to deal with external and internal factors such as market competitiveness and management decisions regarding pricing, inventory and so on. The purpose of this study was to investigate the extent of usage of mobile cloud accounting on the operations of the SMMEs in the selected markets in Cape Town, South Africa. A mixed method research approach was applied.

The study concluded that there was a low level of awareness among the SMMEs regarding the use and impact of mobile cloud accounting tools to record business transactions. In this light, the research concluded that the low levels of usage of these mobile applications were due to multiple reasons, which ranged from the costs involved in purchasing and maintaining the software, the data and network issues, the complexity of the tools and generally the fact that the SMMEs' knowledge regarding these applications was outdated.

There were, however, significant impacts observed by those participants who noted that they used the tools to record their financial transactions. These included their ease of use, flexibility, affordability and speed. It is recommended that there should be intervention strategies to ensure that there is increased awareness and competence of SMMEs to use the mobile cloud accounting tools for their benefit. It is recommended that further research should be conducted in order to understand detailed challenges faced in the adoption and implementation of mobile cloud technologies among SMMEs.

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Appendix 1: Pilot Interview Schedule

Please answer the following questions on Mobile Cloud Accounting. **Your participation is completely voluntary and there is no renumeration. Your information will be kept confidential and anonymous. Please answer as honestly as possible. Please accept this as proof of consent to the study……..**

SECTION A: In this section, questions are asked to seek the extent of usage amongst micro- entrepreneurs. **If yes is answered in 1.1, please proceed to Section B and If No, please proceed to 1.2**		
	YES**(Q2&3&4&5)**	NO**(Q1&3&6)**
1.1. Do you use mobile cloud accounting?		

How do you generate financial information?	TICK
1.2. I record it in a book	
1.3. I make a mental note because I have a good memory.	
1.4. I make use of a professional bookkeeper.	
1.5. I use an accounting software package on a desktop when I get home.	

SECTION B: In this section questions are asked to seek mobile cloud accounting competence information regarding ease, flexibility, time, cost etc. Please tick the five most appropriate blocks.	
Tick with an "X" the 5 most appropriate	X
2.1. I use it as medium to monitor inventory/stock balances.	
2.2. I use it to do my quotations for my clients.	
2.3 I use it to do my price mark ups on my products.	
2.4 The software application is user friendly.	
2.5 The software is easy to download.	
2.6 I can use it to print invoices for my clients immediately and it saves me time.	
2.7. I allow me to input my sales and it shows me my sales history.	
2.8 I can see my profit and losses for the month.	
2.9. It simplifies my business life.	
2.10. I can see how much I can afford as a salary every month.	
2.11. I can use it while I am at the market.	
2.12. It allows me to see who owes me money from previous purchases.	
2.13. I do not have to worry about my sales books getting damaged or lost while I travel for business.	
2.14. I use it because the application is relatively inexpensive.	
2.15 The software application allows me to see where I am overspending.	
2.16. The application shows me if I am selling more high profit items versus low profit items.	

SECTION C: In this section questions are asked to seek information to awareness of using mobile cloud accounting as a tool to generate financial information for decision making. Please tick the most appropriate block in question 3.1

3.1. How did you come to learn about mobile cloud accounting?

3.1.1	Internet or social media	
3.1.2	Television	
3.1.3	I have never heard of mobile cloud accounting before	
3.1.4	Newspaper and magazines	
3.1.5	Fellow Traders	
3.1.6	Observation and general knowledge	

Question 4

Please answer question 4 to seek information on why the micro-entrepreneur use mobile cloud accounting.

Option	Never	Rarely	Sometimes	Often	Always
Code	1	2	3	4	5

4.1 Do you use the application as a medium to do stock control?					
4.2 Do you use the application to remind you of outstanding creditor or debtors' obligations?					
4.3Do you use the application to do quotations?					
4.4 Do you use the application do a price mark-up?					
4.5 Do you use the application to do invoices?					
4.6. Do you use the application to do bank reconciliations?					
4.7. Can you order products via the applications?					
4.8. Do you pay your suppliers with the application?					
4.9. Do you use the application to record sales sufficiently?					
4.10Do you use the application to verify your profit or loss on specific year, month?					
4.11. Do you use the application to get an overview of the product to get an idea of when which product sells best?					
4.12. Do you use the application to record sales?					
4.13. Do you use the application to make management decisions?					

Please answer question 5 to what extent you agree with to find out the reasons why micro-entrepreneurs use mobile cloud accounting.

Question 5

Agree	Tend to agree	Not sure	Tend to disagree	Disagree
1	2	3	4	5

5.1 The mobile software applications inexpensive?					
5.2 The mobile software applications are challenging to download?					
5.3. The tutorials and IT support make it easier to use?					
5.4 The training offered makes it the application less challenging.					
5.5 The application supports the use of I –Phones?					

5.6 The application difficult to use?					
5.7. This software application is only beneficial for people who are young.					

Question 6

Please choose the most appropriate statements in relation to the constraints that may hinder the use of Mobile Cloud Accounting to generate information for decision making in selected markets in Cape Town?

Tick the 3 most appropriate blocks with a "X"	X
6.1. Connectivity issues is always a problem	
6.2. The cost of data is relatively expensive	
6.3.I do not possess a smartphone that allows me to download the application.	
6.4. It is time consuming to input information because I am primarily interested in making sales.	
6.5. The application is expensive or an unnecessary cost.	
6.6.I am technologically disadvantaged.	
6.7.I am not interested in knowing my profit or loss on paper, since I have cash in my pocket I am doing okay.	
6.8.I have operated for the past 20 years like this, there is no need to change my system	
6.9.I have a bookkeeper who does everything for me	
6.10. It only works on Android phones	
6.11. It only works on iPhones?	

SECTION D: In this section information about you is sought. Please tick the appropriate block.

Gender	Tick
Male	
Female	

Are you trading as a survivalist or a hobbyist?	
Survivalist	
Hobbyist	

What market do you cater for?	
Lower	

Middle	
Upper	

What items do you trade with?	
Food and beverages	
Arts and crafts	
Clothing and footwear	
Other	

What age bracket are you?	
18- 30	
31- 45	
46-60	

How long have you been trading?	
Less than 5 years	
5-15 years	
Longer than 15 years	

What is your highest level of education?	
Junior certificate	
Senior certificate	
Diploma or degree	

Thank you for your time and patience. If you would like feedback on the findings of this study, please email me at the following email address: researchresearch63@gmail.com

Interview questions

In this section questions about the respondent's reasons for not utilising mobile cloud accounting as a tool is sought.

Please answer the following in your own words.

What measures prevented you from using mobile cloud accounting to generate financial information in your business?

How do you feel about using this technology in the future?

Thank you for your time and patience. If you would like feedback on the findings of this study, please email me at the following email address: researchresearch63@gmail.com

Appendix 2: Survey Questionnaire

Please answer the following questions on Mobile Cloud Accounting. **Your participation is completely voluntary and there is no renumeration. Your information will be kept confidential and anonymous. Please answer as honestly as possible. Please accept this as proof of consent to the study.**

SECTION A: In this section, questions are asked to seek the extent of usage amongst micro- entrepreneurs. **If yes is answered in 1.1, please proceed to Section B and If No, please proceed to 1.2**		
	YES**(Q2&3&4&5)**	NO**(Q1&3&6)**
1.1. Do you use mobile cloud accounting?		

How do you generate financial information?	TICK
1.2. I record it in a book	1
1.3. I make a mental note because I have a good memory.	2
1.4. I make use of a professional bookkeeper.	3
1.5. I use an accounting software package on a desktop when I get home.	4

SECTION B: In this section questions are asked to seek mobile cloud accounting competence information regarding ease, flexibility, time, cost etc. Please tick the five most appropriate blocks.	
Tick with an "X" the 5 most appropriate	X
2.1. I use it as medium to monitor inventory/stock balances.	1
2.2. I use it to do my quotations for my clients.	2
2.3 I use it to do my price mark ups on my products.	3
2.4 The software application is user friendly.	4
2.5 The software is easy to download.	5
2.6 I can use it to print /e- invoices for my clients immediately and it saves me time.	6
2.7. I allow me to input my sales and it shows me my sales history.	7
2.8 I can see my profit and losses for the month.	8
2.9. It simplifies my business life.	9
2.10. I can see how much I can afford as a salary every month.	10
2.11. I can use it while I am at the market.	11
2.12. It allows me to see who owes me money from previous purchases.	12
2.13. I do not have to worry about my sales books getting damaged or lost while I travel for business.	13
2.14. I use it because the application is relatively inexpensive.	14
2.15 The software application allows me to see where I am overspending.	15
2.16. The application shows me if I am selling more high profit items versus low profit items.	16

SECTION C: In this section questions are asked to seek information to awareness of using mobile cloud accounting as a tool to generate financial information for decision making. Please tick the most appropriate block in question 3.1

3.1. How did you come to learn about mobile cloud accounting?

3.1.1	Internet or social media	1
3.1.2	Television	2
3.1.3	I have never heard of mobile cloud accounting before	3
3.1.4	Newspaper and magazines/ billboards/radio	4
3.1.5	Fellow Traders	5
3.1.6	Observation and general knowledge	6

Question 4

Please answer question 4 to seek information on the extent of usage on mobile cloud accounting.

Option	Never	Rarely	Sometimes	Often	Always
Code	1	2	3	4	5

4.1 Do you use the application as a medium to do stock control?	1	2	3	4	5
4.2 Do you use the application to remind you of outstanding creditor or debtors' obligations?	1	2	3	4	5
4.3Do you use the application to do quotations?	1	2	3	4	5
4.4 Do you use the application do a price mark-up?	1	2	3	4	5
4.5 Do you use the application to do invoices?	1	2	3	4	5
4.6. Do you use the application to do bank reconciliations?	1	2	3	4	5
4.7. Can you order products via the applications?	1	2	3	4	5
4.8. Do you pay your suppliers with the application?	1	2	3	4	5
4.9. Do you use the application to record sales sufficiently?	1	2	3	4	5
4.10Do you use the application to verify your profit or loss on specific year, month?	1	2	3	4	5
4.11. Do you use the application to get an overview of the product to get an idea of when which product sells best?	1	2	3	4	5
4.12. Do you use the application to record expenses?	1	2	3	4	5
4.13. Do you use the application to make management decisions?	1	2	3	4	5

Question 5

Please choose the most appropriate statements in relation to the constraints that may hinder the use of Mobile Cloud Accounting to generate information for decision making in selected markets in Cape Town.

Tick the 3 most appropriate blocks with a "X"	X
5.1. Connectivity issues is always a problem	1

5.2. The cost of data is relatively expensive	2
5.3.I do not possess a smartphone that allows me to download the application.	3
5.4. It is time consuming to input information because I am primarily interested in making sales.	4
5.5. The application is expensive or an unnecessary cost.	5
5.6.I am technologically disadvantaged.	6
5.7.I am not interested in knowing my profit or loss on paper, since I have cash in my pocket I am doing okay.	7
5.8.I have operated for the past 20 years like this, there is no need to change my system	8
5.9.I have a bookkeeper who does everything for me	9
5.10. It only works on Android phones	10
5.11. It only works on iPhones?	11

SECTION D: In this section information about you is sought. Please tick the appropriate block.

Gender	Tick
Male	1
Female	2

Are you trading as a survivalist or a hobbyist?	
Survivalist	1
Hobbyist	2

What market do you cater for?	
Lower	1
Middle	2
Upper	3

What items do you trade with?	
Food and beverages	1
Arts and crafts	2
Clothing and footwear	3
Other	4

What age bracket are you?	
18- 30	1
31- 45	2
46-60	3

How long have you been trading?	
Less than 5 years	1
5-15 years	2
Longer than 15 years	3

What is your highest level of education?	
Junior certificate	1
Senior certificate	2

Diploma or degree	3
Post graduate	4

Thank you for your time and patience. If you would like feedback on the findings of this study, please email me at the following email address: researchresearch63@gmail.com

Appendix 3: Changes made from the questionnaire after pilot test.

It should be noted that the questionnaire in Appendix 2 above was the final instrument which was administered for the collection of qualitative data. This questionnaire was administered after effecting the following changes:

- The paper-based questionnaires were rather long and did not give proper direction how the participant should navigate around the questionnaire.
- Question 1.1 needed to be clarified with a marker (If “YES” answer: Q 2.3 & 4 and if “NO” answer: Q 1.3 & 5).
- Google forms kept the same questions, however the researcher had to create more sections to link it to follow a specific path if the participant answered yes or no to question 1.1. This would ensure the participants would then answer the correct set of questions based on question 1.

- Google Forms had two additional questions added to the questionnaire, namely if the SMMEs traded in Cape Town. These questions were excluded from the analysis because it was mainly to get the right participants to answer the questions relevant to the study.

Appendix 4: Generation of themes for qualitative data

The following themes were generated for the analysis of primary research:

- ❖ Factors inhibiting SMMEs from using mobile cloud accounting tools– findings from qualification data:
  - SMMEs' lack of awareness about mobile cloud accounting;
  - Lack of literacy among the SMMEs on the use of mobile cloud applications;
  - Financial costs, time management and security challenges of mobile cloud accounting tools;
  - Relevance of mobile cloud accounting tools;
  - Affordability of the traditional methods of recording business transactions;
- ❖ Future prospects of using mobile cloud accounting tools:
  - Future growth and sustainability will determine use of mobile cloud accounting.

Appendix 5: Consent from CPUT to participate in a research study.

Cape Peninsula University of Technology

Faculty of Business and Management Sciences
Ethics Informed Consent Form

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Category of Participants (tick as appropriate):

Staff/Workers		Teachers		Parents		Lecturers		Students	
Other (specify)	✓	Informal traders							

You are kindly invited to participate in a research study being conducted by Aziza Fortuin from the Cape Peninsula University of Technology. The findings of this study will contribute towards (tick as appropriate):

An undergraduate project		A conference paper	
An Honours project		A published journal article	
A Masters/doctoral thesis	x	A published report	

Selection criteria
You were selected as a possible participant in this study because you are:

(a) The chairperson of the informal traders association of Paarl.
(b) You have approximately 180 registered informal traders.

The information below gives details about the study to help you decide whether you would want to participate.

Title of the research:

The effects of mobile cloud accounting on the operations of small and micro enterprises in selected Cape Town markets.

The research aims to investigate the extent to which small and micro entrepreneurs use mobile cloud accounting to improve their business operations in selected markets in Cape Town.

Procedures

If you volunteer to participate in this study the following will be done:

1. Describe the main research procedures to you in advance, so that you are informed about what to expect.
2. Treat all interviewees with respect by arriving on time for all the interview schedules and well prepared.

3. Conduct an introduction with the interviewee in order to break ice;
4. All the interviewees will be asked for permission to record the interviews and also take some note where applicable;
5. In a case where there is no clarity, the interviewees will be allowed to ask for confirmation or clarity of words/sentences/phrases to ensure accuracy of the data collected;
6. Participants will be told that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs;
7. Participants will be given the option of omitting questions they do not want to answer or feel uncomfortable with;
8. Participants will be told that questions do not pose any realistic risk of distress or discomfort, either physically or psychologically, to them;
9. At the end of each interview all the interviewees will be thanked for their time and information provided for this study;
10. Participants will be debriefed at the end of their participation (i.e. give them a brief explanation of the study).

You are invited to contact the researchers should you have any questions about the research before or during the study. You will be free to withdraw your participation at any time without having to give a reason.

Kindly complete the table below before participating in the research.

Tick the appropriate column		
Statement	Yes	No
1. I understand the purpose of the research.	x	
2. I understand what the research requires of me.	x	
3. I volunteer to take part in the research.	x	
4. I know that I can withdraw at any time.	x	
5. I understand that there will not be any form of discrimination against me as a result of my participation or non-participation.	x	
6. Comment:		

Please sign the consent form. You will be given a copy of this form on request.

	2020/04/15
Signature of participant	Date

Researchers

	Name:	Surname:	Contact details:
1.	Aziza	Fortuin	081 329 3426

Appendix 6: Ethical clearance from CPUT

Cape Peninsula University of Technology

28 October 2019

To whom it may concern

Dear Respondent

The importance of time in our days cannot be overemphasized. At the same time, sharing your time with someone can be very enriching, rewarding and fulfilling. I would like to introduce our Master's student **AZIZA FORTUIN** who is currently working on a Masters Research project for a degree in the field of Management Accounting at the Cape Peninsula University of Technology. She is seeking your permission to share approximately 10-15 minutes of your valuable time to conduct her questionnaire-based interviews. Granted, such permission will enable the student to carry out surveys across the sector for the project entitled, **'The effect of Mobile cloud accounting on the operations of the entrepreneurs in the selected markets in the Western Cape**.

The main objective is to ascertain the extent of usage by micro entrepreneurs at the selected markets of MCA to generate financial information for decision making.

The researcher and the supervisor pledge, that all the survey data will be aggregated and organisational information will be treated with the strictest confidence; and that you are under no obligation to participate. All the information obtained will be used for research thesis and research publication purposes only. The final report will not include any identifying information of your organisation. Please feel free to contact student and/or supervisor with regards to any queries you might have. Your participation in the research project will be most appreciated.

This information is given in good faith. Should you need any information, do not hesitate to contact our offices.

Yours sincerely

Professor Lawrence Obokoh
HOD: Cost & Management Accounting
Tel: 021 650 3389/3054
e-mail:Obokohl@cput.ac.za

FACULTY OF BUSINESS
COST & MANAGEMENT ACCOUNTING
28 OCT 2019
Cape Peninsula University of Technology

PO Box 1906 Bellville 7535 South Africa
086 123 2758

Cape Peninsula University of Technology

P.O. Box 1906 • Bellville 7535 South Africa •Tel: +27 21 4603291 • Email: fbmsethics@cput.ac.za
Symphony Road Bellville 7535

Office of the Chairperson Research Ethics Committee	Faculty: BUSINESS AND MANAGEMENT SCIENCES

The Faculty's Research Ethics Committee (FREC) on **9 June 2020**, ethics **Approval** was granted to **Aziza Fortuin (219491348)** for a research activity for **M Tech: Cost and Management Accounting** at Cape Peninsula University of Technology.

Title of dissertation/thesis/project:	**The effects of mobile cloud accounting on the operations of micro entrepreneurs in selected Cape Town markets.** Lead Supervisor (s): Prof L. Obokoh and Dr. H. Benedict

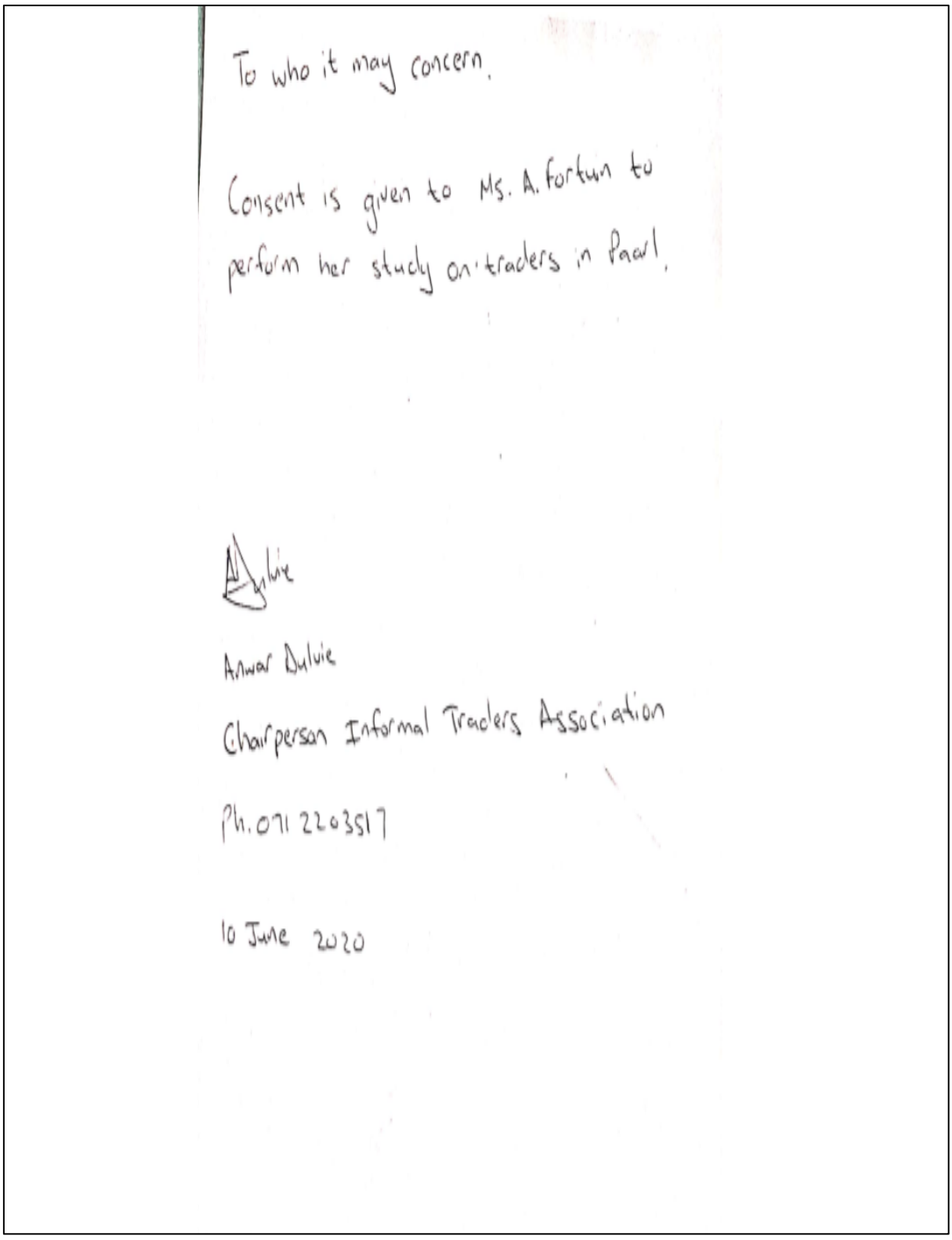
Comments:

Decision: Approved

	18 June 2020
Signed: Chairperson: Research Ethics Committee	Date

Clearance Certificate No | 2020FOBREC759

Appendix 7: Permission letter from the Informal Traders Association



To who it may concern.

Consent is given to Ms. A. Fortuin to perform her study on traders in Paarl.

Anwar Dulvie

Chairperson Informal Traders Association

Ph. 071 220 3517

10 June 2020

Appendix 8: Permission letter from the Mother-tongue Festival Coordinator

THE MOTHERTONGUE-PROJECT 2020

GAIREYAH FREDERICKS ghaireyah@gmail.com 0814088755

22 May 2020

To whom this may concern.

I hereby give Aziza Fortuin consent to approach The Mothertongue-project writers who trades at the Arts festival markets I coordinate, trading with their self-published anthologies for her research purposes.

Regards.

Gaireyah Fredericks
Mothertongue Arts festival coordinator

Internal Use

Appendix 9: Proof of English editing

+27 (0)62 579 1698
laurakleinhans1@gmail.com
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Certificate of Authenticity

CERTIFICATE: COA300121AF

30 January 2021

To Whom It May Concern

This is to certify that **THE EFFECTS OF MOBILE CLOUD ACCOUNTING ON THE OPERATIONS OF SMALL, MEDIUM AND MICRO-ENTERPRISES IN SELECTED CAPE TOWN MARKETS** by **Aziza Fortuin** for Faculty of Business and Management Sciences at the Cape Peninsula University of Technology in South Africa has been professionally edited by Dr. Laura Budler Kleinhans of ChickPea Proofreading and Editing Services for Students and Professionals.

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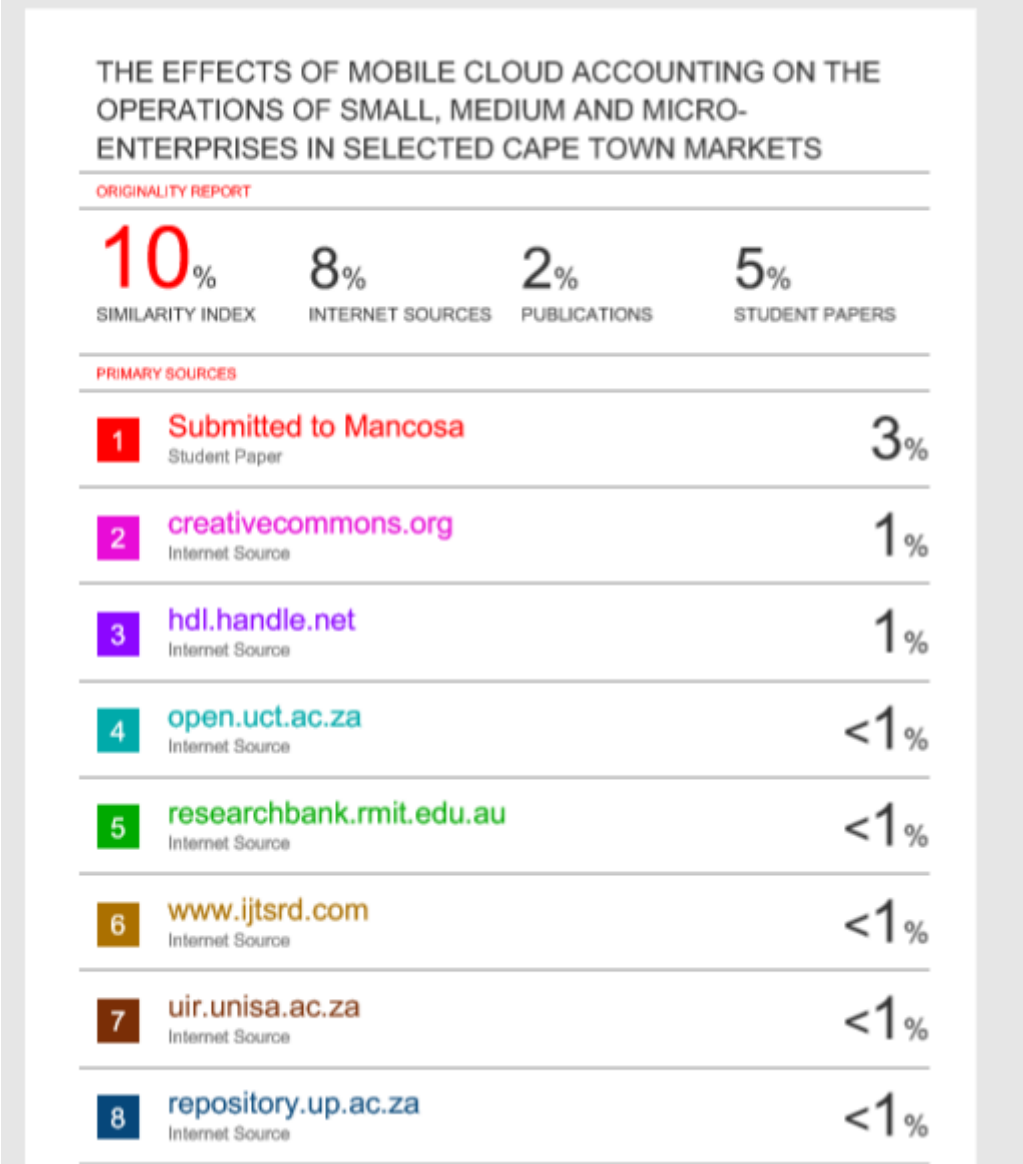
Appendix 10: Turnitin report



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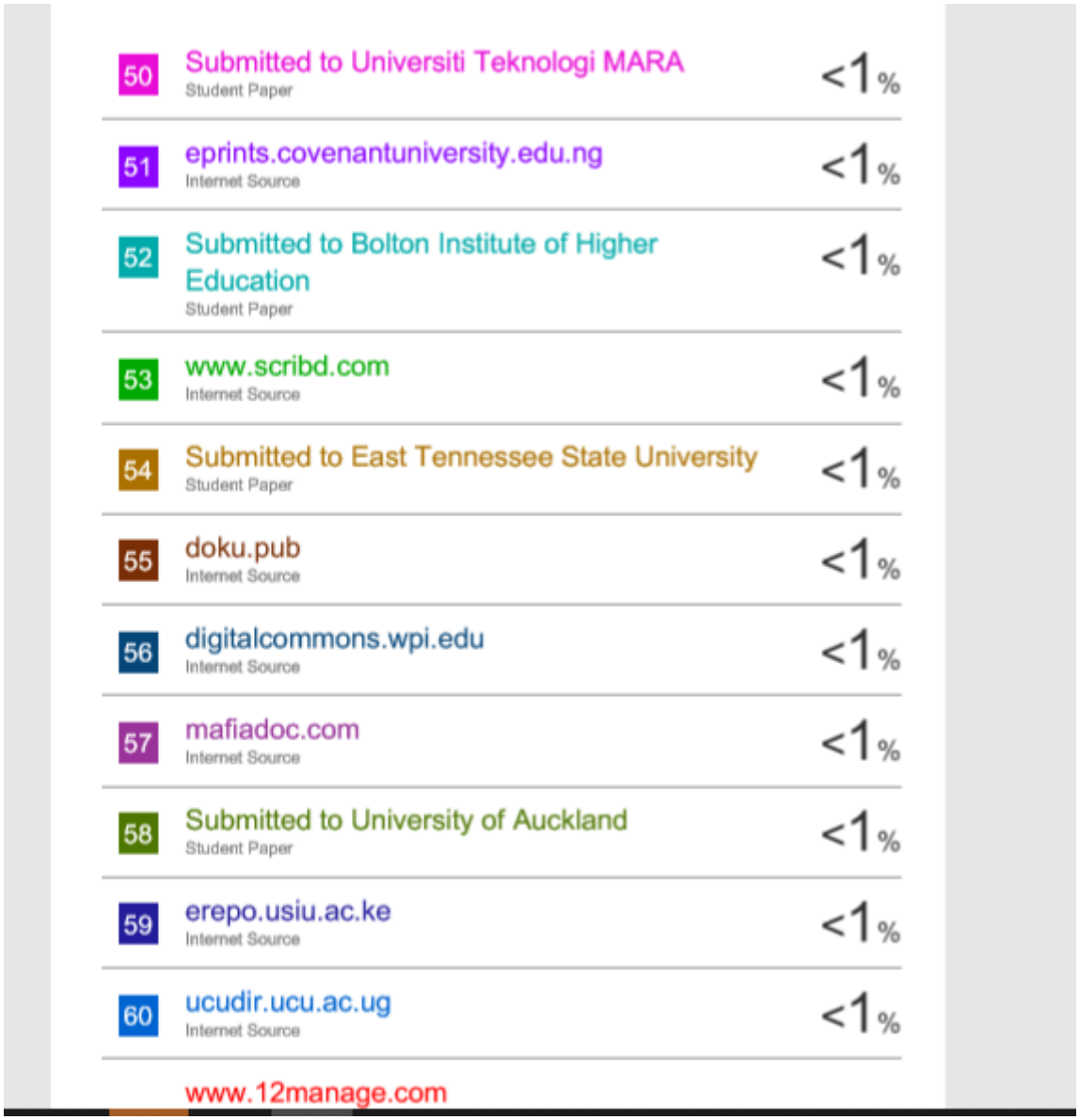
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