

**AN INVESTIGATION INTO PASSENGERS' EXPERIENCES OF A
TRANSPORTATION NETWORK FIRM'S 'RIDE-HAILING' SERVICES, UBER**

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DECLARATION

We, Sonwabo Cibi and Phumeza Ndzambo, declare that:

- The the entire body of work contained in this treatise, entitled “Passenger experiences of a transportation network firm’s ‘ride-hailing’ services”, is our original work and that no help was provided from other sources except for those allowed;
- All sources used or quoted in sections of this treatise have been acknowledged and documented by means of complete references; and
- This treatise has not previously been submitted by us or anyone else for a degree at any other tertiary institution.



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ABSTRACT

The dawn of the information age has brought about great change in the way things are done. This change has impacted many industries, displacing some and revolutionising others. In the transport industry this impact has come in the form of ride-hailing, a technology driven way of sharing mobility. This involves the use of mobile applications to connect private vehicle owners/drivers and passengers in transactional encounters, where private transport is provided in exchange for a fee. Organisations that offer these ride-hailing services are referred to as transport networking firms (TNF).

The world's market leader in ride-hailing is Uber, an American firm which has fast captured markets in countries around the world. In South Africa, like in many other countries, Uber has faced many challenges. However, despite these challenges, Uber continues to attract more passengers. While there is some literature relating to usage intentions by passengers, very little is known about their experiences after having used transport networking firms.

The primary objective of this study is to investigate passengers' experiences of a transport network firm's ride-hailing service, namely Uber.

In order to archive this objective a comprehensive review of existing literature was conducted. Literature showed challenges and gaps that exist in the transport industry, and specific focus was given to South Africa. The emergence and rise of transport networking firms as a result of insufficient capacity of existing transport systems is the main finding in the literature chapter.

The study followed the quantitative research approach, using the descriptive research method. The sample consisted of 58 Uber users in the Nelson Mandela Bay region. The empirical data was collected to address passengers' experiences using Likert-type scale questions pertaining to the following factors:

- *Convenience/Ease of use*
- *Economic reward*
- *Social connection*
- *Safety and security*

The findings were that with regards to *Convenience/Ease* of use, respondents agreed that Uber provides a convenient mode of transport with an easy to use mobile application. On the contrary, the respondents were not fully convinced about the ride-hailing service's *Economic reward*. They found it is not cheaper than other forms of transport. They did, however, find that it is valuable and met their expectations considering the amount paid, making it somewhat rewarding. Majority of respondents responded positively to statements asserting that Uber enriches their social lives, by allowing them free movement regardless of the time. Thus, Uber, was reported to have a positive contribution to *Social connection*. Lastly, Uber was reported to provide better *Safety and security* than other forms of transport. The Uber mobile app was also viewed as trustworthy.

It is the researchers' recommendation that any business looking to enter or grow in the ride-hailing service industry should have a good pricing model, a solid driver retention strategy, and recruit a highly innovative team that will be able to compete in today's fast changing technology.

Key Concepts

- Ride-hailing
- Ride-sharing
- The sharing economy
- Transport network firms (TNFs)

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CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION AND BACKGROUND

The growing adoption of internet usage and the technologies that come with it has given rise to innovative opportunities that have in turn led to the emergence of a new, fast growing and disruptive economic sector, the sharing economy (Hira & Reilley 2017:175). The sharing economy is changing resource allocation, business models and consumer behaviour in many industries (Puschmann & Alt 2016:93). These changes are done predominantly through cost cutting by eliminating the traditional middleman by using internet-based platforms and allowing for optimised utilisation of resources (Hira & Reilley 2017:175).

Some of the industries that have been impacted by the sharing economy include the finance industry, through lending platforms such as M-Pesa; entrepreneurship through crowd-funding platforms such as Kickstart and Kiva (Hira & Reilley 2017:175-176); and tourism and hospitality through accommodation platforms such as Airbnb and Couchsurfing (Heo 2016:167). In the transportation industry, Cohen and Kietzmann (2014:280) refer to a segment of the sharing economy, called 'sharing mobility'.

In broad terms, Cohen and Kietzmann (2014:280) focus on three business models for sharing mobility. Firstly, car-sharing where one gets to use an available car, and only pay for the duration the car is in their possession and/or for the distance for which the car is used, e.g. Zipcar (Cohen & Kietzmann 2014:283). Secondly, bike-sharing which, much like car-sharing, has various stations around the city for easy pick-up and drop-off where users pay membership and usage fees (Cohen & Kietzmann 2014:289). And lastly, ride-sharing which Cohen and Kietzmann (2014:288) further divide into smaller categories, carpooling and person-to-person (P2P) ride-sharing. Within car-pooling Cohen and Kietzmann (2014:288) mention car-pooling, van-pooling, flexi car-pooling and non-profit/cooperative car-pooling all of which involve communal use of a vehicle to the same destination. In many world cities, due to the arrival of innovative internet technologies, P2P ride-sharing has become a vital alternative means of transport (Cohen & Kietzmann 2014:288). Ride-sharing firms, often referred to as transportation network companies (TNC's), fall within this category.

Transportation network companies (TNCs) are defined by the California Public Utilities Commission (2013:2) as

‘an association whether an organization, association, sole proprietor, or other form...that gives prearranged transportation administrations to pay utilizing an online-empowered (application) or stage to interface travellers with drivers utilizing their own vehicles’.

For the purpose of this study, transportation network companies will be referred to as transportation network firms (TNFs) to avoid misinterpretation with the South African form of business ownership (Bosch, Tait & Venter 2018:112).

One of the transportation network firms (TNFs) operating in South Africa is Uber, which will be the focus of this study. Uber was founded in San Francisco in 2009 and is currently the world’s largest transportation network firm (California Public Utilities Commission 2013:5). Uber has been operating in South Africa since September 2013 (Uber 2019). Uber cites vision for growth as its reason for the expansion to South Africa (Wilson 2013). According to Wilson (2013), Uber launched first in Johannesburg because of opportunities provided by lack of alternative transport in the city. The reference to lack of alternative transport is in line with Cohen and Kietzmann’s (2014:281) view that shared mobility represents the market’s reaction to shortcomings, including overcrowding, of both the private and public spheres of the transport industry. Available mobility means fail to adequately service the market with good quality and convenient options (Cohen & Kietzmann 2014:281). On the other hand, the private sectors are faced with challenges related to financial accessibility and hygiene (Cohen & Kietzmann 2014:281).

By their own assertion Uber fills the gaps by providing services that are not catered for by traditional transport services, such as linking transport terminals with passengers’ final destinations (“first or last mile”), or servicing areas where other forms of transport do not go (Uber 2019). According to Stander and Brink (2016:381), traffic congestion steals time from passengers, and due to insufficient resources to deal with this, the situation might deteriorate further if alternative means are not employed. To this end Uber aims to contribute by bringing practical solutions to issues of road overcrowding, by encouraging ride-sharing, which would mean fewer cars on the road

(Uber 2019). Uber's core business is providing a market for the ride-hailing service supported by point-to-point software technology and mobile phone application, connecting drivers and passengers (Azevedo & Maciejewski 2015:1). According to Clewlow and Mishra (2017:4), the most defining characteristic of ride-hailing is that it enables passengers to summon rides using smartphone applications, and drivers to locate their customers using GPS technology.

This study aims to investigate selected aspects of passengers' experiences of this ride-hailing service by Uber.

1.2 PROBLEM STATEMENT

Not long after Uber's entry into the South African market, the firm became embedded with troubles and challenges (Mybroadband 2017). Among challenges faced by Uber in South Africa were licensing and regulation issues from the law (Mybroadband 2017). According to Fin24 (2016) up to 302 Uber registered vehicles were impounded by Cape Town metro traffic police between January and June 2016 for reasons relating to licensing and regulations. Fin24 (2016) reported that the 302 in 2016 was an increase, in the number of vehicles impounded for the similar reasons, from 255 in 2015 between January and November.

Partly resulting from the above-mentioned regulation issues, Uber also experienced resistance from metered taxi service providers for various reasons among which they mentioned illegal operations and unfair competition, which robs them of their livelihood (Fin24 2016). The scope of resistance ranged from confrontational protests to serious threats (Fin24 2016). These confrontational encounters have been reported to cause such high tensions between Uber drivers and metered taxi drivers that they have at times escalated to grievous bodily harm including violent deaths (Maako 2018). Most reports of this nature were prominent in the early years of Uber South Africa. However, there are reported incidents as recent as December 2018 (Sicetshana 2018).

Besides the attacks on drivers, other security concerns are due to reported criminal and violent acts directed at passengers (Mybroadband 2017). These include cases where perpetrators mislead passengers by picking them up posing as the expected Uber ride (Tandwa 2016). The reports are, however, unclear on the details about how the pretence is achieved. At other times it is the drivers themselves who have acted with malicious intentions (Mitchely 2019).

And lastly, Uber also faces the challenge of perceived decline in the quality of service the Uber platform provides (Mybroadband 2017). Mybroadband (2017), mentions a number of complaints and concerns from passengers including driver incompetence, time and location related issues, and other system failures.

Despite these challenges, Uber South Africa reports increasing demand for its services. Passengers hold a central role in the success or failure of transportation network firms (Agboma & Liotta 2007:162). However, determining the intention to use mobile applications to enhance the shopping experience of consumers is a largely under-researched topic particularly in developing and emerging economies such as South Africa (Henama & Sifolo 2017:49). Although there is literature relating to the intention to use mobile applications by passengers, little attention is given to the experiences of passengers after they have actually undertaken the ride using transport networking firms (Henama & Sifolo 2017:49). As a result, not much is known about passenger expectations and experiences of Uber's ride-hailing services.

Thus, the problem statement for this paper is that little is known about passengers' experiences of ride-hailing services, in particular Uber.

1.3 RESEARCH OBJECTIVES

The objectives of this study are divided into three categories. The primary objective communicates the main goal of the study. Secondary and methodological objectives breakdown the goal into strategies and actions to be taken.

1.3.1 Primary objective

The primary objective of this study is to investigate passengers' experiences of a transport network firm's (TNF's) 'ride-hailing' service, namely Uber.

1.3.2 Secondary objectives

The study has the following sub-objectives:

- a) SO¹: To investigate passenger experiences of Uber's ride-hailing services in terms of *Convenience/Ease of use* and *Economic reward*.
- b) SO²: To investigate users' experiences with regards to *Social connection* and *Safety and security*.
- c) SO³: To investigate whether passenger experiences of Uber's ride-hailing services

met their expectations.

1.3.3 Methodological objectives

In order to achieve the above-mentioned primary and secondary objectives, the following methodological objectives have been identified:

- a) MO¹: To determine the appropriate research methodology to address the identified research problem and research objectives.
- b) MO²: To develop a quantitative measuring instrument (a questionnaire) that will be used for empirical investigation.
- c) MO³: To source primary data from a pre-determined sample of Uber users in the Port Elizabeth area, and to statistically analyse the data, as well as test the proposed hypotheses; and
- d) MO⁴: To provide conclusions and recommendations based on the findings of this research, which could assist Uber to improve the quality of their ride-hailing services in South Africa.

1.3.4 Research questions

The following questions will be answered by this study:

- What are passenger experiences of Uber's ride-hailing services with regards to convenience/ease of use, economic reward, social connection, and safety and security?
- How do passenger perceptions differ from their expectations once they have used Uber?
- How do passengers view Uber in relation to the traditional public transport means in South Africa?

1.4 RESEARCH DESIGN AND METHODOLOGY

In order to fulfil the objectives of this study data will have to be collected. According to Van Zyl (2014:46-47) three types of information sources exist, and those are general, secondary and primary information sources. All three will be used for this study.

1.4.1 Literature review (secondary research)

General clues about the study matter will be collected from general sources such as newspapers, reliable online news articles, as well as specialty websites. Secondary

data, or data collected from secondary sources, will also be used. Van Zyl (2014:47) defines secondary sources as information sources that are 'once removed' from the study being conducted. Secondary sources are used to get academic summation of studies that have already been done in the field being studied (Van Zyl 2014:50). Struwig and Stead (2013:82) explain secondary data as data whose initial source is not the study being researched. Sources of secondary data include academic databases, government departments, institutions and associations (Struwig & Stead 2013:82).

Secondary research towards meeting the objectives of this study will consist of an expansive literature review in order to determine passenger experiences of utilising transport network firms and how this has impacted on the South African public transport system in general. The secondary research of this study will be conducted by consulting a variety of relevant textbooks and well-known journal articles such as Belk (2014), Agboma & Liotta (2007), and Schor (2014).

Resources from Nelson Mandela University library's online databases, such as Emerald Insight, EBSCOHost and Sabinet will also be used to identify preceding research on the sharing economy and transportation network firms in the South African context.

1.4.2 Empirical investigation (primary research)

Primary data is data gathered specifically to meet the requirements of the study being done (Struwig & Stead 2013:82). Primary research of this study will be in four stages, namely an overview of the selected research design and paradigm, sampling, and choosing suitable data collection methods for the study. Afterwards, the design of the measuring instrument, together with data analysis methods that will be used during the study will be presented. More details will be discussed on chapter three.

1.4.3 Research design, paradigm and methodology

Many approaches exist that can be employed to conduct a scientific research, but they all fall under two categories, quantitative or qualitative methods (Struwig & Stead 2013:2). Quantitative research (positivist paradigm) uses numbers to measure concepts and is considered the more structured and conclusive of the two (Struwig & Stead 2013:3). Core characteristics of quantitative research include being replicable, measurability, generalizability, causality and being individual focused (Struwig & Stead

2013:4-6). Qualitative paradigm on the other hand is concerned with analysing substance and tend to use words and other expressive forms of communication, but not numbers, and it is less structured and more flexible by comparison (Struwig & Stead 2013:12).

This study will describe the ride-hailing experiences of passengers. And as per secondary objectives this will be done in relation to four other variables, namely *Convenience/Ease of use*, *Economic reward*, *Social connection* and *Safety and security*. According to Struwig and Stead (2013:7) descriptive research is one of quantitative methods. Thus, it has been decided that the research should take the quantitative approach employing the statistical method of descriptive research. Descriptive research illustrates events in their current state (Van Zyl 2013:197).

Struwig and Stead (2013:8) assert that used correctly, the statistical method can provide a clear bird's view of that which is being researched. Although a qualitative approach may give detailed insights, this study aims to give a starting point with an overall view of this under researched topic. Using Van Zyl's (2013:198) words, the study will be 'painting a picture' for the reader.

1.4.4 Population, sampling & data collection

Population is the total number of people who fit the criteria of the desired respondents (Van Zyl 2013:95). Ideally the population for this study consists of all Uber users in South Africa. But in considering time and distance limits, Nelson Mandela Bay (NMB) Uber users will be considered as the population pool. According Van Zyl (2013:96) two main categories of sampling exist. One is probability sampling where there are known chances for the selection of any individual in the population. And since the total number of Uber users in NMB is not known, and thus no way of knowing what chance each population member stands, non-probability sampling will be applied for this study. Primary and secondary data will be gathered as discussed.

1.4.5 Design of the measuring instrument

For the purpose of this study a measuring instrument will be designed in accordance with the needs and requirements of the research. Literature will be used to find the most suitable items to ensure that the research meets both validity and reliability standards. Likert-type scale questions will be utilised to structure responses supplied by the respondents.

A covering letter will accompany the questionnaire for ease of use and participation. The letter will disclose all the relevant information to the respondents, communicate the purpose of the study and address confidentiality concerns.

1.4.6 Data analysis

Methods deemed suitable will be used to analyse collected primary data into useable and helpful information that can help formulate findings. According to Struwig and Stead (2013:156), quantitative data analysis requires technical knowledge that can be employed using experts. In order to come to meaningful findings services of relevant people will be solicited. At the end the data will be categorised, tabulated and interpreted into meaningful results.

1.5 SCOPE AND DEMARCATION OF THE STUDY

This study will be conducted as a treatise project by two honours students at Nelson Mandela University in Port Elizabeth. As discussed in the objectives section, it aims to investigate experiences of passengers regarding TNFs, specifically Uber. The study's interest is informed by the emergence of TNFs as alternative transport means.

Due to the researcher's limitations with regards to time, location, financial and other resources the study will be conducted within the limits of Nelson Mandela Bay, observing issues of generalizability where possibly.

1.6 CONTRIBUTION OF THE STUDY

In light of the fact that little research has been done in the field of transport networking firms, this study will contribute to the existing body of work and provide a point of departure for future research in the field. It will also give a picture of the current state of TNFs in the South African context. In addition, it will give a voice to TNF passengers by highlighting their experiences. On the other hand, Uber and other TNFs will get an insightful view of what their customers feel and think. Thus, allowing for continued learning and improvement.

1.7 DEFINITION OF KEY CONCEPTS

1.7.1 Ride-hailing

Ride-hailing refers to an app operated programme that allows people to summon and pay for a vehicle trip with a qualified or freelance driver (Clewlow & Mishra 2017:4).

1.7.2 Ride-sharing

Ride-sharing can either refer to car-pooling where a car is shared by passengers going to the same direction (Arrive alive 2019), or interchangeably with ride-hailing (Clewlow & Mishra 2017:4).

1.7.3 The sharing economy

Clewlow & Mishra (2017:3) define sharing economy as a technology enabled communal utilisation of goods and services.

1.7.4 Transport network firms (TNFs)

For the purpose of this study, the term transport network firms (TNFs) is used in reference to businesses that provide ride-hailing/ride-sharing activities (Clewlow & Mishra 2017:5).

1.8 STRUCTURE OF THE RESEARCH

In **Chapter One** the study is introduced, giving background to the concept of ride-hailing. The problem statement is explained to highlight the motivation behind the research. The study's objectives, design and methodology, scope, and contribution are briefly presented.

In **Chapter Two** an overview of the South African transport system will be given, with discussions around its challenges, government contributions, and the taxi industry as a leading segment of the public transport system. Also presented in the chapter will be the concept of the sharing economy, transport networking firms and ride-hailing in the South African market.

Chapter Three will discuss the research design and methodology. This chapter will see the process of choosing the most appropriate approach for the study, selecting and designing a suitable research instrument for data collection, and deciding on the right program for data analysis.

Chapter Four will give a presentation of the study's empirical results. This presentation will include a description of the sample demographics and a report on the empirical findings.

Chapter Five will provide a brief overview of the research together with conclusions, recommendations, limitations and suggestions for future research. Lastly the researchers will give their impressions of the research experience.

CHAPTER TWO

THE RISE OF RIDE-HAILING SERVICES IN THE SOUTH AFRICAN TRANSPORT INDUSTRY

2.1 INTRODUCTION

The emergence of Uber in 2009 has led to a noteworthy rise in ride-hailing services (Clewlow and Mishra 2017:1). While traditional vehicle sharing models, which have been in existence for over 15 years, could only attract around five million customers globally, within the first five years of existence ride-hailing services managed to appeal to a clientele exceeding 250 million individuals (Clewlow and Mishra 2017:1). Clewlow and Mishra 2017:3) also note that ride-hailing has also been a topic of many discussions and a source of disagreements, ranging from views on how it changes travel patterns, to safety concerns and issues of regulation.

As previously mentioned in Chapter One above, South Africa has not been immune to these issues. There have been a number of reports regarding traditional public transport providers rising up and mobilising against the adoption of transport network firms in the country (Mybroadband 2017, Fin24 2016). This section of the study examines the transport landscape of South Africa, including challenges, opportunities and developments that have led to the adoption of ride-hailing services as a transport option. The section also presents the literature review of the existing scholarly work around transportation network firms and in particular Uber.

The focus will be on the sharing economy, transportation network firms and the impact of the latter in the traditional taxi industry operations. Lastly, the section will look at the challenges that are faced by transportation network firms in South Africa.

2.2 THE SOUTH AFRICAN PUBLIC TRANSPORT SYSTEM

In order for South Africa to have socio-economic progress, it is essential for the public to have access to safe and reasonable public transport structure (Thomas 2016:352). Thomas (2016:352) further asserts that the South African government has mostly fallen short and failed to provide an effective public policy that caters to this vital need. Stander and Brink (2016:375) split transportation mode for South African commuters into three major categories. These include public transport which accounts for 39.1%

of commuter transportation, while 38.4 % is serviced by private transport and 21.1% use walking as the primary means of commuting (Stander & Brink 2016:375). Saipa (2017:29) further categorises public transport into four broad service spheres based on mode and the type of service provided. First is the load-based services. As the name suggests, load-based services' primary focus is to capitalise on the vehicle's carrying capacity and ability to carry as many passengers as possible.

Time is only factored in as a means to minimise the duration of the journey, from the point of departure to the final destination. The more passengers the vehicle carries, even to the point of overloading, the higher the compensation for the driver. Likewise, compensation is also improved by speed because the higher the speed the shorter the duration, and the more trips there will be (Saipa 2017:29). Contrary to load-based services, scheduled services do not take vehicle capacity into account, and prioritises time overload. The driver has nothing to gain by having more passengers on-board but has a duty to honour the set time by which the final destination has to be reached. Gautrain bus services is an example of this form of service, where drivers will leave the departure spot at a specified time and be expected to arrive at predestined location(s) at a later planned time (Saipa 2017:29). One-to-many mode (1<) follows a set route throughout which a number of passengers hop-on and off at various stops or waiting zones.

This is used by different forms of public transport in South Africa, including trains, planes, buses and minibus taxis (Saipa 2017:29). One-to-many mode is also the most widely used or most popular form of transport service in South Africa. According to Stander and Brink (2016:375), minibus taxis alone service up to 70% of the commuting needs of the country. The one-to-one mode (1:1) caters for those people who want to be picked up and dropped off at locations of their own choosing, its neither route nor time based. The one-to-one segment is targeted and serviced by businesses such as metered taxis and transport network firms (Saipa 2017:29).

2.2.1 Challenges faced by the South African transport system

From the apartheid regime South Africa inherited social exclusion, which led to the current situation where people stay far from their workplaces and essential social services (Thomas 2016:352). Due to shortage of infrastructure that links different modes of transport, the South African economy relies heavily on road transport to deal

with the infrastructural problems it inherited from its past (Niemand & Chauke 2017:3). According to Stander and Brink (2016:376), in 2014 SANRAL reported a backlog of R197 billion in the maintenance of the South African road network, with no evidence of any plan developed to mitigate the problem. Although the rail commuter network has been on the spotlight with promised investment and upgrades, there has been no material improvement (Stander & Brink 2016:376). Evidence shows that more than two working weeks' worth of time is wasted on delays per year, and this equates to a loss of about R21.6 billion annually (Stander & Brink 2016:376). There also seems to be little budget allocated to combating the issue of congestion which is detrimental to road users who have to waste immeasurable amounts of time in traffic (Stander & Brink 2016:377).

The impact of poor infrastructure as a legacy of South Africa's past is reflected in the large numbers of South African commuters using minibus taxis daily (Niemand & Chauke 2017:3). According to Niemand and Chauke (2017:3) up to 15 million commuters, 60- 70% of the South African workforce, use minibus taxis and spend an average of no less than three hours per day commuting to and from their places of work. The National Household Travel Survey of 2004 provides insight into the experiences of South Africans with regards to transport system and portrays a bleak picture regarding the challenges faced by the users of public transport (Thomas 2016:355). The most stated challenges relate to safety, accessibility and affordability (Thomas 2016:356). According to Thomas (2016:356), in 2004 the Department of Transport reported that 10% of household income was used on transport by 32% of the South African households. South Africa's road safety reputation is reported among the worst globally (Stander & Brink 2016:377).

A significant number of commuters use walking as a big part of their daily travel crossing high-traffic roads on foot (Stander & Brink 2016:375). And for this reason, South Africa ranks high among a few countries where there's a clash between pedestrian needs and speed-traffic (Stander & Brink 2016:376). Stander and Brink (2016:375) give an example area where this clash can be observed, on the N2 highway between Cape Town and Somerset West where an estimated number of 18 000 pedestrians cross a road that passes between 60 000 and 100 000 vehicles daily. Radical steps need to be taken to combat South African transport problems, and political determination is key (Stander & Brink 2016:380).

2.2.2 Government's role and contribution to public transport

The transportation industry is of high importance to the national economy of South Africa and has the potential to contribute positively to the country's job creation. (Thomas 2016:355) It is the obligation of the national government to provide leadership through strategies, such as Acts, while the local governments are charged with the duty of delivering by planning for and implementing those strategies (Thomas 2016:356). Niemand and Chauke (2017:3) agree with Thomas and further state that when it comes to public transport public entities, reporting to the Department of Transport (DoT), are mostly responsible for the execution of strategy. There are 12 such entities at national level (Niemand & Chauke 2016:3).

The National Transport Master Plan 2050 (NATMAP 2050) maps projects that the government is planning to embark on in order to improve the country's transport state and enhance interconnectivity of the different transport modes (Niemand & Chauke 2016:3). The NATMAP 2050 works as a blueprint for the government's long-term plan for integrating the South African transport network to one that links different modes, making them complementary for the benefit of the country's economy (Niemand & Chauke (2017:3). Moreover, Niemand and Chauke 2017:3), state six tactical objectives by which the South African Department of Transport is guided, and these are:

- To promote social and economic development through an efficient and integrated infrastructure network.
- To ascertain safety and security in the transport sector
- To develop and progress the systems of public transport
- To improve job creation through the increase of transport sector contribution
- To improve accessibility, infrastructure and mobility in rural areas
- To contribute more to the protection of the environment

Thomas (2016:356) mentions that the South African government has (in the past) funded a number of projects aimed at improving the country's transportation system to meet world standards and inspire the hosting of big events. The nature of the funding includes R29 billion spent on the Gauteng Freeway Improvement Project, R7 billion for the King Shaka International Airport in Durban, and the Taxi Recapitalisation Programme which cost R7.7 billion. In addition to these, Thomas (2016:357) mentions

two other major public transport initiatives namely the Gautrain and the Bus Rapid Transit (BRT).

The Gautrain is a rapid rail transport which covers 80 km long route servicing commuters in ten stations between Johannesburg and Tshwane (Thomas 2016:357). According to Thomas (2016:357), the Gauteng provincial government stated these main objectives for the development of the project:

- To alleviate traffic overcrowding on the roads connecting Johannesburg and Tshwane
- To encourage job creation, and thus contributing to economic growth
- To also encourage economic growth through tourism marketing and advancement
- To develop a mode of transport that is favourable to the environment

The Gautrain project is estimated to have cost about R30 billion, and part of it was completed and operation for the 2010 soccer world cup while the remaining section opened in August 2011 (Thomas 2016:357). While the project's objectives seem noble, Thomas (2016:357) highlights areas where Gautrain's development was criticised. The first reason was that Gautrain's development promotes a classist stance decidedly excluding areas where poor citizens reside, thus catering to the needs of the well-off fraction of the province's population (Thomas 2016:357-358). The project is also said to widen the mobility exclusion gap by creating two separate systems of transport for specific parts of the province (Thomas 2016:358). Resource allocation for the Gautrain project is said to be exceptionally high, more so considering that there is a critical need for better transport provisions for the great magnitudes of destitute South Africans (Thomas 2016:358).

According to Thomas (2016:358), when feasibility and cost-benefit analysis was carried out, it was projected that the Gautrain project would cost R7 billion to complete. But, by 2011, the project was reported to have cost R30 billion with more costs expected (Thomas 2016:358). Thomas (2016:358) highlights the severity of the cost by weighing the R30 billion budget allocation to a project that caters for 60 000- 70 000 people per day against R250 million (2007-2009) budget allocation for transport needs of about seven million daily users. The Gauteng provincial government is also criticised for failing to do thorough research, consult and discuss the matter sufficiently, before commencement, to find better and more cost-effective alternatives (Thomas

2016:358). Gautrain management claims environmental friendliness due to reduced carbon discharge as a result of thousands of drivers opting for Gautrain as a substitute for their cars (Thomas 2016:359).

Thomas (2016:359), however, asserts that in South Africa, where most electricity supply is generated by coal, the claim is inaccurate because of the increased level of carbon emission in generating the electricity required to run the Gautrain. This means that the decreased air pollution in the Gauteng province is at a cost to other provinces which host coal power plants (Thomas 2016:360). Despite it being the duty of the local government to plan and implement transport development, the Gautrain project was solely governed by the provincial government with no consideration for municipal transport development plans (Thomas 2016:360). Thomas (2016:360) sees this as highlighting the lack of synergy at play between the tiers of government when developing transport systems.

Bus Rapid Transit (BRT) is showing potential among the initiatives that are being adopted in South Africa (Thomas 2016:360). BRT is a system of buses with exclusive traffic lanes and pick up points for passengers (Thomas 2016:360). Thomas (2016:361) states that BRT differs from the Gautrain in that it addresses the issue of social exclusion by linking people from places that were previously mobility disadvantaged to the areas where they work. Moreover, the cost of developing BRT is significantly lower than that of the Gautrain project (Thomas 2016:361).

However, Thomas (2016:361) concedes that trying to work collaboratively with the mini-bus taxi industry has been the main challenge for the BRT system. On-going discussions about the evolution of the taxi industry are essential, otherwise it poses a threat to the BRT roll-out by local government (Thomas 2016:361). Furthermore, Stander and Brink (2016:380) assert that besides being the largest carrier of South Africa's commuters, the mini-bus taxi industry saves the government substantial money that would be spent on subventions, thus making it the most vital part of the South African public transport sector.

2.3 THE TAXI INDUSTRY IN SOUTH AFRICA

According to Fourie (2003:6), the taxi industry was established as a response to the rising demands of a growing urban African workforce in the late 1970's. At the beginning, the taxi industry was a fairly easy and cheaper way to start a business and

competition was stiff (Geldenhuys 2011). The taxi industry in South Africa is largely operated by previously disadvantaged individuals. The taxi industry in South Africa forms part of the informal sector but is subjected to processes of formalisation and informalisation which are contrary in nature (Theron 2010).

The history of South Africa's taxi industry is related to the history of the apartheid era, as it was introduced in the early 1960s when black South Africans in particular had very restricted access to these kinds of business opportunities (Barrett 2003:6). According to Barrett (2003:6), during the same period, from the early 1960's, urban African people were relocated as part of the apartheid policy to reside in areas far from major economic areas and industrial centres in all South Africa's towns. That created an immense opportunity for black South Africans in the taxi industry for the transportation of workers from their residences to places of work in various towns (Barrett 2003:6). Khosa (1995:167) also argues that the South African passenger transportation system was intended for daily transportation of people of African descent from the peripheries of urban centres into the inner cities in line with the racially segregated nature of minority rule.

Later on, prospective minibus taxi workers found a loophole in the Road Transportation Act of 1977 which allowed them to apply for a road carrier permit and operate legally within the country. In 1987, the taxi industry, known for its minibus taxis (excluding conventional metered taxis), secured for itself a permanent place in the transport sector of the country (Barrett 2003). The minibus taxi industry is commended for supporting black South African communities by providing a decentralised and a cheaper substitute to formalised public transportation (Fourie 2003). The industry has traditionally been highly regulated for numerous reasons related to transportation policy, public safety, and rent seeking (Gilbert & Samuels 1982, Hodges 2009).

South African major cities have gone on a drive to implement internationally recognised public transport systems that seek to address transportation challenges such as the inadequate public transport systems coupled with the need to attract and sustain global events without deviating from the objectives set out in policy (Walters 2014).

In implementing the resolutions of the United Nations on global warming, cities around the globe are trying to reduce the number of personal vehicle trips and promote the

use of non-motorised modes such as walking and cycling and public transportation (Rodrigue, Comtois and Slack 2013). According to South Africa's National House Travel Survey (NHTS, 2013), nearly 4 million of the 15,3 million workers in the country drive all the way to work using private transport, while 3,7 million use taxis. A further 3 million walk all the way, and approximately 1 million use buses as their main mode.

The minibus taxi industry remains an informal one, yet has a high share of the transport market, at 65% (Walters, 2008; Fobosi, 2013; Mabe, 2015). It is the most available, convenient and affordable mode of public transport, and serves largely the urban poor (Fobosi, 2013).

2.4 THE SHARING ECONOMY

Morgan and Kuch (2015:557) define the idea of “sharing economy” as a range of options which vary between a strict business outlook and more social, sustainable, nurturing, and democratic possibilities. The sharing economy, the collaborative economy, the digital economy, the circular economy, and the peer-to-peer economy are just some examples of the terms regularly used in the academic literature and in the media. This number of terms reflects the difficulty of establishing a precise definition of this new method of exchange and trade in goods and services (Botsman 2013).

According to Belk (2014), sharing economy is as old as humankind and has been necessary for the survival of the human species. The sharing economy in the modern context involves coordinating the acquisition and distribution of an underutilized resource for a fee or other forms of monetary compensation (Belk, 2014). While sharing has been in existence across cultures for millennia, in the modern marketplace and the sharing economy, technology is a critical component that facilitates sharing (Belk 2014).

The sharing economy in terms of goods and services provided is divided into four broad categories: recirculation of goods, increased utilization of durable assets, exchange of services, and sharing of productive assets (Schor 2014).

Uber converts two forms of underutilized resources into productive capital – the vehicle that we drive daily for personal activities as a potential source of profit (Becchis & Nada 2015).

One segment of the sharing economy, shared mobility, consists of a number of unique business models including car-sharing, bike-sharing and ride-sharing (Cohen & Kietzmann 2014:281). The term “shared mobility” refers to the sharing of vehicles among users, as with taxicabs and companies such as Uber and Lyft, which provide private rides to a series of passengers, and of bicycles or vehicles utilised serially by subscribers, as in bike-sharing and car-sharing. Shared mobility services have gained momentum in the recent years in terms of both number of companies and number of trips provided (National Academies of Sciences, Engineering, & Medicine 2016:11).

Shared mobility in the past represented a larger proportion of overall travel in the most developed countries such as the United States than is the case today: carpooling was more common among commuters, some people routinely hitchhiked around the community, and college campuses offered rides for students wishing to travel during breaks (National Academies of Sciences, Engineering, & Medicine 2016:2).

2.4.1 Car-sharing

Car-sharing allows drivers to use cars they do not own at a fee. However, unlike traditional car hiring services, Cohen and Kietzmann (2014:283) mention that car sharing does not require the user to pay additional fees such as insurance or fuel. The driver pays only for the usage of the vehicle in relation to time and distance (Cohen & Kietzmann 2014:283). Car-sharing differs from other car rental services in that car-sharing is in most instances for a short period of time (e.g. for minutes or hours instead of days or weeks), although there are some variations (National Academies of Sciences, Engineering, & Medicine 2016:17).

This therefore implies that car-sharing is the short-term provision of vehicles to individuals who drive themselves and return the vehicles to set locations. Carsharing Association (2019), further differentiates car-sharing and car rental (car hire) by that in its nature car sharing is driven by social and environmental interests rather than financial gain. Car-sharing seeks to combat urban congestion by reducing the number of vehicles in the road, thus allowing for better use of space and less fuel borne air pollution (Carsharing Association 2019). Carsharing Association (2019), further states that car-sharing works on membership, where users are not required to sign a contract each time they make use of a leased vehicle. In fact, when using car-sharing, drivers

do not even have to deal with another human as the car sharing stations are unmanned and the service is automated (Carsharing Association 2019).

Cohen and Kietzmann (2014:283) distinguish between three models of car-sharing, which are business to consumer car-sharing, non-profit/corporative car-sharing and person to person car-sharing. As the name suggests, business to consumer (B2C) car-sharing means a firm owns a fleet of vehicles that it makes available at different locations all around a city from where users can start and/or end their trip (Cohen & Kietzmann 2014:283). Some firms offer a return service, where the pick-up and drop-off location are one and the same; while others also offer a one-way option, where drop-off can be done at a different location (Cohen & Kietzmann 2014:283). The second model of car-sharing, non-profit/ corporative, has no expectation of financial gain at all (Cohen & Kietzmann 2014:283). This is achieved by members contributing resources and collectively managing the car-sharing (Cohen & Kietzmann 2014:285).

Unlike the first two models, person to person (P2P) car-sharing does not demanding as much capital (Cohen & Kietzmann 2014:287). Individuals make use of an intermediary (e.g. an app) to connect to an available privately-owned car (Cohen & Kietzmann 2014:285).

2.4.2 Bike-sharing

According to Cohen and Kietzmann (2014:285), bike-sharing only differs to car sharing in that instead of sharing cars, users share the use of bicycles. Bike-sharing involves users paying daily, weekly, or annual fees for access to a fleet of bicycles for their use. Bike-sharing addresses a number of environmental, social and transport related needs and leaves a very low carbon footprint (Shaheen, Martin, Cohen & Finson 2012:15). Much like with car-sharing, different business models exist for bike-sharing (Cohen & Kietzmann 2014:285). However, further understanding of bike-sharing, beyond what has already been discussed, is not necessary for the purpose of this study.

2.4.3 Ride-sharing

According to Arrive alive (2019), ride-sharing or car-pooling entails commuting in the same vehicle for people who are going to the same destination or general direction. Cohen and Kietzmann (2014:288), further differentiates between four variations of carpooling models (car-pooling, flexible car-pooling, van-pooling, non-profit car-pooling) and the person-to-person ride-sharing model. Car-pooling is coordinated by

individual car owners who want to provide rides, in their private cars, to people whose destination is in the same vicinity as the car owner's destination (Cohen & Kietzmann 2014:288). Where car-sharing was previously coordinated through word-of-mouth and traditional advertising, modern technology has given rise to car-pooling structures that enhance the experience (Cohen & Kietzmann 2014:288). Most car-pooling vehicle owners partake in car-pooling arrangements as a means to minimise personal vehicle costs, while also positively contributing to transport solutions, rather than for financial gain (Cohen & Kietzmann 201:288).

Flexible car-pooling differs from the basic car-pooling in that instead of picking-up and dropping-off riders from their departure points to their doorsteps, communal meeting places are agreed upon and trips run between them (Cohen & Kietzmann 2014:288). Cohen and Kietzmann (2014:288) mention Liftshare as an example of non-profit or corporate car-pooling social business where the mission is not to make profit. Van-pooling provides an option for bigger groups of car-pooling passengers (Cohen & Kietzmann 2014:288). Person-to-person (P2P) ride-sharing has become an option of choice to passengers around the world, all thanks to the emergence of mobile technologies and the internet (Cohen & Kietzmann 2014:288). Person-to-person (P2P) ride-sharing uses internet, mobile applications and technology to connect users and suppliers for efficient service (Cohen & Kietzmann 2014:288). Transportation Network Firms are form part of the P2P ride-sharing options propelled by the rapid evolution of technology solutions.

2.5 THE RISE OF TRANSPORTATION NETWORK FIRMS

The technological revolution is disrupting existing industries by offering new ways of providing services globally, presenting both opportunities and challenges. One major change in the taxi industry was the shift in operating models in the late 1970s and early 1980s, which saw the taxi industry mostly move from employer-employee relationships to independent contracting (leasing arrangements and "owner-drivers") (Gilbert & Samuels 1982; Biju 2005). The emergence of transportation network firms (TNFs), such as Uber, Lyft and Bolt (formerly Taxify) for ride hailing since the early 2010's is the latest disruption in the provisioning of public transportation services.

TNF's use mobile applications that link passengers looking to hail rides with drivers for a fee (Mulligan 2015). The first transportation network firm to enter the South

African market was Uber in 2013 (Uber 2019). Since then more TNF's entered the market with Bolt as the main competitor.

Uber's principal business is providing a market with a software application that connects drivers and passengers using point-to-point capabilities that is accessed through mobile devices (Azevedo & Maciejewski 2015). This definition is consistent with that of Mulligan (2015) describing Uber as a transportation network firm that provides an on-demand transportation service and a technology solution that connects passengers with drivers registered on the Uber platform nearest to their pick-up location, in real time, through their mobile devices. Traditionally, passengers can either hail a metre-taxi on the road or call the taxi hotline to book one and both of these approaches are contributing to long waiting periods and missed opportunities during peak hours (Zhao & Xing 2012).

Minibus-taxis are busy during peak, but off-peak hours they remain idle at the taxi rank or holding facilities, because there are fewer trips generated. This means long waiting times for those who want to travel during that time. The unavailability of the minibus-taxis in other areas of the town and in the off-peak periods creates a gap which in most cases is filled by private cars, TNF's (such as Uber and Taxify) and metre taxi services.

2.6 THE IMPORTANCE OF TRANSPORTATION NETWORK FIRMS

Ngo (2015) states that "Uber provides better service than taxi service with faster time, reduces cost of money, cost of waiting, it is convenient and they are more concerned about handicap passenger". The most notable justification for TNF's superiority over the traditional metre taxis are the superior convenience, customer experience, and (often) fares they offered compared with traditional metre-taxis.

From a passenger's point of view, TNF's are attractive because they often offer lower prices, better accessibility, great flexibility and ease of use (Dredge & Gyimóthy 2015; Wallsten 2015). Passengers view TNF's as part of a set transport choice that serves previously unmet demand for fast, flexible and convenient mobility in urban areas (Azmi et al. 2016). A survey conducted by Rayle, Dai, Chan, Cervero and Shaheen, 2016:168-178) revealed that 25% out of 313 respondents stated that Uber service is more convenient, comfortable and gives them better experience. Uber and Lyft can be considered the most recent and most technologically evolved answer to the question of how to get a ride in someone else's vehicle (National Academies of Sciences,

Engineering & Medicine 2016:69). The main difficulties to getting such a ride in the past included information, negotiation, and trust. In particular, those problems have involved irregular information and high transaction costs (National Academies of Sciences, Engineering & Medicine 2016:69).

The Uber Company in Africa argues that its main focus is on improving the transport ecosystem, and also to support economic growth by empowering drivers, enables drivers to do business and also improve small business (GeSI 2015). Mulligan (2015) reports the Uber's expansion into Africa will improve the transportation ecosystem, and supports the economic growth, especially for SMMEs, by empowering drivers with the tools to build their own small businesses, while providing a safe and reliable transport option to passengers.

2.7 UBER's ENTRY IN SOUTH AFRICAN MARKET

According to Munshi (2016) Uber has been operational in the South African market since September 2013. The introduction of the technology-based Uber service into South Africa's local passenger transport industry in 2013 had led to the authorities placing emphasis on issues relating to regulation and competition (Dube 2015:4). Uber South Africa locates Uber as a complimentary service to traditional public transport services by providing flexible and affordable last and first mile solutions.

According to Uber (2019), Uber has created substantial self-employment opportunities since entering the South African market in 2013 with over 12,000 economic opportunities in South Africa benefiting the existing metred taxi industry, professional drivers as well as individuals who were previously unemployed. Chu (2015) however criticises Uber's business model that does not recognise drivers as employees to avoid taking responsibility for any challenges that may arise between drivers and riders. The drivers recognised as contractors, who receive no formal standard employment benefits, have to bear the responsibility for expenditures such as fuel and maintenance, and assume liability for any associated automotive accidents (Chu 2015). Uber (2019) reports that Uber has more than 1.8 million riders in the country with more than 230 000 trips scheduled daily.

2.8 CHALLENGES FACED BY THE TRANSPORTATION NETWORK FIRMS

Lopes (2015) alludes to the requirements for drivers to participate in the service such as background checks, however, the reality is Uber's application platform allows for other people to use their cars to provide Uber rides without having registered themselves as drivers. Euromonitor International (2015) reports that governments limit Uber operations with many institutional frameworks due to Uber's encouragement of a 'black' market (e.g. avoiding taxes, unregulated payments, few insurance coverage, and absence of consumer protection).

Uber is disrupting the transportation industry and taxi companies are attempting to block the growth of the service and Uber faces numerous legal difficulties globally (Lopes 2015:23). In South Africa, Uber is facing class action lawsuit following violent attacks as alleged criminal drivers target drivers (BusinessTech 2019).

In South Africa, metre taxi's protesting for the ban of Uber operation. The meter taxi industry is condemning the Uber business of stealing their business, and that the Uber cars operate illegally. According to Munshi (2016) meter taxi operators indicated that Uber's lower prices was driving them out of business. Various incidents were also reported where Uber vehicles were set on fire and drivers intimidated, assaulted and killed (Selisho 2015). Similar violent incidents have been noticed since to introduction of Uber services globally for an example when Uber started operating in Puerto Rico, it was met by violent acts within the first 48 hours of it launching and despite this passengers continued to display trust in the service with more than 10 000 downloads of the application and more than 1500 partner drivers, in the first few days of operation (Costa 2016).

According to traditional metre taxi owners and drivers, Uber is merely a software company and therefore the taxi industry rules and regulations are not applicable to Uber. Khoisan (2016) stated that in June 2015, 15 metre taxi operators were charged with public disorder following violence protests against the presence of Uber in Cape Town.

Public transport systems are often strictly regulated with a high barrier of entry, resulting in limited growth and innovations in these niche monopolistic and oligopolistic markets and this has given rise to the opportunity for the ride sharing businesses as an alternative to traditional public transport system in urban areas (Chu 2015:4). Uber

also experienced various legislative and regulatory challenges since it started operations in South Africa in 2013. Government has been slow in regulating Uber, a technology-driven taxi service new to the South African public transport industry, which led to ambiguity around how the e-hailing service should be licensed (Business Day 2018). According to the Business Day (2018), the National Land Transport Amendment Bill which has been submitted to parliament covers the regulatory requirements for e-hailing services in South Africa.

2.9 SUMMARY

This chapter presented findings based on the literature. First, the transport industry of South Africa was discussed, giving historical background to the events that led to its current status. The industry's challenges and shortcomings were reported on, followed by the government's duty and efforts to improve transportation. The taxi industry came up as a major stakeholder bringing big contributions and threats to the transport sector.

The concept of sharing economy was discussed, linking traditional transport systems with the phenomenon of ride-hailing. The importance and rise of ride-hailing service providers, in the form of transport networking firm was detailed. Uber was introduced, its entry into the South African market presented; and lastly, challenges encountered by transport network firms were displayed.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

In Chapter Two the literature review explored the nature of the South African transport industry, its challenges, opportunities and developments. The concept of sharing economy was explained in detail together with its contributions to the transport sector. In addition, transport networking firms (TNFs), their rise, and importance were discussed. Further discussion was done with regards to the challenges faced by transport network firms (TNFs) with particular focus to Uber and the South African context.

This chapter addresses the question of how the study will be conducted in order to meet the objectives discussed in Chapter One. The nature of data necessary for the completion of this study will be defined and differentiated. The method by which data will be collected will be explained and justified. Once the data is collected it will need to be analysed, this chapter will also describe how the data will be analysed and turned into useful information.

3.2 RESEARCH DESIGN

Struwig and Stead (2017: 8) define research design as a plan through which research questions are tackled. Struwig and Stead (2017:2) further reason that while many ways of data collection and analysis exist, they all fall under two general approaches, namely quantitative and qualitative research approaches. Van Zyl (2014:10), on the other hand, distinguishes between two main kinds of research; one that is experimental, and the other kind which is non-experimental. Experimental research considers causal connections between variables (Van Zyl 2014:13), while non-experimental research is unconcerned about cause but only the connections between variables (Van Zyl 2014:10). Creswell (2003:13) indicates that quantitative research can be either experimental or non-experimental. While Van Zyl (2014:11) classifies qualitative research as a non-experimental type of research. According to Creswell (2003:18) quantitative research employs post-positivist assertions to advance understanding, and gathers information using tools that can provide data that is possible to process and measure numerically. On the contrary, qualitative research

examines the context - whether cultural, political, or social- under which the behavioural occurrences being studied take place (Van Zyl 2014:13). Mixed methods approach is introduced by Creswell (2003:18) as a third approach which has realistic and practical assertions and combines both the quantitative and qualitative data collection methods.

Further to the three afore mentioned research approaches Creswell (2003:6) argues that at the beginning of each study, researchers hold theories about what knowledge is to be gained from the study, and the manner in which it will be gained. According to Creswell (2003:6), different authors refer to these theories using different names including names such as paradigms, philosophical assumptions and epistemologies. Creswell (2003:6) refers to these theories as knowledge assumptions and highlights four schools of thought in this regard. Firstly, post-positivistic school of thought, used in the quantitative approach, breaks theories into smaller measurable constructs and studies reasons that affect an end result (Creswell 2003:7). Post-positivistic approach produces knowledge through prudently watching, and objectively assessing the world and its realities (Creswell 2003:7). In post-positivism, which is also called the scientific method or positivist research (Creswell 2003:6), the researcher may need to revisit the original theory, before continuing with the study, if the collected data does not support the theory (Creswell 2003:7).

The second thought school is constructivism or social constructivism. Social constructivism asserts that people have individual perceptions of the world, and as such there will be many differing views which speak to the complex nature of each subject (Creswell 2003:8). Contrary to the positivistic view which narrows theories down, constructivist views widen the questions and opens them up in order to help participants structure meaning of a subject through communication with others (Creswell 2003:8). Instead of working on measuring theories, researchers decipher the information and form a theory based on the understanding of available data (Creswell 2003:9). Thirdly, Creswell (2003:9) discusses the advocacy/participatory approach which takes a political stance in that it advocates deeper inclusion of the participants in the research and seeks to drive change or improvement of social concerns. Advocacy/participatory school of thought generally back agendas of disadvantaged social groups or individuals (Creswell 2003: 9-10). The fourth, and last school of thought discussed by Creswell (2003:11) is pragmatism. This knowledge

assumption is informed by actions, conditions and results and not previous circumstances (Creswell 2003:11). Pragmatist researchers use mixed methods to best understand the research problem and address the needs of the study (Creswell 2003:11).

For the purpose of this study, the quantitative approach will be employed with the positivist view where Uber passenger experiences will be studied by reducing them into small measurable items. The quantitative approach was chosen because the study does not seek deeper meaning of these experiences for passengers, just to understand their general nature. There are a number of available designs for conducting a quantitative study, and Struwig and Stead (2017:6) mentions three of these, which are exploratory, experimental, and descriptive.

Exploratory research is undertaken to explore a topic about which there is limited known information, and it can be used as groundwork for a more comprehensive study at a later stage (Struwig & Stead 2017:6). Experimental research can be subdivided into two categories, true experimental & quasi- experimental (Van Zyl 2014: 11). According to Van Zyl (2014:11) the main differentiating factor between the two is control. While true experimental research can test the true causative relationship between variables (Van Zyl 2017:11), Quasi-experimental research is used with non-random sampling, and/or when variables are difficult to control (Struwig & Stead 2017:9). Descriptive research seeks to depict attributes of a current occurrence (Van Zyl 2014:11). Thus, descriptive research describes the status quo, or 'what is' at the present moment. Descriptive research aims to be precise and thorough (Struwig & Stead 2017:7).

While a study of Uber passengers' experiences can be done using different approaches for different reasons; the aim of this study is to draw a picture that shows those experiences. For this reason, a descriptive method will be followed to define what Uber passengers experience when using Uber. Successfully done, this will help Uber understand how its passengers experience its service. Should additional questions arise, this study could serve a foundational purpose for future research. That would be in line with Van Zyl's (2014:12) assertion that descriptive research mostly functions as a steppingstone for further, more involved, research.

3.3 DATA COLLECTION

Among other factors, Van Zyl (2014:3) characterises quality research as work founded upon other people's labour in pursuit of new knowledge. This suggests that research requires information to be gathered. According to Struwig and Stead (2017:82), necessary data for research can be divided into two categories which are primary and secondary data. This section seeks to clarify the difference between the two, describe the manner in which data for this particular study will be collected, and the sources used.

3.3.1 Secondary data collection

For the purpose of this study relevant literature will be reviewed. Journals will be sourced from the university's library online databases like (but not limited to) Emerald, Sage, Sabinet and EBSCO Host. Reliable websites like transport network firms' (TNFs') websites, and other relevant online sources, will also be used as sources of secondary data.

Secondary data refers to data whose initial purpose has nothing to do with the study being undertaken (Struwig 2017:82). In other words, while it may be useful and even meet the needs of the study at hand, the study is not the reason why the data was initially collected. Struwig and Stead (2017:82) distinguish between three classes of data; namely raw data, summaries of numbers and written treatises. Van Zyl (2014:156) refers to raw data as unorganised data and likens it to puzzle pieces. Summaries of numbers can be obtained from the relevant institutions based on the study like those received from Statistics South Africa (Struwig & Stead 2017:82). Examples written treatises include academic literature like books and dissertations (Struwig & Stead 2017:82).

Gathering secondary data is more cost effective than primary data and thus more use of secondary data is recommended (Struwig & Stead 2017:82). However, Struwig and Stead (2017:82) suggest that secondary data should be tested for both reliability and validity. Van Zyl (2014:118) explains reliability as a measure of stability and consistency, while validity test looks at whether what is intended to be studied is actually what is being studied (Van Zyl 2014:123).

3.3.2 Primary data collection

Asking questions, in the form of interviews or questionnaire surveys, or simply observing the subject(s) of the study are ways by which primary data can be obtained and put together (Struwig & Stead 2014:89). According to Struwig and Stead (2017:82) primary data owes its collection to the study being currently conducted. Thus, primary data collection is a direct response to the needs of the research at hand. For this reason, serious decisions need to be made. Van Zyl (2014:95) asserts that decisions about selecting research participants determine the success of the study and its results. The following sections aims to address the selection process and define important concepts such as population, sample, sampling and research instruments.

3.3.2.1 Population, sample frame and sample

Struwig and Stead (2017:114) define a population as an overall number of constituents of a study's area of interest. Moreover, Van Zyl (2014:95) suggests that a population defines those preferred respondents the researcher would want to encompass in generalizing the research findings. For this study, whose main focus is Uber passengers' experiences, the population would be all Uber users, specifically those who have used Uber in Port Elizabeth and/or the greater Nelson Mandela Bay Metropolitan area.

However due to the limit in resources, not all the individuals in the defined population can be reached to participate in the study, thus a smaller pool from the population will have to be used. That subdivision of the population is what is known as a sample. In order for research findings to have an impact outside the study's original situation, the sample results need to be generalizable to the whole population (Van Zyl 2017:95).

A sampling frame is defined by Struwig and Stead (2017:115) as a comprehensive list of all individual constituents that make up a population from which a study sample can be drawn. Due to laws that prohibit the distribution of personal information to third parties, such a list cannot be legally obtained for this study. This means the study's sample frame cannot not be identified. Alternative methods will be employed in order to draw a sample for the study. The section below discusses the sampling options available to researchers.

3.3.2.2 Sampling techniques

The most important question to ask of a sample is whether it is a miniature version of the population (Van Zyl 2014:96). The measure of difference between defining factors of a sample versus those of a population is called a sampling error (Van Zyl 2014:103). Regardless of the researcher's efforts, drawing an accurately representative sample is not probable (Van Zyl 2014:103). However, using decent sampling techniques will help, as it is every sampling technique's aim to diminish the sampling error (Van Zyl 2014:101-103). Probability and no-probability strategies are two general sampling techniques that a research can employ (Struwig & Stead 2017: 116; Van Zyl 2014:96).

In probability sampling, there is a known chance of any individual constituent of the population making it to the final sample (Van Zyl 2014:96), and that chance is not zero (Struwig & Stead 2017:118). The selection outcome is chance dependent, thus improving the sample's likeness to the population (Van Zyl 2014:96). One way through which random sampling can be done is indiscriminate selection, from a comprehensive list of all population members, by means of a computer programme or a table of random numbers (Van Zyl 2014:96-99; (Struwig & Stead 2017:118). Struwig and Stead (2017:118) refer to this type of random sampling as random probability sampling, while Van Zyl (2014:96) calls it simple random sampling. Systematic sampling on the other hand in that some of the population elements' odds of selection are lessened making it less accurate than simple random sampling (Van Zyl 2014:100). Systematic sampling chooses numbers at predetermined intervals of the population list, e.g. every 9th name (Van Zyl 2014:100; Struwig & Stead 2017:120). Van Zyl (2014: 101) suggests that stratified sampling first divides the population into groups of significant characteristics to make sure that each characteristic is represented instead of leaving it all to chance. That way the sample will have all the relevant characteristics of the population, thus representative (Van Zyl 2014:101). Cluster sampling involves sampling the population from existing groupings instead of individuals (Van Zyl 2014:102; Struwig & Stead 2017:119-120). Multi-stage sampling employs the strategy of using more than one random sampling technique at different phases of the sampling process (Struwig & Stead 2017:120).

When the chances of being drawn are not known for any of the population members, non-probability sampling is used (Van Zyl 2014:96), and the selection is dependent on the researcher's assessment (Struwig & Stead 2017:116). As with probability sampling, Van Zyl (2014:102) and Struwig and Stead (2017:116) mention a few

options for non-probability sampling. Convenience sampling works exactly the way the name suggests (Van Zyl 2014:103), the researcher goes for reachable and willing participants (Struwig & Stead 2017:116). Judgement sampling on the other hand is reliant on the educated decision of the researcher (Struwig & Stead 2017:116). Another method of non-probability sampling is quota sampling, which Van Zyl (2014:103) suggests is like stratified sampling but for a population where a sample frame cannot be obtained. Thus, quota sampling is for non-probability sampling what stratified sampling is to probability sampling. Lastly, Struwig and Stead (2017:118) mention snowball sampling. Snowball sampling makes use of randomly selected respondents' recommendations for leads of additional respondents (Struwig & Stead 2017:118), thus increasing the sample as the research progresses.

As previously mentioned, this study's population is defined to include all users of Uber's ride-hailing services in the Nelson Mandela Metropolitan area. From the above information, it is clear that none of the probability sampling techniques will be possible due to the fact that a full list of all Uber ride-hailing service passengers, in Nelson Mandela Bay, cannot be obtained. Non-probability techniques have been considered. The researchers do not claim any expertise in ride-hailing services or Uber, other than what the literature provides, and as such will not be using the judgement sampling. The study itself does not require any additional or differentiating criteria, other than that the respondents need to have used Uber ride-hailing service. Thus, the quota sampling will not be suitable either. Convenience seems to be the more reasonable option. Convenience sampling is preferred because it gives the researchers a starting point. While it is not random, it is considered representative in this case because whoever gets selected has the most relevant characteristic of the population, and that is having the experience of using Uber ride-hailing service. According to Van Zyl (2014:105), in addition to choosing an appropriate sampling technique, growing the sample to a reasonably big size reduces the sampling error. After sample selection the next step is the development of a research instrument. The following section discusses the research instrument.

3.3.2.3 Research instrument

The instrument that will be used for this study is a questionnaire. Typically, a questionnaire involves a series of organised and purposeful questions (Van Zyl

2014:147). Van Zyl (2014:150) advises that the questions in a questionnaire ought to be answerable, forthright and take social appropriateness into consideration. According to Struwig and Stead (2017:95) questions used in questionnaires differ for different reasons, some are open-ended while others are not. Questions where respondents are at liberty to use their own words and views to answer are considered open-ended (Struwig & Stead 2017:95). Struwig & Stead (2017: 96) assert that questioners conducting open-ended questions tend to be inclined to bias behaviour. Moreover, analysing open-ended questions takes a considerable amount of time (Struwig & Stead 2017:96). These types of questions will not be suitable for this study because they rely on words, a trait more suitable for qualitative studies. Alternatives will be briefly explained.

Multiple-choice questions provide options from which the respondent can choose (Struwig & Stead 2017:96). Checklist differ from multiple-choice questions in that the options need to be valued based on set benchmarks (Struwig & Stead 2017:97). Questions where respondents have only two choices from which to pick are known as dichotomous questions (Struwig & Stead 2017: 97). To measure people's perceptions about a specified subject, scale-response questions or attitude tests can be used (Van Zyl 2014:142). Struwig and Stead (2017:98) highlight two types of scaled-response questions, Likert-type scale and semantic differential scale. A Likert-type scale involves statements where five- or seven-point scales are used to measure views (Struwig & Stead 2017:98). The semantic differential scale works similarly to the Likert-type scale but differs in that the scale has only two polarising views (Struwig & Stead 2017:98). Lastly, the ranking questions. As the name suggests, ranking questions requires that things be organised according to how the respondent ranks them (Struwig & Stead 2017:99).

According to Van Zyl (2014:109) an assessment tool ought to meet the qualities of validity and reliability. Reliability is met if the results of an assessment remain the same even when a reassessment is done (Van Zyl 2014:115). Validity is achieved if the measuring instrument truly measures what is intended to be measured (Van Zyl 2014:123).

3.4 DATA ANALYSIS

After the collection of data has been done, the next step is the analysis process (Zikmund 2003:453). A research's main aim is mostly to supply information (Zikmund 2003:453). Accordingly, it is essential that the collected data be converted to useable information (Zikmund 2003:453). The process of turning data into information involves a few activities which include editing, coding, data entry and data analysis (Zikmund 2003:453). According to Struwig and Stead (2017:165), editing is there to cut off mistakes that may be found in the collected data. Zikmund (2003:454) adds that editing prepares data for editing by confirming that data is complete, consistent and reliable. Coding involves the categorisation of individual responses and assigning scoring numbers to each category (Zikmund 2003:457). Once data has been coded it can be added into a computer (Zikmund 2003:457). For the purpose of this research, data will be captured to an Excel spreadsheet.

After the data has been captured into a computer, the next step will be the actual analysis. Using descriptive analysis, data can be arranged and manipulated to give information that is illustrative (Zikmund 2003:473). In other words, characteristics of data sets and how the scores are distributed can be described through descriptive statistics (Van Zyl 2014:161-162). Variation in the distributions of scores can be compared using measures of central tendency (including mean, median and mode), measures of dispersion (variability using range or standard deviation) or by way of contrasting standard scores (Van Zyl 2014:163). Once the data has been summarised using descriptive statistics, inferential statistics can be used. Inferential statistics allow for the study findings to be generalizable and can help a researcher make conclusions about the collected data in relation to their initial assumptions (Van Zyl 2014:161). Struwig and Stead (2017:168) group inferential statistics into two broad groups which are parametric and non-parametric statistics. Both these measure relationships and offer comparisons (Struwig & Stead 2017:168-173).

However, due to the descriptive nature of this study inferential statistics will not be employed, thus only descriptive statistics will be used to analyse the data.

Once the analysis has been done, the researchers will be able to communicate the findings.

3.4.1 Factors that influence ride-hailing experiences

This section of the chapter deliberates on the factors used to analyse data, provides the definitions for these factors and explains where they were found and why they are being used for this study.

Various factors relevant to this study were identified. The factors include *Convenience/Ease of use*, *Economic rewards*, *Social connection*, *Safety and security*. This brings the total number of factors to five. These factors will be defined in Table 3.1 below. The safety and security factors will be grouped together in Chapter 4.

Table 3.1: Experiences of ride-hailing services

Factor	Operationalisation	Items
Convenience/Ease of use	Convenience refers to how easy and effortless the Uber mobile application is to use. This factor looks at the accessibility of the Uber mobile app and also considers the amount of time it takes to wait for an Uber ride. In summary the factor looks at various convenience feature such as reliability, accessibility and its ability to provide relevant information at a relevant time.	7
Economic reward	Economic reward looks at the economic benefits that could be a motivating factor for passengers to continue using Uber ride-hailing services. This factor explores whether respondents experienced personal economic gains in the form of money savings from cheaper fare and discounts. It also looks at the value for money in terms of service expectations.	9
Social connection	Social connection looks at the extent which Uber contributes to eliminating the barrier to social participation caused by an ineffective and inefficient public transport system. This factor explores the service constraints prevalent in public transportation systems and how they affect Uber ride-hailing services. This also reconnoitres whether respondents benefitted from opportunities to connect with people using Uber and whether they gained any social status as a consequence of using the ride-hailing service.	9

Factor	Operationalisation	Items
Safety and security	Safety looks at how safe the Uber ride-hailing service is in comparison to other forms of transport such as buses, minibus taxis and metred taxi services. This factor also examines how safe the Uber mobile application is to use with regards to sharing of private information. It also explores how safe the respondents felt with regards to driver behaviour. Passenger security is a critical factor in ride-hailing services as it looks at the issues relating to violence, assault and harassment from drivers. This factor looks at the risk of harm and how secured the Uber mobile platform is.	13

3.5 SUMMARY

In this chapter the concept of research design was defined, and different research approaches were discussed. Various schools of thoughts pertaining to research paradigms were introduced and explained. A justification for adopting the quantitative approach for this study was presented with supporting arguments from literature.

Both primary and secondary data were explained, and ways by which both will be gathered discussed. Sampling was discussed in great length and a distinction between probability and non-probability sampling made. And the choice for non-probability sampling was defended.

The research instrument, in the form of a questionnaire was discussed. Possible types of questions to be put in a questionnaire were identified and explained.

And finally, data analysis was put into context and the process clarified. The purpose of descriptive statistics was explained and distinguished from that of inferential statistics. Chapter four will provide the findings of the empirical findings.

CHAPTER FOUR

EMPIRICAL FINDINGS

4.1 INTRODUCTION

The previous chapter provided details on the research design and methodology that would be utilised for this study. The aforementioned chapter incorporated the research paradigms, approach and the research method as well as the data collection for this study. As explained in Chapter Three, for this study a quantitative approach was adopted with supporting arguments from the literature. Chapter Three concluded with a summary.

The main purpose of this chapter is to discuss findings of the research. Firstly, an overview of the study sample will be given, highlighting the main characteristics of the sample. Thereafter, the empirical findings will be discussed in line with the chosen research approach, as discussed in Chapter Three.

4.2 DATA PREPARATION

Data preparation entails simplifying data and repackaging it into information that can be used (Zikmund 2003:453). This involves cleaning out any errors inherent to data collection and coding the data in preparation for analysis. According to Zikmund (2003:457), coding means putting each response under a category and giving it a scoring number. In this study, the researchers assigned the item responses to four categories based on the ride-hailing experience factors discussed in Chapter Three. Items pertaining to *Convenience/Ease of use* were given the code CEU, *Economic reward* was allocated ER, *Social connection* was named SC, and *Safety and security* given SS. Next to each factor code a number was allocated corresponding with the item number on the questionnaire. The questionnaire numbers were obtained in the questionnaire design stage through the randomisation of the items.

4.3 SAMPLE DESCRIPTION

The data for this study was collected from respondents who met the requirements of the term “Uber passenger” as defined by the researchers. The researchers determined that in order to be considered a qualifying respondent, one must have:

- i) Used Uber at least 2 times in the 6 months between March and August 2019

- ii) Used Uber in Nelson Mandela Bay, in at least one of the two instances
- iii) Been over 16 years of age

Table 4.1 below, presents the demographic data of 58 respondents who met the requirements for participation in the study. Table 4.2 on the other hand presents data that looks at Uber usage patterns from all 58 respondents. Lastly, Table 4.3 focuses on the purposes for which the respondents use Uber.

Table 4.1: Demographical information

PARTICIPATION REQUIREMENTS		
Value	Frequency	Percent
Yes	58	100%
No	0	0%
Total	58	100%
GENDER		
Value	Frequency	Percent
Male	12	21%
Female	46	79%
Total	58	100%
AGE		
Value	Frequency	Percent
20 - 29 years	30	52%
30 - 39 years	20	34%
40 - 49 years	6	10%
50 - 59 years	0	0%
60 - 69 years	0	0%
70+ years	1	2%
No answer	1	2%
Total	58	100%
POPULATION GROUP		
Value	Frequency	Percent
Black	47	81%
Coloured	6	10%
Indian/Asian	0	0%
White	3	5%
Not willing to say	2	3%
Total	58	100%

EDUCATIONAL BACKGROUND		
Value	Frequency	Percent
Grade 11 or less	0	0%
Grade 12 or equivalent (matric)	9	16%
National Diploma or equivalent certificate	23	40%
Bachelor's Degree	14	24%
Postgraduate Degree	12	21%
Total	58	100%
INCOME		
Value	Frequency	Percent
Less than R10 000	15	26%
R10 001 - R 20 000	23	40%
R20 001 - R 30 000	7	12%
R30 001 - R 40 000	3	5%
R40 001 - R 50 000	0	0%
More than R50 000	3	5%
Prefer not to say	7	12%
Total	58	100%

The demographic information deemed relevant to the study included the respondents' gender and age, the population group to which they belong, educational background and income.

The sample was made up of twelve males (21%) and forty-six females (79%). Most respondents were in their twenties (52%), followed by respondents in their thirties (34%), then respondents in their forties (10%). Only one respondent was over the age of fifty. The sample had 81% black representation, 10% coloured, 5% white and 3% preferred not to disclose their race. The educational background of all participants included a Grade 12 or an equivalent qualification. A total of 21% of the respondents held a postgraduate qualification, 24% held a bachelor's degree, while the majority (40%) had a national diploma or an equivalent qualification. The sample was made up of respondents from varying income brackets with more than 65% earning R20 000 or less and 12% choosing not to divulge.

Table 4.2: Uber usage patterns

DURATION OF USE		
Value	Frequency	Percent
From 2013 (When South Africa launched in Jhb, Pta, CT, Drb)	4	7%
From 2014 (When South Africa launched in Drb)	1	2%
From 2015 (When South Africa launched in PE)	11	19%
From 2016 (PE or other: _____)	10	17%
From 2017 (PE or other: _____)	12	21%
From 2018 (PE or other: _____)	15	26%
From 2019 (PE or other: _____)	5	9%
Total	58	100%
USAGE FREQUENCY		
Value	Frequency	Percent
Everyday	2	3%
1-3 times per week	15	26%
4-6 times per week	2	3%
1-10 times per month	16	28%
11-20 times per month	3	5%
21-30 times per month	2	3%
On special occasions only	17	29%
No answer	1	2%
Total	58	100%
WAITING TIME		
Value	Frequency	Percent
Less than three minutes	3	5%
Three to six minutes	36	62%
More than six minutes	17	29%
No answer	2	3%
Total	58	100%
SHARE SPLIT		
Value	Frequency	Percent
Always	1	2%
Most of the time	5	9%
Occasionally	25	43%
Never	27	47%
No answer	0	0%
Total	58	100%

Table 4.3: Uber usage purposes

USAGE PURPOSE	
Value	Frequency
No answer	0
To get from home to work	16
To return from work to home	15
To go out at night	33
To move freely around the city	21
To ride because you do not own a motor vehicle	23
To visit friends at their home	18
To return home after a night out / party	29
To return home if you are not sober	10
To leave your car at home to avoid using it	5
To go shopping	22
To return home from shopping	27
To get to an appointment	23
To return home from an appointment	20
Other	4
Total	266

Uber usage patterns as shown in Table 4.2 indicate that 9% of the respondents started using Uber in 2013/14, in other cities, before it was introduced in Port Elizabeth. Nineteen percent of the respondents joined Uber in 2015 when it first launched in Port Elizabeth. According to the sample, there was a drop in the number of first time users from 19% in 2015 to 17% in 2016. There was a steady increase from 2016 to 2018, growing to 21% in 2017 and reaching a high of 26% in 2018. Only 9% of the respondents used uber for the first time in 2019. Table 4.2 also shows that majority of the respondents (29%) use Uber only on special occasions, closely followed by those who use it 1-10 times a week (28%). 26% of the respondents use it 1-3 times a week, and the rest make up smaller percentages. The waiting time reported differs, however 3 to 6 minutes wait was reported by most respondents, making up 62% of the sample. 5% indicated a lesser waiting time, while 29% indicated that they have had an average waiting time longer than 6 minutes. When it comes to splitting the riding fare, 54% of the respondents have split an Uber fare; however, 43% indicated that they split only occasionally. The remaining 47% reported that they have never split a fare.

The purpose for which respondents use Uber varies across several reasons, as shown in Table 4.3. Some respondents indicated more than one reason for hailing an Uber ride. The most common reason cited, however, was going out at night, with 33 and 29 people using an Uber for going out and coming back respectively. Shopping also ranked high as a purpose, with up to 29 respondents indicating that they use Uber for shopping purposes. Other reasons include using Uber to keep appointments, as a primary means of transport and for free movement around the city. Out of the 58 respondents, 10 indicated that they use Uber when they are not sober, and 5 ride to avoid using their own cars.

4.4 EMPIRICAL RESULTS

The questionnaire also comprised of statements in Section B relating to the respondent's experience with the ride hailing firm, namely Uber. These statements were grouped into four factors as discussed in chapter three, namely: *Convenience/Ease of use*, *Economic reward*, *Social connection* and lastly *Safety and security*. A total of thirty six (36) statements were asked of the 58 respondents of which, seven (7) belonged to the *Convenience/Ease of use* category, eight (8) belonged to the *Economic reward* category, nine (9) belonged to the *Social connection* category and twelve (12) belonged to the *Safety and security* category. The report will focus mainly on the mean scores on the various statements asked in the questionnaire.

Table 4.4 below presents the summary of findings per factor based on disagreement (disagree and strongly disagree), neutral and agreement (agree and strongly agree).

Table 4.4: Summary of empirical findings

Factor	Disagree	Neutral	Agree	Mean
Convenience / Ease of use	11%	10%	79%	4
Economic reward	26%	16%	58%	3.5
Social connection	7%	18%	75%	3.9
Safety and security	11%	24%	65%	3.8

Convenience / Ease of use

The majority of respondents (98%; n=57) said because their phones are always with them, they can use Uber to go anywhere they like. Most respondents (91%; n=53) also

felt that the Uber app is always accessible as long as they have an active internet connection. Because of Uber's punctuality, respondents (88%; n=51) also believe that Uber ride-hailing service saves time, unlike mini-bus taxis which do not have scheduled times. Approximately 86% (n=50) respondents believe that the Uber application provides all the information they need to make decisions about getting to their destination.

Respondents also confirmed that they do not have to wait long for their ride because of driver unavailability (67%; n=39) and that the Uber drivers are readily available at any time (66%; n=38). Respondents (57%; n=33) also confirmed that Uber mobile application performs reliably every time.

Perceived ease of use is defined as the individual's perception that using the new technology will be free of effort (Davis 1989:320). The *Convenience/Ease of use* factor scored a total mean score of 4 on average meaning respondents as a whole felt that Uber is more convenient as a mode of transportation and the mobile app is user friendly and easy to use. The results also showed that the respondents agreed with each statement relating to *Convenience/Ease of use*.

Economic reward

Consistent with the findings under the *Convenience/Ease of use* factor, 91% (n=53) of the 58 respondents agreed that sometimes the Uber ride-hailing service proved to be a money saving mode of transport for them. For the price they paid, respondents (79%; n=46) reported that the ride-hailing service met their expectations and that Uber offers the best priced door-to-door service.

The respondents (66%; n=38) on average agreed that it is possible to get a reasonable discount which could be a motivating factor for them to reuse the service again.

In terms of public transportation fares, the majority of respondents believed Uber is more expensive compared to catching a bus or using a minibus taxi. In comparison, 72% (n=42) of the respondents believed catching a bus is cheaper and 71% (n=41) said it is also cheaper to use a minibus taxi. When compared to calling a metered-taxi, respondents (57%; n=33) believed Uber to be a cheaper option. Respondents (55%; n=32) also confirmed that sometimes Uber can be money saving mode of transport.

It is therefore evident from the data gathered from the 58 respondents that, on average, respondents agreed that with the use of Uber they received some *Economic reward* in the form of money and time saved. The *Economic reward* factor scored a total mean score of 3.5 on average meaning respondents believed that there are economic rewards associated with the use of the Uber ride-hailing service.

Social connection

Respondents (95%; n=55) believe that Uber socially connects them to people and that their independence is enhanced by attending whichever social gathering they choose without any transport constraints. With Uber the respondents (88%; n=51) are able to meet up with people wherever they are located and can use the service anytime since Uber does not have fixed operating hours. Respondents (86%; n=50) agreed that Uber ride hailing service has no constraints of pre-determined boarding points. While 67% (n=39) said it has no constraints of pre-determined routes and virtually no limitations to get them to where they need to go.

The respondents agreed with most statements relating to *Social connection* and the majority of respondents (48%; n=28) felt neutral when asked whether they believed Uber elevates their social status in the community, since Uber is also used by prestigious people, such as celebrities. Twenty-six respondents (45%; n=26) also felt neutral on average when it comes to Uber assisting them to develop possible beneficial relationships with others.

Based on the data gathered from the 58 respondents and analysed, it is clear that on average respondents agree that Uber connects them social to people. The factor has an average mean score of 3.9 of all the statements. This result, therefore, shows that respondents believe that using Uber improves their societal status and connects them with people whenever they wish to.

Safety and security

With the inherent security risks that come with the use of mobile applications, the majority of respondents (79%; n=46) were convinced that Uber mobile application is a safe platform to use and is trustworthy in processing transactions. Respondents (78%; n=45) also felt confident that the mobile application will not allow others to join their ride, which could increase the risk of harm from strangers. The results also show that

respondents (69%; n=40) believe that Uber drivers are more careful on the road than minibus taxi drivers. Despite Uber drivers knowing where respondents stay, a majority of respondents (67%; n=39) feel confident that there is no potential privacy loss from riding an Uber vehicle. The results also show that respondents (66%; n=38) believe that the Uber mobile app is a safe environment in that their privacy is protected in all forms of interaction.

When measuring the safety of the Uber ride-hailing service compared to alternative forms of transport, respondents believed that hailing an Uber ride is much safer than using a minibus taxi (69%; n=40) while fifty-five percent (55%; n=32) of the 58 respondents believed Uber ride-hailing service is safer than calling a metered-taxi.

Based on the data collected from the 58 respondents, it is clear that most respondents felt that the Uber mobile application can be trusted and is safer to use. The results also depict that on average the respondents believed that the use of the Uber ride-hailing service will not lead to any bodily harm and loss of privacy. Overall, the safety and security factor of the questionnaire scored an average of 3.8 of the total mean score.

4.5 SUMMARY

The chapter discussed the data collected and analysed. A sample description was discussed, and this reflected how many respondents were interviewed. The results of the sample description highlighted the demographic information and usage patterns of the Uber ride-hailing service. The sample description section was divided into three subcategories. The first subcategory discussed the sample's demographic makeup pertaining to gender, age, ethnicity, education and income. The second subcategory focused on the patterns of use by Uber passengers. This included usage duration, usage frequency, average waiting time and tendency to split the fare. The third subcategory presented purposes for which Uber passengers use the ride-hailing service.

The empirical findings for each factor were analysed. Tables were included that reflected the results of each factor using a summarised Likert-type scale and a mean score for each statement with each factor. In conclusion to this chapter, it can be said that on average, the mean scores from the 58 respondents were within the range of 3.5 to 4. This means that the respondents, on average, agreed with most statements in the questionnaire in respect to the different factors.

In the next chapter, the summary, conclusions and recommendations for the study are given. The chapter will also discuss the research objectives and show whether they have been achieved. The chapter will also contain a brief synopsis of the main findings from the literature review and main findings from the empirical investigation. Shortcomings of the research will be discussed and recommendations for future research will be given. The researchers will also give a self-reflection at the end of the chapter.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Chapter Four was an in depth discussion of the study's empirical findings, giving also a description of the sample demographics.

This chapter revisits the research objectives as set out in Chapter One, briefly touches on the research design and goes on to discuss the study's main findings. Conclusions, recommendations and the research limits are then discussed to provide a basis for future studies.

5.2 RESEARCH OBJECTIVES

Chapter One provided an introduction and background to the study, namely passenger experiences of ride-hailing services. The problem statement outlined that despite a number of challenges in the South African market, Uber reports an increasing demand for its services. However, little attention has been given to the growing number of passengers' experiences after they have undertaken an Uber ride.

The research objectives were formulated in Chapter One in order to give effect to the problem statement of the study. The objectives of this study were divided into three categories. The primary objective communicated the main goal and purpose of the study. Secondary and methodological objectives broke the goal down into strategies and actions that were to be taken.

5.2.1 Primary objective

The primary objective of this study was to investigate passengers' experiences of a transport network firm's (TNF's) 'ride-hailing' service, namely Uber.

5.2.2 Secondary objectives

The following secondary objectives were formulated to achieve the primary objective:

- a) SO¹: To investigate passenger experiences of Uber's ride-hailing services in terms of *Convenience/Ease of use and Economic reward*
- b) SO²: To investigate users' experiences with regards to *Social connection and Safety and security*.

- c) SO³: To investigate whether passenger experiences of Uber's ride-hailing services met their expectations.

5.2.3 Methodological objectives

In order to achieve the above-mentioned primary and secondary objectives, the following methodological objectives were identified:

- a) MO¹: To determine the appropriate research methodology to address the identified research problem and research objectives.
- b) MO²: To develop a quantitative measuring instrument (a questionnaire) that will be used for empirical investigation.
- c) MO³: To source primary data from a pre-determined sample of Uber users in the Port Elizabeth area, and to statistically analyse the data.
- d) MO⁴: To provide conclusions and recommendations based on the findings of this research, which could assist Uber to improve the quality of their ride-hailing services in South Africa.

5.2.4 Research questions

The study purposed to answer the following questions

- a) What are passengers' experiences of Uber's ride-hailing services with regards to *Convenience/Ease of use, Economic reward, Social connection, and Safety and Security*?
- b) How do passengers' perceptions differ from their expectations once they have used Uber?
- c) How do passengers view Uber in relation to the traditional public transport means in South Africa?

In Chapter Two, a literature overview of the rise in ride-hailing services in the South African transport industry was presented. Chapter Three assisted the researchers to meet the methodological objectives as mentioned above. The empirical findings as discussed in Chapter Four addressed each of the four ride-hailing experience factors, *Convenience/Ease of use, Economic reward, Social connection, and Safety and security*. By so doing, each of the secondary objectives were met and the research questions were answered.

5.3 RESEARCH DESIGN AND METHODOLOGY

In order to fulfil the objectives of this study, data was collected. According to Van Zyl (2014:46-47) three types of information sources exist, and those are general, secondary and primary information sources. All three were used for this study.

5.3.1 Literature review (secondary research)

Resources from Nelson Mandela University library's online databases, such as Emerald Insight, Sage and EBSCOHost were used to identify preceding research on the sharing economy and transportation network firms. For particular focus to the South African context, Sabinet was consulted.

Secondary research towards meeting the objectives of this study consists of an expansive literature review in order to determine passenger experiences of utilising transport network firms and how this has impacted on the South African public transport system in general. The secondary research of this study was conducted by consulting a variety of relevant textbooks and well-known journal articles such as Belk (2014), Agboma & Liotta, (2007), and Schor (2014).

The above-mentioned resources worked as secondary sources for this study, thus providing secondary data. Van Zyl (2014:47) defines secondary sources as information sources that are 'once removed' from the study being conducted. Secondary sources are used to get academic summations of studies that have already been done in the field being studied (Van Zyl 2014:50). Struwig and Stead (2013:82) explain secondary data as data whose initial source is not the study being researched. Sources of secondary data include academic databases, government departments, institutions and associations (Struwig & Stead 2013:82).

General clues about the study were collected from general sources such as newspapers, reliable online news articles, as well as specialty websites.

5.3.2 Empirical research (primary research)

Primary data is data gathered specifically to meet the requirements of the study being done (Struwig & Stead 2013:82). Primary research of this study was done in four stages, namely an overview of the selected research design and paradigm, sampling, and choosing suitable data collection methods for the study. Afterwards, the design of

the measuring instrument, together with data analysis methods used during the study were presented.

5.3.3 Research design and methodology

Many approaches exist that can be employed to conduct a scientific research, but they all fall under either of two categories, quantitative or qualitative methods (Struwig & Stead 2013:2). Quantitative research (positivist paradigm) uses numbers to measure concepts and is considered the more structured and conclusive of the two (Struwig & Stead 2013:3). Core characteristics of quantitative research include being replicable, measurability, generalizability, causality and being individual focused (Struwig & Stead 2013:4-6). Qualitative paradigm on the other hand is concerned with analysing substance and tend to use words and other expressive forms of communication, but not numbers, and it is less structured and more flexible by comparison (Struwig & Stead 2013:12).

This study describes experiences of ride-hailing passengers. And as per secondary objectives this was done in relation to four other variables, namely *Convenience/Ease of use*, *Economic reward*, *Social connection* and *Safety and security*. According to Struwig and Stead (2013:7) descriptive research is one of quantitative methods. Thus, it was decided that the research would take the quantitative approach employing the statistical method of descriptive research. Descriptive research illustrates events in their current state (Van Zyl 2013:197).

Struwig and Stead (2013:8) assert that if used correctly, the statistical method can provide a clear bird's eye view of that which is being researched. Although a qualitative approach may give detailed insights, this study aims to give a starting point with an overall view of this under researched topic. Using Van Zyl's (2013:198) words, the study aimed at 'painting a picture' for the reader.

5.3.4 Population, sampling and data collection

Population is the total number of people who fit the criteria of the desired respondents (Van Zyl 2013:95). Ideally the population for this study consists of all Uber users in South Africa. But in considering time and distance limits, Nelson Mandela Bay (NMB) Uber users were considered as the population pool. According Van Zyl (2013:96), two main categories of sampling exist. One is probability sampling where there are known chances for the selection of any individual in the population. And since the total number

of Uber users in NMB is not known, and thus no way of knowing what chance each population member stands, non-probability sampling was applied for this study, in the form of convenience sampling.

5.3.5 Design of the measuring instrument

For the purpose of this study a measuring instrument was designed in accordance with the needs and requirements of the research. Likert-type scale questions were utilised to structure responses supplied by the respondents.

A covering letter accompanied the questionnaire for ease of use and participation. The letter disclosed all the relevant information to the respondents, communicated the purpose of the study and addressed confidentiality concerns.

5.3.6 Data analysis

Data analysis was conducted in four stages, consisting of editing, coding, data entry and the actual analysis. Editing was done by reading through each of the questionnaires in an attempt to spot mistakes and incomplete entries. Coding was done by putting items of the questionnaire into categories according to the factor under which each item belonged. Thereafter, each item was given a code to link it to the relevant factor. The next step was capturing the information on an Excel spreadsheet. Finally, the information was manipulated using Excel to give percentages and mean scores for individual items. From there, overall mean scores and percentages were calculated for each factor.

5.4 MAIN FINDINGS FROM LITERATURE REVIEW

Presented in Chapter Two is existing literature which was reviewed to give a background, create context and explore existing knowledge. According to Thomas (2016: 352), the South African government is failing to meet the requirements of an effective public transport system. The type of public transport options traditionally available in South Africa were reported to be limited, thus not providing optimal passenger experience (Professional Accountant 2017:29). Professional Accountant (2017:29) found that traditional transport options satisfy one area but fail elsewhere. Traditional transport options either satisfy the need for reasonable price at the expense of time, through load-based services. Some favour time with limited flexibility, as is the case with scheduled options. Others, route based one-to-many options, try to both save time and offer flexibility but compromise on convenience and physical

accessibility. While one-to-one options meet most of these needs, they lack in affordable pricing. Transport network firms traditionally fall within this last category (Professional Accountant 2017:29).

Literature also revealed that as a result of South Africa's divisive past, which systematically excluded the majority of the country's population from essential services (Thomas 2016:352), there is an infrastructural gap in the South African transport system (Niemand & Chauke 2017:3). This gap is evident in the over reliance on road transport (Niemand & Chauke 2017:3), which causes traffic congestion and delays that cost commuters a great deal in time lost (Stander & Brink 2016: 377). While time wasted in traffic is of high significance, it is not top on the list of public transport challenges in South Africa. Safety, accessibility and affordability rank higher (Thomas 2016:356).

It is the government's responsibility to plan, implement and see to completion strategies and projects that are aimed at improving the country's transport system (Thomas 2016:355). To this end, millions of rands have been spent on projects such as the Bus Rapid Transit and the Gautrain to try and mitigate these transport problems (Thomas 2016:357). It is worth noting, however, that the taxi industry threatens to be the biggest stumbling block to some of the government's initiatives, particularly the BRT, if not properly handled (Thomas 2016:361). The taxi industry plays an important role in South Africa's transport system as it saves the government a great deal of money, and transports more commuters than any other form of transport.

The taxi industry emerged as a result of growing urbanisation (Fourie 2003:6). The industry emerged as a response to the needs of black commuters who were distanced from economic activities due to the segregating laws and policies of the day (Barrett 2003:6). The taxi industry provides decentralised and affordable transport options to the majority of South Africans (Fourie 2003:6). However, the minibus taxi industry is still an informal industry (Walters 2008).

South African cities are working towards internationally recognised public transport systems to combat inadequacies in the country's public transport systems, through shared mobility. Shared mobility, a segment of the broader sharing economy, involves sharing of vehicles among users (National Academy of Sciences 2016:2). According to Cohen and Kietzmann (2014: 281), shared mobility includes car-sharing, bike-

sharing and ride-sharing or carpooling (Arrive Alive 2019). Cohen and Kietzmann (2014: 288) differentiates between carpooling, which has a variety of four models, and person-to-person ride sharing model. Carpooling involves coordination between drivers and potential passengers going to the same area, traditionally using word of mouth or advertising (Cohen & Kietzmann 2014:288). Person-to-person ride-sharing employs the use of technology and mobile applications as tools to connect drivers and riders (Cohen & Kietzmann 2014:288)

Ride-sharing is used by transport networking firms to connect transport users and suppliers (Mulligan 2015). Passengers view transport network firms as offering lower prices, accessibility, flexibility and ease of use (Dredge & Gyimothy 2015; Wallsten 2015). Uber was the first transport networking firm to enter South Africa (Uber South Africa 2019). Uber's main offering involves providing point to point transport services connecting via a mobile device (Azevedo & Maciejewski 2015).

In South Africa Uber is positioned to complement the traditional public transport by providing transport for the first and the last mile that not usually catered for (Uber South Africa 2019). By so doing Uber has also opened up countless self-employment opportunities for South Africans (Uber South Africa 2019). It is reported that Uber riders are in excess of 1.8 million responsible of a collective 230 000 daily rides (Uber South Africa 2019).

However, Uber is navigating legal challenges worldwide because of the disruption it is causing to the traditional transport industries (Lopes 2015:23). In South Africa, Uber faces opposition from metred-taxi drivers and accusations of operating illegally (Mybroadband 2017). Report of violence towards Uber registered vehicles have also been circulated (Selisho 2015). Efforts, by the government, to regulate Uber have been slow leading to confusion regarding licencing of this new model of transportation (National Department of Transport 2017).

5.5 MAIN FINDINGS FROM THE EMPIRICAL RESULTS

According to the researchers' main findings of the empirical results, this study consisted of 58 respondents. A questionnaire was designed in such a way that Section A collected the demographics of the respondents and Section B consisted of 38 statements that seek to measure the passengers' experiences of a ride-hailing service, Uber. A Likert-type scale was used to collect data, where a five point scale was used

to measure views of the respondents with regards to each factor as defined in Chapter Three. Following data collection, the information was captured in Microsoft Excel and was grouped according to the factors that were defined in Chapter Three.

According to the demographic information collected, the majority of the 58 respondents interviewed were female (n=46) and approximately 50 of the respondents were below the age of 40. All 58 respondents had used Uber at least twice. All respondents had at least obtained a Grade 12 or equivalent qualification, with 40% (n=23) having obtained a National Diploma or an equivalent certificate. Sixty-six percent (n=38) of the respondents were earning less than R20 000 per month, with the rest of the respondents spread across other income brackets.

Looking at the usage purpose of ride-hailing services especially Uber, the most common reason cited was going out at night, with 33 and 29 respondents using an Uber ride for going out and coming back respectively. Shopping also ranked high as a purpose, with up to 29 respondents indicating that they use Uber for shopping purposes.

When it comes to *Convenience/Ease of use*, overall, respondents felt that Uber is convenient in both its spheres of operation, as a mode of transportation and as a mobile application. This is evident in the high level of agreement in statements such as, “The Uber app is always accessible as long as I have internet connection” (98% agree) and “It saves me time because of their punctuality, unlike minibus taxis that do not have scheduled times” (86% agree). There were 16 outliers who felt that Uber does not perform reliably every time and 11 respondents claimed they had to wait for a long period for their ride due to driver unavailability. However, despite these minor deviations respondents scored *Convenience/Ease of use* an overall mean score of 4, agreeing that Uber is convenient and easy to use.

In the area of *Economic reward* results showed that 91% (n=53) respondents said that Uber is a time saving mode of transport. In contrast, respondents as a whole on average mean total score felt neutral or had no opinion about Uber being sometimes a money saving mode of transport. The reason for this according to the respondents was that Uber was more expensive in comparison to buses and minibus taxis. While it is not the cheapest mode of transport, overall, respondents found Uber economically

rewarding in that it met their expectation for the money they paid, and provided the best priced door-to-door service.

With a mean score of 3.9, respondents agree that Uber improves *Social connection* because it has virtually no limitations to get them where they need to go. According to the respondents, Uber enhances their independence by connecting them to other people by taking them to social gatherings without any constraints. Out of 9 items on *Social connection*, respondents decidedly agree on 7 about Uber's positive contribution to *Social connection* and are neutral on the other 2.

On *Safety and security*, the results show that Uber is safer than alternative forms of transport. The drivers are more careful on the road and the mobile application that is used to hail a ride is a trustworthy platform. The overall mean score for *Safety and security* is 3.8, making it a safe platform and mode of transport in the eyes of the respondents.

5.6 CONCLUSIONS

It is evident from the results of the research that Uber is a trusted mode transport that is considered safe, efficient, convenient and not necessarily cheaper. Because Uber as a ride-hailing service has met the expectations of respondents, respondents opted for convenience and safety over price. Uber is cheaper than its closest competitor in the form of metered-taxis and this has resulted in metered-taxi service providers holding confrontational protests to serious threats.

Despite the reports of violence from 2015 towards Uber, respondents have continued to utilise this ride-hailing service and still regard it safer than all the alternative forms of transport combined. Respondents also believed that Uber drivers are the most careful on the road than other drivers of alternative forms of transport.

5.7 RECOMMENDATIONS

Following the findings of the study it would seem Uber is doing well in the transport industry as a ride-hailing market leader. However, transport network firms looking to do even better should look to fill the small gaps left by Uber. As an example, a new local ride-hailing provider by the name of InDriver has entered the market using lower pricing to target ride-hailing customers. Another area of opportunity to be exploited by new entrants could be driver incentives. The growth of the ride-hailing industry will see

drivers playing providers against each other for better benefits. Transport network firms would also be wise to keep an eye on competitors, as well stay abreast of new developments in the market since the current revolution (Fourth Industrial Revolution) may even render drivers a thing of the past.

5.8 LIMITATIONS OF THE RESEARCH

As with any other research, this study has limitations that need to be considered to fully understand the findings. The subject being researched is fairly new and thus poses the challenge of limited previous research. The ride-hailing service is an emerging sector in the transportation industry across the world, especially in South Africa. This makes it a fast-changing sector as governments are pushed to regulate on one hand, and competition is rising on the other. This may mean that what was true at the time when literature was reviewed is no longer applicable at the time of the findings. The study was conducted in the Nelson Mandela Bay area, using a small convenience sample, which makes it not completely suitable for generalisation for the whole country. Lastly, the study's contribution is limited to descriptive findings of ride-hailing passengers' experiences, thus there is no depth pertaining to what these passengers may prefer.

5.9 FUTURE RESEARCH

The study was conducted to find out about passengers' experiences with Uber's ride-hailing services. This provides a good basis from which in depth research can depart for other relationships between passengers and ride-hailing services. In its nature, descriptive research lends itself as a steppingstone to deeper research. This makes this study beneficial to future research.

As a starting point, future research could look to expand on the impact passenger experiences have on using ride-hailing services, paying particular attention to see what experiences influence participation most.

Another area of future research interest would be the impact of ride-hailing services on traditional transport systems. This would be helpful to see if there is a real shift from the old to the new, or if they merely complement one another.

5.10 SELF REFLECTION

Conducting the research into passenger experiences of Uber ride hailing services provided an insight into the workings of the public transportation industry in South Africa.

It was sometimes difficult to find the necessary motivation and time to do the work. This research was the first of its kind since no other academic literature was found in various databases on the passenger experiences of ride-hailing firms. As a result, this research required researchers to spend countless hours searching, reading and analysing academic articles and journals that may be related to the research topic. The search was conducted using keywords such as sharing economy, Uber, ride-hailing etc.

The process of data collection was not as challenging as anticipated. Originally, the researchers planned to reach 50 respondents and managed to exceed that number by 8 making a total of 58 respondents. The research also helped to develop the researchers' academic writing skills and the techniques on how to interpret and analyse research data.

The researcher's greatest experience and knowledge gained was the ability to conduct research by choosing the most appropriate methodologies, methods, analysing data and making recommendations that could help ride-hailing firms to improve certain aspects of their operations relating to the researched factors.

The main challenges experienced in putting the research together had to do with time, communication and writing styles. While technically, the research was done by two students, realistically the supervisor was a big part of the process. Thus, everything had to be balanced between three individuals with challenging work schedules. This impacted on how meetings were setup, how information was communicated and received and how the presentation of the work was conducted. The overall experience was that of self-discovery, discipline, and a learning curve.

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ANNEXURE A – ETHICS FORM TO COMPLETE

considered the following ethics criteria (please tick the appropriate block):

		YES	NO
1.	Is there any risk of harm, embarrassment of offence, however slight or temporary, to the participant, third parties or to the communities at large?		✓
2.	Is the study based on a research population defined as 'vulnerable' in terms of age, physical characteristics and/or disease status?		✓
2.1	Are subjects/participants/respondents of your study:		✓
2.1.1	Children under the age of 18?		✓
2.1.2	NMMU staff?		✓
2.1.3	NMMU students?		✓
2.1.4	The elderly/persons over the age of 60?		✓
2.1.5	A sample from an institution (e.g. hospital/school)?		✓
2.1.6	Handicapped (e.g. mentally or physically)?		✓
3.	Does the data that will be collected require consent of an institutional authority for this study? (An institutional authority refers to an organisation that is established by government to protect vulnerable people)		✓
3.1	Are you intending to access participant data from an existing, stored repository (e.g. school, institutional or university records)?		✓
4.	Will the participant's privacy, anonymity or confidentiality be compromised?		✓
4.1	Are you administering a questionnaire/survey that:		✓
4.1.1	Collects sensitive/identifiable data from participants?		✓
4.1.2	Does not guarantee the anonymity of the participant?		✓
4.1.3	Does not guarantee the confidentiality of the participant and the data?		✓
4.1.4	Will offer an incentive to respondents to participate, i.e. a lucky draw or any other prize?		✓
4.1.5	Will create doubt whether sample control measures are in place?		✓
4.1.5	Will be distributed electronically via email (and requesting an email response)?		✓
	<p>Note:</p> <ul style="list-style-type: none"> If your questionnaire DOES NOT request respondents' identification, is distributed electronically and you request respondents to return it <i>manually</i> (print out and deliver/mail); AND respondent anonymity can be guaranteed, your answer will be NO. If your questionnaire DOES NOT request respondents' identification, is <i>distributed via an email link and works through a web response system (e.g. the university survey system)</i>; AND respondent anonymity can be guaranteed, your answer will be NO. 		✓

ANNEXURE A – ETHICS FORM TO COMPLETE

5.	Do you wish to publish an article from this study and submit to an accredited Journal?		✓
----	--	--	---

Please note that if ANY of the questions above have been answered in the affirmative (YES) the student will need to complete the full ethics clearance form (REC-H application) and submit it with the relevant documentation to the Faculty REC (Ethics) representative.

and hereby certify that the student has given his/her research ethical consideration and full ethics approval is not required.

B. Gray
STUDY LEADER(S)

22 April 2019
DATE

M. M. M. M.
HEAD OF DEPARTMENT

25 APRIL 2019
DATE

Sonwabo Cibi
STUDENT

15 April 2019
DATE

Pumezi Nkomo
STUDENT

15 April 2019
DATE

NELSON MANDELA
UNIVERSITY

Unit for Management Sciences
Department of Business Management
School of Management Sciences
Summerstrand South Campus
Tel. +27 (0)41 504 4745 / +27 (0)41 504 4065
Email: Beverley.Gray@mandela.ac.za

2 August 2019

Dear Respondent

RESEARCH PROJECT: PASSENGERS' EXPERIENCES OF RIDE-HAILING SERVICE UBER

We are BCom (Honours) students in Business Management at Nelson Mandela University currently conducting a research project to investigate passengers' experiences of Uber.

The **objective** of this research is to investigate passengers' experiences of a 'ride-hailing' service, namely Uber.

It would be greatly appreciated if you could respond to the following questions so as to assist us in the completion of our research project. The questionnaire should take no longer than approximately 10 minutes to complete and there are no right or wrong answers. Simply record your response to each question based on your perspective. The results of this study will be valuable to understanding how passengers' experiences with a transport network firm influence their choice of this mode of public transport.

All information will be treated in the strictest confidence and you are under no obligation to participate. Please note that the information obtained will be used for research purposes only. Personal particulars of respondents will not be identified in any way, including the final report.

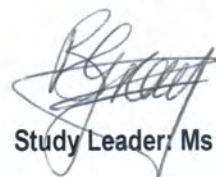
Please do not hesitate to contact our study leader, Ms Beverley Gray at the above contact details should you require any further information.

Thanking you in anticipation for your willingness to participate in the study. It is greatly appreciated.

Yours faithfully



Ms Phumeza Ndzambo (Student number: 219375925) and Mr Sonwabo Cibi (Student number: 220660433)
Researchers (BCom Honours Programme) – Department of Business Management



Study Leader: Ms Beverley Gray – Department of Business Management



A GENERAL INFORMATION

Please indicate your responses to the following questions with an (X) in the columns on the right.

- 1 Please confirm that you meet the requirements for participating in this research.

(i) You have used Uber at least twice in the last six months.	Yes		1
(ii) At least one of these trips was made in the Nelson Mandela Bay area.	No		2
(iii) You are over the age of 16 years.			

- 2 Please indicate your gender.

Male		1
Female		2

- 3 Please indicate the age category to which you belong (for statistical purposes only).

20-29 years	1	40-49 years	3	60-69 years	5
30-39 years	2	50-59 years	4	70+ years	6

- 4 Please indicate the population group to which you belong (for statistical purposes only).

Black		1
Coloured		2
Indian/Asian		3
White		4
Not willing to say		5

- 5 Please indicate your highest level of education.

Grade 11 or less		1
Grade 12 or equivalent (matric)		2
National Diploma or equivalent certificate		3
Bachelor's Degree		4
Postgraduate Degree (e.g. Honours/Masters/MBA/Doctorate)		5

- 6 Please indicate your total monthly income. Please note that this information will be treated in the strictest confidence. Even an estimate will be helpful.

Less than R10 000		1
R10 001-R20 000		2
R20 001-R30 000		3
R30 001-R40 000		4
R40 001-R50 000		5
More than R50 000		6
Prefer not to say		7

- 7 Please indicate the year, including city, when you first started using Uber.

From 2013 (When South Africa launched in Jhb, Pta, CT, Drb)		1
From 2014 (When South Africa launched in Drb)		2
From 2015 (When South Africa launched in PE)		3
From 2016 (PE or other: _____)		4
From 2017 (PE or other: _____)		5
From 2018 (PE or other: _____)		6
From 2019 (PE or other: _____)		7

- 8 Please indicate, on average, how often you use Uber (daily, weekly, monthly).

Everyday		1
1-3 times per week		2
4-6 times per week		3
1-10 times per month		4
11-20 times per month		5
21-30 times per month		6
On special occasions only		7

- 9 Please indicate, on average, how long you wait for Uber to arrive at the pick-up point.

Less than three minutes		1
Three to six minutes		2
More than six minutes		3

- 10 Please indicate the purpose for which you use Uber. You may select (X) more than one option.

To get from home to work		1
To return from work to home		2
To go out at night		3
To move freely around the city		4
To ride because you do not own a motor vehicle		5
To visit friends at their home		6
To return home after a night out / party		7
To return home if you are not sober		8
To leave your car at home to avoid using it		9
To go shopping		10
To return home from shopping		11
To get to an appointment		12
To return home from an appointment		13
Other. Please specify _____		14

- 11 Please indicate whether you split the Uber fare.

Always		1
Most of the time		2
Occasionally		3
Never		4

B PASSENGERS' EXPERIENCES OF RIDE-HAILING SERVICE UBER

Below are a number of statements relating to **passengers' experiences of ride-hailing service Uber** which could influence their choice of this mode of public transport. Please indicate with an X the extent to which you agree or disagree with each of the following statements. The columns are graded from 1 to 5. Number 1 denotes strong disagreement with a statement and at the other end of the scale, number 5 denotes strong agreement with a statement. There are no right or wrong statements.

Statements relating to the passengers' experiences of using Uber		Extent of agreement				
		Strongly disagree	Disagree	Neutral or no opinion	Agree	Strongly agree
1	It does not have the constraints of pre-determined routes	1	2	3	4	5
2	It is safer than the following alternative forms of transport:					
3	• Catching a bus	1	2	3	4	5
4	• Using a minibus taxi	1	2	3	4	5
5	• Calling a metered-taxi	1	2	3	4	5
6	It is sometimes a money saving mode of transport for me	1	2	3	4	5
7	It has virtually no limitations to get me to where I need to go	1	2	3	4	5
8	It saves me time because of their punctuality, unlike mini-bus taxis which do not have scheduled times	1	2	3	4	5
9	It is possible to get a reasonable discount, which means I will use them again	1	2	3	4	5
10	The drivers are more careful on the road than metered-taxi drivers	1	2	3	4	5
11	It is sometimes a time saving mode of transport for me	1	2	3	4	5
12	It enhances my independence by taking me to whichever social gathering I wish to go, without any transport constraints	1	2	3	4	5
13	I can meet up with people wherever they are located	1	2	3	4	5
14	The drivers are more careful on the road than minibus taxi drivers	1	2	3	4	5
15	Its mobile app is a safe environment in that my privacy is protected in all forms of interaction	1	2	3	4	5
16	There are no privacy risks in using the Uber app	1	2	3	4	5
17	The Uber app provides all the information I need to make decisions about getting to my destination	1	2	3	4	5
18	The drivers are more careful on the road than bus drivers	1	2	3	4	5
19	The Uber mobile app performs reliably every time	1	2	3	4	5
20	It is cheaper than the following alternative forms of transport:					
21	• Catching a bus	1	2	3	4	5
22	• Using a minibus taxi	1	2	3	4	5
23	• Calling a metered-taxi	1	2	3	4	5
24	Its mobile application is a safe platform to use	1	2	3	4	5
25	Ride-hailing offers the best priced door-to-door service	1	2	3	4	5
26	It does not have the constraints of pre-determined boarding points	1	2	3	4	5
27	The Uber app is always accessible as long as I have an internet connection	1	2	3	4	5
28	I am confident that it will not allow others to join my ride, which could increase the risk of harm to myself from a stranger	1	2	3	4	5
29	I do not have to wait long for my ride because drivers are unavailable	1	2	3	4	5
30	It helps me develop possible beneficial relationships with others (for example, where	1	2	3	4	5

Statements relating to the passengers' experiences of using Uber		Extent of agreement				
		Strongly disagree	Disagree	Neutral or no opinion	Agree	Strongly agree
	passengers agree to share a ride)					
31	Drivers are readily available at any time	1	2	3	4	5
32	Despite their drivers knowing where I stay, I feel confident there is no potential privacy loss from riding in their vehicle	1	2	3	4	5
33	It does not have the constraints of fixed operating hours	1	2	3	4	5
34	It socially connects me to people because I can attend social events regardless of the time	1	2	3	4	5
35	For the price I paid, the ride-hailing service met my expectations	1	2	3	4	5
36	Because my phone is always with me, I can use Uber to go anywhere I like	1	2	3	4	5
37	Its mobile application is trustworthy in processing my transaction (for example, no double charge on a single transaction)	1	2	3	4	5
38	It elevates my social status in the community because prestigious people (such as celebrities) also use Uber	1	2	3	4	5

C IMPORTANT RIDE-HAILING SERVICE FACTORS

Please list the top five factors that you, as an Uber user, consider to be the most important to enhance your experience as a passenger using this mode of public transport.

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____

THANK YOU VERY MUCH FOR YOUR PARTICIPATION

ANNEXURE C - TURNITIN REPORT
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