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THE APPLICATION OF MANAGEMENT ACCOUNTING PRINCIPLES IN THE EMFULENI LOCAL MUNICIPALITY MINIBUS TAXI INDUSTRY

Dissertation submitted in fulfilment of the requirements for the degree

MASTER OF MANAGEMENT IN ACCOUNTANCY

in the Faculty of

MANAGEMENT SCIENCES

at the Vaal University of Technology

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DECLARATION OF ORIGINALITY

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THE APPLICATION OF MANAGEMENT ACCOUNTING PRINCIPLES IN THE EMFULENI LOCAL MUNICIPALITY MINIBUS TAXI INDUSTRY

I, declare that this dissertation is my own work/investigation, except where otherwise stated and that all the sources that I have used or quoted have been indicated and acknowledged by employing complete references. I declare that I submitted the dissertation to the originality checking software and that it falls within the accepted requirements for originality. I further declare that I have not previously submitted this work, or part of it, for examination at the Vaal University of Technology for another qualification or any other higher education institution.

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PROOF OF LANGUAGE EDITING

Linda Scott
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3 November 2021

To whom it may concern

This is to confirm that I, the undersigned, have language edited the **dissertation** of

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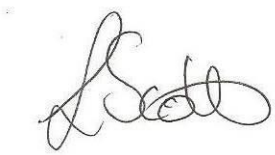
The responsibility of implementing the recommended language changes rests with the author of the document.

Yours truly,



Linda Scott

DEDICATION

This dissertation is dedicated to a number of people, some of who I know and others who I do not.

I dedicate this dissertation to my late grandparents, Mukalaha Vho Mbobo Nelson Muthige nwana wa vho Vele Muthige mudulu wa vho Jan Vrou and Vho Tryphina Muthige nwana wa Vho Florence Khethani na Vho Petrus Khethani. I trust that wherever they are, they recognise the work that I have done and continue to do in both education and the development of the South African minibus taxi industry. May their souls rest in peace.

I also dedicate this dissertation to my mother, Musandiwa Portia Masela, who continues to be my pillar of strength.

This dissertation is also dedicated to all minibus taxi owners, minibus taxi drivers, minibus washers, queue marshals, minibus taxi associations, and their affiliated mothers' bodies. The above metioned stakeholders are currently faced with several challenges. I have experienced some of their pains and struggles first-hand. It is this dissertation that forms part of my many efforts to help the minibus taxi industry grow, thrive, and prosper.

Last but not least, I dedicate this dissertation to more than 15 million minibus taxi users in South Africa. It is suddenly clear that the minibus taxi industry is the lifeblood of any economy, and I recognise the minibus taxi users as the lifeblood of the minibus taxi industry. I believe that they deserve a service of the highest quality and standard from the minibus taxi industry.

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ABSTRACT

KEYWORDS: management accounting, selected management accounting principles; cost volume profit analysis; cost structure; budgeting; minibus taxi industry; minibus taxi owner; Emfuleni Local Municipality.

The minibus taxi industry in South Africa is one of the biggest, fastest growing, and riskiest industries in the world. The minibus taxi industry contributes to the economy by creating over 600,000 jobs, providing fast and cheap transport and fighting poverty and unemployment. However, the recent COVID 19 pandemia restrictions has caused a sudden and movement of economic growth and competition has forced the minibus taxi industry to be competitive in all aspects. This has resulted in intense competition for minibus taxi owners. Minibus taxi owners are constantly in rivalry amongst themselves and with other public road transport providers. In early 1988, the minibus taxi industry started seeing an influx in the number of new minibus taxis and minibus owners. This influx created problems of competition within the industry and among minibus taxi owners. Due to the importance of this industry, this research study investigated whether minibus taxi owners in the Emfuleni Local Municipality apply selected management accounting principles in the management of their minibus taxi businesses. Selected management accounting principles in this study refers to cost volume profit analysis, cost structure, and budgeting. This research study followed a quantitative research design and a questionnaire was used to collect primary data from a census of 500 minibus taxi owners from the following five associations: Get Ahead Taxi Association (GATA), Vaal National Taxi Association (VNTA), Vanderbijlpark Taxi Association (VTA), Sharpeville to Vereeniging and Vanderbijlpark Taxi Association (SVVTA) and Civic Centre Taxi Association (CCTA) operating in the Emfuleni Local Municipality. Using descriptive statistical analysis to present the findings, the study used Statistical Package for Social Sciences Version 27. Findings obtained using an online questionnaire and printed questionnaire distributed revealed a lack of management accounting principles application among these minibus taxi owners. Furthermore, the minibus taxi owners do not apply cost volume profit analysis and most do not use budgets. However, it was found that some minibus taxi owners apply very basic cash budgeting through a pen-on-paper approach. It was also found that minibus taxi owners understand the application of cost structures. This research study recommends that minibus taxi owners should be offered training by skills sectors to apply the selected management accounting principles. The limitations of this research study included that the census was geogracial restrictions, level of education, and corona virus restrictions. Despite these limitations, the research study was able to fulfil its main objective by determining that majority of minibus taxi owners do not apply the selected management accounting principles.

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LIST OF ACRONYMS

Accronym/abbreviation	Description
ACAUS	Association of Chartered Accountants in the United States
ACCA	Association of Chartered Certified Accountants
AVE	Average variance extracted
C/S	Contribution margin concepts
CCTA	Civic Centre Taxi Association
CIMA	Chartered Institute of Management Accountants
CR	Compsite reliability
CVP	Cost Volume Profit Analysis
FASSET	Financial Accounting Services Skills Education Training
GATA	Get Ahead Taxi Association
NAAM	National Association of Automobile Manufacturers
NTA	National Taxi Alliance
NTHS	National Transport Housing Survey
NTPS	National Transport Planning Study
NTTT	National Taxi Task Taxi
Par.	Paragraph
P/V ratio	Profit-volume ratio
RSC	Regional Services Council
SA Taxi	South Africa Taxi
SABTA	South Africa Black Taxi Association
SALDTA	South Africa Long Distance Taxi Association
SANTACO	South African National Taxi Council
SATAWU	South Africa transport Workers Union
SPSS	Statistical Package for Social Sciences
SVVTA	Sharpeville to Vereeniging and Vanderbijlpark Taxi Association
TETA	Transport Education Training Authority
VNTA	Vaal National Taxi Association
VTA	Vanderbijlpark Taxi Association
SETAs	Sector Education Training Authorities

CHAPTER 1:
INTRODUCTION AND BACKGROUND TO THE STUDY

"Transportion is the center of the world. It is the glue of our daily lives. When it goes well, we don't see it. When it goes wrong, it negatively colors our day, makes us feel angry and impotent, curtails our possibilities." - Robin Chase

1.1 INTRODUCTION

A brief history of the origin of management accounting will be discussed in this chapter. This is followed by the background to the research study, which comprises the selected management accounting principles, namely cost volume profit analysis (CVP), cost structure, and budgeting. In the background, a concept of management and brief theory on the overview of public transport in South Africa are also discussed. Singh (2021:2) posits that the research process is a process of multiple scientific steps in conducting research work. Each step is interlinked with other steps. This chapter addresses the following elements: the problem statement, the research question, objectives of the research study, contribution of the research study, the research methodology, the scope of the research study, ethics in research, the chapter classification and the chapter summary.

1.1.1 Brief origin of management accounting

Management accounting was referred to and known as cost accounting during the 1800s (Ahmad 2012:29). According to Wilson and Chau (1993:7), during the 1800s, people who worked in management accounting were often referred to as accountants or practitioners of cost. Historians of accounting have long supported the concept that cost accounting is a product of the first industrial revolution (Johnson 1988:512). Wilson and Chau (1993:7) also support the claim that cost accounting is the concept of the first industrial revolution by further stating that this concept was used in the multi-process, mechanized and textile factories that emerged in the 1800s in the United States and England. Ahmad (2012:29) views cost accounting as a product of the first industrial revolution and points out that it was during the 1800s that the emergence of textile factories saw the birth of cost accounting.

According to Ahmad (2012:31), it was in the twentieth century that the term "management accounting" started being used in place of "cost accounting." However, the term did not appear extremely popular during that time. Johnson and Kaplan (1987:15) stated that the term "management accounting" became popular in the early 1960s. This change of terms from cost accounting to management accounting was also accepted in 1965 when the Institute of Cost and Works Accountants changed its journal name to the Institute of Cost and Management Accounting (Ahmad 2012:31). This institute again changed its name in 1972 to the Institute of

Cost and Management Accounting (Johnson & Kaplan 1987:15). The first management accounting textbook, titled "Managerial Accounting," was published in 1950 (Ahmad 2012:33). The author was Vatter, who claimed that management accounting has a different purpose to other types of accounting, which is to support managers not report to the owners of the organisation (Johnson & Kaplan 1987:15).

Marimuthu, Cloete, Dikgole, Du Toit, Fouche and Sinclair (2016:2) posit that management accounting is a part of accounting that supplies both the workforce of an institution and its management with financial and non-financial information that can be used for decision making. Management accounting is a tool used internally to report on the organisation. Therefore, it is non-mandatory, as it is not required by any statutory act (Seal, Garrison & Noreen 2012:8). Additionally, Drury (2021:6) indicated that management accounting deals with the day-to-day operations of any organisation and provides applicable management accounting information to management or owners of the organisation. The Chartered Institute of Management Accountants (CIMA) (2001), defined management accounting as an essential part of accounting, which is concerned with distinguishing, displaying, and deciphering information utilised for defining strategy, as well as planning and controlling activities, decision making, administration of costing, and assurance. Similarly, Drury (2021:2) defines management accounting as a procedure of recognising, gathering, estimating, interpreting, deciphering and imparting helpful information to accomplish the organisation's objectives. Lastly, for this research study, management accounting and the following selected management accounting principles, namely CVP, cost structure, and budgeting, will be explored in the minibus taxi industry. The next section discusses the background of the research study.

1.2 BACKGROUND TO THE RESEARCH STUDY

1.2.1 Selected management accounting principles

CVP is also referred to as breakeven analysis (Marimuthu et al. 2016:58). According to Llie and Sorina (2017:629), CVP is an analysis that is constructed on a balance point, which is the connection between the price of services or goods, the output volume, the variable cost per unit, and fixed overheads. Additionally, Marimuthu et al. (2016:58) stated that managers of entities that operate in the manufacturing industry use this technique to determine how many units need to be sold in order to cover all costs incurred for the organisation to make a profit. Additionally, Atkinson, Kaplan, Matsumura and Young (2012:89) describe CVP as a methodology used in pricing and product planning decisions in management accounting and explain further that this methodology can be used in planning, budgeting, and performance evaluation. Lal (2008:522) provides three techniques used in CVP, namely contribution margin concepts (C/S), break-even analysis, and profit-volume ratio (P/V ratio). Lastly, the main purpose of CVP is to create a question that can be used by an organisation to predict whether

the organisation will make a profit or loss (Lulaj & Iseni 2018:101). The next paragraph briefly introduces another selected management accounting principle called cost structure.

According to Novák and Popesko (2014:93), cost structure refers to the different types of costs that an organisation incurs. These costs are incurred on a daily or monthly basis (Anderson & Sollenberger 1992:36). The cost structure is a managerial responsibility and is also described as management control over costs (Lal 2008:709). Management control over costs is a procedure in which management attempts to guide the organisation to accomplish the arranged objectives and targets. This control guarantees that real outcomes coincide with and even enhance desired objectives (Lal 2008:710). There are three types of cost structures, namely fixed cost, variable cost and mixed cost (Anderson & Sollenberger 1992:36). According to Novák and Popesko (2014:93), fixed costs do not change, and variable costs change as production changes. Lastly, a mixed cost is a combination of both variable and fixed costs (Anderson & Sollenberger 1992:36). The next paragraph briefly introduces another selected management accounting principle called budgeting.

Budgeting is an indispensable part of the planning process that forces management to consider future possibilities, foresee openings in terms of opportunities or restructuring, and identify threats (Van Rensburg, Boyce, Evangelou, Govender, Koortzen, Shaku & Ziemerink 2017:248). According to Drury (2021:372), there are rolling short-term and continuous long-term budgets. Rolling short-term budgets are usually set up for a one-year financial period, while long-term budgets are for longer than one year and are usually the responsibility of top-level management (Marimuthu et al. 2016:272). The purpose of budgeting is to plan, communicate, control, motivate, coordinate, and evaluate (Drury 2021:361). According to Van Rensburg et al. (2017:255), there are budgets drafted for operational and financial aspects of the business. Drury (2021:361) states that a budget/(s) is/are aligned with the mission and vision of the organisation. Lastly, there are three types of budgets, namely fixed budgets, flexible budgets, and cash budgets (Van Rensburg et al. 2017:249). The next subsection briefly introduces the concept of management, which in this research study refers to minibus taxi owners.

1.2.2 The concept of management

The term management is diverse, so authors such as Fleetwood (2005:199) and Massie and Douglas (1977:31) interpreted the term differently. It has also been concluded that it has not been easy to answer the question of what management is (Fleetwood 2005:199). In the words of Nienaber (2010:661), management refers to the tasks and activities involved in directing an organisation or one of its units: planning, organising, leading, and controlling. Moreover, Bateman and Snell (2002:14) defined management as the process of working with people and

resources in order to accomplish organisational goals. Lastly, Nienaber (2010:661) defined management as the process of working with people and resources in order to accomplish organisational goals. The concept of management in this research study refers to minibus taxi owners. The National Land Transport Transition Act (22 of 2000) defined a minibus taxi owner as a person carrying on the business of a public passenger road transport service. As this research study focuses on the minibus taxi industry, which is part of land public transport, the next subsection gives an overview of the land public transport in South Africa.

1.2.3 The overview of public transport in South Africa

The first South African public transport (via road) was made available in the early 1800s in the form of horse carts (Makae 2009:31). Molefe (2016:16) states that the reason for the rise in public transport was due to more Black South Africans' need for horse carts to travel to and from work. Diane (2002:9) notes that during the early 1900s, trains were also used as public transport, and later buses and taxis emerged as modes of public transport. According to McCaul (1990:6), the need for public transport emerged as a result of the Natives Resettlement Act (19 of 1954), often referred to as the Bantu law, imposed by the apartheid regime, which restricted Black South Africans' living inside cities or in areas that White South Africans lived in.

Diane (2002:19) posits that even in the late 1900s, both trains and buses proved to be unreliable and irregular. This resulted in the birth of sedan taxis in 1970s that could carry four to eight commuters at once (Moolman & Kgosimore 1998:4). These taxis operated in all South African cities and townships, such as in Katlehong and Soweto, primarily in townships where there was a need for black South Africans who lived a long distance from their workplaces (Diane 2002:10). During the 1970s, the demand for sedan taxis grew as buses and trains were deemed symbols of the oppressive apartheid era (Moolman & Kgosimore 1998:4). In 1970, sedan taxis were fast, more convenient and more adequate, with reasonable prices (Moolman & Kgosimore 1998:4). But at this time, the sedan taxis were labelled illegal transporters and pirates, because the law did not recognise them as a legal form of transport. This was the same until the late 1970s when a loophole in the Road Transportation Act (77 of 1977) was discovered and then taxi transportation was legalized. According to the Road Transportation Act (77 of 1977), by definition, a sedan taxi was defined as a vehicle that conveys up to nine commuters, including the driver of the vehicle. The Road Transportation Act (77 of 1977) opened doors for minibus taxis or kombi taxis. The bus industry was not happy with the legalisation and feared competition, which forced the government to restrict the number of sedan taxis through the requirement of permits (Fourie 2003:42). As taxi transportation became more in demand, the permit system could not accommodate all the sedan taxi operators. This led to sedan operators transporting commuters without permits. Additionally,

Fourie (2003:39) attests that the bus industry soon initiated violence by illegally paying the police to harass, intimidate, and kill sedan taxi operators who could not present permits.

Matjila (2001:20) posits that in order to gain an upper hand, the sedan taxi and minibus operators formed the South African Black Taxi Association (SABTA) in 1978. The SABTA served many purposes, such as communication with the authorities on issues affecting the taxi industry and assisting their members in obtaining business loans without a screening process (Department of Transport 2020:9). It also assisted members in running the operations and negotiated a discount from kombi suppliers (Magubane 2003:7). After the success of SABTA, rival bodies such as the South African Long Distance Taxi Association (SALDTA) emerged. The taxi industry grew and the market became more accessible in the late 1980s (Barret 1993). According to Mmadi (2013:47), the White Paper on Transport Policy, tabled in January 1987, legalised kombi taxis as public transport. The term kombi refers to a minibus. A study done in 2017 shows that the minibus taxi industry carries more than 15 million commuters in South Africa daily, with more than 200 000 taxis, making it one of the fastest growing informal industries in South Africa (Businesstech 2017).

Moyake (2006:77) is of the view that the need for public transport is as great as ever since the resolution or scrapping of the Natives Resettlement Act (19 of 1954). This is because there are many developments, such as shopping complexes and schools, built in areas and that people can live anywhere.

The need for public transport has been great since the scrubbing of the Natives Resettlement Act (19 of 1954). More recently, the minibus taxi industry was badly affected by the coronavirus pandemic. The pandemic was caused by a respiratory outbreak that ranged from the common cold to more severe illnesses (Cheng & Shan 2019:2). Singhal (2020:282) noted that this respiratory outburst was first identified as the cause of an outbreak of respiratory illness first detected in Wuhan, China, in 2019. The outbreak spread all over the world and forced countries to go into national lockdown (Cheng & Shan 2019:2). The impact of the lockdown regulations resulted in people that work in industries that produce non-essential goods and services not going to work (Foucault & Galasso 2020:17). This then impacted the minibus taxi industry negatively as it transports these people and restrictions were also imposed (Fobosi 2021:7). One of those restrictions permitted the minibus taxi industry to only operate for eight hours a day, from 5 am to 9 am and from 4 pm to 8 pm (Sowetanlive 2020). Coronavirus restrictions that affected the minibus taxi industry will be discussed in the problem statement below.

1.3 PROBLEM STATEMENT

The coronavirus pandemic has had a huge impact in the sudden and powerful movement of economic growth and competition has forced businesses, in both the informal and formal sectors, to be competitive in all aspects (Jennings 2020:2). This has resulted in intense competition, even for minibus taxi owners. The minibus taxi owners are constantly in rivalry amongst themselves and with other public road transport providers that are subsidised by the government. It was in early 1988 that the minibus taxi industry started seeing an influx in the number of new minibus taxis and minibus owners. This influx created problems with competition within the industry and among minibus taxi owners (Diane 2002:22). Moyake (2006:65) is of the view that the large influx of minibus taxis resulted in a decline in profits among minibus taxi owners. In response to the decline in profits, some minibus taxi owners started using cheap and unsafe methods of maintaining their minibuses, which resulted in many unroadworthy minibuses, and some being forced out of the minibus taxi business (Diane 2002:22). As outlined in Section 1.2, the minibus taxi industry was affected by the coronavirus pandemic. Below are the restrictions imposed by the government (Sowetanlive 2020):

- A minibus taxi that has a licence to carry 10 commuters is limited to carrying a maximum of seven commuters.
- A minibus with a licence to carry 15 commuters is limited to carrying a maximum of 10 commuters.
- The midibus that has a licence to carry 22 commuters is limited to carrying 15 commuters.

The minibus taxi industry did not respond well to the above rules (Sowetanlive 2020). The South African National Taxi Council (SANTACO) and the National Taxi Alliance (NTA) joined forces to fight for the minibus taxi industry's demand to carry 100% (Fobosi 2021:7). This was followed by SANTACO's call for a "national peace taxi shut down" demanding an industry relief fund to assist the minibus taxi owners who have been impacted by the pandemic restrictions (Sowetanlive 2020). Fobosi (2021:8) emphasised that some minibus taxi owners were forced out of the minibus taxi industry after their minibus taxis were repossessed by the bank.

Despite the latter challenges, some minibus taxi owners in the Emfuleni Local Municipality are still operating and can be considered successful as they have operated in the minibus taxi industry for more than a decade even after the Corona virus restrictions. With no research or studies reported in literature on how these successful minibus taxi owners run their operations, it is difficult to know how they make decisions and how they manage their business. The research questions are set out hereafter, in par. 1.3.1.

1.3.1 Research question

The South African minibus taxi industry is often considered a high-risk but profitable industry (Sauti 2006:23). To minimise the high risks and to be more profitable, business owners are advised to make use of management accounting principles (Accounting Tools 2021). This research study will strive to answer the following research question: Do minibus taxi owners located in the Emfuleni Local Municipality use the following selected management accounting principles: CVP, cost structure, and budgeting as part of running their business?

1.4 OBJECTIVES OF THE RESEARCH

The main objective, as well as sub-objectives, have been identified for this research study. The main objective demonstrates the overall goal of the study, while sub-objectives are detailed to help or support the main objective (Bingzhen & Weimin 2015:85).

1.4.1 Main objective

In an attempt to answer the research question (par. 1.3.1), the main objective of this research study is to determine whether or not the minibus taxi owners in the Emfuleni Local Municipality apply selected management accounting principles in the management of their businesses.

1.4.2 Sub objectives

In an attempt to achieve the main objective, the researcher formulated the following theoretical and empirical objectives for this research study:

1.4.2.1 Theoretical objectives

1. To gain a general understanding of accounting and management accounting through reviewing literature on the latter subjects;
2. To gain an understanding of the selected management accounting principles: CVP, cost structure, and budgeting through reviewing related literature;
3. To review literature and obtain a general understanding of the South African minibus taxi industry, its development, problems and the current state of operation;
4. To provide an extensive analysis through reviewing literature on the research design and methodology applied in the research study.

1.4.2.2 Empirical objectives

1. To obtain a general understanding of the minibus taxi industry of the Emfuleni Local Municipality through empirical data obtained from Sections A and B of the online and printed questionnaire;

2. To determine if minibus taxi owners in the Emfuleni Local Municipality apply CVP in the running of their minibus taxi businesses using section C of the online and printed questionnaire;
3. To determine which costs are considered as fixed costs, which costs are considered as variable costs, and which costs are considered mixed costs by minibus taxi owners in the Emfuleni Local Municipality using Section D of the online and printed questionnaire;
4. To determine whether minibus taxi owners in the Emfuleni Local Municipality develop a budget for running their minibus taxi business using section D of the online and printed questionnaire.

1.5 CONTRIBUTION TO BE MADE BY THE RESEARCH STUDY

The minibus taxi industry in South Africa is one of the biggest, fastest-growing, and riskiest industries (Neumann, Röder & Joubert 2015:137). Businesstech (2017) reports that the minibus taxi industry contributes to the economy by creating over 600,000 jobs, providing fast and cheap public transport and fighting poverty. There is limited research done in the use of management accounting in the minibus taxi industry, it is difficult to understand how this industry operates. Thus, this research study contributes to the body of knowledge by revising literature on the minibus taxi industry and the selected management accounting principles (CVP, cost structure, and budgeting).

1.6 RESEARCH METHODOLOGY

The research methodology applied in this research study was empirical in nature, and it was supported by a literature review, which is discussed below.

1.6.1 Literature review

By definition, a literature review is a process that involves searching for, reading, evaluating, and summarising available data that is directly or indirectly related to the research topic (Paré, Trude, Jaana & Kitsiou 2015:184; Howard 2014:101). In this research study, the available literature on the minibus taxi industry in South Africa and the literature that reviews management accounting and the following management accounting principles (CVP, cost structure, and budgeting) were compared. Furthermore, Howard (2014:101) and Rowe (2014:244) state that the literature review is compiled through the collection of the literature from various sources. Among these sources are (Templier & Paré 2015:113):

- Published dissertations and theses
- Electronic books
- Electronic articles
- Published newspaper articles

- Published books

The mentioned sources of literature review contain different information and are used for different purposes (Paré et al. 2015:184). The types of literature review are discussed in the subsection to follow

1.6.1.1 Type of literature review

Sylvester, Tate and Johnstone (2013:1200) state that there are different types of literature and each type of literature is used for a different purpose. The following types of literature reviews were used for this research study, which were taken from Rowe (2014:244) and Howard (2014:102):

- **Historical review:** research study traced the chronological birth of the minibus taxi industry and how it came about in the Emfuleni Local Municipality. Various researchers or authors, such as Barolsky (1990), McCaul (1990), and Makae (2009), have previously conducted research on the development of the minibus taxi industry in South Africa. McCaul (1990) and Makae (2009) researched the minibus taxi industry after it was called the kombi industry and before it was called the minibus taxi industry. Barolsky (1990) looked at the first public transportation up until the kombi industry.
- **Thematic review:** this research study pertains to different thoughts on how the minibus taxi industry should operate and why it should operate in that manner. Several researchers and authors, like Sauti (2006) and Baloyi (2012), have looked at how minibus taxi drivers act. Sauti (2006) looked at how minibus taxi drivers act, and Baloyi (2012) looked at how the minibus taxi industry works now.
- **Theoretical review:** this research study links the operation of the minibus taxi industry with the theory of management accounting and the following selected management accounting principles: CVP, cost structure, and budgeting. The theoretical framework was taken from authors like Drury (2021), who wrote a textbook on cost and management accounting, and Van Rensburg et al. (2017), who also wrote a textbook on cost and management accounting.
- **An empirical review:** a research study investigates the application of the following selected management accounting principles: CVP, cost structure, and budgeting in the minibus taxi industry at the Emfuleni Local Municipality. The section below posits how empirical review was executed in this research study.

1.6.2 Empirical study

An empirical study necessitates the identification of the following: the procedures of data collection; a sampling method; a statistical population; the methods of statistical analysis; and

the sample size of the research study (Binu, Shreemathi & Dhar 2014:120). The subsection below discusses the statistical population.

1.6.2.1 Statistical population

Wiid and Diggines (2013:186) define a population as a total group of either entities or people from whom the data is required. Examples of a population given by Kumar (2011:50) included families living in the area and people in the organisation that will form part of the respondents. Pascoe (2014:133) states that there are research parameters, namely the nature of the population, the size of the population and the unique features to consider when defining the population.

In a discussion with the regional chairperson of the SANTACO, Mali (2018) it was said that "there are over 2500 taxis with 10 associations affiliated with SANTACO and 6 associations not affiliated to SANTACO in the region but 5 associations operating within the Emfuleni Local Municipality". Furthermore, Mali (2018) posits that, in the Emfuleni Local Municipality, SANTACO has almost 240 members, which is constantly changing as minibus taxis are purchased and sold every day and minibus taxi owner join and leave on regularly basis. Maqubela (2018), the Secretary-General of the Top 6, a subgroup of the NTA, confirmed that there are 16 taxi associations in the region with five affiliated with the National Taxi Alliance, comprising 247 minibus taxi owners during an interview. According to the CCTA (2018), an association that does not belong to any mother body, posits that they have 247 minibus taxis and 119 minibus taxi owners. Therefore, according to Mali (2018), Maqubela (2018) and CCTA (2018), it can be concluded that the Emfuleni Local municipality has five minibus taxi associations operating within its boundaries. In an interview with the Municipal Manager of Transport at the Sedibeng district Mr. James Dlangamandla (2019), there are five minibus taxi associations operating in the Emfuleni local municipality, namely Get Ahead Taxi Association (GATA), Vanderbijlpark Taxi Association (VTA), Vaal National Taxi Association (VNTA), Sharpeville to Vereeniging and Vanderbijlpark Taxi Association (SVVTA) and CCTA with just over 700 minibus taxi and over 500 minibus taxi owners. Therefore, the population size of this research study is 500 minibus taxi owners, but is not fixed, as a taxi/(s) can be purchased by any legal or natural person at any time during or after this research study. The subsection discuses the location of this research study population.

1.6.2.2 Location of the population

For this research study, the location of the population is the Emfuleni Local Municipality. As these minibus taxi owners' minibus taxis are operating within the boundaries of the Emfuleni Local Municipality, together with the Midvaal and Lesedi regions, the Emfuleni Local Municipality makes up the Sedibeng district (Marais 2007:100). The Emfuleni Local

Municipality comprises both urban and rural areas. These urban and rural areas are Vanderbijlpark, Vereeniging, Vaal Oewer, Loch Vaal, Sebokeng, Sharpeville, Boitumelo, Evaton, North Vaal, Boipatong, Tshepiso, and Bophelong (Sedibeng 2019).

It is difficult to appreciate the history of Emfuleni Local Municipality without understanding and mentioning the history of ISCOR and the steel business in South Africa. Thus, the history of ISCOR and the steel business is firmly identified with an Afrikaner national, employment reservation of white individuals, and low-paid black individuals. The University of Free State (2017:14) posits that the first structure in Emfuleni Local Municipality was developed during 1842–1942. Moreover, Britannica (2018) states that this first structure is now known as Vereeniging, which obtained its name from serving as a place of peace between the Dutch and the British. The second phase of the Emfuleni Local Municipality was developed from 1943 to 1959. This development took 16 years and saw the birth of Vanderbijlpark. This town is known for its steelmaking and was named after Dr. Van der Biji (University of Free State 2017:14).

As emphasised before, the Natives Resettlement Act (19 of 1954) brought the need for land public transport. This was also the case in the Emfuleni region. Most people who lived in the Vaal Oewer, Loch Vaal, Sebokeng, Sharpeville, Boitumelo, Evaton, North Vaal, Boipatong Tshepiso, and Bophelong were blacks, and they needed transport to go to Vanderbijlpark and Vereeniging, where most white people lived (Sedibeng 2019). The primary reasons for black people visiting Vanderbijlpark and Vereeniging were for work, school, and shopping (Mali 2018; Maqubela 2018).

In recent times, the minibus taxi industry in South Africa has been a primary means of transport for the black people of South Africa (Molefe 2016:16). According to Maqubela (2018), students from universities and colleges in the Emfuleni Local Municipality are now the minibus taxi industry's biggest commuters. The sampling method and size will be discussed in the next subsection.

1.6.2.3 Sampling method and size

A sample is a portion of the population that is accessible to the researcher and to which the researcher will apply the research methods (Davis 2014:136). For the purpose of this research study, a census was used for. A census as defined by Jupp (2006:17) is a study of every unit, everyone or everything, in a population. It is known as a complete enumeration, which means a complete count. According to Lavrakas (2008:144) a census can have two meanings; one is an attempt to collect data from every member of the population being studied rather than choosing a sample and the other is a specific form of social survey organized by government with the aim of collecting information from every household in the country. Moreover Jupp

(2006:25) said that a census is an attempt to list all elements in a group and to measure one or more characteristics of those elements. Lastly, Baffour, King and Valente (2012:4) posits that a census is the most complex and massive exercise a national statistical office undertakes. The next subsection discusses the pilot study.

1.6.2.4 Pilot study

According to Chakrabarti and Lucienne (2009:114), a pilot study is a try-out of the research approach that is used to detect potential problems that may affect the results. This research study utilised non-probability sampling in the form of convenience sampling for the pilot study. Davis (2014:146) states that convenience sampling is a sampling method that involves choosing a sample based on members of the population that are quick and easy to access. This research pilot study involves 50 minibus taxi owners who are based in Vanderbijlpark, which falls under the Emfuleni Local Municipality. This number of sample representations in the pilot study is in line with previous research studies done in the minibus taxi industry. Previous research studies of this type were conducted by Baloyi (2012:7) and Moyake (2006:9), who had nearly 10% of their overall sample in their pilot study. This pilot study was done to test whether the questionnaire achieves the objectives set out in this research study.

The subsection below discusses the data collection used in this research study.

1.6.2.5 Nature and collection of data

This research study applied a quantitative approach through surveying. According to Dhurup (2015:18), a quantitative approach is mainly used in survey research and the data collected is expressed in numbers. Bryman (2012:12) posits that survey research can be conducted using a questionnaire. A survey refers to an inspection of something in a careful manner (Du Plooy-Cilliers & Cronje 2014:149). The researcher used a self-administered online questionnaire and printed questionnaire to survey the minibus taxi owners in Emfuleni Local Municipality to determine whether or not they apply the following selected management accounting principles: CVP, cost structure and budgeting in running their minibus taxi business. The online questionnaire and printed questionnaire consist of the four sections: demographic profile; Operating within the minibus taxi industry; CVP and cost structure; and budgeting. This was done through a cross-sectional survey, in which information data were taken once from the minibus taxi owners and there was no repetition.

Minibus taxi owners were asked closed-ended questions. Likert scales were used to respond to statements. For this research study, the researcher collected primary data. Only primary data was collected and analysed.

a) Primary data

The researcher collected primary data for the study. Primary data are data that a researcher will collect first hand for a specific study, and this data was not previously collected (Howard 2014:103). The researcher collected raw data, which are also referred to as first-hand data, from minibus taxi owners in the Emfuleni Local Municipality. Lastly this primary data was collected using an online questionnaire and printed questionnaire. The subsection below discusses the secondary data.

b) Secondary data

Secondary data is referred to as data that has been previously collected by either other researchers or institutions, and this data were used by the researcher in conducting research (Welman, Kruger & Mitchell 2009:149). Secondary data was not in the data analysis of this research study but in reviewing of the literature. There are previous research studies conducted on the minibus industry in South Africa such as Barolsky (1990), McCaul (1990), and Makae (2009). But the latter outlined studies are not in the field of management accounting. Lastly, the researcher utilised literature from management accounting textbooks, articles, and journals in discussing concepts used in this research study. In the next subsection reliability and validity in the quantitative research study is discussed. During the main study, the researcher surveyed the entire population, excluding the pilot of 500 minibus taxi owners in the Emfuleni Local Municipality. In other words, this research study used a census. The census was selected in line with Leedy and Ormrod's guidelines (2001:221). These authors suggested that if the population is less or equal to 500, then all subjects should be included in the units of analysis. This is also in line with Baloyi (2012:7), whose population size was 420 minibus taxi operators and used a census. Lastly, it is also important to mention that the researcher can access the overall population of minibus taxi owners in the Emfuleni Local Municipality through their affiliated minibus taxi associations and mother bodies.

1.6.2.6 Reliability and validity in the quantitative research study

Reliability refers to a situation where other researchers using the same data will find the same outcome (Mouton 1996:144). Maree (2010:233) notes reliability has to do with repeatability and added consistency. In other words, the applied measurement procedure will produce the same results on repeated trials if it is reliable. An inter-coder was used for the reliability of the research study. To ensure repeatability and consistency of data obtained, a Cronbach's alpha test was conducted (Tavakol & Dennick 2011:53). According to Andrew, McEvory and Pederson (2011:202), the value of Cronbach's alpha ranges from zero to one and for a social study, a value of 0.7 or above is desirable. Yin (2009:136) states that validity is about whether the research study measures what it is supposed to measure. According to McDaniel and

Gates (2004:301), validity can be examined from a variety of perspectives, including face-, content-, criterion-, and construct validity. For this research study, convergent validity was established through a pilot study and a pre-test. The pilot study and pre-test are done to check whether the questionnaire tests what it is supposed to test. Convergent validity will be examined by item loadings, which will include standardised regression weights, as well as the average variance extracted (AVE). Lastly discriminant validity will be established through interfactor- correlations between the research constructs and by comparing the AVE and shared variance. The next subsection discusses the research instrument used in this research study.

1.6.2.7 Statistical analysis

The main objective of data analysis is to ensure that the data obtained is aligned with the objectives of the study (Leedy & Ormrod 2013:284). In order to reach the research objectives of this research study, data collected through an online questionnaires and printed questionnaire was submitted to the statistician for statistical analysis. Descriptive statistics such as graphs and pie charts were utilised to explain the outcome of the research study. The descriptive analysis in this study was interpreted in the form of pie charts, histograms and tabulations. The Statistical Package for Social Sciences (SPSS) version 27.0 was used for the analysis of data.

1.7 SCOPE OF THE RESEARCH STUDY

This is an accounting research study, and management accounting is the main field that it focuses on. This research study explores whether or not minibus taxi owners make use of the selected management accounting principles in the management of their minibus taxi businesses.

1.8 ETHICS IN RESEARCH

Fouka and Mantzorou (2011:4) refer to ethics as a part of philosophy that deals with how people live, with the idea of the good, and also with concepts that are considered as either wrong or right. Kerridge, Lowe and McPhee (2005:1) view ethics as a study of what should be done. Louw (2014:263) contends that a researcher must ensure that exploration design is established and use methods that are ethical and moral. Prior to data collection, ethical clearance was granted by the Vaal University of Technology's Ethics board. This can be viewed in Appendix A. Moreover, the following ethical considerations were considered for this research study;

- Misusing information refers to using data collected for purposes it was not collected for - the researcher will not even in the future give the data collected to tax authorities;

- Preceding the initiation of this research study, permission was obtained from all relevant parties. Before the commencement of this research proposal, the researcher requested permission from the minibus taxi industry at the local level, regional and national levels to acquire permission to conduct the research study;
- Respondents in the study were made aware that they were taking part in the study and should give their consent. The minibus taxi owners gave their consent in the form of a letter;
- The researcher remained consistent in considering and rendering respect to the identity, rights, convictions and flexibility of the respondents;
- The researcher did not falsify or distort data at any time, as this is unethical. All the data used was sent to the minibus taxi owners for review before being published;
- Lastly the researcher did at all times abide by the Protection of Personal Information Act (4 of 2013) while collecting and analysis data for this research study. In the next Section outline the chapters in this research study

1.9. CHAPTER CLASSIFICATION

Chapter 1: Introduction and background to the study

This chapter comprises the introduction, background of the study, the literature research question, research objectives, research methodology, chapter classification and chapter summary.

Chapter 2: Literature review of the study

A review of the management accounting literature and the South Africa minibus taxi industry was conducted and reported on in this chapter.

Chapter 3: Research methodology

The chapter comprises the methodology used in the study and explains the reasons why that methodology was used.

Chapter 4: Data analysis

This chapter comprises of the findings and analysis obtained from minibus taxi owners on their application of management accounting principles.

Chapter 5: Conclusion and recommendation

This chapter provides unbiased recommendations to the minibus taxi owners. Lastly, the chapter also provides a conclusion to the research study and highlights how this research study's research objectives were fulfilled.

1.10 CHAPTER SUMMARY

The main objective of this chapter was to discuss the research process that the researcher will undertake, briefly, in an attempt to answer the research question in section 1.3.1, which is: Do minibus taxi owners located in the Emfuleni Local Municipality use the selected management accounting principles as part of running their business? Consequently, in this attempt to answer the research question, the researcher developed both the main and sub-objectives set out in Section 1.4 (1.4.1 and 1.4.2). A research process is a process of multiple scientific steps in conducting research work and each step is interlinked with other steps. The process starts with the problem statement at first, as this chapter did in section 1.3, then it advances to the next steps, sequentially. These steps are illustrated in Section 1.1–1.9 of this chapter.

In South Africa, researchers such as Barret (2003) and Baloyi (2012) have done studies on the South African minibus taxi industry, but not in the field of management accounting. International authors such as Ramasamy (2005) and Curry (2020) have written academic studies in the field of management accounting, but not in the minibus taxi industry. Therefore, both local and international research on management accounting and the minibus taxi industry have been limited.

The next chapter will focus on the literature on accounting, selected management accounting principles and the minibus taxi industry. The next chapter will consist of a literature review, which addresses the theoretical objectives 1 to 3, set out in par. 1.4.2.1.

CHAPTER 2:
LITERATURE REVIEW

"You have to understand accounting and you have to understand the nuances of accounting. It's the language of business and it's an imperfect language, but unless you are willing to put in the effort to learn accounting, how to read and interpret financial statements, you really shouldn't select stocks yourself." – Warren Buffet

2.1 INTRODUCTION

The previous chapter briefly introduced some of the literature that is discussed in this chapter. This chapter is divided into two sections. In the first section, the researcher discusses the literature on management accounting, and in the second section, the researcher discusses the literature on the minibus taxi industry. In the first section, the origin of accounting is explored to establish a thorough understanding of accounting, as well as management accounting, a branch of accounting that this research study focuses on.

In one of the official journals of accounting, namely the Association of Chartered Accountants in the United States (ACAUS), a particular emphasis on knowing the importance of accounting is through studying the history thereof (Schreuder 2014:3; ACAUS 2000). According to Botes (2009:14) and Reyneke (2016:33), accounting's history casts light on an economic and business history that may potentially help us better predict what is on the horizon, as the pace of global business evolution escalates. The importance of knowing accounting history was also emphasised by Lloyd (2002:1) and Goretzki, Strauss and Weber (2013:44), stating that "in addition to providing detailed knowledge of accounting and commercial practice, further review of early accounting texts can offer insight into the level of theoretical awareness at the time of their publication."

Consequently, the main purpose of this chapter is to address theoretical objectives 1 to 3, as discussed in Chapter 1 (Section 1.4.2.1). Figure 2.1 hereafter indicates how each main paragraph is linked to the theoretical objectives.

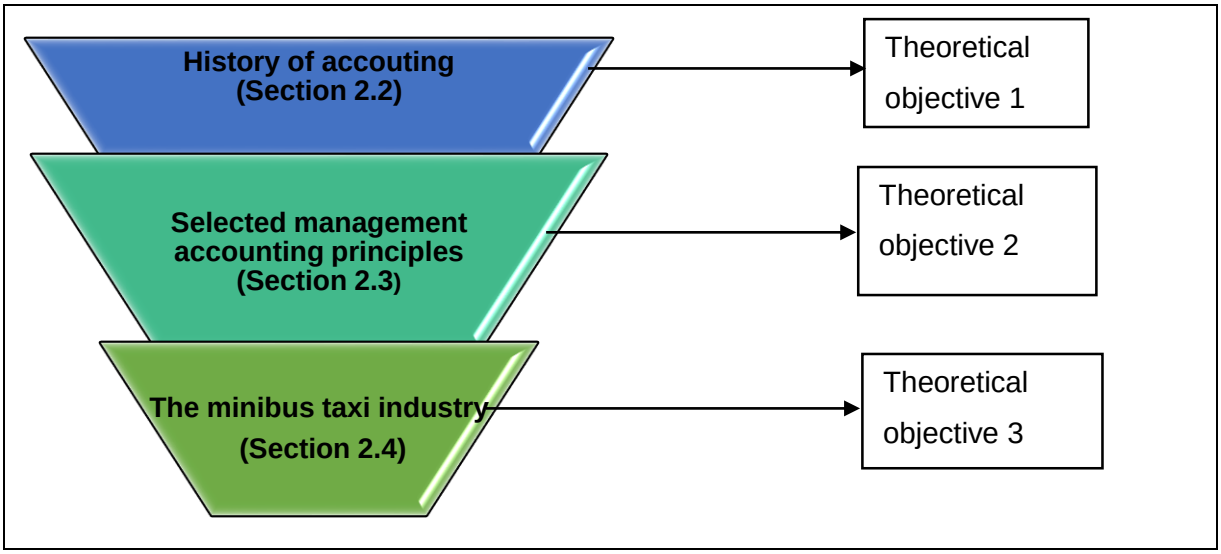

Figure 2.1: Links between main paragraphs and theoretical objectives

Source: Author

In accordance with Figure 2.1, Section 2.2 to follow begins with a discussion of the history of accounting.

2.2 HISTORY OF ACCOUNTING

The roots of accounting reach many parts of the world. These roots originated more than 6000 years ago (ACAUS 2000:1; Reyneke 2016:33). Authors such as Beneke (2014:15), Unegbu (2014:3) and Taylor, Kritzinger and Puttick (1983:1) believe that accounting emerged even before the double-entry system in 1494 was created. Beneke (2014:15) linked accounting to human life, and in his words *"accounting has been part of human life for thousands of years.'"*

However, authors such as Smith (2018:1) posited that accounting only started after the double-entry system's inception in the 1490s. This was the first accounting book *titled "Summa de Arithmetica, Geometria, Proportionai et Proportionalita"* (Everything about arithmetic, geometry and proportion) was written by Luci Pacioli, who later became known as the father of modern accounting (Sangster & Scataglinibelghitar 2010:424; Sangster 2021:126). Furthermore, Smith (2018:1) states that in the 1490s, accounting was often referred to as 'bookkeeping'.

Although Smith's (2018:10) and Ovunda (2015:132) literature supports that Luci Pacioli is the founder of the double-entry system. Sangster (2021:126) and Sangster and Rossi (2018:24) is of the opinion that Benedetto Contrugli was the founder and original author of the double-entry system (Ovunda 2015:132). The double-entry system is seen as the beginning of modern accounting (Sargiacomo, Coronella & Mio 2018:7). Since the inception of the double-entry system there has been many authors who contributed to modern accounting (Bunget,

Dumitresc & Deliu 2013:2). These authors includes Giovanni Tagliente, Domenico Manzoni, Alvise Casanova and Gerolame Cardano (Chindea et al. 2011:19). Table 2.1 hereafter presents these authors that contributed to modern accounting, the period in which they published and their publication title. As these publications were written in Latin and Itlain the researcher added a column translation.

Table 2.1: Authors who contributed to modern accounting

Period	Author	Publication	Translation	Source
1450-1458	Benedetto Contrugli	*'Della Mercatura it del merchant'*	Of commerce and the perfect merchant	Anzovin and Podell (2000:36)
1494	Luci Pacilio	*'Summa de arithmetica'*	Summary of arithmetic, geometry, proportions and proportionality	Sangster Stoner and McCarthy (2008:111)
1498	Giovanni Tagliente	*'luminario di Arithmetica'*	luminary of Arithmetic	Bunget Dumitresc and Deliu (2013:2).
1530 -1540	Domenico Manzoni	• *'Quderno doppio col suo giornals'* • *'il costume di Venezia'*	• Double notebook with his newspaper • The costume of Venice	Mari Picciaia And Sangster (2020:1177).
1558	Alvise Casanova	*'Ordine modo et osseruantie, che gli fattor debbeno tenere gli conti delle'*	Order and devor, that the factors must keep the accounts of	Sargiacomo, Coronella and Mio (2018:7)
1564	Gerolame Cardano	*'libe de ludo'*	free to play	Costa (2015:7)

It can be observed from the Table 2.1 that the first contributor was not Luci Pacilio but Benedetto Contrugil, who was a native of Dalmatia and is considered the first person to write about the double-entry system (Sangster & Rossi 2018:22). His book, titled *"Della Mercatura it del merchant"* was written in Italian but later translated into other languages such as Spanish (Van der Helm & Postma 2000:148).

In the year 1530, a book titled 'Quderno doppio col suo giornals' was published alongside, *"il costume di Venezia*" (Mari, Picciaia & Sangster 2020:1177; Chindea et al. 2011:19). The

author of these two books was Domenico Manzoni. Manzoni was actually a bookkeeper and probably the first accounting author who worked in the accounting profession. Manzoni was criticised by most Italians, as most of his chapters was a duplicate of Luci Pacioli's work (Coronella, Antonelli & Lombrano 2017:3).

Nevertheless, his work contributed value that Luci Pacioli lacked, practical accounting knowledge. Not only did Manzoni reveal his professional knowledge, he also completed a set of the double-entry system standard used in the field (Gaffikin 2011:236). Lastly he and Luci were not the only author, other authors who contributed to modern accounting includes Gerolame Cardano, Alvise Casanova, and Giovanni Tagliente, but none of these great authors' work surpass that of Contrugli, Luca Pacioli and Manzoni (Costa 2015:7). The next subsection discusses various definition on accounting.

2.2.1 The definition of accounting

Since the inception of the double-entry system, accounting has become the business language that conveys monetary and non-monetary information to individuals interested in an organisation (Van Rensburg et al. 2017:2). These individuals include managers, shareholders, potential investors, lenders, employees and the government (Drury 2021:5). Furthermore, Butterfield (2016:2) labels accounting as a set of organised procedures used to measure an entity's activities by processing data into reports and availing them for decision-making. As aforementioned, accounting is not all about numbers and monetary values, but also about conveying important policies and organisational information to users (Drury 2021:6). Thus, accounting information plays a positive role in promoting the integrity of the decisions and the success of the development plans; such a role is derived from the availability of information required to prepare, implement and follow up.

Furthermore, Berry (2011:1) said that accounting is divided into three branches: financial accounting, cost accounting and management accounting and these branches have different functions. However, they are interlinked to create what is known as accountancy. As this reseaech study focuses on management accounting as a branch of accoumting the subsection below discusses the origin of management accounting.

2.2.2 Origin of management accounting

Management accounting was referred to and known as cost accounting during the 1800s (Ahmad 2012:29). According to Ratnatunga (2020:3) and Wilson and Chau (1993:7), people who work in management accounting were titled accountants or practitioners of cost. Historians of accounting have long supported the concept that cost accounting is a product of the first industrial revolution (Johnson 1988:512). Wilson and Chau (1993:7) also supported

the claim that cost accounting is the first industrial evolution concept by further claiming that this concept was used in the multi-process, mechanised and textile factories that emerged in the 1800s in the United States and England.

The viewpoint that cost accounting is a product of the industrial revolution was also pointed out by Waweru (2010:165), who added that it was during the 1800s when textile factories emerged, that the birth of cost accounting was observed. It was not up until the twentieth century when the term management accounting started being used in place of cost accounting (Kamal 2019:13). Burns and Scapens (2000:3) posits that the term management accounting became popular in the early 1960s. This change of terms from cost accounting to management accounting was also accepted in 1965 when the Institute of Cost and Works Accountants changed its journal name to the Institute of Cost and Management Accounting (Cavalluzzo & Ittner 2003:3). This institute again changed its name in 1972 to the Institute of Cost and Management Accounting (Kamal 2019:13).

The first management accounting textbook, titled 'Managerial Accounting,' was published in 1950 (Mark & Williams 2019:1; Ahmad 2012:33). The author of the book is William Joseph Vatter, who was an American accounting scholar and professor at the University of Chicago and University- Berkeley (Stephen 2016:5; Johnson & Kaplan 1987:15). He was known for his new approach to teaching managerial accounting (Moonitz 2016:3). He claimed that management accounting has a different purpose than other accounting types, supporting managers not reporting to the organisation's owners (Graybeal 2018:2; Vatter 1959:33). As emphasised in Chapter 1 Section 1.2.1 that this research study investigates the following selected management accounting principles; CVP, cost structure and budgeting. The researcher discusses these selected management accounting principles in detail in the Section below.

2.3 SELECTED MANAGEMENT ACCOUNTING PRINCIPLES

In Chapter 1, Section 1.4.1 (2), the researcher has identified the following theoretical objective; to gain an understanding of the following selected management accounting principles CVP, cost structure and budgeting through reviewing related litetrature. Hereafter, to achieve the latter outlined theortical objective, the researcher will review the literature on the latter outlined selected management accounting principles; CVP, cost structure and budgeting. Starting with CVP in the section hereafter.

2.3.1 CVP

Before defining CVP, it is essential to note that it is one of the most hallowed principle in management accounting and yet one of the most straightforward analytical principle (Habeeb 2012:33; Graybeal 2018:3). The term hallowed used in this research study refers to

unpopoularally used because it is seen as difficult. The literature on CVP was also discussed in Chapter 1, whereby the researcher cited Marimuthu et al. (2016:58), who referred to CVP as breakeven point and defined the principle as an analysis of costs, volume and profit. Moreover, Eyni (2019:1288) and Ameen, Ahmed & Hafez (2018:17) posits that CVP is an analysis done on a balance point, which is the connection between the price of services or goods, the output volume, the variable cost per unit and fixed overheads.

CVP is a principle used for planning and decision-making by the management in an organisation (Cele 2022:3; Budugan & Georgescu 2008:5). It is also a principle that is useful for management control and forecasting (Vromans 2019:2; Habeeb 2012:31). As minibus taxi owners manage their minibus taxi business, they may use this principle for operational planning and forecasting of profit. There are five factors namely variable cost, fixed costs, volume, sales and sales mix that affects CVP and there factors are illistrauted in Figure 2.2. Althrough Ameyaw (2016:23) used the term components when referring to these factors of CVP that also impact profit planning. In this research study both terms components and factors are used as interchangables. Each factor of CVP affects the key elements of CVP (Hilton, Maher & Selto 2006:15). There are three elements of CVP namely cost, volume and profit (Hillier & Lieberman 2006:33)

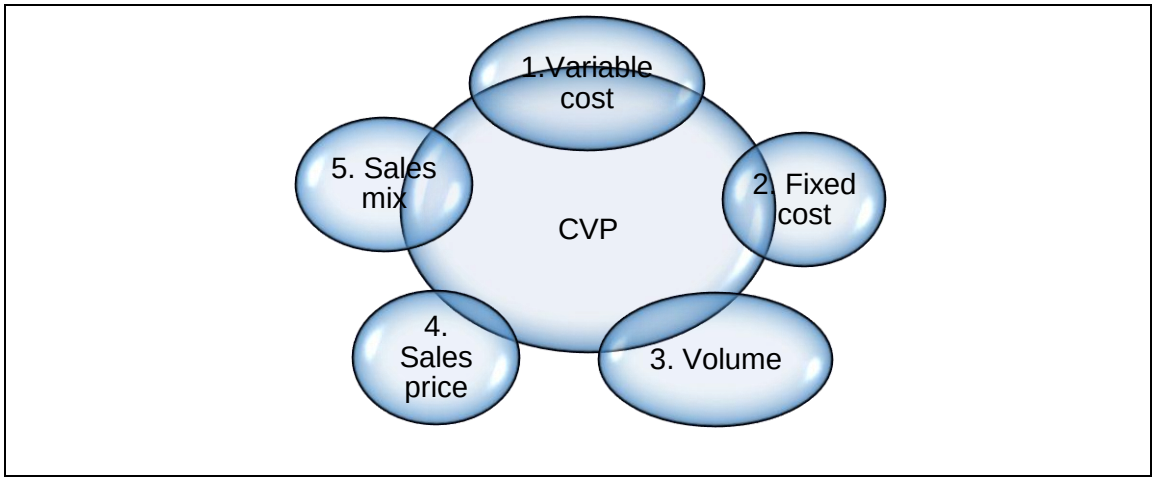

Figure 2.2: Factors of CVP

Source: Eyni (2019:1288).

Alnoor et al. (2020:42) posits that variables costs and fixed costs factors affects cost element. While, Hillier and Lieberman (2006:33) said that the volume factor affected by itself (volume element). Lastly, sales price and sales mix factors affect the profit element (Abdulkareem & Aymen 2020:329). In the subsection below the researcher discusses two of the three elements then discusses the each factor that has an impact on that in detail. As volume is a factor and an element the researcher will discuss the element and factor conjointly.

2.3.1.1 Cost

The term "cost" refers to a price paid to produce, acquire, maintain, or accomplish something (Shakya 2009:26). In the business world, the term "cost" is usually associated with the monetary value of time, effort used, usage of materials, and usage of resources (Ndongolo 2013:15). Kapil (2011:7) added that cost is a sacrifice taken in return for future organisational objectives and benefits. Ndongolo (2013:15) views cost as a resource that has been foregone to achieve the desired objectives. Lastly, the term "resource" can come in the form of something virulent to cash or cash itself (Abelson 2000:5). As emphasised in section 2.3.1, there are two factors of CVP that affect costs, which are variable costs and fixed costs. These factors are discussed in the paragraph below.

a) Variable costs

Garrison, Noreen, and Brewer (2006:53) described variable costs as those costs in an organisation that change proportionally in amounts as the level of output changes. When defining variable costs, Fransiska (2013:14) posits the following: "variable costs are those in which changes are directly proportional to changes in volume, or output, within the relevant range, while the unit cost remains constant." From the authors above, it can be concluded that variable costs are those costs that are dependent on the level of output in an activity of a service setup.

Variable costs are generic to sectors and industries. Examples of variable costs in the manufacturing sector include indirect material costs, indirect labour costs, and variable overheads (Ameyaw 2016:29). Examples of variable costs in the service sector include petrol costs, wages, and service fee costs (Lal 2008:519). It is important to note that variable costs have a cost driver (Fransiska 2013:14). A "cost driver" is any factor that causes a cost to be incurred (Musenga, Mpwanya & van Heerden 2017:4). Variable costs are not fixed; they are based on a cause (Rodrigue 2016:595). Lastly, when the latter is linked to this research study, it implies that if the minibus taxi travels a lot or for a longer distance, costs such as petrol and oil will increase as they are not fixed. The next subsection discusses the other factor of CVP that affects the cost element, which is fixed cost.

b) Fixed cost

Capacity cost is a term used by Shakya (2009:32) to refer to fixed cost. In this research study, both terms are used as interchangeable. Fixed cost are unaffected by service volume (Kallio 2018:10). The fixed cost can be paid daily or monthly or quarterly, or yearly for as long as the amount is fixed (Berry-Johnson 2019:44). Fixed costs in the minibus taxi industry are those costs that the minibus taxi owner incurs every month and are fixed cost. Fixed costs consist

of both cash and non-cash items. The typical cash fixed cost examples include monthly instalment costs, insurance costs and rank fees (Gallo 2017). Lastly, depreciation and impairment losses are common examples of non-cash fixed costs (Kallio 2018:11; Lin et al. 2007:179). In other words, this means that it does not change when service volume changes. Whenever the amount of fixed costs is increased or decreased, there is a direct impact on profit. In an instance whereby fixed costs have decreased, the profit is higher and vice-versa, in instances where fixed costs are increased, the profit will be lower (Lal 2008:519). When the latter is link to this research study it implies that if minibus taxi owners pay less for their minibus taxi instalment they will have more profit and vice versa if the minibus taxi instaliment is high (increased). The next section focuses on the volume which is dicussed conjointly.

2.3.1.2 Volume

Ndongolo (2013:15) defines volume as the level at which the amount of space has been taken. Srikant and Madhav (2015:18), states that volume is when something is heard or the amount of space that something takes up. That something can be goods or services being sold or manufactured (Shakay 2009:26). While Ameyaw (2016:25) added that volume is to the total quantity of either a good or service sold in a specified period. Volume in the minibus taxi industry refers to the number of commuters taken by a minibus taxi for a specified period. Naturally, an organisation would sell more if the sales price is low and vice versa whenever the sale price is high (Ameyaw 2016:27). When the latter is link in the minibus taxi industry or to this research study it implies that if the fare price is low more commuters would take the minibus taxi industry and if the fare price is high (increased) the minibus taxi industry would take less passenger. As emphasised in section 2.3.1 that the next and last element profit.

2.3.1.3 Profit

Profit is a diverse term that is interpreted differently and has different meanings for different people (Bhattacharyya 2011:4). For instance, in the case of a shareholder, profit is regarded as income (Dwivedi 2008:2). Ferguson, Rentzler and Yu (2005:102), posits that economists refer to the term profit differently to that of shareholders – shareholders' view on profit is a return over cost above the opportunity cost. Also, to an accounting academic, the term profit refers to a case whereby sales revenue is much more significant than expenditure (Garg et al. 2003:32). As emphasised in section 2.3.1 that there are two factors of CVP that affects profit which are sales price and sales mix and will be discussed in the subection below.

a) Sales price

The term sales price is generic to industries. In the transport sector, the term is referred to as a fare price and in most service industries, it is referred to as a service fee (Rodrigue 2016:596). The most common term used in the product-selling industry is "selling price." In

this research study, the term sales price is interchangeably used with the fare price (Rodrigue & Notteboom 2020:75). A sales price can be defined as the price at which either a service or product is sold to a buyer (Button & Reggiani 2011:4). In other words, it is a price charged for a service rendered in a servicing rendering industry and the price of the product sold when it is a product selling industry.

There are various methods to calculate sales prices, such as cost-plus profit, penetration pricing and price skimming (Button 2010:19; Holland 1998:3). In the informal sector, such as the minibus taxi industry, the minibus taxi associations and mother bodies such as SANTACO and NTA set the fare price (Barrett 2003:13). Lastly, various things are considered when deciding on the fare price, such as the trip's distance, affordability and commuters' size (Vegter 2020:16). The sales mix factor is discussed below.

b) Sales mix

Sales mix occurs and exists when an organisation sells multiple goods or renders multiple services (Habeeb 2012:24). Moreover, in most cases, these multiple goods or services are jointly used or linked, though in other cases, the goods are separately used (Lal 2008:519). Habeeb (2012:24) further explained that a sales mix represents a percentage or proportion of how an organisation sells its multiple goods. Lastly, in the minibus taxi industry, a sales mix occurs when a minibus taxi operates in an association that operates multiple routes (Kubeka 2020). The next section purpose and advantages of CVP.

2.3.2 Purpose and advantages of CVP

In this subsection, the researcher discusses the literature covering the purpose and the advantages of CVP in an organisation. During the discussion, the researcher shows why minibus taxi owners can or may apply CVP to run their business. The researcher further discusses the advantages of using CVP.

The primary purpose of CVP is to create an expression that can be used by an organisation to predict profits (Lulaj & Iseni 2018:101). This question is created by finding a relationship between sales price, volume, variable costs and fixed costs (Ameyaw 2016:22). Minibus taxi owners create a question about how they can predict profits – through looking at the different costs they incur when running their business.

By creating this question, business owners, including minibus taxi owners, may make informed decisions that may increase profit (Lulaj & Iseni 2018:101). Ameyaw (2016:19) added that business owners could also use CVP to prepare for economic changes. Ihemeje, Okereafor, and Ogungbangbe (2014:11) point out the advantages of CVP in a service business, thenafter the techniques of CVP will be discussed;

- The minimum level services that should be rendered to avoid making a loss;
- The level of services that the business needs to render to earn a targeted profit;
- How the increase or decrease in the sales price (selling price) will impact the target profit;
- How the increase or decrease in service costs will impact the target profit
- Identification of services that contribute less to the profits and those that contribute more to profits;
- Decisions on whether to discontinue or continue specific services offer
- The new breakeven point after the above mention (sales price, costs, and service render) effects;
- How the increase or decrease in fixed costs, such as rent and other services fixed cost, may affect the business operating profit;
- Lastly, the impacts of the expansion plan on the CVP relationship.

2.3.3 Techniques used in CVP

In this subsection, the researcher discusses the literature concerning the techniques used in CVP. As emphasised in Chapter 1 (Section 1.2.1), in the area of decision making and managerial planning, CVP uses the following techniques to analyse and respond to many questions that arise in running a business (Lal 2008:521):

1. The contribution margin concept
2. The P/V ratio
3. The break-even analysis

2.3.3.1 The contribution margin concept

The contribution margin concept is used to indicate the relationship between sales revenue, cost and profit (Ndaliman & Bala 2007:6). Furthermore, it also indicates the potential profit that an organisation can make. Scarlett (2005:33) posits that this technique is beneficial to management when it comes to decision-making and planning. In this technique, the variable costs comprise both variable administrative and selling costs and the production costs, if applicable to an organisation (Ahsan 2018:7). The fixed cost is subtracted from the contribution margin, yielding an operating profit or loss (Armean & Ardeleanu 2017:74).Thus, this technique is used to either cover or recover fixed costs. Lastly, once the fixed cost are covered, the remainder is added directly to the gross profit (Josh 2004:89). The other technique of CVP is the PV ratio which is discussed below.

2.3.3.2 The P/V ratio

The P/V ratio is also known as a contribution margin ratio (Satryo, Rokhmania & Diptyana 2017:56). The P/V ratio is expressed in the form of a percentage (Kieso, Weygandt & Warfield 2014:35). This percentage denotes each available product or service that can cover fixed costs and contribute to the organisation's operating profit. This is a useful technique that management can use to decide whether to increase sales volume (Ratnasari 2003:15). For example, if the P/V ratio of a business is above 50% or more and the business is operating at less than 100% of its capacity, it will be advantageous for the business to increase its volume (Sartono 2003:77). It is important to note that this technique is based on the assumption that all other CVP factors are constant (Ahsan 2018:73B).

2.3.3.3 The break-even analysis

The break-even analysis is a technique used to identify whether selling goods or services helps a business cover its costs (both variable and fixed costs) (Khalid, Lewis & Rajiv 2011:52). The business makes no profit or loss, which means that at this point, the total cost equals the total sale revenue (McBryde-Foster 2005:31). This technique is essential for management because it highlights an important point. This vital point also represents the minimum acceptable level of services or goods that can be sold and indicates a reasonable level, which is a level that the business starts making a profit (Grewal & Levy 2011:33). Shim and Siegel (2000:23) further state that the breakeven analysis can be expressed in either units or monetary value. As one of the three selected management accounting principles called CVP has been discussed in this section, the next section focuses on the other selected management accounting principle called cost structure.

2.3.4 Cost Structure

Cost structure is one of the selected management accounting principles that this research study focuses on. In this subsection, the researcher will discuss the literature on the cost structure. According to Oberholzer and Ziemerink (2004:188), the following are methods of costs structure:

1. Cost structure by element;
2. Behaviour of costs.

2.3.4.1 Cost structure by element

According to Ebele and Nneamaka (2018:144), cost structure using elements provides business owners with information to measure sales revenue and develop a service price. The elements of cost structure in a service business are different from a manufacturing business (Jhigan 2009:13). The following are examples of cost structure by element;

a) Cost of service

Service cost is an important component used in the service industry to provide the service (Fransiska 2013:15).The cost of service in the minibus taxi industry includes the petrol cost and a monthly instalment on the purchase of a minibus taxi (Kubeka 2020).

b) Labour cost

According to Oberholzer and Ziemerink (2004:188), there are two types of labour, which are;

- Direct labour – this is a cost that is directly related to providing a service; for example, in the minibus taxi industry, a minibus taxi driver's wage (Barret 2003:19);
- Indirect labour – this is a cost that is indirectly related to providing a service; for example, the wage paid to the queue marshal (Kubeka 2020).

c) Other related costs

These are costs incurred during the operation of the business (Lal 2008:488). Lastly, other related costs in the minibus taxi industry include insurance costs, rank fees, and association fees (Moswane 2022). The next section discusses the behavior of cost, which is another method of cost structure.

2.3.4.2 Behaviour of cost

The explanation behaviour of cost given by Fransiska (2013:16) is that "behaviour of cost can be interpreted as a change in the costs incurred due to the change in business activity." Cost behaviour also refers to how costs change due to volume changes. Generally, costs are classified into three categories: variable costs, fixed costs and semi-costs. The two classifications namely variable costs and fixed costs were discussed in par. 2.3.1.1 (a) variable costs and par. 2.3.1.1 (b) fixed costs. Whereby the researcher cited Garrison, Noreen and Brewer (2006:53) who said variable costs in dependent on volume output and Kallio (2018:10) who said fixed costs are independent of volume output. As semi cost is the only classification out of the three classification that was not discussed the litterature below discusses semi cost.

Semi-cost is a mixture of variable costs and fixed costs. In other words, this means that part of the semi-cost is variable and some parts are fixed. Semi-cost is called many different names, such as semi-variable or mixed cost, semi-fixed and other names used in place of semi-cost (Kamaruddin 1996:14). An example of semi-cost in the minibus taxi industry may include drivers' wages. Lastly, if a minibus taxi driver has a fixed amount plus commission, this cost can be considered semi-cost. The selected priniciple that is yet to be discussed is budgeting and is dicussed below.

2.3.5 Budgeting

The most common vocabulary word used by all managers over the past decade is budget (John & Ngoasong 2008:9). This might have been because a budget is perhaps the most chosen action done by both the management and staff in all business sectors or a course of action (Assey 2014:7). As with the term management accounting, the term budget also has various definitions. Given in Chapter 1 (par. 1.2.1) and below are some of the definitions of budgets by various authors:

- A budget, according to Oboladze (2016:27), is a translation of strategic plans into measurable quantities that express the expected resources required and anticipated returns over a certain period;
- Oboladze and Otinashvili (2019:55) referred to a budget as a timely and measurable plan;
- A budget is a detailed plan which sets out, in money terms, the plan for income and expenditure in respect of a future period (Gulpenko et al. 2017:2).

All the above definitions of budget, together with the definitions of a budget in Chapter 1 (par. 1.2.1), are acceptable in this research study. The researcher defined a budget as a management accounting tool that plans, coordinates, communicates, evaluates, and assists in making future decisions of the organisation's monetary and non-monetary activities that occur for a specific time in the future. A specific time in the future can be yearly, half-yearly, quarterly and monthly. The next subsection discusses the origin and history of the budget.

2.3.5.1 The origin and history of the budget

Budgeting started as a management tool used to control the municipality's expenses and income in the United States of America during the late 1800s (Holtkamp, Kliebenstein, Neumann & Zimmerman 2012:29). The term budget is an English term that comes from both Latin and French (Kpedor 2014:23; Banovic 2005:6). In Latin, the term stems from the word bulga, whereas the term stems from the French term bougette. The Latin term bulga refers to a large-sized purse or leather bag. Whereas, according to Hofstede (1969:389), the French bougette can be described as a treasurer's leather case that finance ministers in countries such as Holland and Great Britain even use to present their country's annual financial plan.

The first national budget was created and transmitted to Congress in the year 1921. During the twentieth century, the term budget started to be used not solely by governments but by both legal and private organisations (Henke & Spoede 1991:55; Hofstede 1969:389). It is essential to note that when budgets were first used, they were referred to as "money bags" and later referred to as financial plans (Banovic 2005:6). There must have been reason/s of

why the budget was done thus the next subsection focuses on the reasons for and importance of budgeting.

2.3.5.2 Reasons for and importance of budgeting

People are often asked whether it is essential to set a budget both in their personal lives and business. Scholars such as Assey (2014:16) and Banovic (2005:12) agree that it is vital to perform a personal and business budget. These academics also discussed the importance of budgeting. In this subsection, the researcher discusses the literature on the importance of budgeting. The importance of budgeting according to Van Rensburg et al. (2017:244) and Drury (2021:373) includes planning, co–ordination, communication, motivation, performance evulation and control. These importance are a responsibility of a owner or someone in charge of daily duties (Schick 2002:3). Table 2.2 hereafter discusses to the importance of budgeting.

Table 2.2: Importance of budgeting

Importance of budgeting	Discussion
• Planning	Planning is an integral part of any budgeting process. It is during the planning phase, whereby both short and long-term plans are defined. As management needs to consider the organisation's future and plan for it, management should produce strategies to achieve short and long-term goals.
• Co-ordination	In an organisation, a budget serves as a coordinate that ensures that everyone works in the best interest that serves the organisation best. If it may occur that managers do not coordinate properly, the organisation will suffer and will not reach its desired goal.
• Communication	To fully have a functional organisation, there is a need for clear communication among all organisation parts. A budget does serve the purpose of communicating the strategy that will be used in the future.
• Motivation	A budget increases managers' motivation to strive their best to reach their desired set goals. Thus, a budget can serve as an instrument that has an impact on managerial performance.

Importance of budgeting	Discussion
• Performance evaluation	A budget can be used as a tool for measuring the overall performance of the organisation. Often, performance is evaluated by measuring an employee's ability to achieve a frequent target.
• Control	In many different organiations, the behaviour of workers often needs to be controlled and mostly is restricted. The behaviour of workers is a type of control that arose from the budgetary system. A budget serves as a tool for managers to facilitate their responsibilities to manage and control the organisations' activities.

Source: Van Rensburg et al. (2017:244); Drury (2021:373)

The table shows that there are importance in using budgeting in running a business for a owner. The importance of applying a budget can also be shared within the minibus taxi industry. According to Moswane (2022) minibus taxi owners especially in the start of COVID 19 have lost minibus taxis due to lack of planning. Which according to the table is one of the important aspects that a budget offers. Kubeka (2020) emphasised that the following lack of co-ordination and lack of control are two of many contributions of wars within the minibus taxi industry. As the table has also showed co-ordination and control are importance of budget. There are different types of budgets such as cash budget, capital budget, material budget and sales budget that can be used by a business owner, the subsection below discusses literature on budgets that is applicable to this research study.

2.3.5.3 Types of budget

This research study focuses on the cash budget. As this is the only budget that minibus taxi owns uses in persuit of their minibus taxi business. This is because there is much physical cash in the minibus taxi industry and little bookkeeping is done.

A cash budget is a financial budget used to manage funds within a business (Mungai 2014:14). In this budget, the focus is on cash coming into the business and cash going out. A cash budget is seen as an essential budget in small businesses. Small business owners can foresee and overcome challenges in cash flow using this budget (Lal 2008:596).

There are various definitions and explanations given for the cash budget. The Association of Chartered Certified Accountants (ACCA) (2000) defines a cash budget as a tool used by owners to see whether there will be future cash problems. CIMA (2001) explains that a cash budget consists of all estimates of income to be received and all cash costs to be paid within

a given time. This given time can be a week or month, quarter, half-yearly and yearly. Whenever a business has an estimated higher cost than income, the result will be a shortage (Dyson 2004:632). This shortage may force owners to look for cash.

Moreover, whenever a business has lower costs than income, the result will be surplus (ACCA 2000). The business shoud make an investment in using the funds whenever there is a surplus. The latter advice is also applicable o minibus taxi owners as they are running a business. In the next section of this chapter, the researcher discusses the literature on the minibus taxi industry.

2.4 INTRODUCTION TO THE LITERATURE ON THE MINIBUS TAXI INDUSTRY

This is the start of the second section of this chapter and the researcher discusses the literature on the minibus taxi industry. As this research study focuses on the minibus taxi industry, it is vital to understand the industry. The researcher first discusses South Africa's land public transport, which the minibus taxi industry forms part of.

The land public transportation system in South Africa comprises three modes of transport, namely the bus services and the rail service, which are subsidized by the South African government and the minibus taxi industry that is not subsidised by the government. Many researchers such as James (2018:37) and Moyake (2006:50) used the phrase "the minibus taxis, despised by some and loved by others" when referring to the non-subsidised taxi industry. The three modes mentioned above of land public transport in South Africa are rivals as they usually compete with one another for commuters and therefore, it can also be posited that they do not operate in an integrated way (Baloyi 2012:15). By the integrated way, the researcher supported by Moyake (2006:54) posits that the three modes of land public transport are unsegregated. The land public transport system plays an essential role in the general South Africa population's daily life and is the country's primary transport mode (South Africa (SA) Taxi 2018:11). The land public transport in South Africa has the following shortcomings not eco friendly to enivornment and not inclusive to disable persons (Jennings 2020:4). Despite the shortcomings of using public transport, most of the population uses land public transport to access their jobs, health, education and social activities (Baloyi 2012:12). The subsection bleow discusses how the latter mentione population uses land public transport.

2.4.1 Statistics on users of land public transport in South Africa

In this subsection, the researcher discusses the choice of transport in South Africa. Figure 2.3 relates to the statistics of users of transport. The choice of transport is linked to affordability and accessibility (Jennings 2020:2). The choice of public land transport ranges from the users of public land transport to users of cars, which are those individuals who own their own cars, to individuals that walk and to others accessing their jobs, health, education, and social

activities. The others include those who use bicycles to access the aforementioned areas (Baloyi 2012:12).

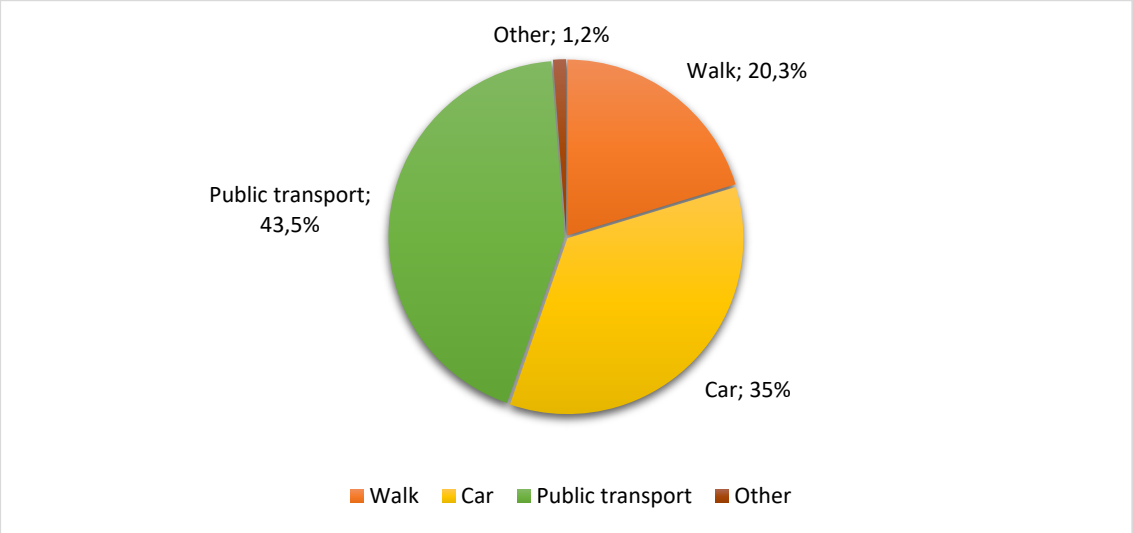

Figure 2.3: Share of transport choices in South Africa

Source: National Household Travel Survey (NHTS) 2021

The popular choice of public transport in South Africa is the public transport as shown by figure 2.3. According to Fobosi (2021:8) the majority of the population can access public transport even through its not fully inclusive. Moreover, Jennings (2020:6) emphasised that the reason land public transport in South Africa is more popular is because is less expensive compared cars and faster compared to walking and other. As the researcher outlined in the introduction of this section, land public transport is made up of three mode of transport: the train industry, the bus and coach industry, and the minibus taxi industry. Figure 2.4 relates to the choice of land public transport made up 43, 5% of the population stated in Figure 2.3. The choice made by individuals towards their choice of modes of land public transport is conditioned upon their need of usage (Theron & Ukpere 2021:4). For instace an individual cannot choice to use a train mode of land public transport to travel to area whereby there is no rail.

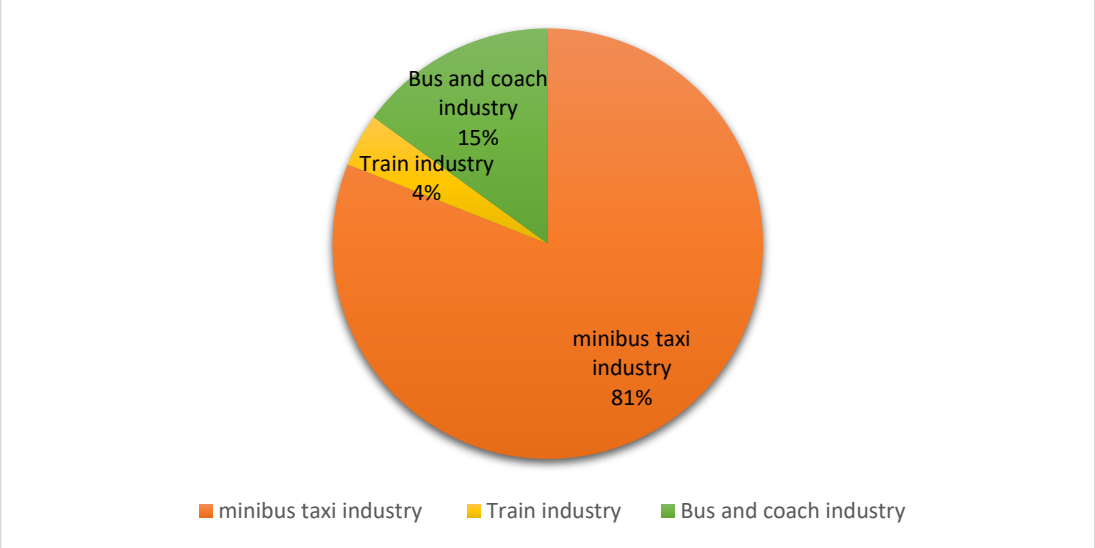

Figure 2.4: Public Transport Choices in South Africa

Source: NTHS 2021

Figure 2.3 shows that of the 43,5% of land public transport users, the minibus taxi industry accounts for 81%, which is the majority, leaving 33% to be shared among the bus and coach industries with 15% and 4% of the train industry (NHTS 2021). Moreover, according to Fobosi (2021:2), the minibus taxi industry transports more than 15 million commuters on a daily basis to work, schools and universities, to access healthcare or for leisure. The Conversation (2020) reported that there are about 200,000 minibus taxis in South Africa. Lastly, the minibus industry employs about 300,000 minibus taxi drivers and 100,000 minibus taxi marshals, and it also benefits 100,000 car washers and 150,000 vendors at minibus taxi ranks. In the subsection to follow, the minibus taxi industry is defined.

2.4.2 Defining the minibus taxi industry

When referring to the minibus taxi industry in South Africa, terms such as 'black taxi, kombi taxi' can be used (Motingwe & Brijlal 2020:846). Using a term such as black taxi is not racially driven, but it distinguishes the minibus taxi industry from the meter taxi industry (Selekane 2014:2). In this research study, the term minibus taxi will be mostly used, but the terms kombi taxi and black taxi are also accepted in cases whereby the researcher quotes someone else. Moyake (2006:52) posits the term minibus could be defined as a small bus that is typically used for both short and long-distance and it travels there with a fixed number of commuters. Baloyi (2012:15) defined the minibus taxi industry as a vehicle that operates for commercial gain and plies hire. The researcher partly disagrees with the definition given by Baloyi (2012:15) on the basis that the meter taxi, which includes meter taxis, Uber, and Bolt operates for commercial gain (Fobosi 2021:3).

Furthermore, Ngubane (2016:12) defined the minibus taxi as a passenger transport that transports the commuters for a fixed fare on a fixed route, but unlike buses and trains, this mode of transport does not operate on a timetable. The fixed routes are managed by the minibus taxi associations (Baloyi 2012:15). The National Land Transport Transition Act (22 of 2000) defines a minibus taxi as "an unscheduled public transport service that operates on a specific route or routes, or where applicable, within a particular area, utilising a motor car, minibus, or midibus." Mmadi (2013:47) outlined that there are two types of minibuses: a minibus taxi that moves around looking for commuters, and a minibus that operates from a taxi rank, also called a “lasaka” in Sesotho and “isibaya” in Zulu. When both the Zulu and Sotho terms are translated into English, they refer to the kraal (Matsemela 2020). Searching for commuters is called "floating," and the process of waiting for commuters at the rank is called "binding" (Mmadi 2013:47). In the subsection to follow the introduction of the minibus taxi industry in the world is discussed.

2.4.2.1 The introduction of the minibus taxi industry to the world

The introduction of the taxi industry in the world can be traced back to the year 1640 (Kerr 2010:284). During that time, horse-drawn transport carriages were available for hire in the United States (Bells 2020; Chen 2013:23). However, the industry did not truly originate in the United States. Rahel (2016:3) disputed the claim that the taxi industry can be traced back to the year 1640, as in the year 1605, there was a horse-drawn hackney operating as taxis in London. Furthermore, over the next 200 years from the inception of the taxi industry's first form, there was not much change. The significant change happened in 1890, when the automoblies became more prevalent gaining popularity in the United States (Taxifarefinder 2012; Seiler 2007:308). These automobiles then became direct competitors to the horse-drawn transport carriages and eventually phased them out (Mom 2003:22).

The second form of taxi that appeared in early 1899 in Paris came in the form of electric-powered taxis (Muellner 2001:38). The invention of electric-powered taxis was quickly superceded in 1907 in New York City by gas-powered taxis. These gas-powered taxis happened alongside the meter introduction to provide standard fares (Walsh 2001:2). Then, from these two inventions, the taxi industry began to flourish. The city of New York brought 600 of these French gas-powered cabs (Harrington 2003:253). Rahel (2016:3) states that these gas-powered were imported from France by Henry Allen and were the first gas-powered taxis to be found in New York City in 1907. In the subsection to follow the comparision of the minibus taxi industry of South Africa to other minibus taxi industries in the world is discussed.

2.4.2.2 Comparing the South Africa taxi industry to other taxi industries in the world

All over the world, there is a minibus taxi industry that forms part of the public transport system; some are more efficient and some are less efficient compared to the South African minibus taxi industry (Mmadi 2013:29). In most developed countries, the minibus taxi industry is much more effective and well-integrated than in South Africa, but in underdeveloped countries, the minibus taxi industry is less effective than in South Africa (Fourie 2003:31).

The minibus taxi industries are called by different names (Moyake 2006:52). This is because most of them operate differently and uniquely, but they are all shared minibus taxis. In Kenya, the minibus taxi industry is called matutus (Mccormick et al. 2012:336). In Kenya,matutus are arranged more similarly to the South African minibus taxi industry, and the term matutus means thirty cents, which was a standard charge in 1960 when it emerged (Williams et al. 2015:2: Mmadi 2013:29). In Ghana, the taxi industry is called 'trotros.' Furthermore, its operations are like those of the Kenyan matutus and the South African minibus taxi industry. The infrastructure for these taxis in Kenya and Ghana are not as good as the ones in South Africa, and the standard of vehicles used is lower than the standards in South African. Mmadi (2013:29) mentions that there are taxi ranks almost everywhere in South Africa and in Kenya and Ghana, in most areas, there are no taxi ranks.

In developing countries such as Bolivia, the taxi industry is relatively small compared to the minibus taxi industry in South Africa (Mmadi 2013:26). Gwilliam (2005:6) mentions that there are only 9 000 taxis out of 2 5000 public transport in the metropolitan area of Bolivia. In South Africa, the minibus taxi industry accounts for 67% of the overall public transport (Mmadi 2013:27). Gwilliam (2005:6) states that the Bolivian minibus taxi industry's effectiveness is much better and well-integrated than in South Africa.

In Hong Kong, Cairo, and Kuala Lumpur, they call their minibus taxi industry minibus exactly the same as us here in South Africa (Mmadi 2013:27). Furthermore, these minibuses operate as shared vehicles, but the fares are not fixed nor regulated by the government (Moyake 2006:52). According to Fourie (2003:31), the minibus taxi industry in Istanbul and the Philippines operates similarly to that of Hong Kong, Cairo and Kuala Lumpur, but is referred to as jeepneys and local associations set fares. In the subsection to follow the history of the South Africa minibus taxi industry is discussed.

2.4.2.3 History of the South Africa minibus taxi industry

In Chapter 1, the researcher briefly discussed the emergence of the South African minibus taxi industry, stating that horse carts were the first road transport available in the late 1800s (Makae 2009:31). Starkey (2002:23) argued that the story of land public road transport in South Africa started over 160 years ago. Ntuli (2015:26) added that the story started with

establishing the post carriage services offered between Simons Town and Cape Town. Starkey (2002:23) mentions the following areas in the Cape Province of South Africa that saw the land public transport industry's birth: Oueenstowns, Paarl, King Williams Town, Worcester, and Wellington. The researcher ended the section on the emergence of land public transport by describing how the need for land public transport is today after the scrapping of the Natives Resettlement Act (19 of 1954) (Moyake 2006:77). The researcher acknowledges that many events have occurred that were just briefly introduced in Chapter 1, such as the formation of South Africa's Black taxi. Therefore, in this section, the researcher will discuss these events in detail. The history of the minibus taxi industry is divided into five periods. Each period shows significant change in the minibus taxi industry.

a) Period 1: The period in the 1800s before 1920

Firstly, it is essential to note that the minibus taxi industry is a pillar of the economy of South Africa, as it is the most convenient and lucrative means of land public transport. The minibus taxi industry's birth results from the black taxi formed by the Natives Resettlement Act (19 of 1954) imposed during the apartheid regime (McCaul 1990:7). Makae (2009:31) opposed the claims of the apartheid regime and stated that the minibus taxi industry emerged as a result of industrialisation, which forced Black South Africa to move into cities from their traditional home. Sauti (2006: XIV) associated the taxi industry's birth with the need to transport black people, who had to walk long distances to and from urban and rural areas. The researcher acknowledges and agrees with the above authors' views as both the Natives Resettlement Act (19 of 1954), industrialisation and the need for black people to travel to urban areas simultaneously happened in the late 1800s

Ntuli (2015:27) mentions that there were more White owners than Black owners of hired cabs and some White owners hired Black drivers during this period. The number of Black owners grew by large numbers between 1900 and 1930 (Makae 2009:32). Ntuli (2015:29) posits that for a Black South African to afford a second-hand power engine vehicle, it took him 10-20 years of working in menial jobs. During this time, Mileham (1993:18) claimed that in 1902, racial licensing was introduced by the council, which categorised powered engine vehicles owned by Black South Africans as a second class that could not be used as a mode of transport for whites. This unlawful Natives Resettlement Act (19 of 1954) by the council was the first to administer the taxi industry. Lastly, Mileham (1993:19) further argues that the introduction and formation of the act downgraded the Black owners' permits to second class and created a racial division in the transport system. The next period is discussed below.

b) Period 2: The period after 1920 to 1955

As more Black owners started owning cabs, the taxi industry started operating differently. Most taxis started operating as shared taxis, though others operated as meter taxis. Khosa (1994:172) emphasised that the shared taxicabs operated in the same manner as today's minibus taxis. According to Baloyi (2012:13), as more Black operators emerged, there was increased competition for White operators and train and bus operators, which had become less popular due to their unreliability in time and accessibility in most Black communities.The government was then pressured by the train and bus operators to restructure its public transportation system. This saw the birth of the first South African Commission on transport, called, the Le Roux Commission, in 1929. Khosa (1994:171) posits that the findings by the Le Roux Commission indicated that it was already evident to the public that bus and train services

were less popular. In response, the first act of public transport called the Motor Carrier Transport Act (39 of 1930) was passed (Baloyi 2012:13).

This Motor Carrier Transport Act (39 of 1930) created a monopoly on transport through enormous transport regulations that stifled rivalry and competition. Khosa (2001:234) states that the act passed favoured train operators and disfavoured the bus and taxi operators. Both buses and taxis were to operate in areas where there was no rail (Molefe 2016:16). Furthermore, in these areas, where the train operator could not operate, the government empowered the Local Road Transportation Board to introduce a quota system that favours some operators issuing licensing certificates (permits). Khosa (2001:234) mentions that even though some operators received the certificate, there was a restriction on black taxis that only authorized them to carry four commuters. Even though most taxis onwned by Black South Africans abided by the rules, they were still harassed by traffic officials for petty or minor offenses (Molefe 2016:19).

Some Black operators ended up operating without the required permit. Ngubane (2016:15) blamed the complex legal restrictions placed bythe government through the Motor Carrier Transport Act (39 of 1930). This problematic legal restriction was the following document's equipment; a record of formal employment, a residential address that had many years and the daily labourers' permit (Ngubane 2016:16).

Before 1955, there were many boycotts by the shared taxi and other bus operators who were not favoured by the government to disarm this act. One particular boycott that centred and changed what became the public transport industry happened in 1955 (Ntuli 2015:25). This boycott is referred to as the bus boycott of 1955 (Moyake 2006:59). Many bus leaders and bus drivers were either arrested and placed on an extended trial or sent into exile (McCaul 1990:27). Many bus owners were forced to close their business as there was a bus burnt during the boycott (Bronkhorst 2019:17). As a result, many bus drivers lost their jobs (Mccaul 1990:27). This led to some bus drivers seeking employment from the then Black taxi operators and others who had to save enough opened their own business as black taxi operators (Moyake 2006:59). Moreover, Ntuli (2015:32) outlined that these former bus drivers who had become taxi operators knew the route very well, making the black taxi more effective and efficient. Ngubane (2016:16) states that during 1950, sedans such as Chevrolets 48's and Chryslers were seen in the Black townships. Lastly as these vehicles became more and more popular, drivers started giving them names such as 6 mabona for the Chevrolet 48's, which when directly translated means 6 eyes and Nkomoziyo Phuza which derives from IsiZulu and translates to Cattle go to drink (Woolf & Joubert 2014:99). The next period is dicussed below

c) Period 3: The period after 1955 to the period before 1977

The researcher uses the term Black taxi during this period because the industry was populated by Black South Africans. Even though the Black taxi industry was popular among the majority of South Africans during this period, the government did not make it easy for them to operate as they were always faced with police that took their money and asked them to return to their township. Moyake (2006:56) mentions that in 1955, there were 8, 560, 003 Blacks, 103, 016 Coloreds, 366, 664 Asians and Indians, and 264, 168, 9 Whites, and most Blacks were dependent on the Black taxis. During this period, the government gave subsidies to both trains and bus companies (Baloyi 2012:21). Moyake (2006:56) emphasised that even though both the train and bus and coach industries were given subsides, there were still insufficient, exclusive and incompetent ways that required most blacks to spend hours (travelling time) and up to 20% of their nominal wage or salaries. Baloyi (2012:21) blamed longer travelling time and the 20% travelling cost due to a decision taken by the government in the early 1960s, which resulted in Black people being moved away from industrial and commercial centres.

This decision to move Black people away was made to limit their access to the best job opportunities that were available then (Baloyi 2012:17). Ntuli (2015:28) emphasises that both the bus and train were inconvenient during this period. Baloyi (2012:17) states "the bus and train services were expensive and they also operated only at peak times and along set routes".

More and more Black South Africans joined the taxi industry and most were trading without permits (Ntuli 2015:26). Others would make fake permits to operate and bypass law enforcement. Sedans ended up owning the Black townships roads and the demand was increasing because they were operating even when it was not peak time (Fobosi 2021:2: Rayle 2017:41). However, it was not easy as the government imposed an illegal movement penalty on the black taxi operators (Moyake 2006:52). The late 1970s became an excellent period for the Black taxi industry, as the industry changed from being a Black taxi industry that used sedans to a kombi industry that used both sedans that loaded four commuters and minibuses that loaded up to 7 commuters (Ntuli 2015:29).

Woolf and Joubert (2014:99) states that the late 1970s did not only see the birth of the kombi industry, but there were many protests centred on political, social and economic freedom, primarily in the townships (Magubane 2003:8). Many buses were set on fire during these protests, resulting in many bus companies withdrawing their bus operations (Baloyi 2012:23). Their withdrawal was a good thing for the kombi industry operators as it resulted in new demand and market expansion (Magubane 2003:8). Many kombi operators were part of the 1976 Soweto uprising (Baloyi 2012:23). After the 1976 Soweto uprising, kombi operators planned to form an association to represent and resolve conflicts within the taxi industry.

During this time, the country's political instability was becoming too much and forming an association made matters worse for the government. Molefe (2016:19) outlinedthat the government feared that the protests would lead to "deep, sustained boycotts" and "deep politicisation" if the protests continued. To prevent and resolve public transport issues, the government appointed the Van Breda Commission of inquiry into the Road Transportation Bill in 1977 (Baloyi 2012:16). After the inquiry, the Van Breda Commission indicated that South Africa had reached a stage of industrial and economic development, enabling freer competition in the transport sector (Molefe 2016:19).

According to Baloyi (2012:16), the freer competition in the transport sector meant the government had to deregulate the Motor Carrier Transport Act (39 of 1930) and allow free trade, which would mean allowing black operators and supporting them to pursue the kombi industry in the public interest. Sekhonyane and Dugard (2004:16) argue that "the Commission's findings reflected a neo-liberal shift in economic policy that resulted in generalized deregulation, commercialization, and privatization, beginning in the late 1970's". The commission's inquiry led to a new transportation act being passed, the Road Transportation Act (77 of 1977) (Baloy 2012:23). Ntuli (2015: 30) mentions that the Road Transportation Act (77 of 1977) declared the eight-seater minibus as legal and believed to be the pillar of customer safety.

The government was not going just to open a freeway for the kombi operators. McCaul (1990:40) posits that the amended acts stated that "in terms of the Road Tranportation (77 of 1977), all public transport operators carrying commuters for gain had to acquire a public carrier's permit from the Local Road Transportation Boards". The taxi permit application was again in the Motor Carrier Transport Act (39 of 1930), and was going to be a hurdle for the black operators (Fourie 2003:34). As part of the taxi permit application, the operator had to prove that existing transport facilities were insufficient to meet the public's needs in a particular area (McCaul 1990:40). Lastly apart from the public carrier's permit, the operator also required a certificate of fitness for their vehicle, in which the operator had to have a public service driver's license and then there were further requirements specific to particular areas (Fourie 2003:34).

d) Period 4: The period after 1977 to the period before 1987

After the passing of the Road Transportation Act (77 of 1977), more black people joined the kombi industry. Diane (2002:10) states a loophole in the act that failed to define the term "taxi" but defined "bus" as a minibus allowed to carry more than nine commuters. This loophole leads to the kombi industry conveying fewer than nine commuters. Diane (2002:11) mentions that there were 12,400 taxis operating legally within the Road Transportation Act (77 of 1977).

As numbers grew during the year, limited permits were issued, leading to more illegal taxi operators. In 1978, 21 taxi operators formed an association called the SABTA (Majeke 2003:15). The SABTA started its work before officially registering. It was officially registered in 1979 but was not recognised as the national representative body for the kombi industry (Majeke 2003:15).

In 1981, the government officially recognised the SABTA as a national body that could represent the kombi industry. During this time, boycotts of both the train and bus services were increasing, and during some boycotts, kombi operators were killed, and some taxis were burnt. The kombi operators fought back. This resulted in the government's appointment of the Welgemoed Commission of Inquiry in 1981 (Fourie 2003:34). In 1982, the number of kombi operators had grown to 22,300, and most kombi operators joined the SABTA, led by Mr. James Nqcoya. There was a growth of more than 90% from 1977 (Fourie 2003:33).

Three years later, in 1983, after the appointment of the Weldgemoed Commission of Inquiry under the chairmanship of Dr. P.J. Weldgemoed, the following were recommended (Fourie 2003:34);

- Taxis should be defined as vehicles that can carry four commuters only.
- The commission had a new category which was called "small bus," which was allowed to carry five to twenty-five commuters and should operate on a fixed schedule. Routes and approved tariffs should be recreated;
- Existing kombi operators that have permits should be phased out within four years.
- All taxis should be fitted with meters.

These recommendations were not in favour of the minibus taxi industry but of the bus industry. So the SABTA rejected the recommendation. Fourie (2003:34) mentions that the SABTA rejected the private sector and the National Association of Automobile Manufacturers and rejected the recommendations. These parties pressured the government to appoint a new commission of inquiry. McCaul (1990:20) posits that the Honourable Chris Heunis, the Minister of Constitutional Development, initiated a new transport commission called the NTPS. This inquiry was supposed to produce a transport policy that would be in line with constitutional developments and national policy to rationalise the transport sector. McCaul (1990:20) favoured the NTPS over the governments' past inquiries because it brought significant changes in the transport policy of South Africa. The following are the primary recommendations considered to have brought a shift in the transport policy in South Africa (Fourie 2003:34):

- The minibus, which is a 16-seater minibus taxi, is to be allowed to operate as a taxi;

- The central government should specify the minimum number of taxis that each regional services council (RSC) should be allowed to operate;
- Taxi numbers should be quota-controlled in each RSC area, with the RSC determining the maximum number in its area.
- The quota should be based on a formula that includes considerations such as rank space and
- The applicant that wishes to operate as a taxi should no longer need to prove the need for a service while applying for a permit.

The SABTA, the National Association of Automobile Manufacturers (NAAM), and other private parties that rejected the Welgemoed recommendations were ready to accept the National Transport Planning Study's recommendation until the Competition Board proposed to deregulate the public transport industry (Mccaul 1990:50). Moyake (2006:65) posits that alongside the White Paper on Transport Policy of 1987, the Competition Board was tasked with deregulation in terms of the Transport Deregulation Act (27 of 1988) that was passed as the policy of deregulation by the government. Dugard (2001:8) credits the White Paper on Transport Policy for the legalisation for legalising the 16-seater minibus to operate as a taxi. This marked the beginning of the minibus taxi industry we see today (Moyake 2006:66). Dugard (2001:8) mentions that the implementation of the South African transport industry's deregulation process was not only "a means of strengthening the economy by giving enough Black South Africans a stake in the system to dilute the revolutionary climate."

e) Period 5: The period after 1987 to date

Almost immediately after the deregulation of the public transport industry, there was a rise in the number of permits issued by the local transport board to the minibus taxi industry operators. Diane (2002:23) indicates that from 3, 752 in 1985/86 to 16, 800 in 1986/87 and 39, 604 in 1987/88. Dugard (2001:13) outlined that it seems like the deregulation was done when the issuing of permits ceased. In early 1988, the minibus taxi industry was flooded with many new minibus taxis and problems were starting within the taxi industry (Diane 2002:22).

An influx of minibus taxis and gaining control was not easy for both the government and the minibus taxi operators (Moyake 2006:65). During this time, the fight was no longer between the bus services or the train services, but within the minibus taxi operators. The cause of these fights was the level of growth in the number of minibuses that directly impacted the high profitability return for minibus taxi operators (Diane 2002:22). This further created more problems within the taxi industry. As many minibus operators wanted to save money, they started using cheap and unsafe methods to maintain their minibus taxis, which led to a lot of unroadworthy minibuses on the road (Moyake 2006:65). The decline in profitability also leads

to taxi wars within the taxi industry (Walters 2010:4; Forrest 1997:24). Since 1987, taxi wars between members of the minibus taxi business have been a major problem. The government established the recapitalisation scheme to address challenges in the non-roadworthy minibus taxis. In the subsection to follow, a discussion on what a minibus taxi owner does is discussed.

2.3.2.4 Minibus taxi owner

Scholars used various names to refer to a minibus taxi owner. Mmadi (2013:127) referred to a minibus taxi as an operator. Baloyi (2012:12) also refers to a minibus taxi owner as an operator. Both Mmadi (2013:123) and Baloyi (2012:12) defined an operator under the National Land Transport Transition Act (22 of 2000), which defined an operator as a person or an individual carrying on the business of a public passenger road transport service. Barret (2003:9) used the term "minibus taxi owner."

A minibus taxi owner's definition or description is an individual who owns one or more minibus taxis and employs one or more minibus taxi drivers. Also, an individual that owns a taxi and drives it themselves is referred to as an owner-driver but is also included in the description of a minibus taxi owner (Barret 2003:9). Minibus taxi drivers are famously known for their violent ways of resolving problems and not abiding by laws. These violent ways are popularly associated with the Zulu term Inkabi, which refers to a hitman when translated into English (Van Holdt 2014:130). The subsection discusses literature on how to become a minibus taxi owner.

a) Becoming a minibus taxi owner

According to Moyake (2006:117), many people believe becoming a minibus taxi owner is tricky, but it is actually very easy. An individual just needs to buy a minibus taxi and join whichever taxi rank he or she wishes. The just outlined above statement is incorrect and untrue because to become a minibus taxi owner, a potential minibus taxi owner does not just buy a minibus taxi and join whichever rank or association that individual wishes. According to Mphahlele (2019), the requirements for becoming a minibus taxi owner differ from association to association. The general requirement is as follows: first, to buy a minibus taxi, an individual needs a letter from the association; then the individual can be approved to buy a minibus taxi.

The potential minibus taxi owner needs to apply for and buy a permit (which will be discussed in detail). Lastly, once the permit is granted, the potential minibus taxi owner can use the route and the rank as per the permit. Moyake (2006:117) also mentions that minibus taxi owners are not restricted to having a limited number of minibus taxis. This is not true, as many associations have restrictions regarding the number of taxis an individual can have (Mphahlele 2019). Supporting the latter statement, Maqubela (2018) gave a practical example from the GATA policy on the restriction of four minibus taxis per minibus owner. Figure 2.5 hereafter is

related to the steps one should take to become a minibus taxi owner. Though the steps are not as easy as the figure outlines, this is becoming the minibus taxi industry is operated by individuals who love to operate the minibus taxi industry using voilence (Kubeka 2020).

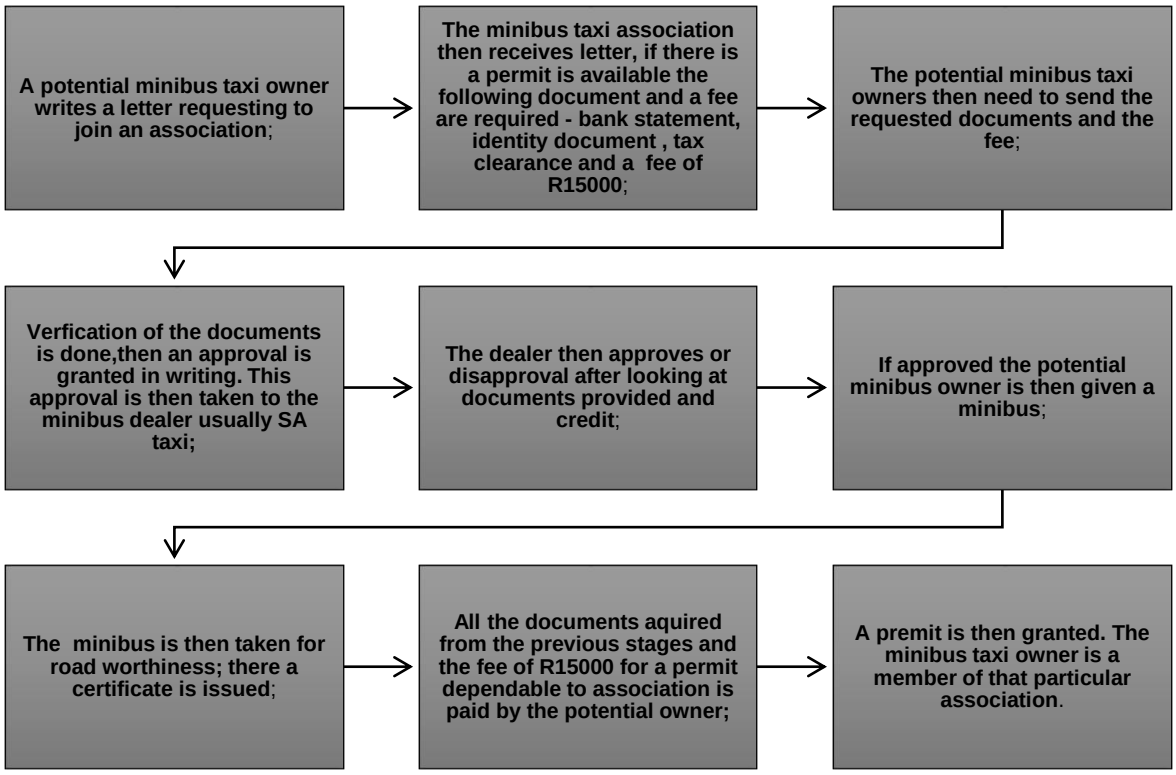

Figure 2.5: Steps of becoming a minibus taxi driver

Source: Maqubela (2018)

Figure 2.5 shows the steps an individual can take to become a minibus taxi driver in South Africa. As with all industries in the world, there are shortcuts. The researcher acknowledges that some individuals can bypass the system by illegally passing steps such as the safety license, thus also supporting the latter statement given by Kubeka (2020) that the minibus taxi industry is run by volience individuals. Maqubela (2018) states that "money has corrupted the minibus taxi industry." It is no longer about transporting people but about making money. "The subsection to follow discusses problems in the minibus taxi industry that are caused by these violent individuals.

b) Problems of the minibus taxi industry

The minibus taxi industry is characterised by ongoing problems and violence. These ongoing problems within the minibus taxi industry are happening in the Emfuleni Local Municipality and

the rest of South Africa and are not new (Fobosi 2021:4). Scholars such as Barret (2003:14) and Baloyi (2012:58) have long outlined the evident problems of the minibus taxi industry, which this research study will be unpacking in Figure 2.6. Using a diagrammatical format, the researcher presents the problems within the minibus taxi industry. These problems in the minibus taxi industry are interlinked and have been ongoing since the minibus taxi industry became over-flooded in 1988 (Diane 2002:22).

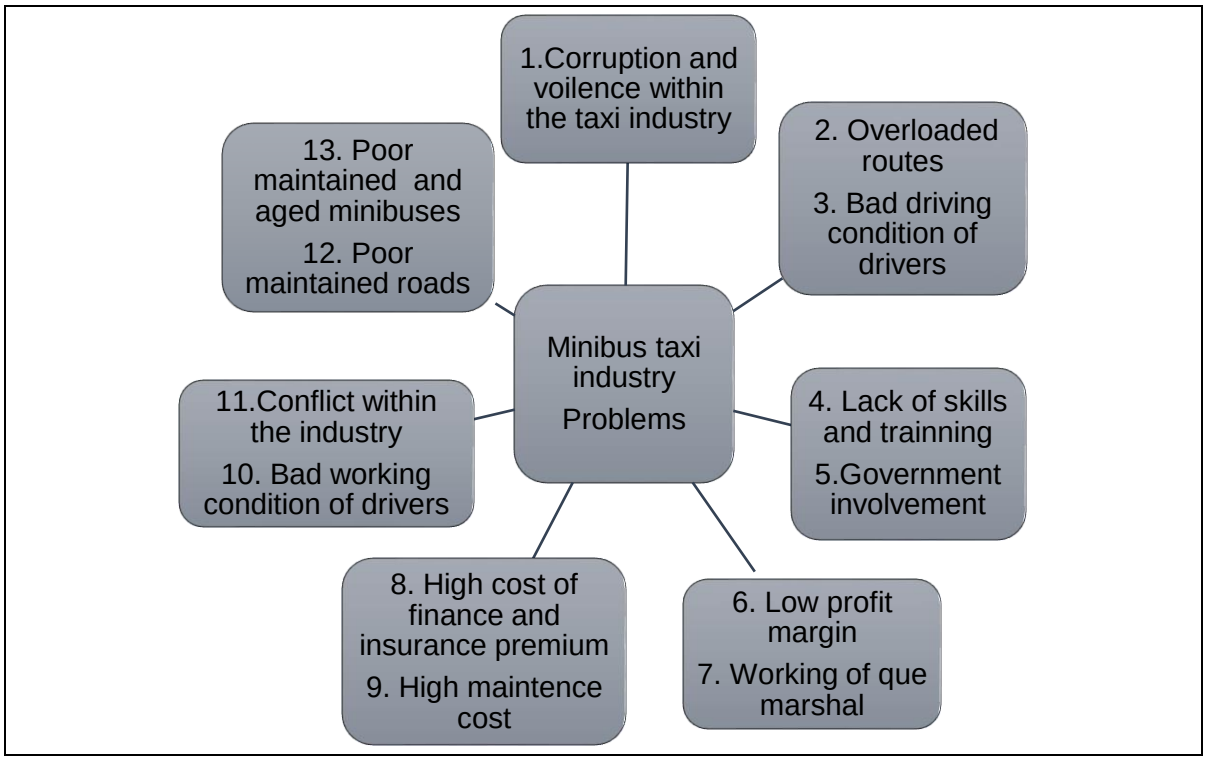

Figure 2.6: The problems within the South African minibus taxi industry

Source: Barret (2003:14); Baloyi (2012:58) and Von Holt (2014:130).

It is important to mention that all the problems within the minibus taxi industry started after 1987 when the government decided to deregulate the minibus taxi industry. Then-president of SABTA, Mr. James Ncoya, argued against the decision taken by the government to deregulate the minibus taxi industry. He remarked: "We cannot allow the ranks to be flooded with people overnight - there would be chaos" (Barret 2003:9). Mmadi (2013:56) mentions that intense competition has led to violence within the industry. Fourie (2003:58) notes that a low profitability margin was caused by the overflow of the operator after deregulation. Moreover, Barret (2003:9) mentions that minibus taxi drivers are paid using a commission system by minibus taxi owners, and that this forces them to drive recklessly (at high speed) and also results in pilfering. Pilfering occurs when a minibus taxi driver puts money aside for himself or herself that was supposed to go to the minibus taxi owner. It is common practice, and even minibus taxi associations and their mother bodies are aware of it. It is known as lekousa, a

Setswana term. In figure 2.6, the researcher mentions that there is violence within the industry, thus the next paragraph explains how voilence occurs within the minibus taxi industry.

Mmadi (2013:55) used the term "sekero," which is another cause of conflict within the taxi industry. Sekero is Setswana and refers to an instance where a minibus taxi driver illegally cut off another minibus taxi driver to do a pick-up. It can occur in both minibuses from the same association as well as minibuses from different associations (Mmadi 2013:56). Lastly, it is the same government that encourages taxi operators to form a taxi association, which further creates problems of control within the industry (Fourie 2003:58). The section to follow will summarise the chapter.

2.5 CHAPTER SUMMARY

The main objective of this chapter was to address the sub-theoretical objectives 1 to 3 as discussed in Chapter 1, Section 1.4.2.2.

This chapter is divided into two sections. In the first section, the researchers covered literature on management accounting, a branch of accounting that this research study focuses on, and in the second section, the chapter focused on the minibus taxi industry.

The first section commenced by discussing the origin of accounting. It was found that other authors besides Lucio Pacilio wrote on the double-entry system. Accounting is frequently viewed or discussed through the lens of one seminal viewpoint, which is that of Lucio Pacilio. The discussion of the history of accounting and its authors was followed by the definition of accounting, which also identified the branches of accounting, namely, cost accounting, management accounting, and financial accounting. Each branch of accounting has its own function. For instance, management accounting has the following functions: planning and decision-making. The selected management accounting principles that this research study is looking into were also talked about in the first section. However, before talking about the selected management accounting principles, the researcher talked about management accounting.

Management accounting is defined as an essential part of accounting that is concerned with distinguishing, displaying, and deciphering information used for defining strategy, as well as planning and controlling activities, decision making, cost management, and assurance. CVP is an analysis based on a balance point that connects the price of services or goods, output volume, variable cost per unit, and fixed overheads. A cost structure refers to the various types of costs incurred by an organisation. These expenses are incurred either on a daily or monthly basis. Finally, budgeting is an essential part of the planning process because it forces management to consider future possibilities, anticipate opportunities or restructuring, and

identify threats. This was then followed by the discussion of the minibus taxi industry in the second section of the chapter.

The minibus taxi industry is the most used mode of road public transport in South Africa. It transports more than 15 million people with over 250 000 minibuses and counting on a daily basis. As the industry is unsubsidized, it is facing ongoing problems that are often associated with violence. However, the ongoing problems of this industry did not begin today. They have existed since 1987. In the chapter to follow, the researcher discusses the research methodology that was adopted in formulating this research study.

CHAPTER 3:
RESEARCH METHODOLOGY

"The power of statistics and the clean lines of quantitative research appealed to me, but I fell in love with the richness and depth of qualitative research." - Brené Brown

3.1 INTRODUCTION

This chapter discusses and describes the research methodology used to address both the research objectives and the research question provided in Chapter 1. Neuman (2011:8) pointed out that all scientific research should be collected and conducted using a relevant methodology. When defining a research methodology, Leedy and Ormrod (2013:160) posit that a research methodology is a systematic investigation that allows both the extraction of new knowledge and the validation of old existing knowledge. Neuman (2011:8) agreed with this definition of a research methodology and further added that these extractions could be used to solve both human and natural problems. When choosing a research method, it must be applicable to the research and related to it (Leed & Ormrod 2013:165). This is to make sure that valid and reliable knowledge is gained or made.

The sections presented in this chapter also demonstrate and include the research paradigm used in this research study and justify the selection of methodology, the research design, data collection and instrument, reliability of the measuring device, validity in assessing the measuring instrument and data procedures and analysis. Lastly, other sections included in this chapter are information on the pilot study, data source, population, sampling, ethical considerations, and limitations.

3.2 RESEARCH METHODOLOGY

In this research study, the researcher adopted the research sphere proposed by Saunders et al. (2015:126). The research sphere covers the stages that are followed when conducting a research study. Zukauskas, Vveinhardt and Andriukaitien (2018:66) posit that the research sphere gives an effective progression in which research methodology can be followed. Figure 3.1 hereafter presents the research sphere. Then, the researcher will discuss what the research sphere entails. The research sphere is commonly known as the research onion (Sahay 2019:2). This is because the research sphere peels like an onion (Melnikovas 2018:30). Peeling away the philosophical and choice layers leads the researcher to the next layer of the research sphere.

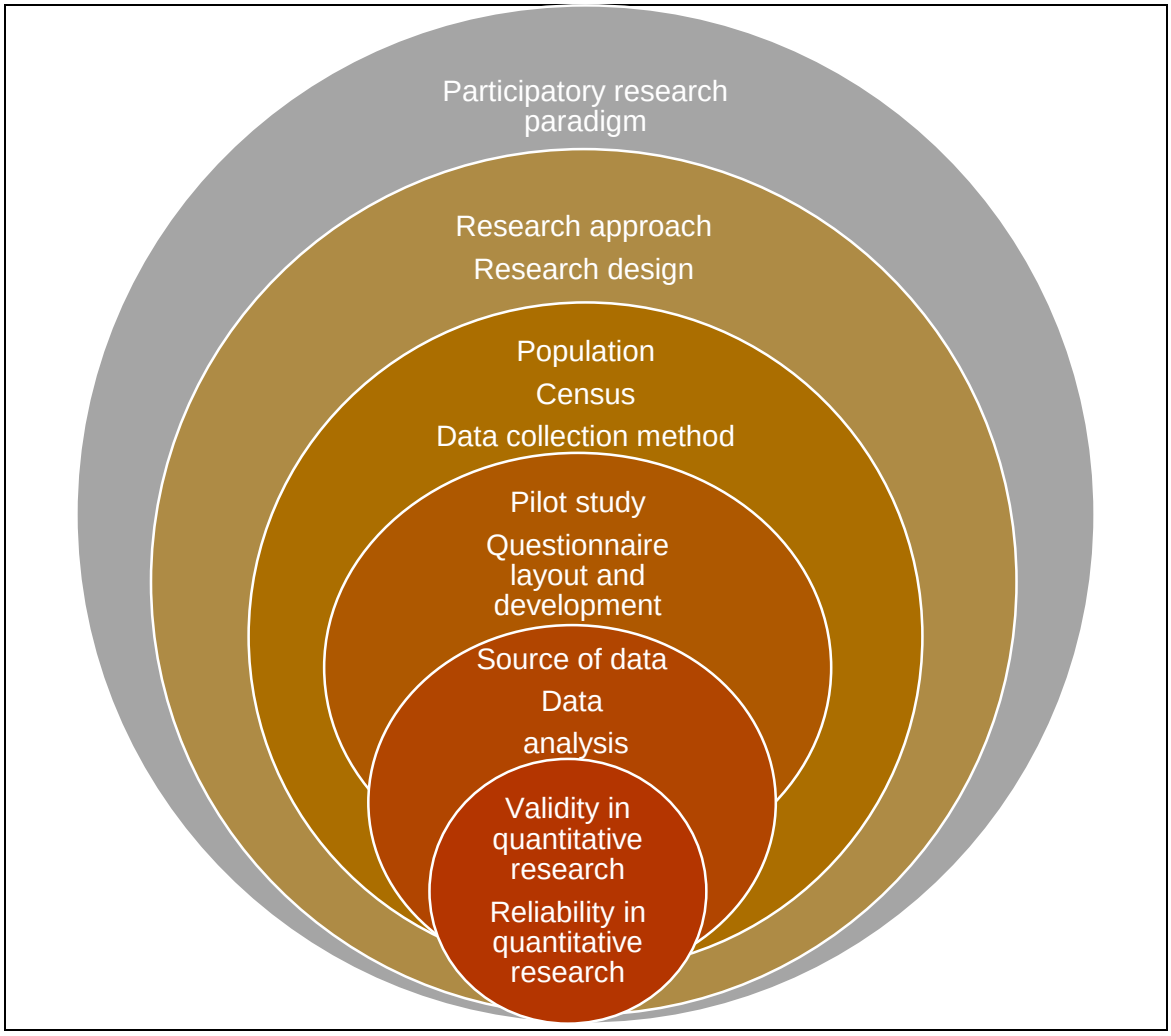

Figure 3.1: The research sphere

Source: Saunders Lewis and Thornhill (2009:108)

Figure 3.1 shows the research sphere that this research study adapted from Saunders et al. (2015:126). The researcher chose this sphere because, from the outside, each layer of the sphere represents a stage of the research study. The researcher will give more details on these stages as the chapter progresses. The chapter is set out in accordance with the layers identified in Figure 3.1. The first layer to be peeled in the research sphere is the participatory research paradigm.

3.2.1 Participatory research paradigm

Kuhn (1996:11) and Cole, Jill, and Lloyd Jones (2013:4) referred to a paradigm as a worldview and further defined it as a set of beliefs, generalizations, and values that a community of specialists has. (McCarthy 2015:11) and Barkera and Nancarrow (1998:32) added that a paradigm is used to establish or define boundaries and give directions to the undertaken research study. It was also pointed out that a paradigm relates to the philosophical view (Terr Blanche, Durrheim & Painter 2006:33; Lindsley, Erin & Karen 2019:5).

Collis and Hussey (2013:34) not only say that the paradigm relates to philosophy, but it is a philosophy of how knowledge is created and developed. According to Cohen, Manion, and Morrison (2006:159), every research process should consist of or involve a philosophical retrospection degree. This process requires the researcher to choose and select an underpinning philosophy. Cohen, Manion, and Morrison (2006:159) further added that all research studies have a philosophical assumption that shapes the research processes and conducts the paradigm inquiry. Collis and Hussey (2013:34) further pointed out that not only the philosophical assumption but also the philosophical foundations are present. In choosing a philosophy or a paradigm, McMillian and Schumacher (2010:4) suggested that the following questions should be asked:

- What kinds of questions are supposed to be asked?
- What can be observed and investigated?
- How can data be collected?
- How can the findings be interpreted?

Before stating the paradigm used in this research study, the central research paradigms that dominate contemporary research are tabled in Table 3.1. This is done to give a clear view of why the specific research study paradigm was chosen. The four main paradigms in contemporary research are post-positivism, participatory, pragmatism, and constructivism (McMillian & Schumacher 2011:4). The four above-outlined paradigms have the following common elements: axiology, epistemology, methodology, ontology and rhetoric. The outlined elements have different stances. Axiology, methodology and rhetoric are regarded as the central fundamental values used to guide the research paradigms (Wahyuni 2012:70). On the other hand, according to Saunders Lewis and Thornhill (2009:119), epistemology and ontology are identified as the primary sets of elements that differentiate the paradigms. In Table 3.1 hereafter, the researcher has summarised the paradigms and their implications. The table was adopted from Creswell and Clark (2011:42). The following are the paradigms that the table focused on: post-positivism, participatory, pragmatism, and constructivism.

Table 3.1: Paradigm elements and the implications

Paradigm	Post–positivism	Participatory	Pragmatism	Constructivism
Methodology (What is the process of research?)	Deductive (e.g., researchers test prior theories)	Inductive (e.g., researcher start with respondents views and build "up" to patterns theories and generalisation)	Pragmantism (e.g., researchers involve respondents in all stages of research and engage in a cyclical review of results)	Combining (e.g., researchers collect both quantitative and qualitative data and mix them)
Ontology (What is nature of reality)	Singular reality	Multiple realities (e.g., researchers provide quotes to illustrate different perspectives)	Political reality (e.g., findings are negotiated with respondents)	Singular and multiple (e.g., researchers test hypothesis and various perspectives)
Epistemology (What is the relationship between the researcher and that what is being researched?)	Distance and impartially (e.g., researchers objectivity collect data on instruments)	Closeness (e.g., researchers visit respondents at their sites to collect data)	Collaboration (e.g., researchers actively involve respondents are collaborators)	Practically (e.g., researchers collect data by "what works" to address research question)
Axiology (What is the role of values?)	Unbiased (e.g., the researcher uses checks to eliminate bias	Biased (e.g., researcher actively take biases and interpretations)	Negotiated (e.g., Researchers mediate their biases with respondents)	Multiple stances (e.g., researchers includes both biased and unbiased perspectives)
Rhetoric (What is the language of research?)	Formal style (e.g., researchers use agreed-variables)	Informal style (e.g., researchers write in a casual literacy style)	Advocacy and change (e.g., researchers use language that will help bring about change and advocate for participates	Formal or informal (e.g., researchers may employ both formal and casual styles of writing.

Source: Creswell and Clark (2011:42)

Drawing from Table 3.1, there are several research paradigms that may be considered depending on the processes followed. Concerning the process in this research study, the researcher opted for an inductive methodology approach rather than the deductive methodology approach. The reason being that there is no previous theory to test as there is no previous research study done on the selected management accounting principles in the

South African minibus taxi industry. In this research study, an inductive method was used, so a participatory paradigm was used.

According to Howell (2013:34), the participatory paradigm allows understanding of people's perspectives as it is based on social reality and tries to find a real solution to an original problem to ensure desirable change. It is posited that researchers who follow a participatory paradigm believe that there are multiple realities as people have different perspectives (Uyangoda 2015:15). Baum, MacDougall, and Smith (2006:856) further opine that participatory researchers believe that surroundings influence external realities and are self-reflective. Thus, there are different illustrations.

Table 3.1 shows that the participatory researcher's epistemology with the respondents is close and that the rhetorical style of language used is informal. The latter is related to this research study as the researcher's relationship with the respondents is close and, prior to the collection of data, the researcher visited the minibus taxi associations on a regular basis. This research study followed a more informal style of writing, which is simple to understand.Bertram and Christiansen (2014:22) also posit that participatory researchers believe there are external realities where patterns can be identified that are influenced by the world around which these patterns revolve. Philips and Christian (2000:101) further posit that participatory researchers believe that a tangible social reality exists in which certain phenomena occur. Therefore, when investigating this phenomenon, the researcher needs to remain unbiased when collecting and interpreting data. In the last subsection, the researcher justifies the paradigm chosen in this research study.

3.2.1.1 Justification of the participatory paradigm

The reason for selecting this paradigm is that the participatory paradigm assumes that research should be focused in a direction to obtain an objective understanding of a phenomenon in the context in which it occurs (De Vos et al. 2011:6). When the researcher related this to this research study, a participatory paradigm applied an understanding of the selected management accounting principles in the minibus taxi industry in the Emfuleni Local Municipality. Information is acquired through the gathering of facts.

As other researchers such as Mwaanga and Adeosun (2016:2) and Scotland (2012:10) noted, participatory researchers use either quantitative research methods or qualitative research methods, so the researcher applied a quantitative methodology to collect data. Du Plooy-Cilliers, Davis and Bezuidenhout (2014:24) posit that these results could be processed using a statistical technique to maintain objectivity related to quantitative research methodology. This was what the researcher did in the collecting and processing of data. In this research

study, the researcher interacted with minibus taxi owners to understand their social setting. This was in line with the view of post-positivists, who advocate studying respondents in their social background (Crowther and Lancaster 2008:139). The next layer of the research sphere to be peeled off contains the research approach.

3.2.2 Research approach

Parahoo (2008:275) stated that to meet the research study's objectives, the researcher must select the most appropriate approach or method. According to Du Plooy-Cilliers et al. (2014:14), there are three main types of research approaches: qualitative, quantitative, and mixed methodology. Therefore, for this research study, the researcher used a quantitative research methodology. In Chapter 1, the researcher briefly introduces what a quantitative research methodology is. In this section, the researcher explains what quantitative research methodology is and how it was used in the research study.

In defining a quantitative research methodology, Grover (2015:7) said that it is an approach that seeks to either quantify data or apply some form of statistical analysis. Creswell (2014:304) agreed that a quantitative research methodology quantifies and further added that it is a gathering of information that focuses on describing a phenomenon (objects and relationships) across a larger number of respondents. This is done by providing the possibility of summarising characteristics across groups or associations, and further emphasising objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques (Rowe 2014:55; Reason & Bradbury 2001:12).

In its abstract meaning, Hennik, Hutter, and Bailey (2011:9) posit that a quantitative methodology is conducted in a field or natural setting and mainly analysed statistically. Grove, Burns and Gray (2013:23) agree that quantitative research methodology is demonstrated in the natural environment and that data obtained can generalise information related to a larger population. Lastly, in this way, a quantitative research approach helped the researcher get details on the application of management accounting principles by minibus taxi owners in the Emfuleni Local Municipality. In the subsection to follow, a further justification of the chosen research approach is given.

3.2.2.1 Justification of the research approach

A quantitative research approach was chosen because it is explorative in nature and has a survey data collection method. The researcher will discuss how it was used later in this chapter. According to Cooper and Schindler (2003:23), exploratory research is characterised by its flexibility. According to Creswell (2014:6), this flexibility characteristic is when a research

problem is broad and not explicitly defined, and therefore the researcher uses exploratory research as a beginning step. This first step also helps to gain a better understanding of the research approach (Cooper & Schindler 2003:23). Creswell (2014:6) notes that exploratory studies are a valuable means of understanding what is happening; seeking new insights; asking questions; and assessing phenomena in a new light.

Choosing a quantitative approach in exploratory research is rare. Cooper and Schindler (2003:23) posit that exploratory research is typically qualitative. Qualitative research is often seen as interpretive research, as it holds the intention of building an understanding rather than proving a theory (Kelly 2009:288). This is true concerning this research study, as it intends to understand how minibus taxi owners apply the selected management accounting principle. According to Cooper and Schindler (2003:23), qualitative research can provide the researcher with rich and useful data as it requires a high level of involvement from the researcher. This is also true, as minibus taxi owners do not have management accounting concepts such as CVP, cost structure, and budgeting. A qualitative researcher may use a personal interview as a research instrument and emphasise words and actions (Cooper & Schindler 2003:28). This is not true concerning the researcher's approach in the research study, as there were no personal interviews conducted or a particular focus placed on words and action. Thus, this research study is not a qualitative or mixed methodology.

This research study followed a quantitative research methodology, as it made sense and used numerical statistical data from the responses of minibus taxi owners. This is in line with Swift and Piff (2010:256), who posit that quantitative researchers use numerical data to generate findings and generalise findings. Leedy and Ormond (2013:26) also argue that quantitative research allows a large scale of data collection and analysis. In this study, this is true because the researcher got information from the whole population.

Creswell (2014:304) states that a quantitative study is conducted in a natural setting with broad problems that cannot be defined as there are no definite answers. This is true as the South African minibus taxi industry has broad problems that are not definite. That is why, in 2020, Minister of Transport Fikile Mbalula called for a taxi indaba to explore the problems that the industry faces. This is not the first; even in 1996, the then Minister Mac Maharaj appointed the NTTT to investigate the issues that this industry faced. In conclusion, as outlined above, quantitative research uses a questionnaire. The researcher gained new insights through the data collected with an online questionnaire and printed questionnaire. Lastly, these insights will be shared and analysed in Chapter 4 of this research study. In the next section, we'll talk about the research design, which, like the research approach, is part of the second layer of the research sphere.

3.2.3 Research design

In research, research design is frequently confused with research methodology, and the terms are often used interchangeably (Sileyew 2019:18). This is because the two terms are interconnected but are not the same (Fraenkel & Warren 2002:25). Table 3.2 hereafter focuses on the difference between research design and research methodology. The differences were outlined by Jowah (2014:74). The comparison is based on how each term functions and what each term focuses on.

Table 3.2: Differences between research design and research methodology

Research design	Research methodology
Strategic master plan	Operational plan
Focuses on the walk to be walked	Focus on how the walk was done
Focuses on what will be obtained	Focuses on the tools used for the results
Guided by either research question or problem	Guided by work packages and tasks
Emphasis on the rationally of the study	Emphasises the process and procedures
Emphasises what should be done	Emphasis on how it should be done

Source: Jowah (2014:74)

Research design and research methodology are the two most confused terms (research design and research methodology) in research, which are often used interchangeably due to their close interconnections. Concerning this research study, the researcher did not use both words (research design and research methodology) as interchangeable. The research design is the blueprint that outlines the research study's structure and is often mostly used for important decisions that the researcher needs to make (Saunders et al. 2015:28; Babbie 2010:19). According to Wong (1999:12), a research design outlines the primary approach that researchers use to answer their research questions. In Chapter 1 (Section 1.3.1), the researcher developed the following research question that guided the research design:

Do minibus taxi owners located in the Emfuleni Local Municipality use the following selected management accounting principles: CVP, cost structure, and budgeting as part of running their business?

The research design outlines the logical procedure initiated by both the research questions and the problem (Saunders et al. 2015:26). The research design involves a rational framework

for moving from one point to the other. Marshall and Rossman (2015:26) point out that a research strategy is a logical plan that outlines the research population, the researcher's role, the research site, data collection instruments, data analysis, and research management. When clearly expressed, the research design helps to ensure the accuracy and validity of the study. Experiments, surveys, case studies, action research, grounded theory, ethnography, and archival research are all part of the research design, according to Saunders et al. (2015:26).

The quantitative research design employed for this research was a cross-sectional survey design, and self-administered questionnaires were used to collect data (Marshall & Rossman 2015:43). In a cross-sectional survey design, the investigator measures the research outcome at a single point in time to obtain data that may be generalised towards the broader population. A cross-sectional design aims to collect timeous, reliable data that makes it possible to generate robust conclusions and create a new understanding of the topic being investigated (Zangirolami-Raimundo, De Oliveira, Echeimberg & Leone 2018:356). In the next section, the researcher discusses the population.

3.2.4 Population

The third layer of the research sphere relates to the population. The population is also referred to as the target population (Lincoln, Lynham & Guba 2011:67). A population is an entire group of people or entities (Cilliers, Davis & Bezuidenhout 2014:58). When defining a population, Goddard and Melville (2001:34) posit that a population is a group that is the subject of specific research interests or criteria. Moreover, according to Cilliers et al. (2014:58), this is a group for which information is required.

The population of this research study is minibus taxi owners of five minibus taxi associations operating within the Emfuleni Local Municipality. According to the Member of Municipality Councillor of Sedibeng district, James Dlangamandla (2019), the Emfuleni Local Municipality is a Category B municipality that does not have a department with roles and functions infrastructure linked with the minibus taxi industry. The Member of the Municipality Councillor posits that the functions and roles of land public transport in the municipality fall within the district and, according to the district database, there are sixteen minibus taxi associations (Dlangamandla 2019). In an interview with the regional chairperson of the SANTACO, there are five minibus taxi associations operating within the boundaries of the Emfuleni Local Municipality. These statistics were further supported by Maqubela (2018), the sectary general of the Top Six Vaal, an affiliate of NTA, who named all the minibus taxi associations and where they operate in Table 3.3 below. The Sedibeng District is a district situated on the southern tip of the Gauteng Province and strategically located on the border of three other provinces,

namely Free State, North West and Mpumalanga (Sedibeng District Municipality 2010:12; Retief & Du Plessis 2008:11). The district is the only area in the province that is situated on the banks of the Vaal River and Vaal Dam, covering the area formerly known as the Vaal Triangle (Palmer 2011:24). The district is a stone's throw from Johannesburg along the scenic Vaal, Klip, and Suikerbos Rivers (Sedibeng District Municipality 2010:12). It is comprised of the Emfuleni Local Municipality, Lesedi Local Municipality, and Midvaal Local Municipality and includes the historic townships of Evaton, Sebokeng, Boipatong, Bophelong, Sharpeville, and Ratanda, which have a rich political history and heritage (Sedibeng District Municipality 2009:14; Lesedi Local Municipality 2008:3).

Table 3.3: Minibus taxi associations in the Sedibeng region

Name of minibus taxi association	Operation
1. CCTA	Emfuleni Local Municipality
2. Ennerdale Taxi Association	Midvaal Local Municipality
3. Evaton West Taxi Association	Midvaal Municipality
4. Faraday Taxi Association (De Deur)	Sedibeng District
5. Federated Taxi Association	Sedibeng District
6. GATA	Emfuleni Local Municipality
7. Meyerton Taxi Association	Midvaal District
8. Morning Star Taxi Association	Lesedi Local Municipality
9. Orange Farm Taxi Association	Midvaal Municipality
10. SVVTA	Emfuleni Local Municipality
11. Vaal Inter Taxi Association	Midvaal Municipality
12. Vaal Maputo Taxi Association	Lesidi Local Municipality
13. Vaal West Taxi Association	Lesedi Municipality
14. Vaalwitwaterand Taxi Association	Midvaal Local Municipality
15. VNTA	Emfuleni Local Municipality
16. VTA	Emfuleni Local Muncipality

Source: Maqubela (2018).

Table 3.3 hereafter shows the different minibus taxi associations and in which municipality in Sedibeng district they operate. As it can be drawn from the table, five associations are operating in Emfuleni Local Municipality, namely CCTA, GATA, SVVTA, VNTA, and VTA. This research study's population is all minibus taxi owners from the five minibus taxi associations in the Emfuleni Local Municipality. In other words, this research study used a census, which will be explained in the section to follow.

3.2.5 Census

Sharing, the third layer of the research sphere is the census. According to Dworsky and Piliavin (2000:194), a census is the complete enumeration of a population or groups at a point in time with respect to the following well-defined characteristics: for example, population, production, and traffic on particular roads. Moreover, according to Berry (2007:167), the main objective of the census is to provide information on the population and its characteristics. A census is used in instances whereby the researcher uses the whole population.

In relation to this research study, the researcher selected the whole population. In other words, the researcher used a census and the census size of this research study is the 500 minibus taxi owners identified in the population.

The census was selected in line with Leedy and Ormrod's guidelines (2010:221). These authors suggested that all subjects should be included in the analysis units if the population is less than or equal to 500. This is also in line with Baloyi (2012:12), whose sample size was 410 minibus taxi operators, which was the entire population. The saturation point of this research study was 100%. In other words, all 500 minibus taxi owners responded to the questionnaire. But out of the 500 questionnaires given to the respondents, only 422 were fully completed and used for analysis in the chapter to follow.

The researcher visited the five minibus taxi associations to identify the number of minibus taxi owners. The researcher shows the number of minibus taxi owners that each of the five minibus taxi associations operating in the Emfuleni Local Municipality has.

Table 3.4: Census of the study

Name of association	Number of owners
CCTA	112 minibus taxi owners
GATA	61 minibus taxi owners
SVVTA	127 minibus taxi owners
VNTA	150 minibus taxi owners
VTA	50 minibus taxi owners
Total	500 minibus taxi owners

Source: Own

As it can be drawn from Table 3.4, the total number of minibus taxi owners operating in the Emfuleni Local Municipality is 500. In other words, the surveyed census of this research study consists of 500 minibus taxi owners. This census is not fixed as minibus taxi owners may at any time decide to discontinue their minibus taxi business or there might also be new minibus

taxi owners. The section to follow discusses the data collection method, which shares the third layer of the research sphere with the population and census.

3.2.6 Data collection method

The data collection method is based on the research design. According to Maree (2010:215), data collection can be defined as the process of gathering and measuring information on variables of interest. Lacey (2010:333) agreed with the given definition that data collection is a process and further adds that the data collection tool should be objective and repeatable. To test hypotheses and answer the research question, data collection should be established systematically (Maree 2010:215).The researcher emphasised that this research study follows a quantitative research approach. According to Lacey (2010:333), quantitative data is collected to either describe or classify the attributes, behaviors, and activities.

According to Robson (2007:175), researchers should use the simplest method of data collection to get answers to research questions, and the data should not contain any more data than necessary. According to Saunders Lewis and Thornhill (2016:194), data collection instruments are to be identified, developed, and used to collect relevant and reliable data. Several data collection tools may be considered, such as interviews, questionnaires, observations, focus-group interviews, content analysis, concept analysis, and bibliometric analysis, to name a few (Ngulube 2015:127).

Questionnaires are the most commonly used data collection tool in the quantitative approach, which focuses on obtaining statistical information to understand a natural setting phenomenon (Young 2016:166; Bryman 2004:79). A questionnaire was used for this research study. Furthermore, a questionnaire is a list of written questions to which the respondents provide the answers (Fife-Schaw 2006:222). Bertram and Christiansen (2014:73) support the definition given by the previous author and also mention that a questionnaire is a list of questions that the respondents answer.

Groves et al. (2009:118) add that the advantages of using a questionnaire are that it can be used to collect data from a large number of people and it is easy to generalise. This is because people are more willing to tick boxes than write or type out long answers (Bertram & Christiansen 2014:75). A further advantage is also given by Harkness et al. (2010) of using a research questionnaire because it can be administered to a large number of respondents within a short period. There is no wrong or right response in the questionnaire (Bertram & Christiansen 2014:73). Robson (2007:188) also posits that responses in a questionnaire are easier to code for statistical analyses.

In this research study, a questionnaire was developed based on the research question and the research objectives set in Chapter 1 (Section 1.3.1 and 1.4). Bertram and Christiansen (2014:73) indicate that a questionnaire can contain either closed-ended questions, which require respondents to select their answers/responses from given options, or open-ended questions, to which respondents write their answers independently.

The researcher used a questionnaire that consisted of closed-ended questions, and some questions were gridded using a Likert scale. There are various salient reasons for using the Likert scales (Van der Merwe, Malan & Willemse 2015:735). Academics such as Radebe and Dhurup (2015:715) and Young (2016:168) stated that Likert scales establish whether the theory used to inform the research context holds. In contrast, Van der Merwe and Malan & Willems (2015:735) posit that using a Likert scale is descriptive of the situation, which is very relevant to this study that seeks information on minibus taxi owners. In the subsection to follow, the researcher further explains the data collection method used.

3.2.6.1 Primary collection of data

The researcher will discuss how the collection of data was done in this research study. As outlined above, this research study used an online questionnaire, which is one of the several data collection methods used in research studies that follow a quantitative research methodology. An online questionnaire and a printed questionnaire were used to collect data. The online questionnaire was created on Google docs, which enabled the researcher to share a link with minibus taxi owners who own smartphones and the census through Whatsapp, email, and messages. And for minibus taxi owners who do not own smartphones, the researcher offered a hardcopy questionnaire, which contained the same content as the online questionnaire. To ensure validity and reliability, the collection of data was done in groups, whereby the researcher explained each question on the questionnaire to 20 minibus taxi owners at a time. This was done at Vereeniging, Vanderbijlpark and Sharpeville. In abiding by the coronavirus pandemic regulations, the researcher only allowed 20 minibus taxi owners at a time to avoid overcrowding. Respondents washed their hands before entry and after, wore masks at all times, and social distance rules were followed. The next layer of the research sphere is peeled off in the next section.

3.2.7 Pilot study

The pilot study shares the fourth layer of the research sphere. According to Neuman (2011:320), a pilot study is a pre-testing phase that examines whether or not the questionnaire is relevant and valid to meet the objectives set. After the compilation of the initial questionnaire, the researcher tested whether the questions were valid and relevant using a pilot study.

Bryman (2014:63) posits that implementing a pilot study of the questionnaire is crucial to finding weak spots as well as ensuring the appropriateness of the questions.

The supervisor, co-supervisor, and statistician reviewed the initial questionnaire to verify validity and relevance. The two management accounting experts made remarks, and these remarks were subsequently integrated into the questionnaire used for the pilot study. This was then followed by a pre-testing of the questionnaire on 50 minibus taxi owners from GATA and VNTA (who are part of the surveyed census). In other words, the respondents who are part of the pilot study are also part of the surveyed census. Based on what was learned and said during pre-testing, the questionnaire was changed to make sure it was easy to understand, quick to fill out, and relevant to the people who filled it out.

Table 3.5 hereafter shows the recommendations from the pilot study and the actions taken by the researcher. The comments made by the supervisor, co-supervisor, and statistician, and the action taken by the researcher are mentioned. The online questionnaire and printed questionnaire can be viewed in Appendix D and E.

Table 3.5: Key recommendations of the pilot study

Comments	Action
Questions were not relevant to the study.	Questions were deleted.
Questions were too ambiguous.	Questions were rearticulated.
Usage of the online questionnaire	Developed both the online and printed questionnaire
Respondents cannot read.	Each question was explained in isiZulu and Sesotho
Uncommon and difficult words were used, and most minibus taxi owners have low literacy levels or do not fully understand English.	Questions had to be simplified by using standard and easy-to-understand words.
Too many yes and no questions	Likert scale was introduced
The questionnaire was too long	Questions were shortened
Questions are too wording.	Questions were simplified.

Double-barreled question were asked based on the supervisor comment	Questions were paraphrased.
Irrelevant and unnecessary questions (supervisor comment)	Questions were deleted

Source: Own.

Table 3.5: The final questionnaire used in this research study has gone through many reviews, and each review came back with a comment that required the researcher to adopt. Lastly, the revised final questionnaire was submitted and approved for ethical approval by the Vaal University of Technology ethical committee. Sharing the fourth layer of the research sphere is the questionnaire layout and development, a tool used to collect data in this research study, which is discussed in the section to follow.

3.2.8 Questionnaire layout and development

The researcher used an online questionnaire and a printed questionnaire. Both questionnaires have the same content and are comprised of four sections and 38 questions.

3.2.8.1 Section A: Demographic profile

This section sought information on the minibus taxi owner's demographic profile, such as the respondents' position in the minibus taxi industry, gender, citizenship, ethnic group, age, and qualification. This section consists of six questions. As one of the sub-objectives is to understand the minibus taxi industry, this section helped the researcher to understand the people operating in the minibus taxi industry. The six questions asked in this section were developed in consideration of the following Protection of Personal Information Act (No. 4 of 2013) guidelines:

- to promote the protection of personal information processed by public and private bodies;
- to introduce certain conditions so as to establish minimum requirements for the processing of personal information;
- to provide for the establishment of an Information Regulator to exercise certain powers and to perform certain duties and functions in terms of this Act and the Promotion of Access to Information Act, 2000;
- to provide for the issuing of codes of conduct;
- to provide for the rights of persons regarding unsolicited electronic communications and automated decision making;
- to regulate the flow of personal information across the borders of the Republic; and

- to provide for matters connected therewith.

3.2.8.2 Section B: Operating in the minibus taxi industry

This section sought information on the minibus taxi owner's experience and the way the minibus taxi industry operates. This section consists of seven questions. As one of the sub-objectives is to understand the minibus taxi industry, this section helped the researcher to understand how the minibus taxi industry operates. The seven questions were also asked by Kokernot (1984:133) in a quest to find out how the minibus taxi industry operates

3.2.8.3 Section C: CVP and Cost Structure

This research study's main objective is to explore the application of management accounting principles in the minibus taxi industry at the Emfuleni Local Municipality. CVP and cost structure are two of the three principles that this research study is investigating. Thus, this section on CVP and cost structure. There is a cost structure in CVP, so the two selected management accounting are asked in the same section. There are 18 questions in this section, and in some of the questions, the respondents who used a printed questionnaire were asked to encircle, while the respondents who used an online questionnaire were asked to tick a Likert scale between one to five, whereby 1 = Insignificant, 2 = Minor, 3 = Moderate, 4 = Major, and 5 = Severe.

3.2.8.4 Section D: Budgeting

The final section consists of seven questions that ask questions on budgeting, a selected management accounting principle that the researcher did not ask about in the previous section. Not only is budgeting part of the main objective but also the sub-objectives. This selected management accounting is asked separately as it has a different function to the other two selected management accounting principles. This section assisted the researcher in understanding how minibus taxi owners use budgeting in operating their business. The section to follow focuses on the source of data.

3.2.9 Source of data

The source of data is in the fifth layer of the research sphere. The source of data has different meanings depending on the purpose of the research study under investigation. In defining data, Lincoln, Lynham, and Guba (2011:67) posit that data "are facts and other relevant materials, past and present, serving as a basis for the study and analysis."Similarly, Polit and Hungler (1996:17) posit that data refers to information obtained and used in preparing the research study. The researcher collated data in preparing this research study. Chapter 1 briefly introduced the literature on these sources, which will now be discussed.

3.2.9.1 Primary data

Kothari (2004:18) defines primary data as the type of data that the researcher collects for the first time when conducting the research study. Thus, Saunders, Lewis, and Thornhill (2007:345) refer to this data as new data that happens to be original. It is this source of data that allows interaction between the respondents and the researcher. Kothari (2004:18) adds that the interaction helps facilitate the description and explanation of the subject under study. Saunders, Lewis, and Thornhill (2007:345) posit that primary data could be collected in many ways, such as textual analysis, semi-structured observation, group interviews, and a questionnaire.

Concerning this research study, the researcher used an online and a printed questionnaire to gather data from the minibus taxi owners. Chapter 4 will present and analyse these findings. Lastly, the researcher will give a conclusion and recommendation based on the findings in the chapter.

3.2.9.2 Secondary data

Lincoln, Lynham, and Guba (2011:69) defined a secondary source as a set of data that has been collected by someone else other than the researcher. That someone else that the researcher is referring to could be either a scholar, a journalist, or also a researcher. Similarly, Kothari (2004:95) referred to a secondary source of data as that set of data that already exists and further added that this data has passed through the statistical process. For this research study, the secondary data was used for reviewing literature and not analysing the findings. This is because there has never been a research study conducted before on the selected management accounting principles in the minibus taxi industry that the researcher can use to either prove or disprove the existence of accounting in the minibus taxi industry. The next layer of the research sphere to be peeled is data analysis.

3.2.10 Data analysis

Addressing the sixth layer of the research sphere is data analysis with the advice of Wilson (2010:13), who opined that the collected quantitative data needs to be organised, processed, and analysed. The researcher will use figure 3.2 hereafter to explain the steps used in this research study. The figure was also used and adopted from Connor and Gibson (2003:88), who used five steps in data analysis.

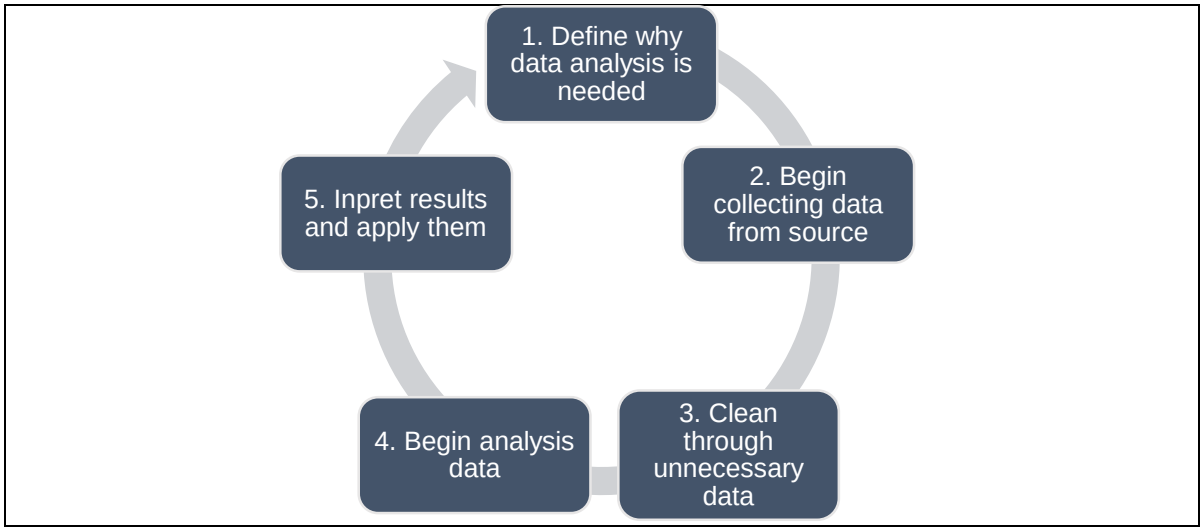

Figure 3.2: Steps in data analysis

Source: Connor and Gibson (2003:88)

The five steps of the data analysis in Figure 3.2 were used, and in this subsection, the researcher will explain how they were used and what they entail. Firstly, this is a stage whereby the researcher processes and analyses the data, in line with Sapsford and Jupp (2006:153), who described data analysis as a stage in research whereby a researcher tunes into the meaning and the message in the data collected. Furthermore, Field (2013:23) defines this stage as making sense, interpreting and theorising the data collected. This research study used an online questionnaire and a printed questionnaire. Responses from the online questionnaire are automatically captured on a Microsoft Excel spreadsheet. Responses from the printed questionnaire were manually entered on a Microsft Excel spreadsheet. The two spreadsheets were then combined by the researcher.

There are different data analysis categories, from descriptive analysis to association and causation analysis (De Vos et al. 2011:251). The outlined categories may assist the researcher in analysing quantitative data (Sapsford & Jupp 2006:153). Concerning this research study, the researcher adopted a descriptive analysis. Bertram and Christiansen (2014:139) suggested that descriptive analysis is a set of data presented in a table or graphic format to summarise the statistical findings. Therefore, the data is shown in graphs and tables for each question. The data analysis package used was SPSS version 27.0. The adoption of SPSS considered the fact that the research study is exploratory and descriptive in nature. Bertram and Christiansen (2014:139) also posit that SPSS version 27.0 deals with frequencies, cross-tabulation, and descriptive ratio. The next layer of the research sphere to be peeled is the validity of quantitative research.

3.2.11 Validity in quantitative research

Sharing, the sixth layer of the research sphere, is validity. According to Babbie and Mouton (2012), this is one of the two yardsticks used in research to assess quantitative research quality in social science. Leedy and Omrod (2010:28) stated that validity determines whether the study truly measures what it is intended to measure. Babbie and Mouton (2012:56) agreed that validity determines the measurement and further posit that it includes measuring how accurate and honest the research results are. According to Saunders and Rojon (2014:75), the validity process involves both the research design and methods. It refers to the degree to which the data collection techniques measure what they are supposed to measure in order to address the research question and meet the research objectives (Leedy & Omrod 2010:28). To construct and test for validity, the researcher adopted the formula from Fornell and Lacker (1981:41). The formula is used to test whether or not the process taken ensures validity. Moreover, the formula is called average variance extracted (AVE) and is shown below.

Formula 1: AVE

$$V\eta = \frac{\sum \lambda yi^2}{(\sum \lambda yi^2 + \sum \varepsilon i)}$$

AVE= summation of the square of factor loadings / [(summation of the square of factor loadings) + (summation of error variances)]

Source: Fornell and Lacker (1981:41).

AVE is a measure of the amount of variance that is captured by a construct in relation to the amount of variance due to measurement error (Henseler, Ringle & Sarstedt 2014:116). The AVE has often been used to assess discriminant validity based on the following rule of thumb: the positive square root of the AVE for each of the latent variables should be higher than the highest correlation with any other latent variable (Kock 2019:677). If that is the case, discriminant validity is established at the construct level (Henseler, Ringle & Sarstedt 2014:116). This rule is known as the Fornell–Larcker criterion. Formula 1 is applied in the next chapter (Section 4.2) (Voorhees 2015:2). This is done because the research findings cannot be presented if they do not meet validity.

Moreover, in this research study, the researcher further attained the following types of validity: face validity, content validity, and convergent validity. These types of validity are different and have further use (Lobiondo-Wood & Haber 2014:60). Face validity refers to whether or not the tool measures what it is supposed to measure (Todd, Morrison & McCutcheon 2017:17). A

panel of experts is used to evaluate the questionnaires' content validity (Polit & Beck, 2010:1458). In contrast, content validity is concerned with the representativeness or inspectable ampleness of an instrument's substance. Convergent validity is defined as the degree to which various measures of the same construct converge or strongly relate to one another (Engellant, Holland, & Piper 2016:39). The researcher will further explain how the types of validity were attained in the next chapter (par. 4.2.2-4.2.4). Still, in the current layer of the researcher's reliability in quantitative research is included and will be discussed in the section to follow.

3.2.12 Reliability in quantitative research

Reliability is the second yardstick used to assess quantitative research quality in social science (Babbie & Mouton 2012:57). Reliability is a necessary but not sufficient condition for validity (Parahoo 2008:275). Tavakol and Dennick (2011:447) define research reliability as the degree to which the same constructs in research results or replicate similar results are replicated. Several methods are identified in the research for ensuring reliability. These methods include the test and retest method; the alternative-form method; the split-halves method; the internal consistency method; and correction for attenuation (Carmines & Zeller 1999:37). Concerning this research study, the researcher applied internal consistency through the administration of data collected using a single instrument. Moreover, the following formula was adopted from Hair et al., (2010: 334) to calculate composite reliability (CR). CR, sometimes called construct reliability, is a measure of internal consistency in scale items, much like Cronbach's alpha (Ketchen & Berg 2006:3). It can be thought of as being equal to the total amount of true score variance relative to the total scale score variance (Brunner & Süß, 2005:26).

Formula 2: CR

$$\textbf{(CR): } CR\eta = \frac{(\sum \lambda yi)^2}{[(\sum \lambda yi)^2 + (\sum \varepsilon i)]}$$

Therefore, CR= (summation of the factor loadings)^2/ [(summation of the factor loadings)^2 + (summation of error variances)]

Source: Hair et al., (2010:334)

CR recommends that the reliability of a construct is at least 0.70 (Duhachek & Iacobucci 2004:794). High CR is a very good indication that all your items constantly measure the same construct (Maydeu-Olivares, Coffman & Hartmann 2007:158). A good CR for the constructs is between 0.758 and 0.898 and greater than 0.70 (Hogan, Benjamin, & Brezinski 2000:524). A clear indication of a good CR shows that all the items consistently measure their

corresponding construct (Graham 2006:932). In the next chapter (par. 4.2), the researcher will indicate the level of CR attained by these research study findings.

The researcher also applied Cronbach's Alpha Coefficient to ensure the reliability of the instrument used. According to Fields (2013:44), Cronbach's alpha coefficient checks for consistency and stability. This method uses a single test administration to provide a unique estimate of a given test (Raykov 2002:89). The researcher also applied the test and retest method to the data collected to ensure reliability. This was done by combining the data collected twice to provide and ensure that similar results are attained. Table 3.6, hereafter, shows the different intervals of Cronbach alpha and what each level entails — the table was adapted from Konting, Norfaryanti, and Man (2009:18). Cronbach alpha is a measure of internal consistency, that is, how closely related a set of items are as a group (Taber 2017:1273). It is considered to be a measure of scale reliability. A high value for alpha does not imply that the measure is unidimensional.

Table 3.6: The interpretation of cronbach alpha value

Cronbach Alpha Value	Interpretation
0.91-1.00	Excellent
0.81-0.90	Good
0.71-0.80	Good and Acceptable
0.61-0.70	Acceptable
0.01-0.60	Non acceptable

Source: Konting, Norfaryanti & Man (2009:18)

Cronbach's alpha shows that the interval level between 0.01 and 0.60 in Cronbach's alpha is not acceptable. In other words, according to Bonett and Wright (2015:5), the Cronbach alpha interval between 0.01-0.60 is void and is not accepted. A low value for Cronbach alpha may mean that there are not enough questions on the test (Ramos, Silva Clarks & Parates 2021:420). Poor interrelatedness between test questions can also cause low values, as can measuring more than one latent variable. Moreover, the Cronbach alpha interval between 0.61-0.70 is acceptable while the Cronbach alpha interval between 0.71-0.80 is good and acceptable. A high value for Cronbach alpha may mean that there are enough questions on the test (Martin 2013:488). Lastly, the table shows that the interval between 0.81 and 0.91-1.00 is good and excellent. The next chapter (par. 4.2) will indicate the Cronbach's aphla value attained in this research study. The researcher hereafter peels the last layer of the research

sphere, which contains the ethics in research layer that were undertaken in the conduct of this research study.

3.3 ETHICS IN RESEARCH

Firstly, the researcher sought permission from the minibus taxi mother bodies—Top Six, an affiliate of the NTA and the SANTACO, and the five associations operating in the Emfuleni Local Municipality. With the promoter's advice, the researcher requested that both the mother bodies and associations write a letter granting the researcher permission to conduct this research within their boundaries. Secondly, the researcher sought permission to conduct this research from the Sedibeng department of transport; a letter was requested and received. These letters can be viewed in Appendix B and C of this research study. Thirdly, the data collection commenced after ethical clearance was granted by the Vaal University of Technology's ethics board (which can be viewed in Appendix A).

The critical ethics in research that guided this research study in practise include informed consent, voluntary participation, and confidentiality benefits (Mouton 2001:25). Informed consent has to do with the participant knowing that they are participating in a research study (Brink, Van der Walt & Van Rensburg 2006:38). To adhere to this, the researcher informed the participant that they were participating in a research study and explained its purpose. The researcher can affirm that the respondents were given enough information beforehand, as stated in the cover letter of the questionnaire.

According to the study by Brink, Van der Walt, and Van Rensburg (2006:38), voluntary participation has to do with the participant's understanding that their participation will not result in any financial benefit, and refusal will not result in any fines. The researcher adhered to this by explaining that this is academic research, not market research. Researchers also informed the respondents that they could discontinue their participation at any time. The researcher can affirm that respondents were told that their participation would not result in financial gain, as stated in the cover letter of the questionnaire.

Confidentiality is also referred to as justice and has to do with fair treatment and the participant's right to privacy (Polit & Beck 2012:155). According to Brink, Van der Walt, and Van Rensburg (2006:39), respondents should be treated fairly and equally. Polit and Beck (2012) advised researchers that confidential information should be provided in the leaflet. The researcher provided this information in the leaflet and clearly stated that the following parties: researcher, promoter, co-promoter, and statistician, are the only ones that will have access to the data collected. According to Polit and Beck (2012:748), the benefits of participation outline the researcher's responsibility to minimise harm or increase benefits for the respondents (Polit & Beck 2012:748). The principle also involves performing acts of goodness and avoiding

injury. To adhere to this, the researcher informed the respondents of the benefit of participating in this study in the cover letter of the questionnaire. As mentioned in par. 3.2.8, this section A of the questionnaire was developed in consideration of the Protection of Personal Information Act (4 of 2013). In the section to follow, the researcher summarises the chapter.

3.4 CHAPTER SUMMARY

The purpose of this chapter was to show and provide a complete overview of the research design and methodology applied in this research study, henceforth, addressing the theoretical objective 4 in Chapter 1 par 1.4.2.1.

The researcher adopted the research sphere used by Sanders Lewis and Thornhill (2009), shown in Figure 3.1. The research sphere was used to show the stages that the researcher used in doing this research study. The research paradigm, research approach, research design, data methodology, pilot study, population, sampling, questionnaire layout and development, data analysis, and ethics in research were outlined in the research sphere.

As every piece of research involves a philosophical retrospection degree, this research study followed a participatory paradigm. The researcher opines that the surroundings influence external realities. Participatory researchers allow understanding of people's perspectives as they are based on social reality and try to find a real solution to an original problem to ensure desirable change by studying respondents in their social background. As a result, this research study leans toward a participatory paradigm. The researcher further emphasised that the research study is a quantitative research methodology that adopted an online questionnaire and a printed questionnaire in the data collection section. A qualitative research methodology tool such as interviews was not used in this research study. For this research, study data was analysed using SPSS and that Cronbach’s alpha would be used to test for reliability. This research study's population and sample size is 500 minibus taxi owners in the Emfuleni Local Municipality. This research study adopted a census. A census was selected using the guidelines that suggested that all subjects should be included in the analysis units if the population is less than or equal to 500. The validity and reliability of the data were established as they are the two yardsticks of qualitative research methodology.

Data was obtained using an online questionnaire and a printed questionnaire. Both questionnaires have the same content and are made up of four sections: section A (sought demographic profile of the respondent and developed in line with the Protection of Personal Information Act (No. 4 of 2013); section B (sought information on the operation of the minibus taxi industry; the questionnaire was developed using previous studies); section C (sought information on CVP and cost structure and was developed using literature); and section D (sought information on budgeting and was developed using literature). Lastly, it was indicated

that the study was performed on an ethically sound basis. In Chapter 4, the researcher will present the data analysis of this research study.

CHAPTER 4:
DATA ANALYSIS

"The findings fit in well with previous research, and provide definite answers where previously there was uncertainty". - Sarah Darby

4.1 INTRODUCTION

In this chapter, the researcher will interpret and analysing the findings from the completed online and printed questionnaire. This questionnaire focused on critical dates that relate to the main objective, empirical objectives, and the research question of this research study. In Table 4.1, the researcher shows each section of the questionnaire and how it relates to the main objective set in Chapter 1 (par. 1.4.1) and the empirical objectives set in Chapter 1 (par. 1.4.2.2). Moreover, the table shows where the main objective and empirical objectives were addressed in the literature review chapter 2. The table was made by the researcher, and it also showed where in Chapter 2 the literature was reviewed.

Table 4.1: Key questionaire section relating to the research objective and literature review

The main objective and empirical objectives	Literature review	Section of the questionnaire
To determine whether the taxi owners in the Emfuleni Local Municipality apply management accounting principles in the management of their business	The literature on the selected management accounting principles; CVP (Chapter 2: par 2.3.1-2.3.3) and cost structure (Chapter 2: par. 2.3.4)	Section C Section D
Obtaining a general understanding of the taxi industry of the Emfuleni Local Municipality	The literature on the South Africa minibus taxi industry (Chapter 2: par 2.4)	Section A Section B
To determine if minibus taxi owners in the Emfuleni Local Municipality apply CVP	The literature on CVP (Chapter 2: par. 2.3.1-2.3.3)	Section C
To determine whether minibus taxi owners in the Emfuleni Local Municipality develop a budget for running their business	The literature on budgeting (Chapter 2: par. 2.3.5)	Section D
To determine which costs are considered fixed costs, variable cost and mixed costs	The literature on cost structure (Chapter 2: par. 2,3.4)	Section C

Source: Own.

The table shows a linkage between the research objective and the empirical objectives and how each section of the questionnaire links to the literature chapter of this research study. The section to follow shows the application and results of reliability and validity in quanatitive research tests on the data collected.

4.2 RELIABILITY AND VALIDITY IN QUANTITATIVE RESEARCH

In the previous chapter, the researcher emphasised that reliability and validity are the main yardsticks used to either access or evaluate the internal consistency of research constructs. It was outlined that CR was conducted in this research study.

The researcher presented formula 1 in par. 3.2.11, in the previous chapter of how CR can be calculated. The internal consistency of the constructs was examined using the CR test in the research study. The overall CR level obtained in this research study is 0.870. In all the composite tests in this research study to test reliability, a value of between 0.7 and 0.91 was also obtained. The results prove the existence of good internal reliability in this research study. Hair et al. (2010:334) outlined that a CR that is greater than 0.7 reflects good consistency of the variable.

The researcher also outlined in the previous chapter that Cronbach alpha was used to test reliability. Therefore, the section below discusses the results of Cronbach alpha.

4.2.1 Cronbach's alpha

In 1951, Cronbach's alpha was established by Lee Cronbach to make available a measure that tests internal uniformity (Tavakol & Dennick 2011:53). Internal uniformity is measured as the proportion of areal units that pass a test of complete spatial randomness for their internal distribution (Sharma 2016:271). Taber (2017:1274) postulates that Cronbach's alpha is a measurement that is normally recited by various academics to determine whether the constructs adopted are fit for purpose. Bonett and Wright (2015:4) confirm that Cronbach's alpha reliability is one of the most commonly used measures, especially for reliability in social and organisational research studies.

The Cronbach's alpha values in research range from 0.700 to 0.910. Martin (2013:488) states that a set of items that can be considered is from a minimum of 0.700. In this research study, the Cronbach's alpha value is 0.880, which indicates good internal reliability of the data collected. This is supported by Malhotra (2010:733), who indicates that Cronbach's alpha coefficient values that are well above the recommended level of 0.700 show a higher degree of internal consistency. The research study also employed face validity, which the application is discussed below.

4.2.2 Face validity

According to Bhattacharyya, Kaur, and Ali (2017:18), face validity occurs when an individual who is knowledgeable about the research subject reviews the questionnaire and concludes that it measures the characteristic or quality of interest. For this reason, Pandey and Pandey (2015:21) and Engel and Schutt (2013:56) posit that face validity is often posited to be unpremeditated and many researchers do not consider it an active measure of validity.

Moreover, the researcher stated in Chapter 3 (Section 3.2.11) that face validity occurs when an individual who is knowledgeable about the research subject reviews the questionnaire and concludes that it measures the characteristic or quality of interest. For this research study, as the researcher outlined in the pilot study (Section 3.2.7), the supervisor, co-supervisor, and statistician evaluate the final questionnaire to check if the questions meet the objectives and answer the research question. The research study also employed content validity, and the results are discussed below.

4.2.3 Content validity

According to Zohrabi (2013:258), content validity relates to the extent to which the tool entirely measures the construct of interest and discloses how well the dimensions and the elements thereof are distinct. However, Akcay and Benek (2019:38) and Bolarinwa (2015:195) posit that content validity guarantees that the measure includes a sufficient and demonstrative set of items that match the notion. Hence, it assesses the existing performance rather than predicts upcoming performance.

To calculate content validity, the researcher uses the AVE. According to Schumacker and Lomax (2016:4), the AVE from the research constructs should be greater than 0.5. Zohrabi (2013:258) refers to AVE and recommends a threshold that exceeds 0.500. Formula 2 in Chapter 3 (Section 3.2.12) shows how validity can be calculated. The value of AVE obtained in this research study is 0.883, which is acceptable. Fornell and Larcker (1981:64) and Schumacker and Lomax (2016:4) recommend a threshold that exceeds 0.500. Therefore, the researcher can conclude that the findings of this research study are acceptable. The research study also employed convergent validity, and the results are discussed below.

4.2.4 Convergent validity

Convergent validity is defined as the degree to which various measures of the same construct converge or strongly relate to one another (Engellant, Holland, & Piper 2016:39). Bajpai and Bajpai (2014:114) and Bolarinwa (2015:197) added that convergent validity is the degree to which two measures capture similar information, yielding comparable research results.

The researcher mentioned in the previous chapter section 3.2.11 that convergent validity would be observed. This was done to check whether this research study tests what it is intended to measure. A validity test was conducted through convergent and discriminant validity.

The factor loadings of all the measurement items were within the range of 0.500 to 0.900, with the highest value of 0.899 in question C4 (Secion C of the questionaire) being obtained and the lowest value of 0.517 for C10 (Secion C of the questionaire). The accepted recommended threshold suggested by Bonett and Wright (2015:5) should be above 0.500. The values obtained in these constructs were greater than 0.500. Therefore, all the items are acceptable and there is a positive relationship between each construct and each item. The research study also employed discriminant validity, and the results are discussed below

4.2.5 Discriminant validity

Farrell and Larcker (2010:325) state that discriminant validity is established to show that the relationships between the research constructs are correct. The value obtained in testing discriminant validity in this research study was above 0.655. According to Bryman (2012:46) and Shau (2017:226), a value above 0.600 means high significance between the constructs.

As the data obtained in this research study were both valid and reliable, the researcher hereafter analyses and discusses the findings.

4.3 ANALYSIS AND FINDINGS

In this section, the findings are analysed. It should be disclosed that a specific limitation was faced during the data collection process in that some respondents were illiterate. This limitation led to incomplete and void responses. From the 500 questionnaires (including minibus taxi owners who were previously surveyed for the pilot research study) that were sent through a link and also printed questionnaire given to minibus taxi owners, 78 questionnaires were void and did not form part of the final analysis. The printed questionnaire was given to minibus taxi owners who did not have access to smart phones and those who could not use the internet.The analysis was done on the 422 completed questionnaires. Table 4.2 presents the response rate.

Table 4.2: Response rate

Respondents	Distributed questionnaires	Filled and returned questionnaires	Response rate
Minibus taxi owners	500	422	84.4%

Source: Author

The research study's response rate was 84.4%, which indicated a reliable and excellent response rate for analysis. Esinah (2014:22) found that a response rate of 50% or higher is considered adequate for analysis and interpretation of a questionnaire. The first section of the questionnaire is analysis and interpreted in the section below.

4.3.1 Section A: Demographic profile

Section A of the questionnaire sought information on the demographics of the respondents. In this section, the researcher sought information such as the participant's position in the minibus taxi industry, gender, citizenship, ethnic group, age group, and highest qualification. The first question asked the respondents to indicate their position in the minibus taxi industry, and the findings are presented and discussed in the subsection to follow.

4.3.1.1 Indicate your position in the minibus taxi industry

The primary idea of the position analysis is to determine whether the participant is indeed a minibus taxi owner and not a minibus taxi driver (this finding will assist in the validity of respondents) and whether the industry is operated according to the laws of South Africa. The National Land Transport Transition Act (22 of 2000) and the Standard Minimum Constitution and Code of Conduct section (61 and 116 (1) a and b of 1997) state that each association must have the following eight executive members: chairperson, vice-chairperson, treasurer, secretary, training officer, chairperson of the grievance committee, chairperson of the disciplinary committee, and an additional member. Figure 4.1 shows the findings of the respondents' position within the minibus taxi industry. The following options were given to the respondents: owner; owner-driver; owner-committee member; all of the above.

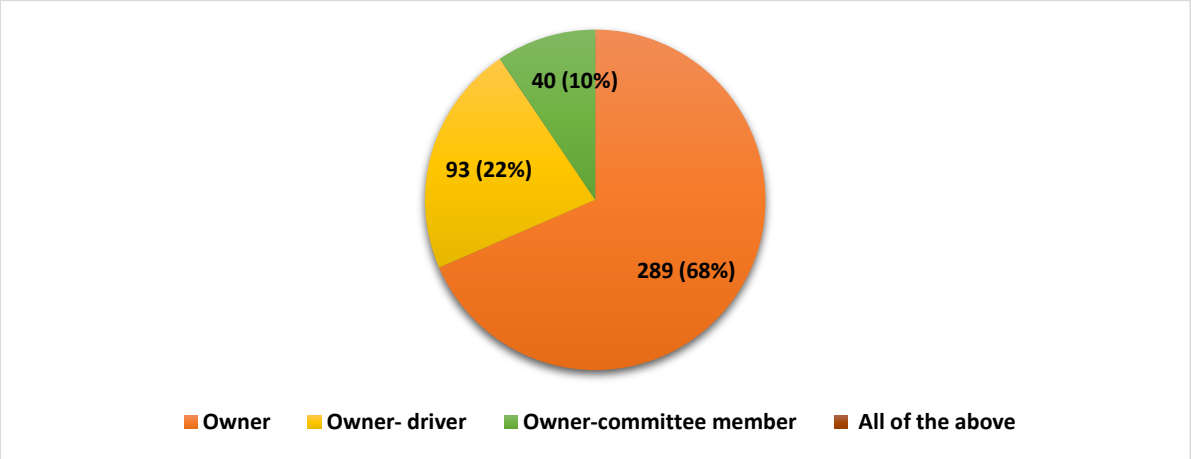

Figure 4.1: Position in the minibus taxi industry at the Emfuleni Local Municipality

Source: Author

Figure 4.1 shows that out of the 422 minibus taxi owners who completed the questionnaire fully, 289 (68%) are owners, 93 (22%) are owner-drivers, and the remaining 40 are minibus

taxi owners. 10% of the respondents are minibus taxi owners that are members of a committee. In Chapter 3, the researcher outlined that there are five minibus taxi associations in the Emfuleni Local Municipality and the findings show that 40 minibus taxi owners are members of the executive committee. In a study conducted by Kokernot (1984:165), it was found that 13% of the sample were owner-drivers. This research study's findings show that 22% are owner-drivers, which is almost double Kokernot's findings. The reason for these different findings is explained by Barret (2003:54), who says that the minibus taxi industry has seen an influx of many new minibus taxi owners since the relaxation of the Road Transport Act (77 of 1999) that allowed more entry by new minibus taxi owners.

4.3.1.2 Gender

The primary idea of gender analysis is to determine whether there is gender equity or whether one gender dominates in the minibus taxi industry. In a quest to understand how the minibus taxi industry operates, Kokernot (1984:166) also posed the question of gender. The following options were given to the respondents: male; female. Table 4.3 shows the findings on the gender representation of minibus taxi owners.

Table 4.3: Gender representation of minibus taxi owners in the

Gender	Frequency	Percent	Valid Percent	Cumulative percent
Male	389	92.18	92.18	92.18
Female	33	7.82	7.82	100.00
Total	422	100.00	100.00	

Source: Author

Table 4.3 shows that out of the 422 minibus taxi owners who completed the questionnaire fully, 92.18% are male and 7.82% are female. In a study conducted by Nkete (2015), it was found that the minibus taxi industry was male-dominated. According to Baloyi (2012:84), the lack of females in the industry is due to a historical gender imbalance. Sauti (2006: XXI) states that the taxi industry is not only challenging for driving a minibus taxi, but it is extremely dangerous due to excessive violence and violent behaviour between minibus taxi operators, which is why there are very few females. In its effort to include females in the industry, SA Taxi Finance invested over R3.5 billion to empower female minibus taxi owners, which has resulted in an increase in their female client base of 4.5% each year since 2015 (SA Taxi Finance 2018).

4.3.1.3 Citizenship

The purpose of probing citizenship was to determine the citizenship of the members of the minibus taxi industry in the Emfuleni Local Municipality. In 2020, the Minister of Transport, Mr. Fikile Mbalula (2020), stated that the minibus taxi industry in South Africa is 100% South African-owned and operated. Moreover, Kokernot (1984:166), in a quest to understand the minibus taxi industry, posed a question on citizenship. Figure 4.2 shows the findings on the citizenship of representation in this study. The following options were given to the respondents: Non-South African; South African

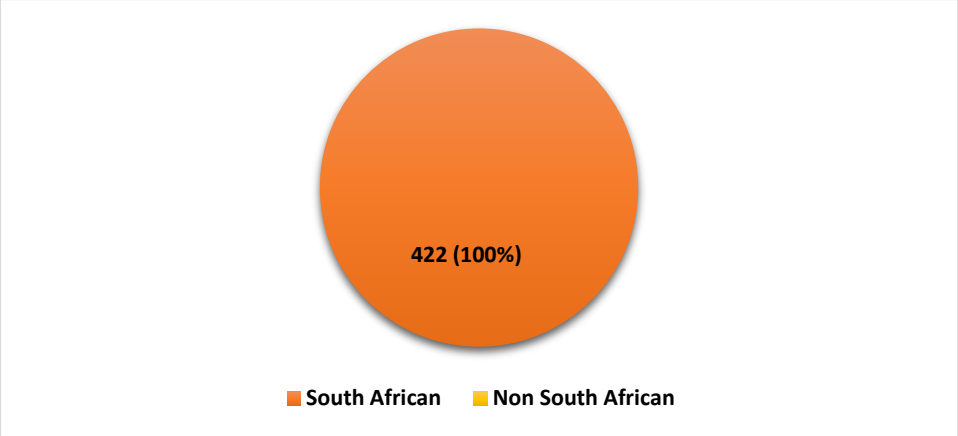

Figure 4.2: Citizenship representation of minibus taxi owners

Source: Author

Figure 4.2 shows that out of the 422 minibus taxi owners who completed this questionnaire, 100% are from South Africa. These findings discredit the reports that there are foreign nationals who are now part of the minibus taxi industry in the Emfuleni Local Municipality (Mali 2018). The same cannot be concluded for the South African minibus taxi industry, as assumptions were made that in Tshwane-Mamelodi there are foreign nationals from Pakistan who own minibuses operating in that region (Pretoria News 2018).

4.3.1.4 Ethnical group

The purpose of probing the ethnic groups was to determine the ethnic groups of the members of the minibus taxi industry in the Emfuleni Local Municipality. In the Gauteng province, a minibus taxi owner is expected to be African (Malele 2021). Also, in a quest to understand the minibus taxi industry, Kokernot (1984:166) also probed the question of the ethical group of minibus taxis. Figure 4.3 below shows the findings on the ethical group representation of minibus taxi owners. The following items were given to the respondents: Africans, Asians, Caucasians, and Indians.

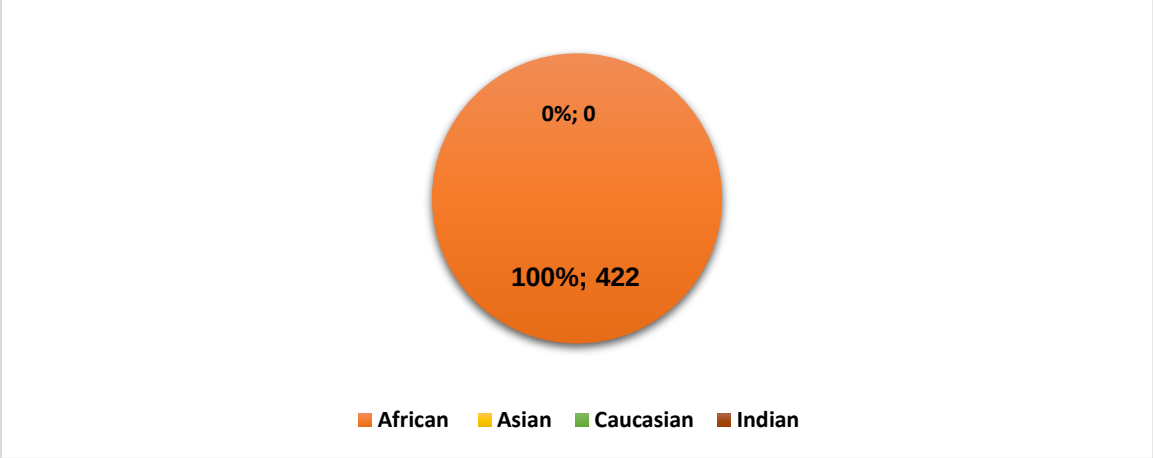

Figure 4.3: Ethnical representation of minibus taxi owners

Source: Author

Figure 4.3 shows that out of the 422 minibus taxi owners who fully completed this questionnaire, 100% are African. These findings are biassed by the geographical location. In an interview with Gauteng Roads and Transport Chief of Staff Matsemela (2020), it was posited that in areas such as Johannesburg-Eldorado, the ethical groups would be shared between Africans, Asians, and Indians.

4.3.1.5 Age group

The age variable will determine the age category of the respondents to ensure both validity and reliability of the research findings. As they are expected to be older, minibus taxi drivers in South Africa are frequently referred to as "baba" in Zulu, "Malome" in Setswana, and "Tata" in Xhosa. Quest to understand the minibus taxi industry, Baloyi (2012:128) posed a question on the age of minibus taxi owners. Figure 4.4 shows the age group representation of minibus taxi owners. The following options were given to the respondents: Under 30 years old; 31-40 years old; 41-50 years old; 51-60 years old; and 61 years and older.

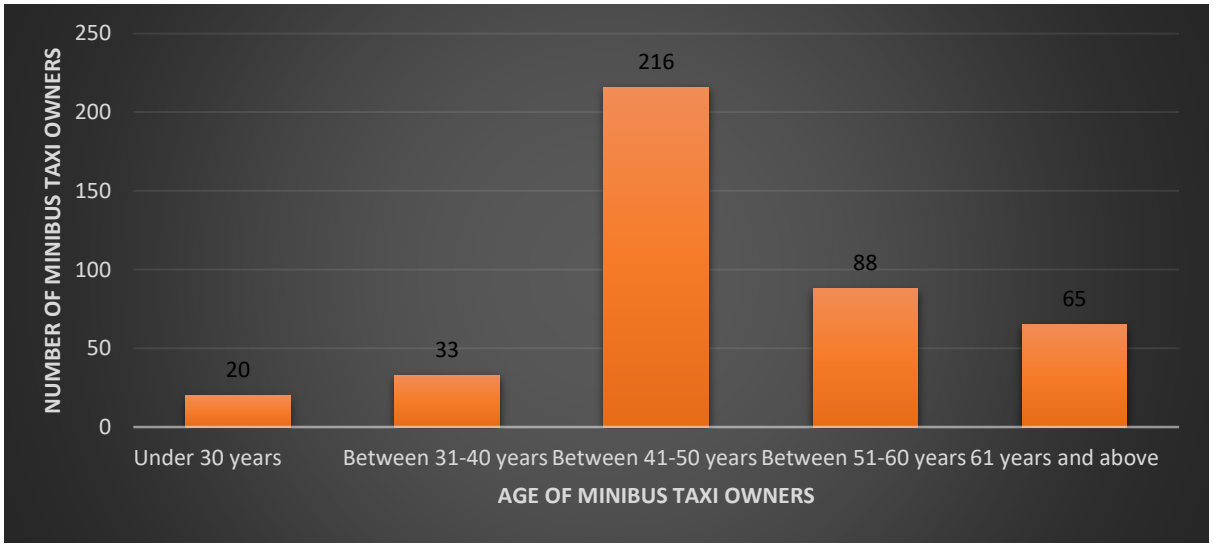

Figure 4.4: The age group of minibus taxi owners

Source: Author

Figure 4.4 shows that out of the 422 minibus taxi owners who completed this questionnaire, the majority (216) are between the ages of 41 and 50 years, followed by 88 minibus taxi owners who are between the ages of 51 and 60 years, and 65 minibus taxi owners are 61 years and older. The remaining 33 and 20 minibus taxi owners are between the ages of 31 and 40 years old and under 30 years old, respectively.

4.3.1.6 Highest qualification

In the minibus taxi industry, education is not considered to be important since it is not a specialised field, but very often the level of education of an individual determines their level of cognitive understanding (Heckman 2011). The researcher probed this variable to determine the level of education of the respondents, thus determining their understanding of accounting and the selected management accounting principles. Very often on the roads, fellow motorists call members of the minibus taxi industry 'abo mageza', which refers to someone who is unschooled (Letabaherald 2021). Figure 4.5 shows the highest qualifications of minibus taxi owners. The following options were given to respondents: matric or lower; Post-secondary diploma; degree; postgraduate

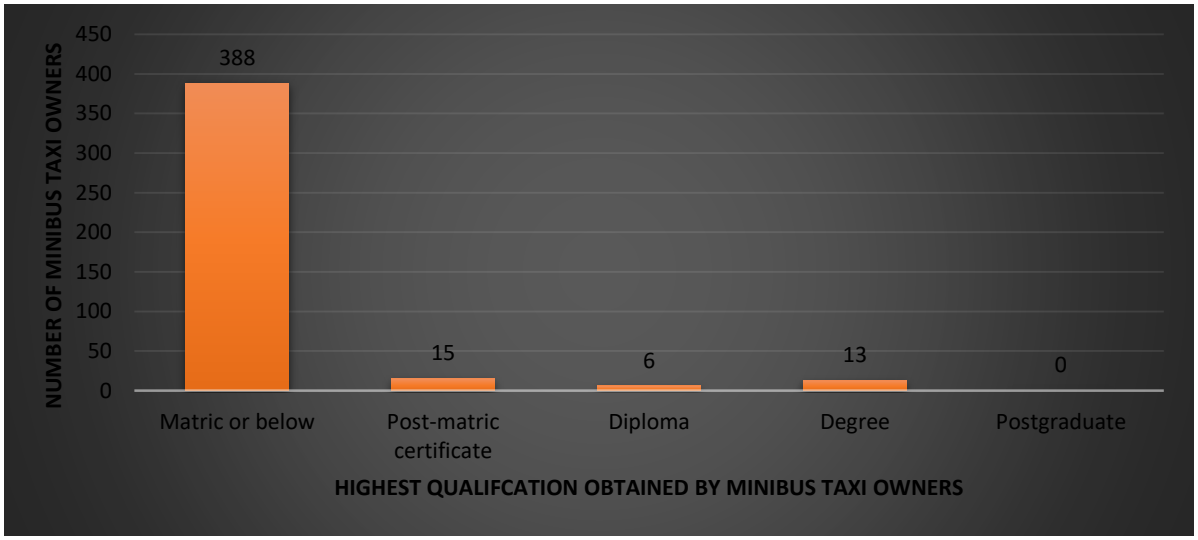

Figure 4.5: The highest qualification of minibus taxi owner

Source: Author

Figure 4.5 shows that out of the 422 minibus taxi owners, 388 minibus taxi owners have matric or lower, while 15 minibus taxi owners have a post-matric certificate, 13 minibus taxi owners have a degree, and 6 minibus taxi owners have a diploma. The level of education is irrelevant as it is not a prerequisite for owning a minibus in the minibus taxi industry. But the application

of accounting or management accounting principles requires some sort of education. The next section will place focus on the interpretation and analysis of section B of the questionnaire.

4.3.2 Section B: Operating in the minibus taxi industry

In this subsection, the researcher sought information on the operation of the minibus taxi industry. Information such as the participant's number of years in the industry, the reason for entering the industry, the busiest time of day, the busiest day of the week in the minibus taxi industry, the number of trips during the busiest day, the busiest period during the month in the minibus taxi industry, and the number of trips during the busiest time of year in the minibus taxi industry.

4.3.2.1 Number of years operating within the minibus taxi industry

The reason for this variable was to determine the number of years that the respondents have been vending in the minibus taxi industry. Figure 4.6 shows the findings on the number of years that the minibus taxi owners have been vending in the minibus taxi industry. The following options were given to the respondents; 5 years and below; 6-10 years; 11-15 years; 16-20 years; 21years and above.

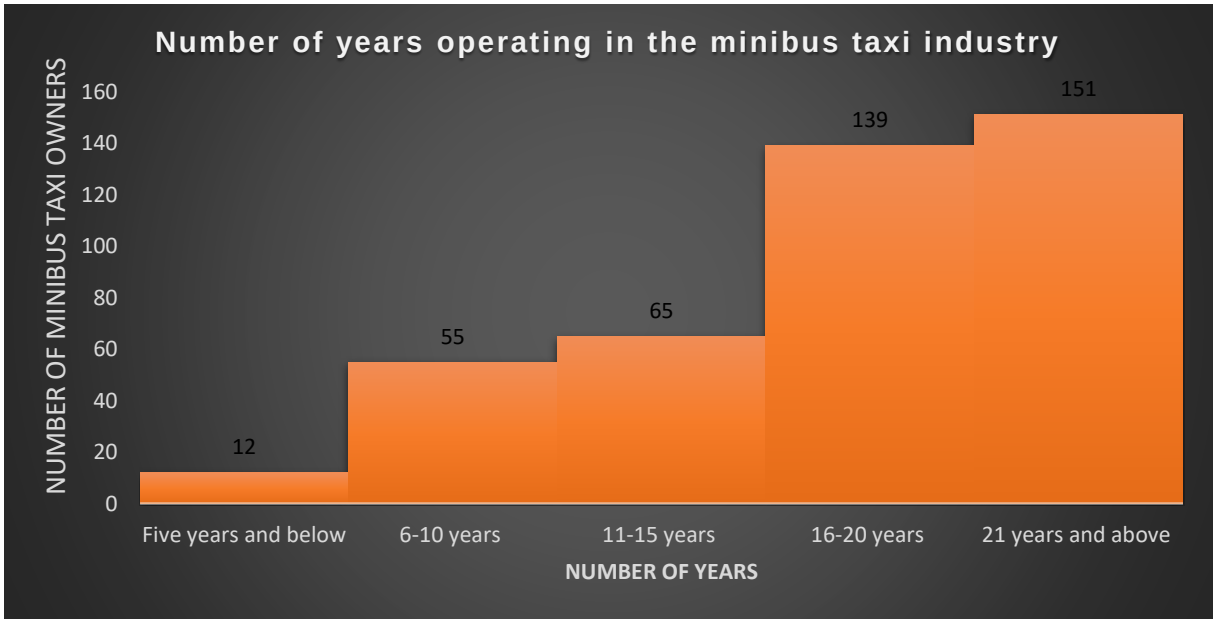

Figure 4.6: Number of years that minibus taxi owners have operated

Source: Author

Figure 4.6 shows that 151 minibus taxi owners have been operating in the industry for over 21 years and more. These findings are aligned with the findings that the ages of the minibus taxi drivers, who are mostly above the age of 41 years. These findings are also in line with the words of the Sedibeng district Director of Transport, Mr. Sam Mofokeng (2020), who posits that the five minibus taxi associations in the Emfuleni Local Municipality have been in

operation for more than 16 years and further outlines that since their inception there has been little in terms of adoption of new members.

4.3.2.2 Indicate your reason for entering the minibus taxi industry

After the post-apartheid election in 1994, many British and Dutch companies closed their operations in South Africa. This resulted in many people becoming unemployed, and many who were employed took their severance packages in exchange for their employment termination (Visser & Meléndez 2015:18). Not only were companies closing, but buses and trains were becoming less popular as they were a symbol of the apartheid regime, which forced bus companies to retrench most of their workers (Diane 2002:9). The other possible factor that made people invest was for investment and retirement purposes. The researcher probed this variable to understand why the participant got into the minibus taxi industry. Thus, it is important to assume the reliability and validity of the research findings. Figure 4.7 shows the findings as the reason for entering the minibus taxi industry. The following options were given to the respondents: Unemployment; investment; both.

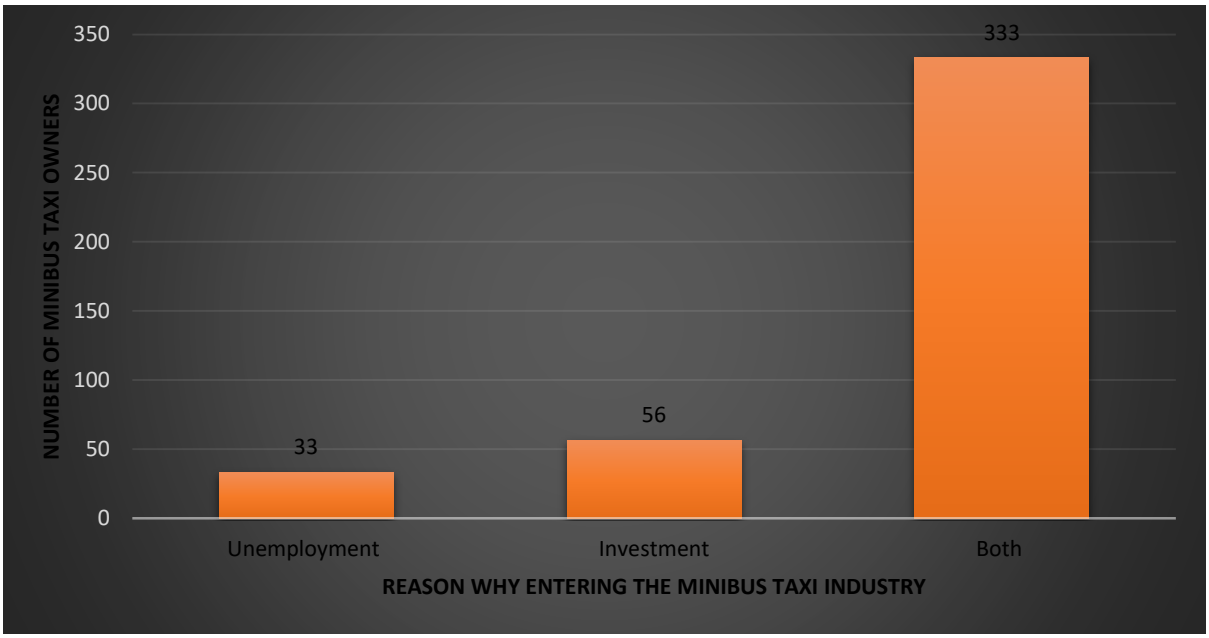

Figure 4.7: The reason for entering the minibus taxi industry

Source: Author

Figure 4.7 shows that 333 minibus taxi owners joined the industry due to both unemployment and investment, while 56 minibus taxi owners entered the industry for investment, and the remaining 33 minibus taxi owners indicated that they entered the minibus taxi industry due to unemployment. Mr. Theo Malele, who is the spokesperson of the NTA (2020), posits that those who took severance packages invested their money in informal businesses such as the minibus taxi industry.

4.3.2.3 When is the busiest time of the day for the minibus taxi industry?

The researcher probed this variable to understand the operation of the minibus taxi industry on a daily basis. A common morning and evening traffic jam on the busy roads in South Africa is characterised by a minibus taxi driving on a yellow line (Sibisa 2020). Is it the case that the minibus taxi industry functions more in the morning as people are on their way to work and in the evening as people are on their way home, thus the usage of dashed yellow lines during these daytime intervals on the busy roads? Figure 4.8 shows the findings on the busiest time during the day for the minibus taxi industry. The following options were given to the respondents: morning, afternoon, and evening.

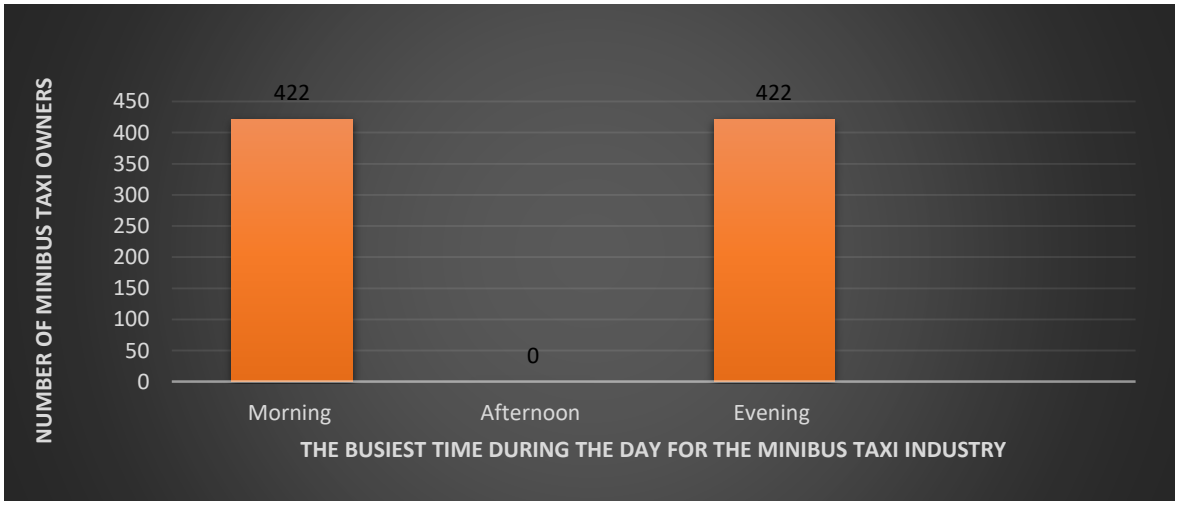

Figure 4.8: The busiest time during the day for the minibus taxi industry

Source: Author

A historical perspective on the minibus taxi industry is that it caters to commuters' demands as they experience a peak and an off-peak period in the operation (Kokernot 1984:123). In this question, the researcher allowed the respondents to tick more than one option, as the peak times may be equal during two or more periods. Figure 4.8 shows that the minibus taxi industry's busiest or peak time in the Emfuleni Local Municipality is in the morning and in the evening. A historical aspect from Kokernot (1984:123) is that the morning peak starts at 5:30 am to 8:30 am and in the evening the business starts picking up in the midday slump at 4:00 pm and the peak time starts at 5:00 pm. The evening peak time lasts for approximately 2 hours and is completed by 7.30 pm.

4.3.2.4 Which day of the week is the busiest in the minibus taxi industry?

Seasonal variation in demand allows for daily and weekly frequency variations (Corluka 2019:22). In historical times, the minibus taxi industry picks up in the warmer months and decreases in the rainy ones (Kokernot 1984:123). The explanation for this seasonal business fluctuation is that during the damp, rainy days, people take only the most necessary trips

(Corluka 2019:22). On warm days, people travel frequently, running odd errands and taking recreational or social journeys (Kuznets 2011:18). The researcher allowed the respondents to select more than one option as there may be more than one peak day in the minibus taxi industry.

The researcher probed this variable to understand the operation of the minibus taxi industry on a weekly basis. A typical Monday morning and Friday evening in the traffic congestion on the busy roads in South Africa is characterised by many minibus taxis driving on a yellow line (Sibisa 2020). Figure 4.9 shows the busiest day of the week in the minibus taxi industry. The following options were given to the respondents: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday.

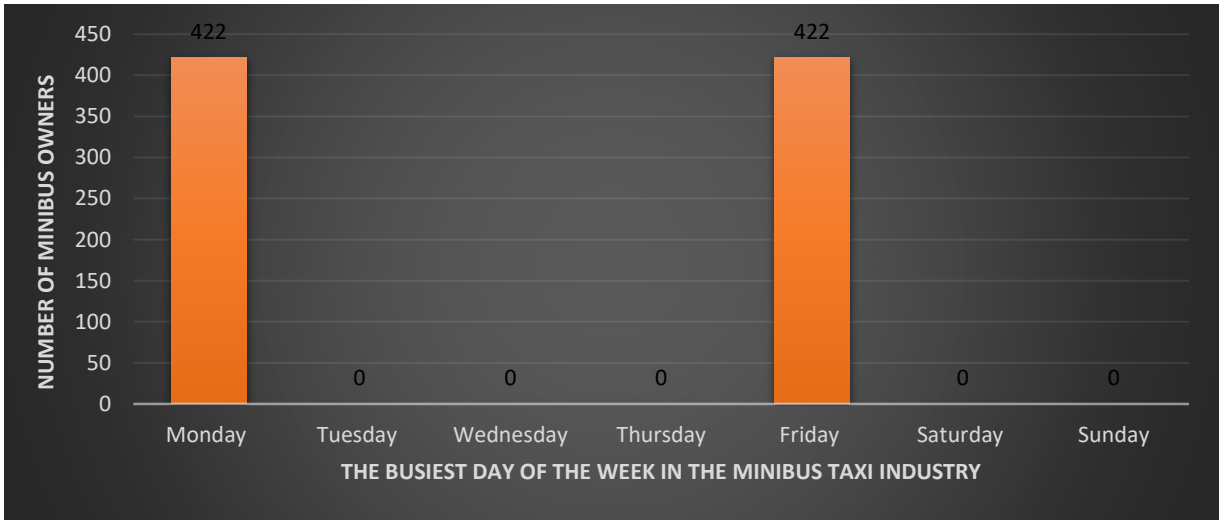

Figure 4.9: The busiest day of the week in the minibus taxi industry

Source: Author

Figure 4.9 shows that the minibus taxi industry's busiest days in the Emfuleni Local Municipality are Monday and Friday. It can be posited that people in the Emfuleni Local Municipality run odd errands or go on social journeys on Fridays and come back on Monday. Usually, on Fridays, many people are coming and going to funerals and weddings – and those who work in the industrial zones usually go to their townships on Fridays and come back on Mondays.

4.3.2.5 How many trips do you make on the busiest day?

This is a follow-up question from question 4.2.2.4, which asked about the busiest day (or days) of the week. In the minibus taxi industry, a trip is also referred to as a load, which means to fill a minibus taxi with commuters (Malele 2020). The number of commuters that fill up a minibus taxi depends on the model and size of the minibus. In the Emfuleni Local Municipality, the common minibuses used by these five minibus taxi associations are the Toyota HiAce, Toyota

Super16, Inyathi, and Nissan, which are all 15-seaters. Figure 4.10 shows the findings on the number of trips minibus taxi owners make on the busiest day. The following options were given to the respondents: 1-5 trips; 6-10 trips; 11-15 trips 16-20 trips; 20 –more trips.

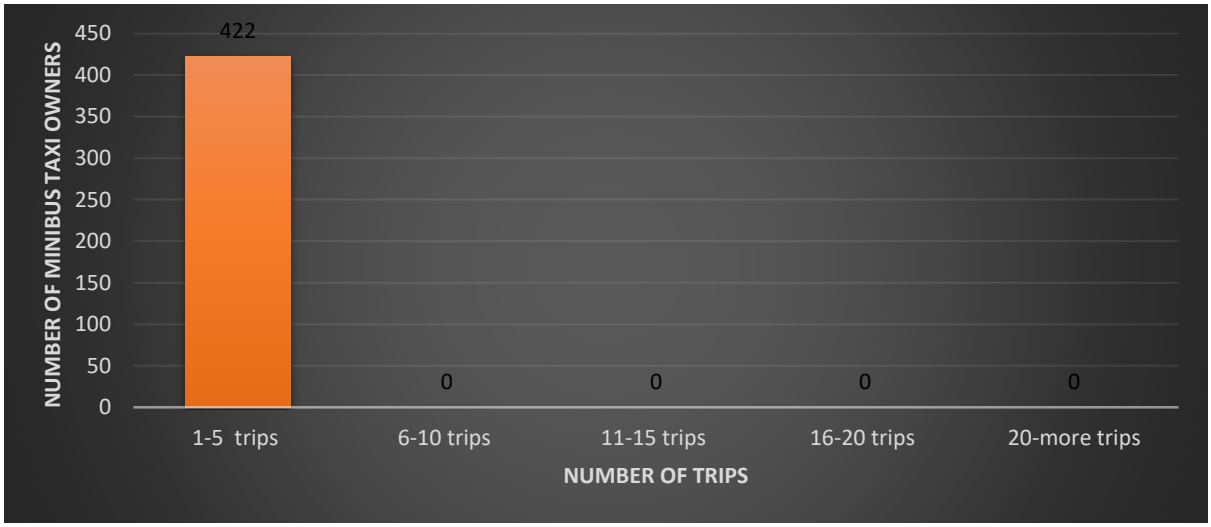

Figure 4.10: The number of trips that minibus taxi makes on the busiest day

Source: Author

Figure 4.10 shows that on the busiest days, which are on Monday and Friday, the minibus taxi makes between 1 and 5 trips per day. All the minibus taxi owners who were a part of the census for this research study agreed that the number of trips made on the busiest day was between 1 and 5. This finding contrasts with the historical perspective of Kokernot's (1984:123) findings, which show that the minibus taxi makes 15–25 trips per day. The explanation for these different findings is that there are several minibus taxis in the market. When Kokernot's study was done, there were 22,300 black-registered minibuses nationwide in 1982, which resulted in minibus taxis taking more trips as the demand was higher than the supply. When a study was conducted by the Mail and Guardian (2020), it was found that more than 200, 000 minibus taxis were transporting more than 15 million commuters on a daily basis in South Africa and that profits had been on a decline since the year 2000.

4.3.2.6 Which is the busiest period of the month?

Periodic peaks are achieved through seasonal variation in demand (Corluka 2019:22). A historical perceptive showed that the minibus taxi industry picks up in the warmer months and goes down in the rainy ones (Kokernot 1984:123). One possible reason that makes the demand in the minibus taxi industry not seasonal but varied is the demand on social grant payday and employment income payday. Figure 4.11 shows the findings from the busiest period of the month. The following options were given to the respondents: beginning of the month; Middle of the month; End of the month; Throughout the month.

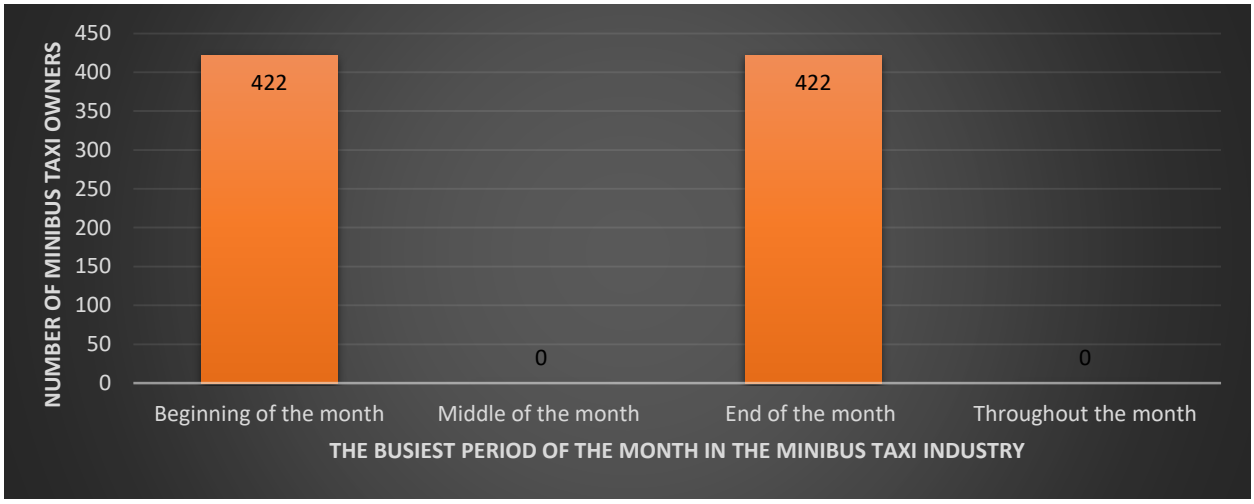

Figure 4.11: The busiest period of the month in the minibus taxi industry

Source: Author

Figure 4.11 shows that the busiest periods of the month are at the beginning of the month and at the end of the month. These results are reliable and aligned with the fact that many companies pay their employees at the end of the month. According to Moswane (2021), elderly grants are paid out at the beginning of the month. It can also be posited that the people of Emfuleni Local Municipality spend most of their money at the end and beginning of the month (Nkosi 2021).

4.3.2.7 How many trips do you make during the busiest period of the month?

This is a follow-up question to the above question (4.2.2.6) that asked when the busiest period of the month is. The researcher probed this variable to understand what it means if the minibus taxi owner says 'it is a good period of the month'. Figure 4.12 shows the findings of the number of trips in the busiest period of the month. The following options were given to the respondents: 1-20 trips; 21-40 trips; 41-60 trips; 61-80 trips; 81- more trips.

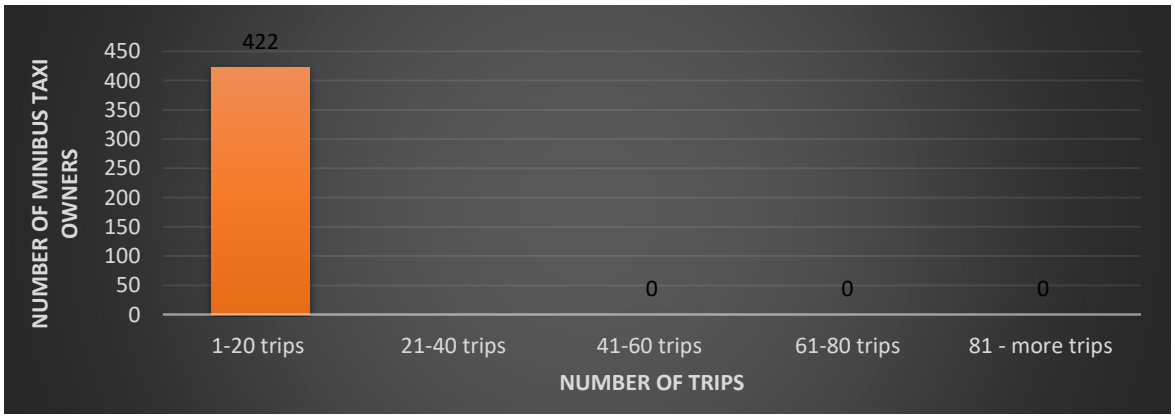

Figure 4.12: The number of trips done in the peakiest period of the month

Source: Author

Figure 4.12 shows that during the busiest period in the minibus taxi industry, which is the beginning and end of the month, the minibus taxi industry in the Emfuleni Local Municipality makes 1 to 20 trips. All the minibus taxi owners who are part of the census agreed that this is the number of trips that their minibus taxis make during the busiest period. Lastly, in a discussion with Mr. Poponkie Makelefane (2021), a radio presenter of Taxi Talk (a show on VUT FM), since the coronavirus pandemic, the minibus taxi makes fewer trips.

The section hereafter discusses the findings on CVP and cost structure, two of the three selected management accounting principles that this research study focuses on.

4.3.3 Section C: CVP and cost structure

In this section, the researcher sought information on the income and costs that the minibus taxi owner incurs while running their taxis. Information such as the fare, type of costs, which costs have more impact on profits, fixed costs, variable costs, trips and kilometres that the minibus taxi needs to take to cover all monthly costs.

4.3.3.1 Indicate the fare price that you charge per trip

The term "fare price" is generic to the public transport sector and is an issue associated with fare collection, often called "taxi maths." According to Maqubela (2018), the fare price is determined by the distance traveled. The answer to the question of who sets fares in the minibus taxi industry, according to Chairman Mali (2018), is the association in accordance with their affiliated mother bodies (SANTACO or the NTA). According to Fransiska (2013:17), the application of CVP requires sales revenue.

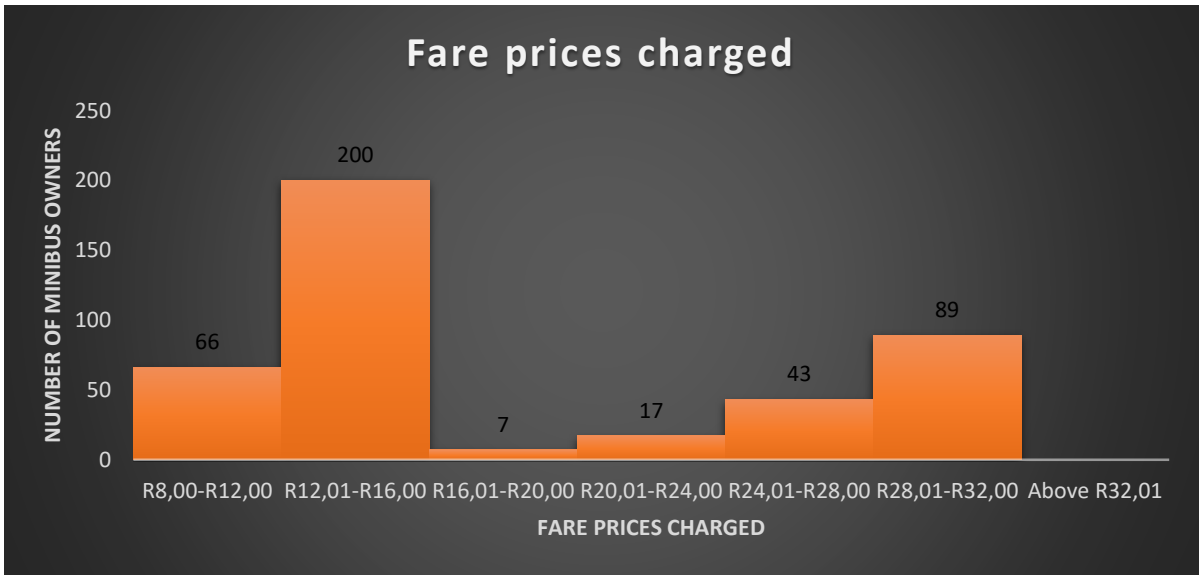

Figure 4.13: Indicate the fare price that you charge per trip

Source: Author

Figure 4.13 shows the findings in a graphical format. Of the 422 minibus taxi owners, 200 charge a fare price between R12,01 and R16,00 and 89 minibus taxi owners charge a fare price between R28,01 and R32,00. 66 minibus taxi owners charge between R8,00 and R12,00. 43 minibus taxi owners charge between R24,00 and R28,00. 17 minibus taxi owners charge between R20, 01 and R24,00 and 7 minibus taxi owners charge between R16, 01 and R20,00. "Fare price" is the terminology used in the minibus taxi industry in place of the sales price. There are a lot of factors, such as demand, standard of living, and also living costs, that influence fare prices within the minibus taxi industry (Maqubela 2018).

4.3.3.2 Tick the following costs that you incur in the running of your business

In this question, the researcher asked the minibus taxi owners to tick off the costs that they incur during the running of their business. The following options were given: fuel, instalment on the purchase of a minibus taxi, service and maintenance, salaries or wages to the driver, miscellaneous fees, association fees, insurance fees, and rank fees. The results are presented in Figure 4.14. The figure shows only the respondents who incur these costs.

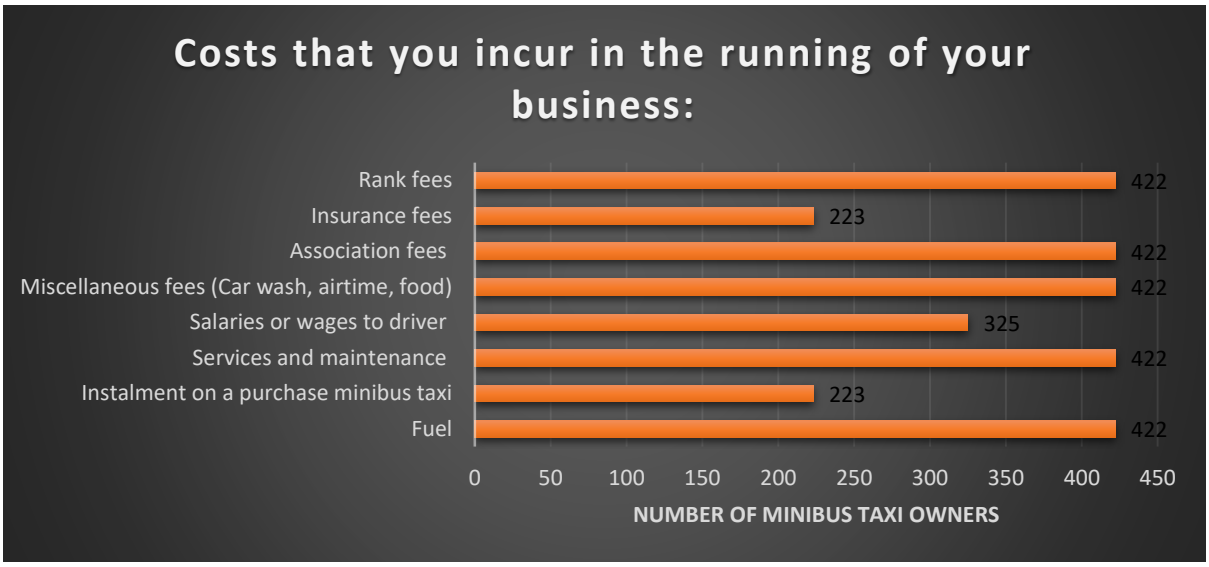

Figure 4.14: Costs incurred in running of the minibus taxi industry

Source: Author

All 422 minibus taxi owners spend on the following costs: fuel, miscellaneous fees, association fees, rank fees, service and maintenance. Of the 422 minibus taxi owners, only 325 pay a salary or wage to the minibus taxi driver. These findings are aligned with the findings of Figure 4.2 above that showed that 97 minibus taxi owners are owner-drivers (these minibus taxi owners do not spend money on salaries and wages as they drive the minibus themselves).

Of the 422 minibus taxi owners, only 223 spent the instalment on the purchase of a minibus taxi. Only 223 of the 422 minibus taxi owners posit that they spend on insurance; these findings

are aligned with those of the number of minibus taxi owners who are still paying instalments. A survey conducted by SA Taxi (2018) shows that most minibus taxi owners who own fully paid minibus taxis do not have insurance.

4.3.3.3 Scale the following costs in terms of their impacts on profits

In this question, the researcher asked the respondents to rate the costs in terms of their impact on profits. The following options were given: fuel, instalment on the purchase of a minibus taxi, service and maintenance, salaries or wages to the driver, miscellaneous fees, association fees, insurance fees, and rank fees. The researcher used a Likert scale where 1 = Insignificant, 2 = Minor, 3 = Moderate, 4 = Major, and 5 = Severe. The application of cost volume profit analysis also looks at different costs and their impact on profits. The view of many is that the fuel and instalment of minibus taxi owners are the minibus taxi industry's biggest cost. According to Kokornet (1984:124), more than 38% of the revenue in the minibus taxi industry goes to petrol costs. Will petrol costs and the instalment on the purchase of a minibus taxi be the highest costs in this region? Before interpreting the findings, the researcher presents them in graphical format in Figure 4.15.

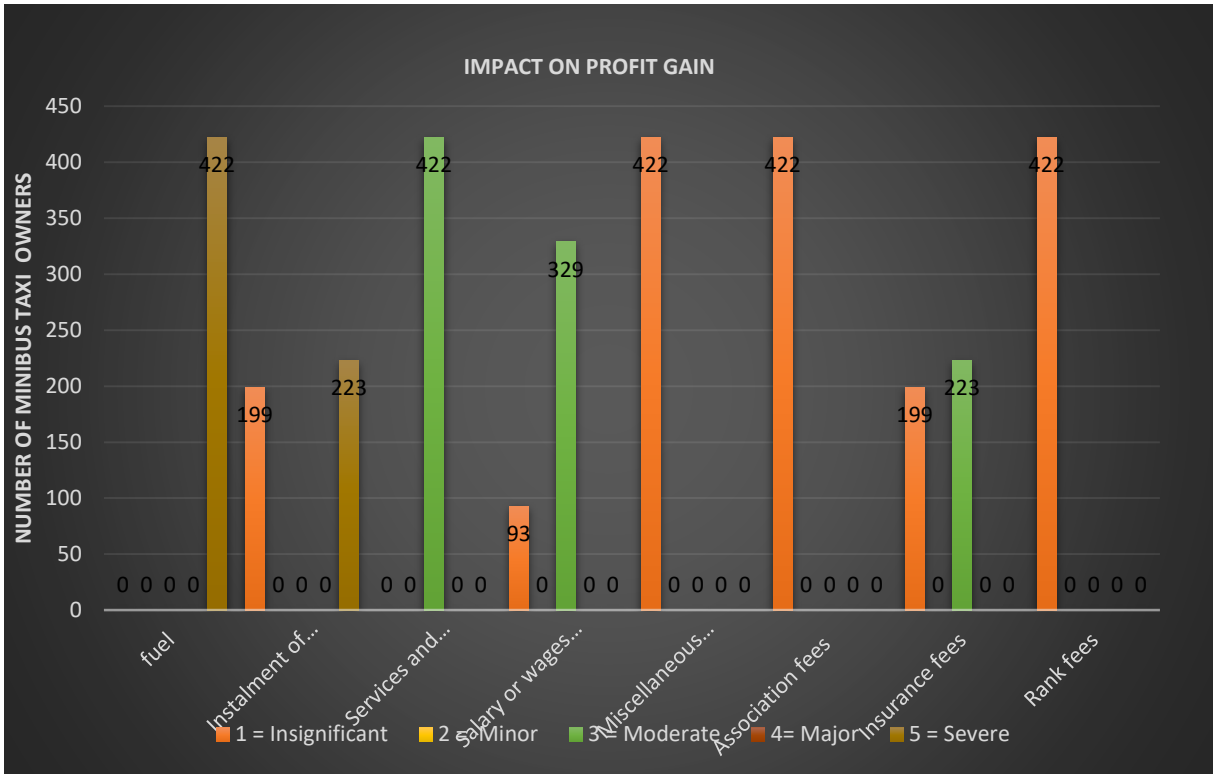

Figure 4.15: The impacts that the following costs have on the profit gains

Source: Author

Figure 4.15 shows that 422 minibus taxi owners strongly agree that fuel has a strong impact on their profits.

The above figure also shows that 223 minibus taxi owners who still pay instalments on the purchase of their minibus also strongly agree that the instalment costs have a strong impact on their profits, leaving the remaining 199 minibus taxi owners without instalments to state that instalment costs have no impact on their profits.

The following costs were rated the least: association fees, rank fees, and miscellaneous fees. Association and rank fees are paid on a weekly basis to the association (Mali 2018). Miscellaneous costs include the cost of washing the minibus, which happens twice to three times a week, and the costs that the minibus taxi owner would spend on airtime and food at the minibus taxi rank.

The above figure also shows that 223 minibus taxi owners who have insurance state that insurance fees have a moderate impact on their profit, while 119 minibus taxi owners who have no insurance state that insurance fees have no impact. Maqubela (2018) explains why many minibus taxi owners do not have insurance is because the cost of insurance is high.

All 422 minibus taxi owners stated that the amount they are spending on service and maintenance is moderate. This finding might be biassed by the fact that most of the minibus taxis in the Emfuleni Local Municipality are Toyota Quantum and Nissan Impendulo, which are considered good quality, or that most of the minibus taxis are new and that they do not need so much service and maintenance. According to SA Taxi (2018), Toyota Quantum Sesfikle and Nissan Impendulo spare parts are readily available and cheap. Minibus taxi owners may spend less than R750,00 for a service kit.

The figure above also shows that 329 minibus taxi owners posit that salaries or wages to drivers impact their profits, while the remaining 93 minibus taxi owners posit that salaries or wages to drivers have no impact. Perceived as the most reckless road transport drivers by fellow motorists, they are minibus taxi drivers who do not have a salary or a wage system. In 2005, the National Department of Transport attempted to enforce the minibus taxi industry to introduce a minimum wage according to the Basic Condition of Employment Act (75 of 1997) that states that minibus taxi drivers should earn a minimum of R1350 (Mahlangu 2002:12). Mmadi (2013:123) posits that the implementation of this act was not properly enforced and adopted by the minibus taxi industry. That is why, even today, minibus taxi drivers are still exploited and many are facing personal challenges. Barret (2003:9) found that minibus taxi drivers working from Johannesburg and Pretoria receive as little as R160 to R500 a week. Mahlangu (2002:12) posits that these low wages given by minibus taxi owners' result in pilfering.

4.3.3.4 Which costs are considered as fixed costs in the minibus taxi industry?

In this question, the researcher asked the minibus taxi owners which of the following costs — fuel, instalment on the purchase of a minibus taxi, service and maintenance, salaries or wages of the driver, miscellaneous fees, association fees, insurance fees, and rank fees—the minibus taxi owners considered as fixed costs. The term "fixed cost" refers to a cost that is constant and is independent of travel or production. The researcher probes the variable to understand the classification of costs in the minibus taxi industry. And as one of the assumptions for performing CVP, there needs to be a variable and fixed cost. The figure shows only the respondents who incur these costs.

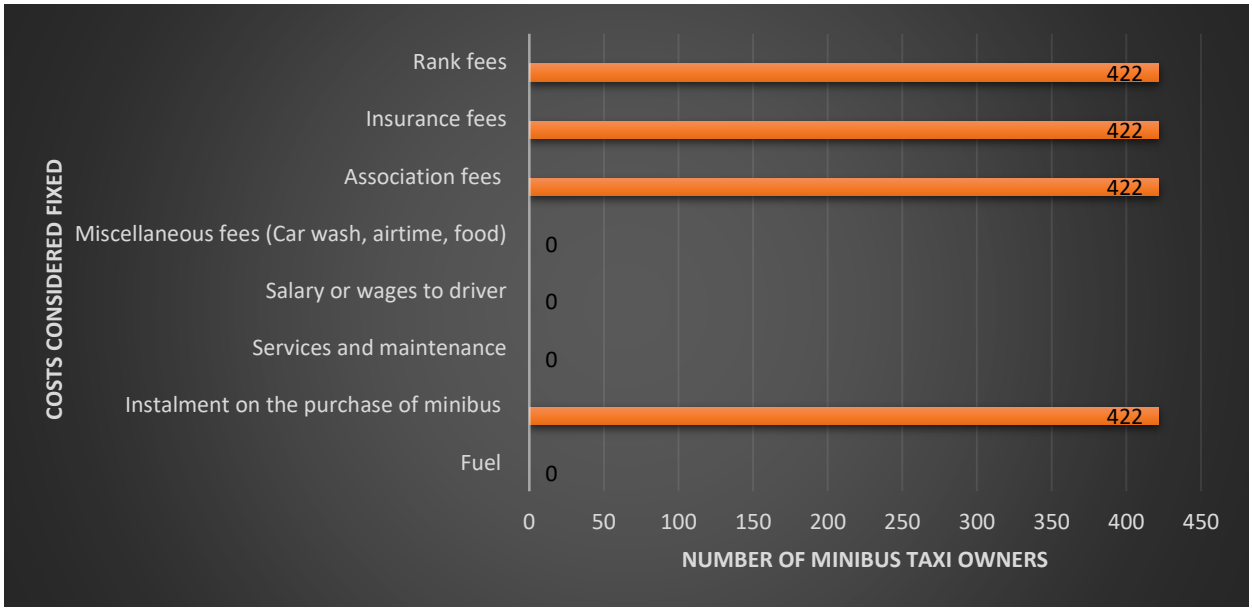

Figure 4.16: Costs considered as fixed costs

Source: Author

Figure 14.16 shows that minibus taxi owners in the Emfuleni Local Municipality consider the following costs as a fixed instalment on the purchase of a minibus taxi: insurance fees, association fees, and rank fees. The fixed costs are independent of the costs. Minibus taxi owners pay R15 000 per month towards the purchase of a minibus taxi (Moswane 2022). Insurance costs are an avoidable cost that amounts to R2 000 (Mali 2018). According to Maqubela (2018), association and rank fees amount to R400 on a weekly basis.

4.3.3.5 Which costs are considered variable costs in the minibus taxi industry?

The term variable cost refers to a cost that is not constant and varies as it is dependent on usage. In this question, the researcher asked the minibus taxi owners which of the following costs they considered variable: fuel; instalment on the purchase of a minibus taxi; service and maintenance; salaries or wages of the drivers; miscellaneous fees; association fees; insurance fees; and rank fees. The term "variable cost" refers to a cost that is not constant

and varies as it is dependent on usage. The figure shows only the respondents who incur these costs.

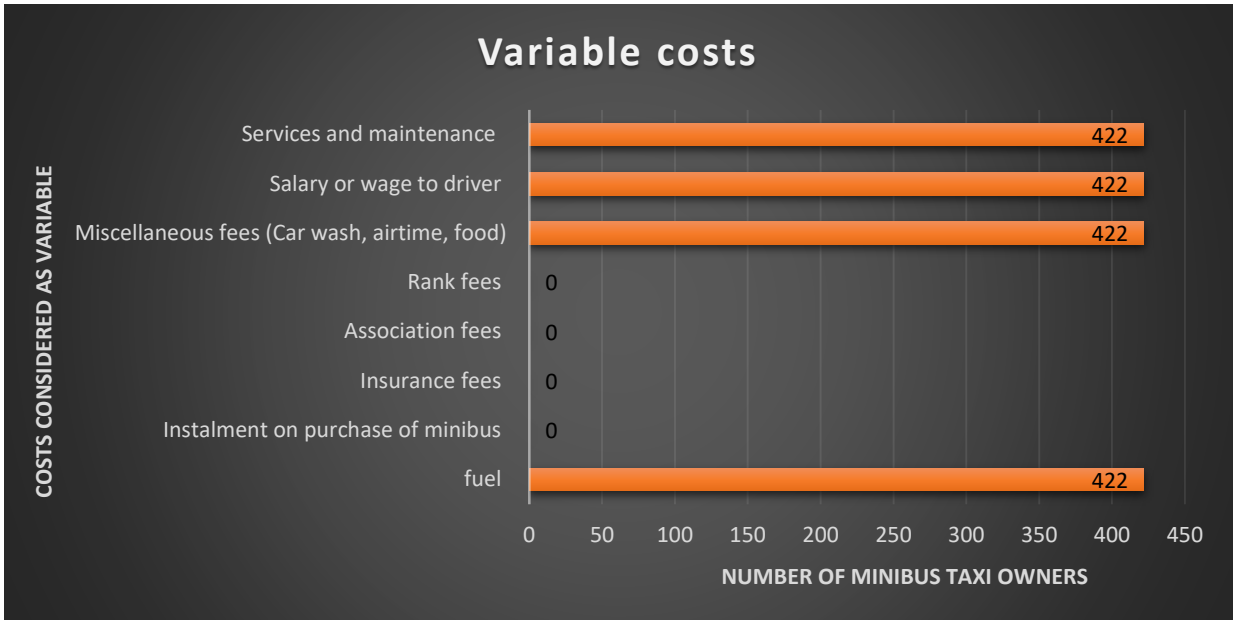

Figure 4.17: Costs that are considered as variables cost

Source: Author

Figure 4.17 shows that 422 minibus taxi owners in the Emfuleni Local Municipality consider service and maintenance, salaries or wages for the driver, miscellaneous fees, and fuel as variable costs. This means that the minibus taxi owner spends unequal amounts on these costs each month. For instance, on fuel, minibus taxi owners spend more money if their minibus has travelled longer. As Barret (2003:9) outlined, most minibus taxi drivers do earn a fixed income but earn a percentage of the income brought to their minibus taxi owners. The variable costs are dependent.

4.3.3.6 Do you know how many commuters your minibus taxi needs to transport to cover all the monthly costs?

In this question, the researcher asked the respondents if they knew how many commuters their minibus taxi needed to take to cover all their monthly costs. According to Malele (2021), it is quite rare for an informal business such as the minibus taxi industry to keep a record of kilometres travelled or expenses. Figure 4.18 shows the findings on the knowledge of commuters to cover all monthly costs.

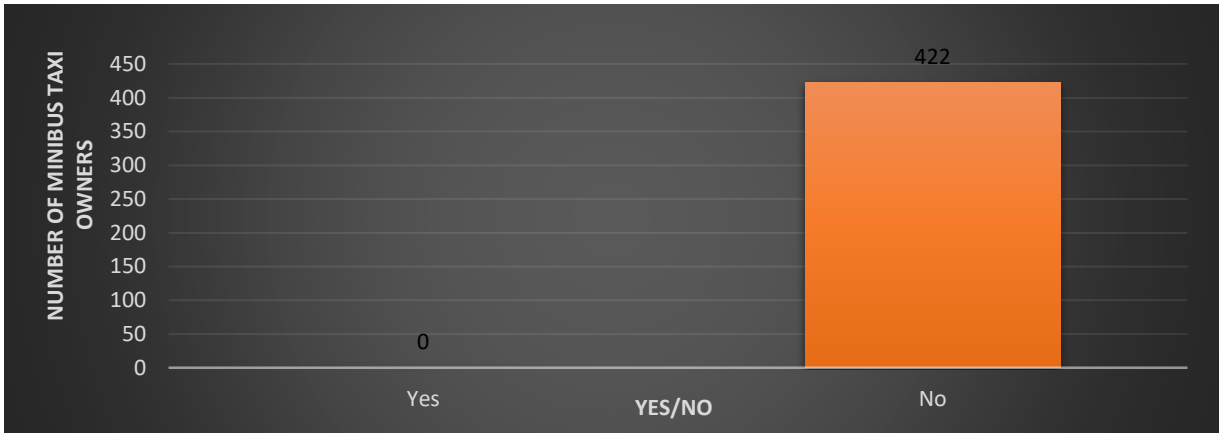

Figure 4.18: Knowledge of commuters to cover all monthly costs

Source: Author

Figure 4.18 shows that out of 422 minibus taxi owners in the Emfuleni Local Municipality, none of them (minibus taxi owners) know how many commuters their minibus taxi should transport to cover all their monthly costs. There are no tracking devices that are used to count commuters in the minibus taxi industry. Thus, the researcher recommends the introduction of commuter count devices in the minibus taxi industry in Chapter 5 (Section 5.4.2). This will assist in introducing and applying CVP.

4.3.3.7 If No, how many commuters?

This is a follow-up question from the previous question (4.2.3.6) that asked if the minibus taxi owner knew how many commuters the minibus taxi needed to take to cover all the monthly costs. But as none of the minibus taxi owners indicated in the previous question, they do know how many commuters they need to transport to cover all costs. These findings will affirm the conformability and reliability of the above findings presented in Figure 4.18.

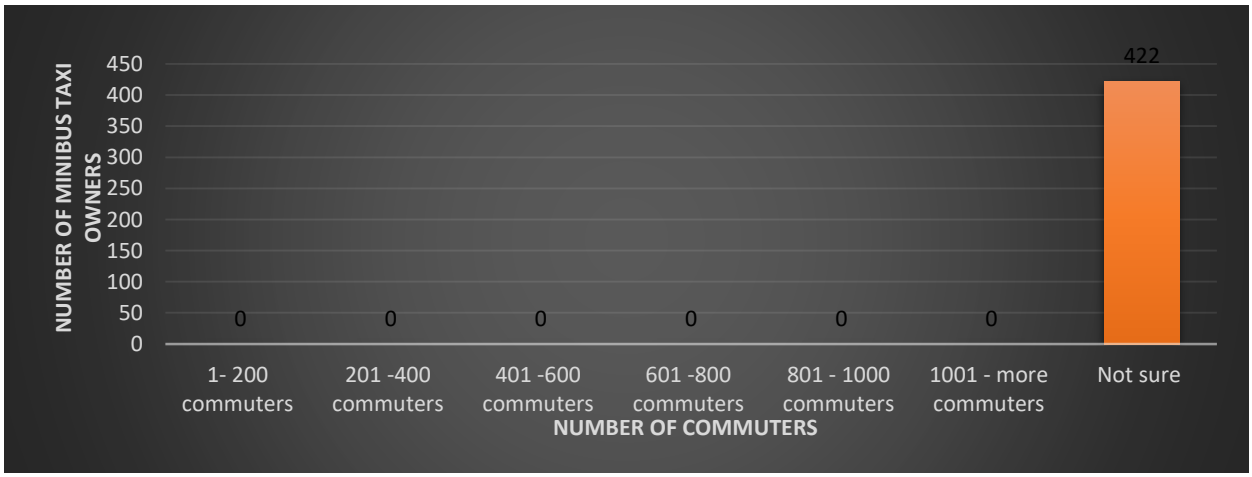

Figure 4.19: The number of commuters needed to cover all monthly costs

Source: Author

Figure 4.19 affirms the findings in Figure 4.18 that 381 minibus taxi owners do not know how many commuters their minibus taxi needs to take to cover all monthly costs. All 422 minibus taxi owners indicated that they are not sure how many commuters they need to take to cover all their monthly costs.

4.3.3.8 Do you number of trips to transport to cover the monthly costs?

In this question, the researcher asked the respondents how many trips they needed to take to cover the monthly costs. In the question 4.3.3.7, the findings showed that minibus taxi owners do not know how many commuters they need to take to cover all the monthly costs. Will these findings be different from the findings in figure 4.19 in terms of response?

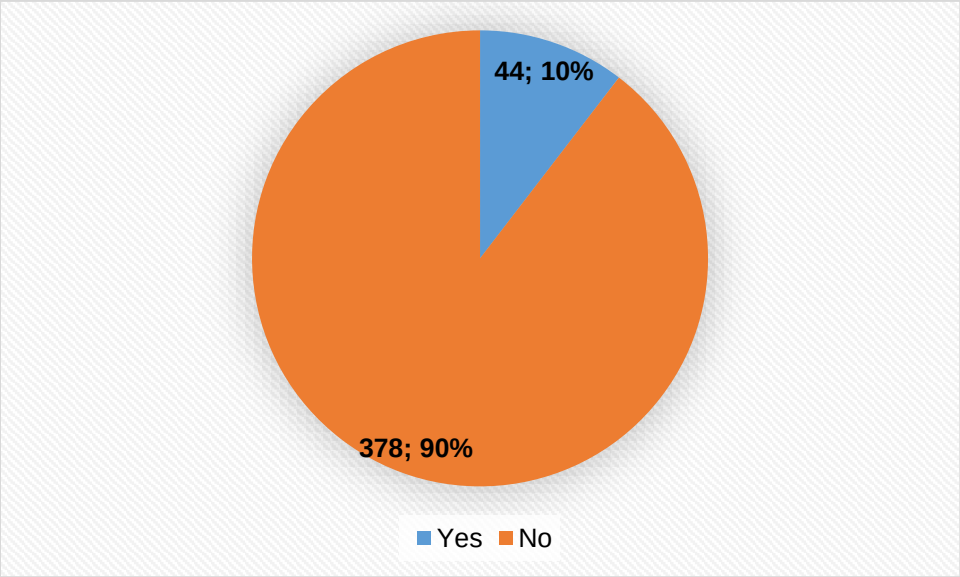

Figure 4.20: Number of trips to cover monthly costs

Source: Author

Figure 4.20 shows that only 44 of the minibus taxi owners in the Emfuleni Local Municipality know how many trips their minibus taxi needs to take to cover all monthly costs. Therefore, according to the findings in Figure 4.17 and the above figure, minibus taxi owners in the Emfuleni Local Municipality do not know how many commuters or trips they need to take to cover all their monthly costs. According to Makelefane (2021), some minibus taxi owners have taken minibus taxis from private individuals. This practise is known as in Sestwana "*legofa."* These private individuals require the minibus taxi owners to give the number of trips the minibus taxi powners will make each month (Makelefane 2021).

4.3.3.9 If yes, how many trips?

This is a follow-up question from question 4.2.3.9, which asked if minibus taxi owners know how many trips their minibus taxi needs to take in order to cover all monthly costs. The researcher probes this variable to test for reliability and validity. Will the findings in figure 4.20 be both reliable and valid?

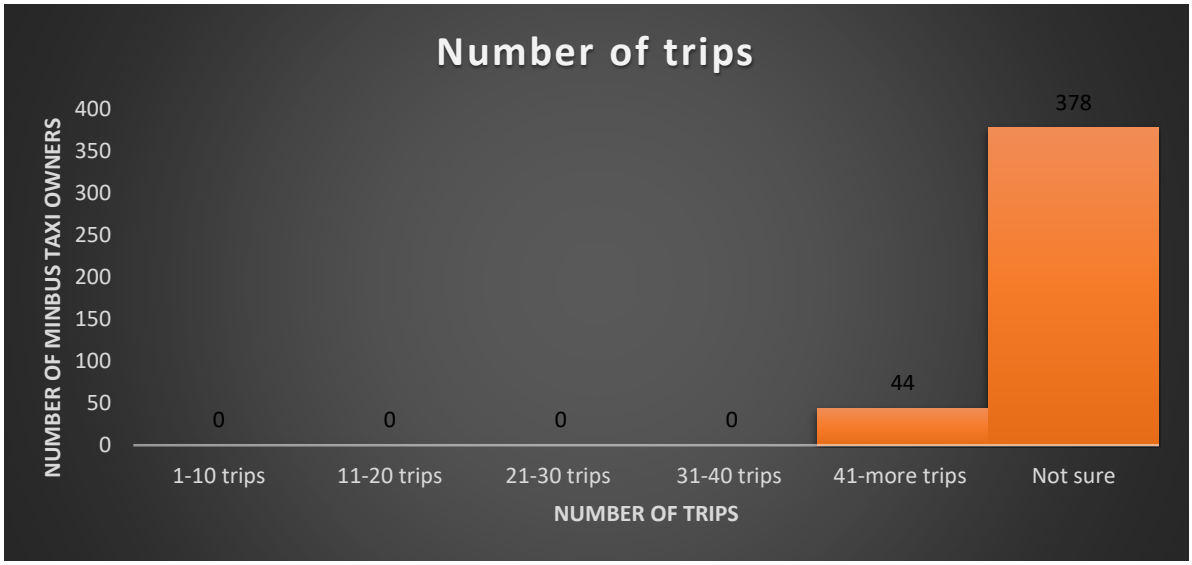

Figure 4.21: The number of trips to cover monthly cost

Source: Author

Figure 4.21 shows that 378 minibus taxi owners in the Emfuleni Local Municipality do not know or are not sure of how many trips their minibus taxis need to take or make before they can start making a profit. While 44 minibus taxi owners indicated that they need 41 or more trips to cover their monthly costs. Lastly, this finding shows that the findings in Figure 4.19 are reliable as only 44 of the minibus taxi owners indicated that they know the number of trips they need to make to breakeven. In other words, to cover all monthly costs.

4.3.3.10 Do you know how many kilometres your taxi needs to travel to cover the monthly costs?

In this question, the researcher asked the minibus taxi owners whether they knew how many kilometres their minibus taxi should travel in order to cover monthly costs.

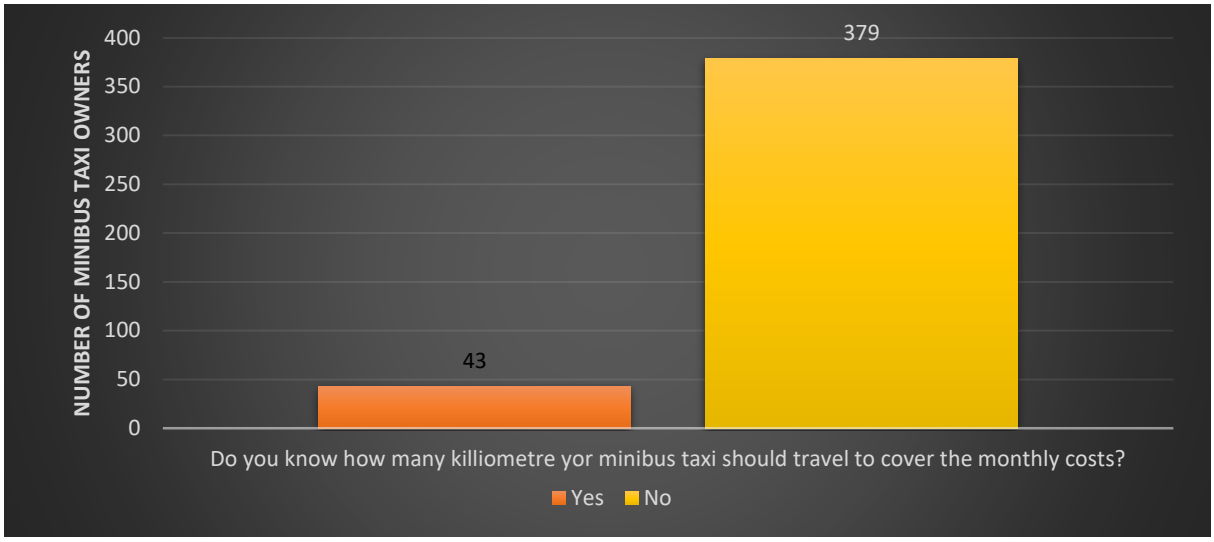

Figure 4.22: Knowledge of kilometres to cover the monthly costs

Source: Author

Figure 4.22 shows that only 43 minibus taxi owners in the Emfuleni Local Municipality know how many kilometres their minibus taxi should travel to cover all the monthly costs. According to Kubeka (2020) minibus taxi owners can use a logbook to check kilometres travelled.

4.3.3.11 If yes, how many kilometres (KM/S)?

This is a follow-up question from question 4.2.3.10 whereby the findings indicated that none of the minibus taxi owners in the Emfuleni Local Municipality know how many kilometres their minibus taxi needs to travel in order to break even. The researcher probed this variable for the validity and reliability of the research findings.

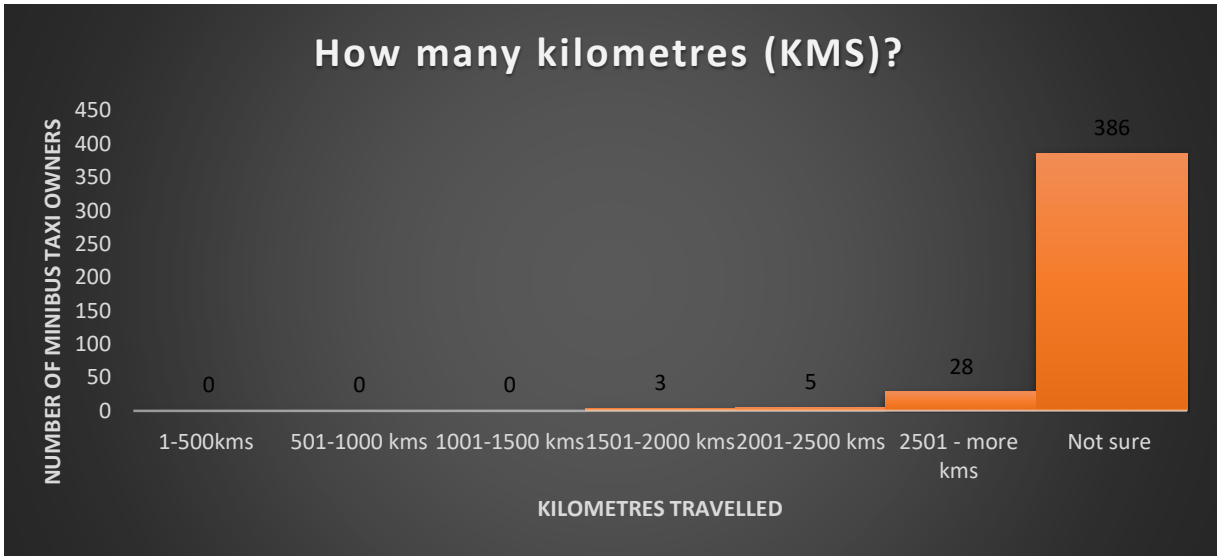

Figure 4.23: kilometres your minibus taxi travel to cover monthly costs

Source: Author

The above figure shows that 386 minibus taxi owners (91.46%) do not know how many kilometres their minibus taxi should travel in order to cover all costs. The remaining 8.54% is shared as follows: 6.63% responded to 2501 and more, 1.18% responded to 2001–2500km, and finally, 0.73% responded to 1501-200km. In the section hereafter, the researcher discusses the findings from section D of the questionnaire.

4.3.4 Section D: Budgeting

In this subsection, the researcher sought information on whether the minibus taxi owners' budget during the running of the minibus taxi business. Information such as whether the minibus taxi owners budget or not, the type of budget they use, the period of budget, whether they adhere to their budgets, whether they think budgets are useful for the minibus taxi industry, and whether they would use budget training if offered was collected. The researcher explains and interprets the findings below.

4.3.4.1 Do you make use of a budget in your business?

In this question, the researcher asked the minibus taxi owner whether they made use of budgets. A historical perspective is that informal businesses do not budget as their owners do not know how to draw a budget (Budlender 2019:6). Is the latter historical perspective still relevant and does it include minibus taxi owners in the Emfuleni Local Municipality?

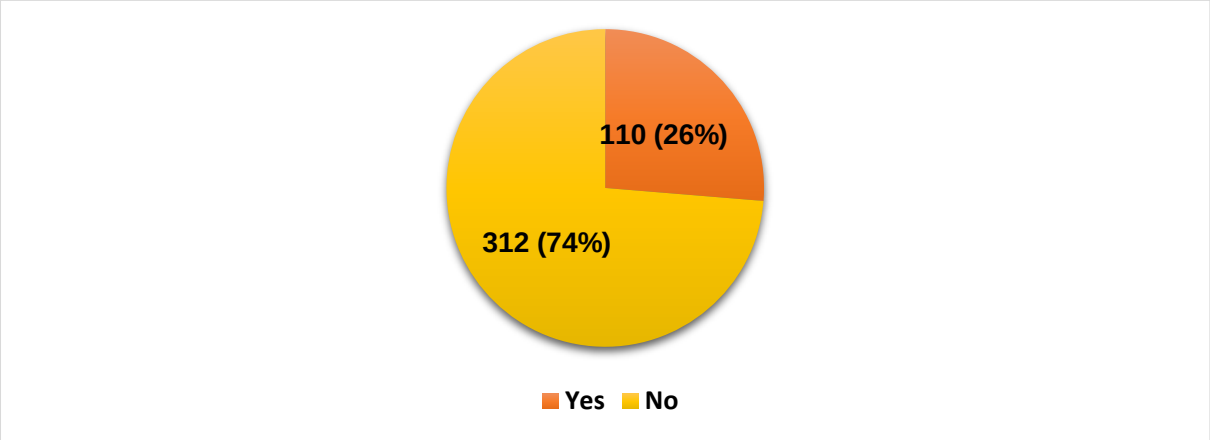

Figure 4.24: Do minibus taxi owners make use of budgets?

Author: Source

The answer to the above question is "Yes". The historical perspective is still relevant as most minibus taxi owners in Emfuleni Local Municipality do not budget. Moreover, the minibus taxi owners are part of the informal business owners who do not budget (Maduekwe & Kamala 2016:188). Figure 4.24 shows that 74% of minibus taxi owners do not budget. The figure also shows that 26% of the minibus taxi owners in the Emfuleni Local Municipality make use of a budget. Education level can influence the application of budgeting.

4.3.4.2 What type of budgets do you prepare?

There are different types of budgets that individuals may use according to their needs or wants. This is a follow-up question from the above findings that showed that none of the minibus taxi owners in the Emfuleni Local Municipality use a budget. The researcher probed the variable to check for the reliability and validity of the research findings.

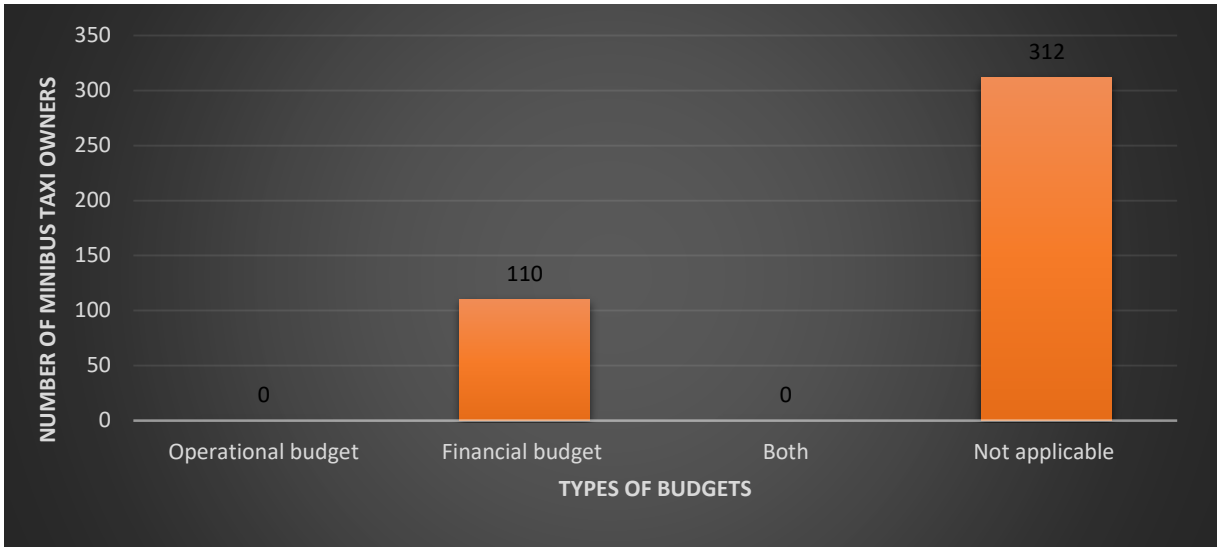

Figure 4.25: Type of budget prepare by minibus taxi owner

Source: Author

The above figure shows that most minibus taxi owners do not use any type of budget. This majority is represented by the 312 minibus taxi owners. While 110 minibus taxi owners use a financial budget – in other words, these minibus taxi owners only do a cash budget.

4.3.4.3 Which period do you budget for?

A budget period is a portion of time, usually equal to either a calendar year or more than a year. The researcher probed the variable to understand the period that the minibus taxi owner .budgets for. But as the findings in figure 4.25 shows that most minibus taxi owners do not budget, will these findings show any difference from the already interpreted findings?

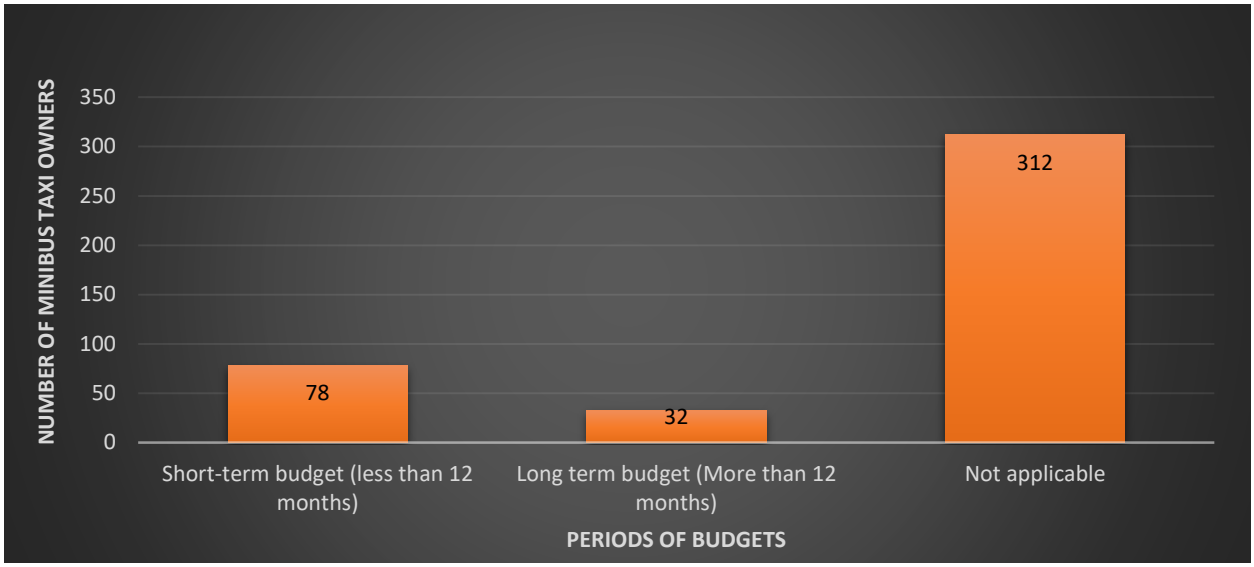

Figure 4.26: The period that minibus taxi owners budget for?

Source: Author

The above figure shows that 312 minibus taxi owners in the Emfuleni Local Municipality do not budget. The remaining part of the census is divided between 78 minibus taxi owners who have a short-term budget and 32 minibus taxi owners who have a long-term budget.

4.3.4.4 How do you set your budgets?

Budgeting is an easy process that only requires a pen and paper and a little bit of looking ahead (Motingwe & Brijlal 2020:847). Technology applications have been developed to advance the process of pen and paper. But as the above findings in figures 2.25 and 2.26 show, most minibus taxi owners do not budget. Those minibus taxi owners who do budget, how do they set their budgets?

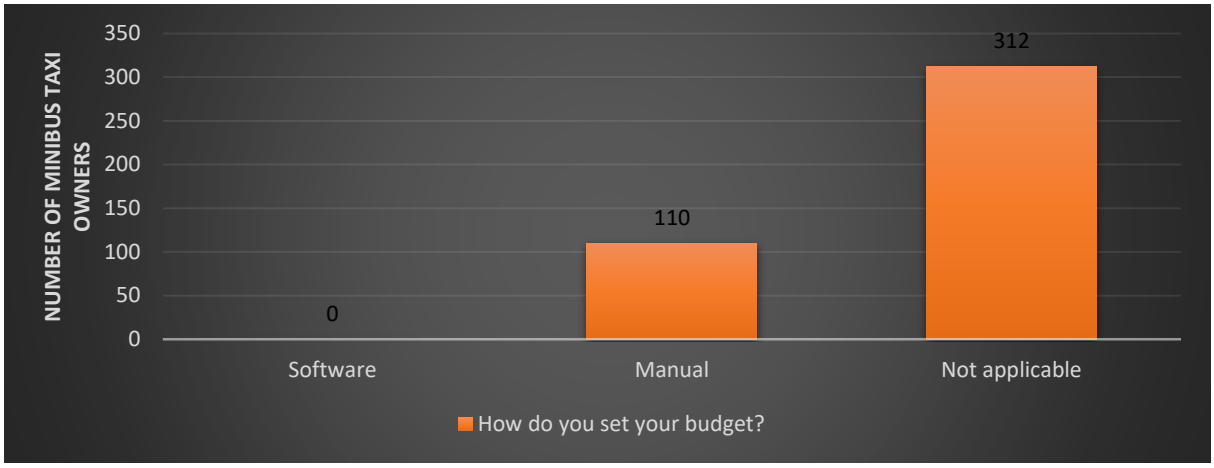

Figure 4.27: Tools used by minibus taxi owners in the Emfuleni Local Municipality

Source: Author

Figure 4.27 shows that none of the minibus taxi owners in the Emfuleni Local Municipality use software to set their budget. The figure shows that 110 minibus taxi owners use a manual system while the remaining 312 minibus taxi owners simply do not budget. These findings are in line with the findings of the question 4.3.4.4 asked in this section.

4.3.4.5 Do you adhere to the budget?

The researcher asked the minibus taxi owners if they adhered to a budget. But as minibus taxi owners in the Emfuleni Local Municipality do not budget, this question is not applicable.

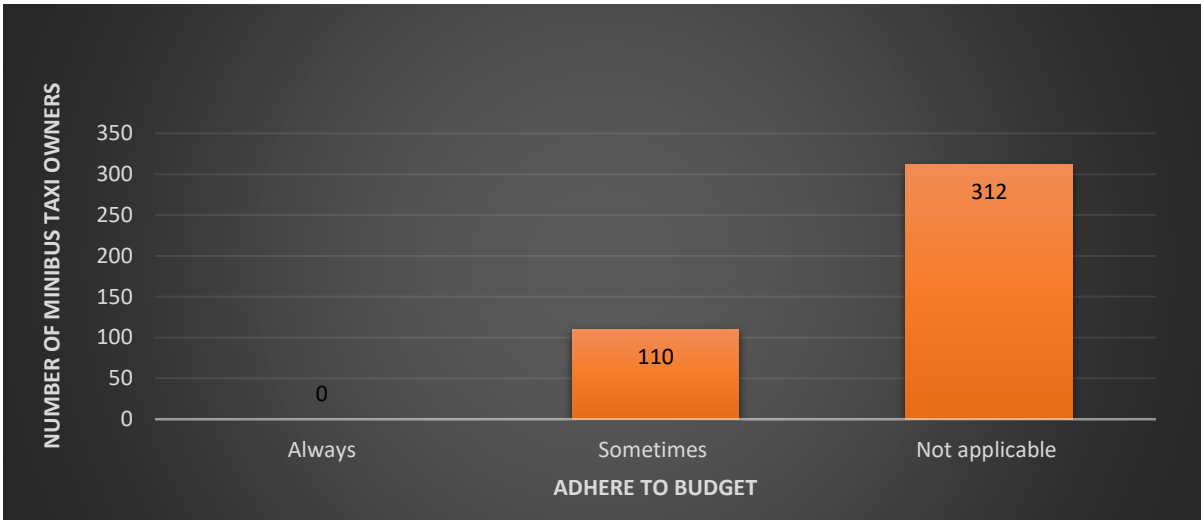

Figure 4.28: Do minibus taxi owners adhere to budget?

Source: Author

Figure 4.28 shows that the 110 minibus taxi owners in the Emfuleni Local who budget sometimes adhere to their budget target. 312 minibus taxi owners indicated that this question does not apply to them as they do not use any tool to set a budget and because they do not budget.

4.3.4.6 Do you think that the setting of budgets is useful in your business?

A budget is a tool that can be used to achieve short-term and long-term goals (Assey 2014:7). It is therefore important to set a budget. Will this be the case among minibus taxi owners in the Emfuleni Local Municipality to see a budget as a useful tool in the minibus taxi industry?

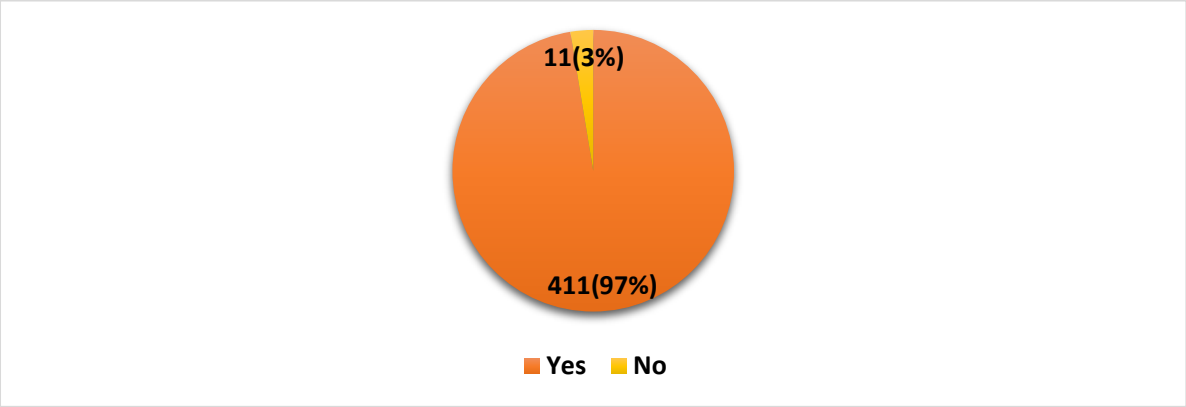

Figure 4.29: Is setting up a budget important in the minibus taxi industry?

Source: Author

Figure 4.29 shows that 411 (97%) minibus taxi owners in the Emfuleni Local Municipality think that setting a budget is useful for their minibus taxi industry. This means that minibus taxi owners believe that a budget is an important tool that may be useful in the minibus taxi industry. 11 minibus taxi owners (3%), do not think that budgeting is useful in the minibus taxi industry.

4.3.4.7 Would you use budgets if you received training relating to the setting thereof?

Many people do not budget because they do not know how to budget (Budlender 2009:6). In this question, the researcher asked the minibus taxi owners if they would receive training on how to budget. Often, it is posits that minibus taxi owners do not want to learn new skills, especially things that involve technology. Will it be the case in findings below? Many people do not budget because they do not know how to budget (Budlender 2009:6). In this question, the researcher asked the minibus taxi owners if they would receive training on how to budget. Often, it is posited that minibus taxi owners do not want to learn new skills, especially things that involve technology. Will it be the case in the findings below?

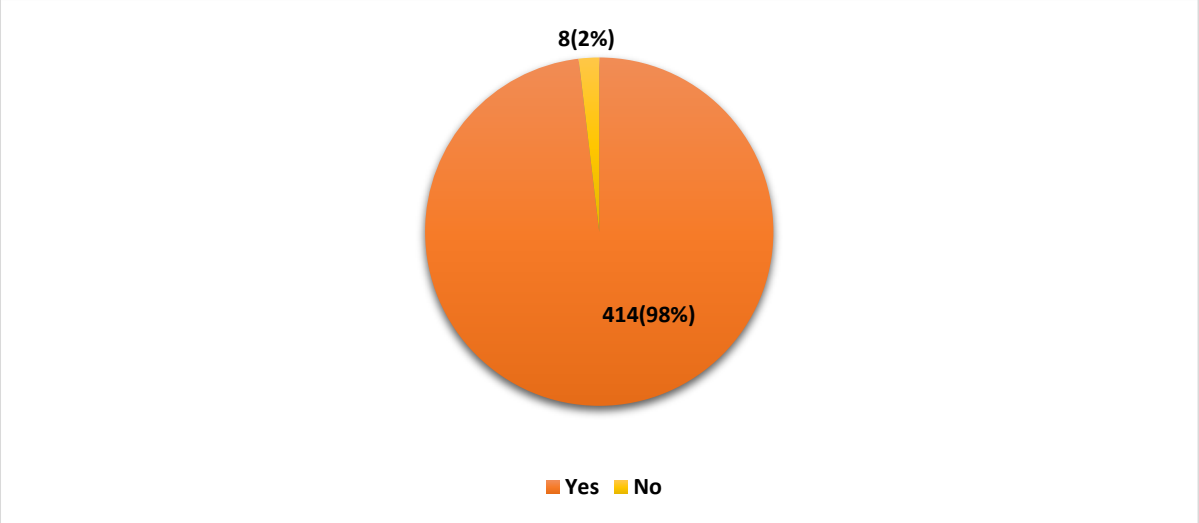

Figure 4.30: How many minibus taxi owners would accept budget training

Source: Author

The above figure shows that 414 minibus taxi owners (98%), who are represented by minibus taxi owners in the Emfuleni Local Municipality, would use budget training if it were offered. Eight minibus taxi owners (2%) posited they would not use budget training. These findings show that minibus taxi owners are willing to acquire new skills that revolve around technology for them to be able to use budgeting in the minibus taxi industry.

4.4 CHAPTER SUMMARY

The main objective of the chapter was to provide empirical research findings in order to fulfil the main objective set in section 1.4.1 and empirical objectives set in section 1.4.2.2. For the main objective and empirical objectives to be fulfilled, the questionnaire consisted of the following sections:

- Section A: Demographic profile;
- section B: Operating in the minibus taxi industry;
- Section C: CVP and cost structure.
- Section D: Budgeting

In this chapter, the researcher presented the respondents' feedback on the online and printed questionnaires, which were issued to the minibus taxi owners from the five minibus associations operating in the Emfuleni local municipality. This questionnaire used was comprised of four sections with 38 questions, and each question's findings were discussed, analysed, and interpreted in the previous chapter.

The findings in Figure 4.16 show that the following costs are classified as fixed costs: instalment on the purchase of a minibus taxi, service and maintenance, association fees, insurance fees, and rank fees. In Figure 4.17, fuel, service and maintenance, salaries or

wages for the driver, and miscellaneous fees are classified as variable costs. This latter finding shows that the minibus taxi owners apply cost structure as part of running the minibus taxi business.

The findings in Figure 4.18 show that minibus taxi owners do not know the number of commuters that their minibus should carry in order to cover all their monthly costs. Whereas figures 4.20 and 4.22 show that most minibus taxi owners do not know the number of trips nor the kilometres their minibus taxi should travel in order to cover all their monthly costs. More than 378 minibus taxi owners out of a total of 422 minibus taxi owners make up this majority. The latter findings show that most minibus taxi owners do not apply cost-volume profit analysis as part of running their minibus taxi business.

The findings in Figure 2.24 show that most minibus taxi owners do not apply budgeting in the running of their minibus taxi business. 312 minibus taxi owners out of 422 do not make use of a budget. The 110 minibus taxi owners who budget, according to Figure 4.28, do not always adhere to budgeting. Moreover, the other findings were presented using the tables, graphs, and bar chart above. In the final chapter to follow, the research study is concluded and several recommendations are made.

CHAPTER 5:
CONCLUSION AND RECOMMENDATION

"Only electricity can give the transport sector the flexibility to switch fuels when one or more become too expensive." - Frederick W. Smith

5.1 INTRODUCTION

In this chapter, the researcher presents a conclusion obtained after conducting this research study, which probes the application of management accounting principles in the minibus taxi industry by the minibus taxi owners in the Emfuleni local municipality. The chapter also provides recommendations, which can be adopted by stakeholders who are either directly or indirectly involved in operating minibus taxis. As this research study was conducted during the COVID-19 pandemic and based on the research findings, the research limitations will also be discussed in this chapter. Lastly, the researcher will end the chapter by identifying shortcomings and opportunities that were identified during the conducting of this study.

This research study asked the following critical question: Do minibus taxi owners located in the Emfuleni Local Municipality use the selected management accounting principles as part of running their business? In terms of the phrase "the selected management accounting principles," the researcher is referring to the following principles: CVP, cost structure, and budgeting. These concepts were discussed in detail in Chapter 2 of this research study. To answer the main critical question, this chapter will indicate how the main objective (5.2.1) and sub-objectives (par. 5.2.2-5.2.4) were achieved.

5.2 RESEARCH OBJECTIVES

Research objectives are also referred to as research goals that should be attained through the conducting of a research study (Kumar 2011:50). Moreover, research objectives are primary or secondary in nature, whereby a primary objective is the main discovery that should be established, while secondary objectives represent specific aspects that should be investigated (Kumar 2011:50). The objectives of the study were identified in Chapter 1, section 1.4. For the purpose of this chapter, these objectives are illustrated in Figure 5.1.

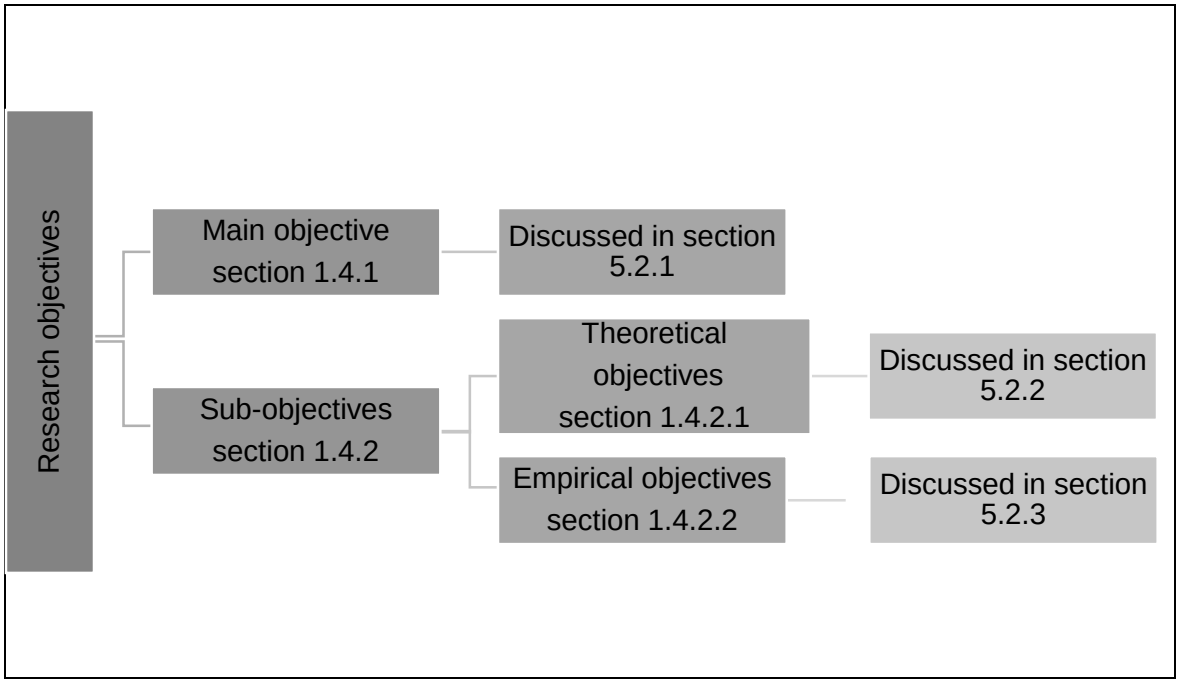

Figure 5.1: Research objectives

Source: Author

Figure 5.1 indicates that this research study consists of both main and sub-objectives. The main objective of this research study is to determine whether the minibus taxi owners in the Emfuleni Local Municipality apply selected management accounting principles in the management of their businesses as indicated in Chapter 1, section 1.4.1. Sub-objectives are divided into two types of objectives: empirical objectives and empirical theoretical objectives. In the following section, the main objective and sub-objectives are indicated, accompanied by an explanation of how they were fulfilled.

5.2.1 Main objective

In accordance with Chapter 1, par. 1.4.1, the main objective was identified as:

The main objective of this research study is to determine whether or not the minibus taxi owners in the Emfuleni Local Municipality apply selected management accounting principles in the management of their businesses.

Management accounting is a branch of accounting that is mainly used for planning and decision-making. This branch of accounting can be defined as management accounting, which is concerned with distinguishing, displaying, and deciphering information utilised for defining strategy, as well as planning and controlling activities, decision making, and assurance (CIMA 2001). Under this branch of accounting, there are various principles such as capital budgeting, throughput accounting, and activity-based costing that can be useful for businesses in the

informal sector, such as the minibus taxi industry, in overcoming ongoing challenges. These ongoing challenges in the minibus taxi industry are discussed in Section 2.4.4.

As mentioned, there are various management accounting principles that can be applied as part of running a business. The research study only placed focus on the following selected management accounting principles: CVP, cost structure, and budgeting. The phrase "selected management accounting principles" used in the main objective and throughout this research study refers to the latter outlined principles.

Although management accounting can be useful to the minibus taxi industry, it does not mean this branch of accounting is used. According to the findings of this research study, minibus taxi owners apply the cost structure, but most do not apply CVP nor budgeting in the running of their business. This is because there are limitations in the application of this branch of accounting. Some of the main limitations include educational background, time, and cost. The educational background relates to having the necessary knowledge to apply the principles of management accounting. The limitation of educational background is demonstrated in Figure 4.5, where the 388 minibus taxi drivers/owners have attained a matric or lower level of education. Badlender (2009:6) mentions that one of the main challenges of budgeting, which is a principle of management accounting, is that informal businesses do not have the time to budget. The application of management accounting in the minibus industry is possible, but it will result in an outflow of cash from the minibus taxi owners to bookkeepers and accountants.

For the main objective to have been fulfilled, sub-objectives (theoretical and empirical objectives) were identified. The researcher will hereafter analyse these objectives.

5.2.2 Theoretical objectives

In accordance with Chapter 1, par. 1.4.2.1, four theoretical objectives were identified. In the sections to follow, each theoretical sub-objective is discussed using the discussion of the literature in Chapter 2, in order to indicate the fulfilment thereof.

5.2.2.1 Theoretical objective one

In accordance with Chapter 1, par. 1.4.2.1, the first theoretical objective was identified.

To gain a general understanding of accounting and management accounting through reviewing literature on the latter subjects.

This theoretical objective was considered in Chapter 2. The process of discussing accounting and management accounting commenced in section 2.1.1 with a synopsis discussion of the history of accounting and its definition. Authors such as Beneke (2014:15) link accounting to human life and in his words, "accounting has been part of human life for thousands of years". Accounting is viewed from one viewpoint, which is that it started after the Luci Pacilio double

entry system in 1495. In Chapter 2, Table 2.1, the researcher presented a list of early authors who contributed to accounting. This was followed by the definition of accounting, which placed an emphasis not only on monetary but also on non-monetary values.

The process of obtaining an understanding of management accounting commenced by discussing management accounting as a branch of accounting that is concerned with planning and making decisions. In Chapter 2 (par. 2.2.2), the researcher cited Ahmad (2012:29) who referred to management accounting as a product of cost accounting that emerged during the first industrial revolution. Also in Chapter 2 (par.2.2.2), the researcher cited Vatter (1959:33) who claimed that management accounting has a different purpose than other accounting types, supporting managers not reporting to the organisation's owners.

5.2.2.2 Theoretical objective two

In accordance with Chapter 1, par. 1.4.2.1, the second theoretical objective was identified.

To gain an understanding of the following selected management accounting principles CVP, cost structure and budgeting through reviewing related litetrature

This theoretical objective was considered in the first section of Chapter 2. The process was initiated by exploring the literature on CVP in par. 2.2.1. According to Budugan and Georgescu (2008:5), CVP is a principle used by management in an organisation for planning and decision-making. The factors of CVP were broken down and the purpose of why businesses applied CVP in Section 2.2.3. Lastly, it was established that there are three techniques used in CVP (Chapter 2 par. 2.2.4).

In Chapter 2 (par. 2.3.4) the researcher reviewed literature on cost structure and cited Oberholzer and Ziemerink (2004:188) who mentioned that cost structure has two methods namely cost structure by element and cost structure through behaviour. Moreover, the researcher cited Moswane (2022) who said that cost structure through elements provides business owners with information to measure sales revenue and develop a service price. Fransiska (2013:16) in Chapter 2 (par. 2.3.4) said that that cost behaviour can be interpreted as a change in the costs incurred due to the change in business activity.

The phrase "selected management accounting principles" does not refer only to CVP. The most common word used by all managers over the past decade is 'budget', which is also another selected management accounting principle in this research study. Chapter 2, Section 2.3.5 discussed the origin of budgeting. The most common question asked in budgeting is whether it is essential to set a budget both in their personal lives and business. Lastly, the researcher tabulated the reason why people budget in Table 2.3 in Chapter 2. par. 2.3.5

discussed the following type of budgets – financial budget (cash budget) and operational budget (sales budget and expense budget).

5.2.2.3 Theoretical objective three

In accordance with Chapter 1, Section 1.4.2.1, the third theoretical objective was identified:

To review literature and obtain a general understanding of the South Africa minibus taxi industry, its development, problems and the current state of operation.

This theoretical objective was considered in Chapter 2, Section 2.3.1. The process of understanding the minibus taxi industry was started by the discussion of public road transportation in South Africa. It was highlighted that the minibus taxi industry is the biggest public transport commuter in the country, although it is not subsidised or given any community grant. In the process of understanding the development of the minibus taxi industry, it was posits in Chapter 2, section 2.3.2.2, that horse-drawn carriages were the first means of public transport in the world. Hence, the minibus taxi industry does not only exist in South Africa alone, but even in countries such as Kenya and Turkey, through it is referred to using a different name such as matutus and *jeepneys*.

In Chapter 2, Section 2.3.2, the researchers discussed literature pertaining to the definition and the operation of the minibus taxi. The busiest or peak times for the minibus taxi industry are in the morning and evening. The morning peak begins at 5:30 a.m. and ends at 8:30 a.m., while the evening peak begins in the midday slump at 4:00 p.m. and ends at 5:00 p.m. The evening peak time lasts approximately 2 hours and ends at 7.30 p.m. Terms such as 'black taxi and kombi taxi' can be used to call or describe the South African minibus taxi industry. According to Moyake (2006:65), using a term such as "black taxi" is not racially driven, but it distinguishes the minibus taxi industry from the meter taxi industry. Unlike buses and trains, this mode of transport does not operate on a timetable (Baloyi 2012:15). According to Mmadi (2013:56), there are two ways that the minibus operates: there is a minibus taxi that moves around looking for commuters and a minibus that operates from a taxi rank, also called a *lasaka* in Sesotho and *isibaya* in Zulu.

Lastly, the minibus taxi industry is characterised by violence resulting from problems. These problems are shown in Figure 2.5. Mmadi (2013:56) outlined that intense competition has led to violence within the industry. Fourie (2003:58) outlined that a low profitability margin was caused by the overflow of the operator after the deregulation. Barret (2003:9) emphasised that some minibus taxi drivers are paid on commission basis by minibus taxi owners and this forces them to drive recklessly (at high speed) and steal money (pilfering). Pilfering occurs when a minibus taxi driver puts money aside for himself or herself that was supposed to go to the

minibus taxi owner. Finally, to resolve these problems, in section 2.3.4, the researcher outlined the government appointed the NTTT and other commissions who came with the recapitalisation scheme.

5.2.2.4 Theoretical objective four

In accordance with Chapter 1, Section 1.4.2.1, the fourth theoretical objective was identified.

To provide an extensive analysis through reviewing literature on the research design and methodology applied in the research study.

This theoretical objective was fulfilled in Chapter 3 of this research study. It investigated both the research design and research methodology that were required in order to reach the main objective and empirical objectives. The researcher adopted a research sphere (Figure 3.1) from Saunders, Thornhill and Lewis (2009:108). The researcher chose this sphere because, from the outside, each layer of the sphere represents a stage of the research study. The layout of the research sphere that this study adapted is shown below.

- Layer 1: Research paradigm
- Layer 2: Research approach and research design
- Layer 3: Population, sampling method and sampling size
- Layer 4: Pilot study and questionnaire layout and development
- Layer 5: Source of data, primary data
- Layer 6: Data analysis, validity and reliability
- Layer 7: Ethics in research

This research study adopted a quantitative research methodology and the research design outlined the logical procedure initiated by both the research questions and the problem. Thus, the research design involves a rational framework for moving from one point to the other. In conclusion, this research study used a census (Chapter 3, par. 3.2.5). In the subsection hereafter, the researcher analyses the empirical objectives.

5.2.3 Empirical objectives

In accordance with Chapter 1, Section 1.4.2.2, four empirical objectives were identified. In the section that follow, each empirical objective is analysed in order to explain the fulfilment thereof.

5.2.3.1 Empirical objective one

In accordance with Chapter 1, Section 1.4.2.2, the first empirical objective was identified.

To obtain a general understanding of the minibus taxi industry of the Emfuleni Local Municipality through empirical data obtained from section A and B of the online questionnaire and printed questionnaire (see appendix D and E);

The minibus taxi industry continues to play a vital role in creating indirect and direct employment. For example, the industry created jobs for minibus taxi drivers who are hired by those who own a fleet of minibus taxis; car washers who wash taxis at taxi ranks; rank marshals who manage taxi ranks; and minibus manufacturers, such as Toyota and Nissan; and mechanics. Not only does the industry have a role in directing stakeholders, but it also plays an important role as a servant to the urban poor.

This empirical objective was achieved in Chapter 4. Collected variables included section A: demographic profile and section B: operation of the minibus taxi industry in the questionnaire that was sorted and analysed. According to Table 4.3, 92.18 percent of the 422 minibus taxi owners who completed the questionnaire completely are male, while 7.82 percent are female. The demographic profile, according to Figure 4.3, is that the minibus taxi drivers in Emfuleni Local Municipality are mostly Africans and mostly between the ages of 41 and 50, according to Figure 4.4.

Moreover, the findings in Figure 4.5 show that 388 minibus taxi owners have matric or lower education, out of the 422 minibus taxi owners who were part of the census. The busiest period, day/s of the week and time of the day in the minibus taxi industry at the Emfuleni Local Municipality are as follows: the beginning of the month and the end of the month, Monday and Friday are the busiest days, and the time of the day is in the morning and evening, according to figures 4.8, 4.9, and 4.11, respectively. Finally, according to figures 4.10 and 4.12, the Emfuleni Local Municipality's minibus taxi owners make between one and five trips on the busiest day and between one and 20 trips during the busiest period.

5.2.3.2 Empirical objective two

In accordance with Chapter 1, Section 1.4.2.2, the second empirical objective was identified.

To determine if minibus taxi owners in the Emfuleni Local Municipality apply CVP in the running of their minibus taxi businesses using section C of the online questionnaire and printed questionnaire (see appendix D and E);

CVP was referred to as breakeven point analysis, and the principle was defined as an examination of costs, volume, and profit. Furthermore, Li and Sorina (2017:627) state that the CVP is performed on a balance point, which is the link between the price of services or goods, the output volume, the variable cost per unit, and fixed overheads. CVP analysis is a principle used by management in an organisation for planning and decision-making (Budugan &

Georgescu 2008:5). It is also a useful principle for management control and forecasting (Habeeb 2012:31).

This empirical objective was considered in Chapter 4. Collected data included some questions (C1-C12) of Section C.The research findings showed (Figures 4.17 to 4.23) that minibus taxi owners in the Emfuleni Local Municipality do not know the number of commuters, trips, or kilometres their minibus taxis should travel on a monthly basis to cover all their monthly costs. But only know the number of trips made during peak times (Figure 4.10). As any of the three variables (commuters, trips, or kilometres) are key in applying the CVP in the minibus taxi industry, it can be concluded that minibus taxi owners in the Emfuleni Local Municipality do not apply CVP as part of running their business. Even through the minibus taxis owners know the number of trips made during peak it is not enough to apply CVP as it not peak times are not through out the month.

5.2.3.3 Empirical objective three

In accordance with Chapter 1, Section 1.4.2.2, the third empirical objective was identified:

To determine which costs are considered as fixed costs, which costs are considered as variable costs and which costs are considered mixed costs by minibus taxi owners in the Emfuleni Local Municipality using section D of the online questionnaire and of the printed questionnaire (see Appendix D and E).

The term "cost structure" refers to the many kinds of expenses that an organisation incurs on a daily or monthly basis (Anderson & Sollenberger 1992:36). The cost structure is a management duty, and it is often referred to as cost management (Lal 2008:709). Management cost control is a process in which management tries to steer the organisation toward achieving its set goals and targets. This control ensures that actual results match, if not exceed, anticipated outcomes (Lal 2008:710).

This empirical objective was considered in Chapter 4. Collected data included some questions (C13-C16) of Section C: CVP and cost structure of the questionnaire that were sorted and analysed. The findings shown in Chapter 4 (figures 4.24 to 4.30) indicate that minibus taxi owners in Emfuleni know the difference between fixed and variable costs. Using Table 5.2, the researcher shows which costs are considered variable and which costs are fixed according to this study census, which is minibus taxi owners in the Emfuleni local municipality.

Table 5.1: Variable and fixed costs in the minibus taxi industry

Variable costs	Fixed costs
Petrol costs	Association fees
Wages driver	Rank fees
Miscellaneous costs	Insurance fees
	Depreciation
	Monthly instalment on the purchase of minibus taxi

Source: Own.

Table 5.1 shows that petrol costs, driver wages, and miscellaneous costs are considered variable, while the association fees, rank fees, insurance, and monthly instalment costs on the minibus are considered fixed.

5.2.3.4 Empirical objective four

In accordance with Chapter 1, Section 1.4.2.2, the four empirical objective was identified.

To determine whether minibus taxi owners in the Emfuleni Local Municipality develop a budget for running their minibus taxi business using section D of the online questionnaire and the printed questionnaire (see Appendix D and E).

The word "budget," like the term "management accounting," has many meanings. According to Luecke (2002:111), a budget is a translation of strategic goals into quantifiable numbers that indicate the estimated resources needed and projected returns over a certain time period. A budget, according to Frederick (2001:33), is a time-bound and quantifiable strategy. A budget is a comprehensive plan that lays out the strategy for revenue and spending in monetary terms for a future time (Du Toit, Neuland, Oost & Begeman 2001:70).

This empirical objective was considered in Chapter 4. The collected data included questions on Section D: Budgeting of the questionnaire that were sorted and analysed. The research findings show in figures 4.24 to 4.30 that most (312, or 74%) minibus taxi owners in the Emfuleni Local Municipality do not budget. Those few minibus taxi owners (110; 26%) who perform a budget (Figure 4.25) only do a cash budget. Lastly, it was also highlighted in Figure 4.27 that the 110 minibus taxi owners in the Emfuleni Local Municipality perform a budget using a manual system (pen and paper). The section hereafter discusses the limitations and drawbacks encountered in the process of completing this research study.

5.3 LIMITATIONS AND DRAWBACKS OF THE RESEARCH STUDY

The limitations are also referred to as the drawbacks of the research study. The following are the limitations that the researcher encountered in conducting this research study:

- One of the main limitations is that this study is cross-sectional and not a longitudinal study, and it collected data during a specific period.
- The researcher collected data using an online questionnaire because of COVID-19 restrictions. The pandemic limited physical contract between the researcher and the respondents and made it impossible for the researcher to conduct follow-up interviews.
- This study was restricted to one geographical location (Emfuleni Local Municipality).
- In the pilot study, the researcher outlined some of the challenges were that some minibus taxi owners could not read English.
- The researcher is very much aware that his employment relationship with the respondents (minibus taxi owners) could have clouded some of the interpretation of the data. Nevertheless, the researcher strove for an approach that ensured objectivity and honesty at all times.

5.4 RECOMMENDATION BASED ON THE FINDINGS

In this section, the researcher will discuss recommendations based on the findings. As outlined above, there is a need for the application of the selected management accounting principles in the minibus taxi industry. To achieve this, the following should be done:

5.4.1 Offer educational training for minibus taxi owners

The findings in Figure 4.5 show that most minibus taxi owners (388) have matric or a lower level of education. The researcher is of the opinion that the level of education might have played a role in the data findings – that most minibus taxi owners do not budget nor apply CVP. The researcher recommends that skill providers such as financial accounting services educational training (FASSET) and transport education training authority (TETA) develop a short course on accounting to assist minibus taxi owners. In terms of the Skills Development Act (10 of 1998), Sector Education Training Authorities (SETAs) have the function to monitor the quality of education and training in their sectors. TETA is a SETA responsible for skills development in the transport sector (Mashabane 2022). The TETA area of operation includes the minibus taxi industry. Hence, the researcher recommends the entity train minibus taxi owners. On the other hand, FASSET is the SETA for the finance, accounting, management consulting, and other financial services sectors. Lastly, the entity is one of the SETAs established in April 2000 in terms of the Skills Development Act (28 of 1998). The recommendation of the latter SETA was based on their function and scope.

5.5 SUGGESTION FOR FURTHER RESEARCH STUDIES

The flow of this research study prompts areas or questions that may be probed by the researcher. Listed below are areas or questions that further research studies might focus on.

- To what extent does minibus taxi finance impact the overall minibus taxi industry?
- If subsidies are applied in the minibus taxi industry, will minibus taxi owners start to budget or use other selected management accounting principles?
- What other management accounting principles can be applied in the minibus taxi industry?
- What system(s) do minibus taxi associations consider when setting minibus taxi fares, in other investigating the pricing decisions made on the minibus taxi fares?

5.6 CHAPTER SUMMARY

The main purpose of this chapter was to provide an overview of the research study and to discuss how each of the research objectives of this study was achieved. Recommendations were provided based on the research findings. The limitations and drawbacks of conducting this research study were also acknowledged.

In Chapter 1, section 1.4.1, the main objective of conducting this research study was identified. The main objective of this research study was to determine whether the minibus taxi owners in the Emfuleni Local Municipality apply selected management accounting principles in the management of their businesses.

After the application of data analysis methods indicated in Chapter 3, section 3.1.10 and the application of Cronbach's alpha indicated in Chapter 4, section 4.6, the main objective was empirically fulfilled through the findings provided in Chapter 4. It was found that two of the three selected management accounting principles, namely CVP and budgeting, are not applied in the minibus taxi industry in the Emfuleni Local Municipality. In the Emfuleni Local Municipality, only a cost structure is effectively used by minibus taxi owners in running their minibus taxi business.

The fulfilment of the main objective also answered the research question of the study. In Chapter 1, section 1.3.1, the research question was stated as "Do minibus taxi owners located in the Emfuleni Local Municipality use the selected management accounting principles as part of running their business?" From the findings of this research study, it can be concluded that minibus taxi owners do not apply the selected management accounting principles as part of running their business.

Although the latter statement stated that minibus taxi owners do not apply the selected management accounting principles, the researcher is of the opinion that this aspect can be

improved upon if minibus taxi owners are willing to educate themselves through training, understand business better, professionalise the industry, collect funds better using electronic funding, and look at improving the type of minibus to use within the minibus taxi industry.

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APPENDIX A: ETHICAL CLEARANCE

Faculty of Management Sciences
Research Ethics Committee
E-mail: richardm@vut.ac.za

25 March 2021

RESEARCHER: MA Masela

PROJECT TITLE: *THE APPLICATION OF MANAGEMENT ACCOUNTING PRINCIPLES IN THE EMFULENI LOCAL MUNICIPALITY MINIBUS TAXI INDUSTRY.*

Decision: Approved

Ethics Reference Number:
FRECMS-10032021-057

Staff number: 214232492

Dear MA Masela

Thank you for submitting the above-mentioned Masters project for ethical consideration. The above committee was delegated by the Central Research Ethics Committee of the Vaal University of Technology to consider your application. The application was detailed and provided useful information. You may commence with your data collection. This clearance is valid for three years from the date of this letter. Please also note the following:

The Ethics Reference number, as stated above, should be used in all correspondence regarding this research project.

As the primary researcher you undertake to:

- *Only follow the procedures for which approval has been given.*
- *Inform the Faculty Research Ethics Committee (FREC) of any significant deviations that may occur in the research project which directly influences what has been approved.*
- *Report any adverse events that might occur, within 14 days of the event, to the FREC. (Refer to the Ethical Guidelines as to what procedure you will need to follow in such an event).*

Inform the FREC once the research project has reached completion and the findings have entered the public domain.

The FREC would like to take this opportunity to wish you well with your research project.

Kind Regards

Dr FE Mahomed
Faculty Research Ethics Committee Chair
Faculty of Management Sciences

Vanderbijlpark Campus - Private Bag X021 - Vanderbijlpark - 1911 - Andries Potgieter Blvd
South Africa - Tel: +27(0)16 950 9000 - Fax: +27(0)16 950 9999 - www.vut.ac.za

APPENDIX B: PERMISSION TO CONDUCT RESEARCH FROM GATEKEEPER

152 Playfair Blvd
C.E.5
Vanderbijlpark
1900

016 933 6577
086 272 4908
info@getaheadtransport.co.za
www.getaheadtransport.co.za

14 May 2018

Dear sir/madam

We [Get Ahead Taxi Association] grant Masela M.A student no.214323492 to use our information for his research study.

We are fully behind him with any information that he will require and we will give him all information he will require at our disposal we will give him.

Yours faithfully

Secretary

S.Maqubela

APPENDIX C: LETTER OF PERMISSION FROM SEDIBENG DISTRICT

Sedibeng District Municipality
1st Floor, House & Home Building
Merriman Street, Vereeniging
PO Box 471, Vereeniging, 1930
Gauteng, Republic of South Africa
Tel: +27 016 450 3331
E-mail: charitym@sedibeng.gov.za
Website: www.sedibeng.gov.za

Development Planning & Special Projects

Sedibeng District Municipality

To:	**VUT NQF9 RESEARCH UNIT**
From:	Charity Hlengiwe Majola, Sedibeng District Municipality
Date:	18/December/2020
Subject:	**REFERENCE CONFIRMATION AND AKNOWDGEMENT OF NQF9 TRANSPORT FIELD RESEARCH DONE BY MASELA MUKHODENI ALTERNAL,VUT STUDENT NUMBER 214232492**

To Whom It May Concern, VUT NQF9 Research Unit

I CHARITY HLENGIWE MAJOLA, Manager Development Planning Special Projects, Sedibeng District Municipality, hereby make a declaration that it is herby made by this municipality this **REFERENCE CONFIRMATION AND AKNOWDGEMENT OF NQF9 TRANSPORT FIELD RESEARCH DONE BY MASELA MUKHODENI ALTERNAL,VUT STUDENT NUMBER 214232492**

The student made a research with interest in one of the Sedibeng District Municipality herby named SDM, a category C municipality. The area or location of research was in one of SDM category B municipalities named Emfuleni Local Municipality (ELM), while mentored and supported by the district municipality due to the fact that the said local municipality (ELM) does not have a department with roles and functions of Transport and related infrastructure performance management linked to Transport, minibus, or Taxi industry.

The study was acknowledged and data utilisation was supervised by management working on Key Performance Indicators (KPIs) relevant to area of study. I Charity Hlengiwe Majola got involved as a manager leading some projects that are linked to transport projects within a municipality plan called Southern Corridor Regional Implementation Plan (SCRIP) where there is Aerotropolis plans, Logistic Hub and Vereeniging Urban renewal plan as well as Government precinct all linking to intermodal taxi rank.

I declare that this confirmation was made in consultation with other managers in the field of study including the SDM cluster named Transport Infrastructure and Environment (TIE) and we were all behind the study and utilisation of transport and development data maintained within SDM, the region and Gauteng province.

Regards

Charity Hlengiwe Majola Pr.Pln 24/34/2016
Manager Development Planning Special Projects
Sedibeng District Municipality
18/12/2020

APPENDIX D: PRINTED QUESTIONNAIRE

Vaal University of Technology

Covering letter/informed concern

THE APPLICATION OF THE SELECTED MANAGEMENT ACCOUNTING PRINCIPLES IN THE MINIBUS TAXI INDUSTRY AT THE EMFULENI LOCAL MUNICIPALITY

Dear Sir/Madam

I am a master's degree student from the Accounting Department at the Vaal University of Technology, and I am currently undertaking a research project on the application of the selected management accounting principles in the minibus taxi industry at the Emfuleni Local Municipality

Researcher: Mukhodeni Mbobo-Muthige

Promoter/Co-promoter: Dr. JD Beneke and Ms. N Robbertze

Purpose of the research: To explore whether minibus taxi owners in the Emfuleni Local Municipality applies the following management accounting principles, cost volume profit (CVP), budgeting, and cost structure in running the minibus taxi business.

Research topic: The application of the selected management accounting principles in the minibus taxi industry at the Emfuleni Local Municipality

Questionnaire completion time: 15- 20 minutes

Informed Consent: The participant of this questionnaire at this moment declares that he/she volunteer to participate in this academic research study.

Voluntary Participation: The participant understands that his/her participation will not result in any financial benefit, and refusal will not result in any fines or penalties. At any time, the participant may stop participating.

Confidentiality: The participant understands that the information provided will be used for academic purposes; this includes academic research journals. The researcher, promoter, co-promoter, and statistician are the only persons that will have access to seeing results in the questionnaires.

Benefits of participation: Participating in this research study will contribute to how minibus taxi owners use the selected management accounting principles to run their minibus taxi business.

For any queries relating to the study, please contact me or my supervisor on the contact details provided below.

Thank you for your time.

Mr Mukhodeni Mbobo-Muthige
RESEARCHER
079 321 7835
21424242@edu.vut.ac.za

Dr. JD Beneke
Supervisor
084 203 3755
johnb@vut.ac.za

SECTION A: DEMOGRAPHIC PROFILE

This section sought general information about you.

Please indicate your answer by placing a cross (X) in the blue block applicable to you.

A1: Indicate your position in the minibus taxi industry	1.Owner	2.Owner-driver	3.Owner-Committee member	4. All of the above

A2: Gender	1. Male	2. Female

A3: Citizenship	1. South African	2. Non- South African

A4: Ethnical group	1.African	2. Asian	3.Caucasian	3. Indian

A5: Age group	1.Under 30 years	2. between 31-40 years	3. Between 41-50 years	3. Between 51-60 years	4. 61 years and above

A6: Highest Qualification	1.Matric or below	2.Post-matric certificate	3.Diploma	4.Degree	5.Postgraduate

SECTION B: OPERATING IN THE MINIBUS TAXI INDUSTRY

This section sought general information on your experience and operation within the minibus taxi industry.

Please indicate your answer by placing a cross (X) in the block that applicable to you.

B1	Indicate the number of years you have been involved in operating within the minibus taxi industry:	
	Five years and below	
	6-10 years	
	11-15 years	
	16-20 years	
	21 years and more	

B2	**Indicate your reason for entering the minibus taxi industry:**	
	Investment	
	Unemployment	
	Both	

B3	**When is the busiest time during the day for the minibus taxi industry?**	
	Morning	
	Afternoon	
	Evening	

B4	**Which day(s) of the week is the busiest in the minibus taxi industry?**	
	Monday	
	Tuesday	
	Wednesday	

	Thursday	
	Friday	
	Saturday	
	Sunday	

B5	**How many trips do you make on the busiest day?**	
	1-5 trips	
	6-10 trips	
	11-15 trips	
	16-20 trips	
	21-more trips	

B6	**Which is the busiest period of the month?**	
	Beginning of the month	
	Middle of the month	
	End of the month	
	Throughout the month	

B7	**How many trips do you make on the busiest period of the month**	
	1-20 trips	
	21-40 trips	
	41-60 trips	
	61-80 trips	
	81-more trips	

SECTION C: COST VOLUME PROFIT ANALYSIS AND COST STRUCTURE

This section sought information on costs or expenses that your minibus taxi incur during its operation.

Please indicate your answer by placing a cross (X) in the block that applies to you.

C1	Indicate the fare price that you charge per trip:	
	R12,00 –R16,00	
	R16,01-R20,00	
	R20,01-R24,00	
	R24,01-R28,00	
	R28,01-R32,00	
	Above R32,01	

C2	**Tick the following costs that you incur in the running of your business:**	
	Fuel	
	Instalment on a purchase minibus taxi	
	Services and maintenance	
	Salaries or wages to driver	
	Miscellaneous fees (Car wash, airtime, food)	
	Association fees	
	Insurance fees	
	Rank fees	

This section aims at measuring the impacts of the costs on your profits in operating your minibus taxi business.

Please indicate the extent to which you agree or disagree by encircling the corresponding number between 1 (Strongly disagree) and 5 (Strongly agree). Your choice of a rating of 3 points towards a neutral response

C3	Fuel	Strongly disagree	1	2	3	4	5	Strongly agree
C4	Instalment of minibus taxi	Strong disagree	1	2	3	4	5	Strongly agree
C5	Services and maintenance	Strongly disagree	1	2	3	4	5	Strongly agree
C6	Salary or wages to driver	Strongly Disagree	1	2	3	4	5	Strongly agree
C7	Miscellaneous fees (Car wash, airtime, food)	Strongly disagree	1	2	3	4	5	Strongly agree
C8	Association fees	Strongly disagree	1	2	3	4	5	Strongly agree
C9	Insurance fees	Strongly disagree	1	2	3	4	5	Strongly agree
C10	Rank fees	Strongly Disagree	1	2	3	4	5	Strongly agree

C11	I consider the following costs to be fixed (Costs that remain the same):	
	Fuel	
	Instalment on a purchase minibus taxi	
	Services and maintenance	
	Salary or wages to driver	
	Miscellaneous fees (Car wash, airtime, food)	
	Association fees	
	Insurance fees	
	Rank fees	

C12	I consider the following costs to be variable (Costs do not remain the same):

	Fuel	
	Instalment on a purchase minibus taxi	
	Services and maintenance	
	Salary or wages to driver	
	Miscellaneous fees (Car wash, airtime, food)	
	Association fees	
	Insurance fees	
	Rank fees	

C13	Do you know how many commuters your taxi needs to transport to cover the monthly costs?	
	Yes	
	No	

C14	If yes, how many commuters?	
	1-200 commuters	
	201-400 commuters	
	401-600 commuters	
	601-800 commuters	
	801-1000 commuters	
	1001 –more commuters	
	Not sure	

C15	Do you know how many trips your taxi needs to transport to cover the monthly costs?	
	Yes	
	No	

C16	If yes, how many trips?

	1-10 trips	
	11-20 trips	
	21-30 trips	
	31-40 trips	
	41 –more trips	
	Not sure	

C17	Do you know how many kilometres your taxi needs to travel to cover the monthly costs?	
	Yes	
	No	

C18	If yes, how many kilometres (KMS)?	
	1-500 kms	
	501-1000 kms	
	1001-1500 kms	
	1501-2000 kms	
	2001-2500 kms	
	2501-more kms	
	Not sure	

SECTION D: BUDGETING

This section sought information on budgeting while running your minibus taxi business.

Please indicate your answer by placing a cross (X) in the block that applicable to you.

D1	Do you make use of a budget in your business?	
	Yes	
	No	

D2	What type of budget do you prepare?	
	Operational budget – Sales budgets, expense budget	
	Financial budget – cash budget	
	Both	
	Not applicable	

D3	Which period do you budget for?	
	Short-term budget (less than 12 months)	
	Long term budget (More than 12 months)	
	Not applicable	

D4	How do you set your budgets?	
	Software (excel, Microsoft, quick books)	
	Manually (pen and paper)	
	Not applicable	

D5	Do you adhere to the budget?	
	Always	
	Sometimes	
	Not applicable, I do not budget	

D6	Do you think that the setting of budgets is useful in your business?	
	Yes	
	No	

D7	Would you use budgets if you received training relating to the setting thereof?	
	Yes	
	No	

Thank you for taking the time to complete this questionnaire!!!

APPENDIX E: LINK TO ONLINE QUESTIONNAIRE

https://docs.google.com/forms/d/e/1FAIpQLSc5ezcvSADj3PbdEvIUAKkDPjfVAP8uQhnexJdGNiK3yoLmqg/viewform?usp=sf_link