Cape Peninsula
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THE INFLUENCE OF ONLINE ORDERING SYSTEMS ON CAPE TOWN RESTAURANTS

By

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DECLARATION

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

Signed **Date**

ABSTRACT

During the COVID-19 outbreak in 2020, there was a noticeable shift towards digital transformation and increased reliance on ICT-based business solutions. This phenomenon was observed in all economic sectors on a global scale when the lockdown measures were imposed by governments worldwide to halt the spread of COVID-19. Considering this, the reliance of many South African restaurants on third-party delivery platforms like Mr. D, Bolt Food and Uber Eats increased and became imperative to ensure the sustainability of their economic activity, especially considering the closure of numerous restaurants that lacked the necessary digital capacity. Owing to the digital capacity of these food delivery platforms, they facilitated seamless communication between restaurants and customers by providing online ordering systems (OOSs) and food delivery services (FDSs) for restaurant businesses. The collaboration of restaurants with third-party digital platforms had a profound impact on the restaurant industry during the pandemic. Although online ordering systems (OOSs) are becoming more common among restaurants to enhance operational efficiency, the long-term impacts of outsourcing online ordering systems to third-party service providers on the financial, operational and strategic performance of small and independent restaurants remain underexplored. Hence, the main objective of the study was to investigate the influence of online ordering systems and to determine the extent to which restaurants owners/managers are dependent on third-party delivery platforms for (OOS) and (FDS) in a COVID-19 free society. In addition, the study sought to ensure the continued implementation of these systems in restaurants through the exploration of risk management issues associated with the use of third-party online ordering systems. To achieve this task, quantitative research approach was adopted. A total of 133 questionnaires were distributed to restaurant owners/managers operating within the Cape Peninsula and 124 were returned. Four of the returned questionnaires were excluded due to incomplete information, which resulted in an overall response rate of 90%. Non- probability sampling techniques were employed to draw a sample of restaurants that were conveniently reachable. As the response was calculated at the above rate, data from 120 restaurants in Cape Town were analysed, specifically targeting restaurants in the suburbs rather than townships owing to security concerns and the limited presence of restaurants in township areas. Data showed that more than 90% of the restaurants have adopted and online ordering systems and have collaborated with the best three local delivery applications. Major factors that attributed to outsourcing online ordering systems are wider customer reach and an increase in revenue. Despite the lack of comprehensive implementation of enterprise risk management, 80% of these restaurants are taking proactive steps to manage risks associated with the use of (OOSs) offered by a third-party delivery platform. This study provides significant implications for small and independent restaurants in South Africa. This shows how local restaurant operators can strategically utilize these third-

party online food ordering and delivery platforms to improve operational efficiency and service quality. This strategic utilization can also help restaurant owners and/ managers to establish long-term resilience and adaptability in a post-pandemic economy. The insights gleaned from this research study can guide emerging restaurant owners, policy makers, and technology providers on how to effectively support the digital transformation of the restaurant industry in Cape town for sustained growth.

Key words: Digitalisation, Online ordering systems, Information and communication technologies, third-party delivery platforms, Enterprise Risk Management.

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LIST OF ABBREVIATIONS

Abbreviation	Meaning
4IR	Fourth Industrial Revolution
ACCA	The Association of Chartered Certified Accountants
AI	Artificial Intelligence
APRANET	Advanced Projects Research Agency Network
B2B	Business to Business
C2B	Customer to Business
C2C	Customer to Customer
CDC	Centers for Disease Control and Prevention
CGCSA	The Consumer Goods Council of South Africa
CIMA	Chartered Institute of Management Accountants
COSO	The Committee of Sponsoring Organizations of the Treadway Commission
EES	Enterprise Engineering Solutions
ERM	Enterprise Risk Management
FDS	Food Delivery System
ICT	Information Communication Technology
IoT	Internet of Things
IPTO	Information Processing Techniques Office
IRs	Industrial Revolutions
LaaS	Logging as a Service
ML	Machine Learning
OOS	Online Ordering System
PaaS	Platform as a Service
PwC	PricewaterhouseCoopers
SaaS	Software as a Service
SDGs	Sustainable Development Goals
UN	United Nations
WEF	World Economic Forum

CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction and background

The world is becoming more and more digital because of advancement in information and communication technology (ICT). This trend is impacting businesses positively in well-developed, developing, and under-developed countries (Amankwah-Amoah et al., 2021; Saba et al., 2024; Noah & David, 2025; United Nations, 2020). ICT is defined as a comprehensive list of communication technologies which, when integrated, provide a platform for efficient and effective communication and can enhance a firm's e-logistics performance (Ul-Hameed et al., 2019). Digital transformation is emerging rapidly which emphasises the impact of technology on jobs and the future of many industries in a modern technological environment (Patil, 2020). In essence, most economic sectors globally will be influenced by automation and the fourth industrial revolution (4IR) technology, as new ground-breaking technologies are developed and integrated into business systems (Perrin, 2021; Schwab, 2017; Sun, 2018; Zervoudi, 2020). For example, the South African banking sector has woken up to a new era, with digital technology replacing traditional banking systems and reaching out to areas that had previously been out of reach (Mungai, 2019). In the hospitality industry, the role of digitalisation is having a significant impact in improving the image of the industry, as online ordering systems (such as food ordering applications) are increasingly emerging in the fast-food sector and changing the perception of eaters regarding food consumption (Dheenadhayalan & Thiagarajan, 2023).

Today, the food industry is becoming increasingly digitalised using ICT, with consumers adapting to ordering food via a delivery application in a new digital restaurant model where food can be ordered online (Lee et al., 2019). Because of advancement in technology, restaurants have started to shift from the traditional way of walk-ins and bookings, as they can now sell food directly to their customers through an online ordering system (Ray et al., 2019; Sonwane et al., 2023). These online ordering systems have given restaurants access to a wider market, are convenient for customers as they can easily place orders anytime using credit card payment with food delivered either at their homes or at their workplaces (Patel, 2015; Tambe et al., 2022; Vinaik et al., 2019). According to Rinaldi et al. (2022), a developing phenomenon of virtual kitchens, which are 100% delivery-only restaurants, allow customers to make contact solely via an online ordering application or website. For most restaurant operators, virtual kitchens are becoming increasingly viable in their food services owing to cost savings, increased level of output and productivity (Rinaldi et al., 2022). Considering that fast-food consumers mainly consist of the millennial generation, which is tech-savvy, it is expected that most consumers will order food through online ordering systems (Cross, 2017; Suhartanto et al., 2019). The latest information and communication technologies (ICTs) have transformed how restaurants interact with their customers, changing the habits of today's food experience

and enforcing a demand for deliveries (Park, 2023; Zou & Cheshmehzangi, 2022). Although the use of online delivery systems is expected to boost restaurants through increased sales, this also has a negative impact on restaurant customers, meal prices and restaurant revenue (Mhlanga, 2020). For instance, some restaurants in other countries are protesting third-party online ordering and delivery companies because of high commission charges (Niu et al., 2021). In essence, these high commission charges can affect the survival of some restaurants negatively (Erickson & Losekoot, 2021). In addition, accompanying these systems are several operational risks that might affect restaurants if not managed. Operational risks emanating from the use of the online ordering systems include errors related to data capturing by employees, errors made when customers input data while ordering, malfunctioning of the software used by the ordering app, and so on (Rajvanshi, 2023). If these operational risks are not managed adequately and/or effectively, the online ordering systems will, in the long run, influence the sustainability of fast-food businesses negatively.

1.2 Problem statement

Sustaining the fast-food sector has become more expensive gradually owing to increasing labour costs and many restaurant operators widely have adopted online systems to replace human service and increase sales volume (Jang, 2021). Furthermore, because of the sudden breakout of the COVID-19 disease many restaurants were negatively affected by governmental restriction measures imposed on all economic activities across all business sectors to minimise the spread of the virus (Ozili & Arun, 2020). Because of these restrictions many restaurants could not stay fully operational owing to the high operating costs of keeping these businesses active economically. As an alternative, the restaurant business across the globe increased their efforts in using the online food ordering and delivery system to stay active economically amid the COVID-19 pandemic (Brewer & Sebby, 2021; Raj et al., 2020). However, these restaurants are vulnerable to financial risk accompanying the adoption and the use of third-party online delivery platforms. Restaurants in America have protested a high commission fee charged by these platforms leading to some restaurants closing their operations (Luna, 2020). Parallel to this, risks perceived to affect the South African restaurant business and its sustainability can also be identified, among others, as financial risk because of high commission paid to third-party online delivery platforms as a plethora of restaurants rely on these platforms to reach out to online customers (Henama, 2021). A fundamental challenge faced by restaurant operators in general is the substantial commission structure of third-party online food ordering and delivery platforms, which, as indicated in an industry publication, can absorb 15% to 30% of their revenue (MyBroadband, 2020). The user acquisition metrics highlight the larger user base of these online delivery platforms. For instance, according to Reuters (2020) Uber Eats has reached approximately two million

downloads since its launch in 2016, a figure reflecting a similar level of downloads recorded by its rival, Mr. D, in South Africa by 2019. This extent of downloads is corroborated by a 2022 industry-insight article, which also highlighted that Mr. D recorded more than five million downloads and sustained over one million active users in South Africa (George, 2022). These considerable figures illustrate the broad market penetration of online food delivery applications and the increasing reliance of the restaurant industry on these third-party digital platforms to connect with a diverse and wider customer base. In addition, although a large number of international studies focused on exploring the increasing adoption of online ordering systems (OOSs) along with benefits and risks of outsourcing them, there is limited localized research studies investigating how these systems impact the financial performance and business sustainability of local restaurants. Prior related research studies have been conducted abroad in more developed economies such as European and Asian countries. As a result, a knowledge gap exists in understanding South Africa's policy frameworks, socio-economic conditions, regulatory and political factors that shape the implementation of these systems. Furthermore, there is a lack of knowledge pertaining to how local restaurant operators view and manage the financial risks emanating from outsourcing of these systems to third-party service providers. Hence, in the research study the problem statement can be briefly stated as follows: *The sustainability of restaurant businesses can be influenced adversely as a result of weak and ineffective risk management practices used by restaurant operators to mitigate financial risk accompanying the use of third-party online food ordering and delivery systems.*

1.3 Research questions

Based on the above, the primary research question of this study is:

What is the influence of online ordering systems on restaurants operating in the Cape Peninsula?

The research sub-questions that pertain to the main research question are as follows:

i. To what extent do restaurants operating in Cape Town utilise third-party online ordering systems?

ii. What are the factors influencing outsourcing an online delivery system to third-party service providers?

iii. What are the benefits of using online ordering systems?

iv. What risks emanate from using online ordering systems?

v. How do restaurants in Cape Town manage the risks arising from using online ordering systems?

1.4 Aim and objectives of the study

The aim of the proposed study is to examine the influence of online food ordering systems on restaurants operating in the Cape Peninsula.

Therefore, the main research objective is *to determine the impact of online ordering systems on restaurants operating in the Cape Peninsula.*

i. To understand the extent to which restaurants in Cape Town are using third-party online food ordering systems.

ii. To identify the motivating factors to outsourcing online delivery service to a third-party service provider.

iii. To determine the benefits of using third-party online ordering systems.

iv. To identify the risks arising from using third-party online ordering systems.
v. To establish the adequacy and effectiveness of the risk management measures used by restaurants in Cape Town.

1.5 Rationale and significance of the study

This study will broaden and extend knowledge through its contribution to the body of knowledge regarding ICT development in the restaurant industry. This will be achieved by presenting an updated overview of existing and emerging ICT advancements in the industry. Furthermore, the study will discuss the influence of ICT development in restaurants, especially with respect to online ordering systems, including the benefits and risks accompanying the use of these systems. Although previous research has been conducted regarding the significance of risk management in the sustainability of small- and medium-size restaurants (Masama, 2017), the integration of online delivery systems into the restaurant business might bring a new set of benefits and risks that could emanate from the use of these systems. The online food ordering and delivery system has been gaining popularity steadily in South Africa as the third-party food delivery companies extend their influence over restaurant operators on a global scale (Goga et al., 2019; Henama, 2021). Hence, this study will bring awareness to small- and medium-size restaurant businesses regarding the current risks and benefits associated with the fast growing use of these systems. Furthermore, this study will enhance the understanding and the significance of risk management practices in the restaurant

business community with regard to the adoption of online ordering systems. This study will also dedicate its contributions to the body of knowledge by means of recommendations and conclusions relating to the research questions and objectives.

1.6 Conclusion

This chapter introduced the reader to the research problem followed by the research aim, objectives and questions. In addition, a summary was provided of the research paradigm, research design, research methodology and research methods deployed in this study.

The remaining chapters after Chapter One are briefly discussed below:

Chapter Two puts more emphasis on the main concepts introduced in Chapter One. This is guided by the conceptual framework that was developed.

Chapter Three: In this chapter, emphasis is placed on the research paradigm, design research, methodology and research methods/instruments used in this study. In addition, the design of a questionnaire tool used was defined as well as the ethical standards the researcher adhered to while conducting research.

Chapter Four: The data (primary data) are analysed and interpreted in this chapter.

Chapter Five: This chapter represents the key findings of the research study while revisiting the critical questions and objectives of the research study. Furthermore, conclusions are drawn followed by recommendations from the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

First, this chapter intends to review the development and use of digital platforms and the associated services in the food industry. The chapter also reviews previous studies covering the use of digital platforms in the food industry, and risk management practices in restaurants. To achieve the above, the following areas are discussed in detail: 1) the role of digital technology in the fourth industrial revolution, 2) online ordering system business model and the gig economy; and 3) risk and risk management.

2.2. The role of digital technology in the fourth industrial revolution era

The unprecedented digital transformation in society today has fostered the emergence of the fourth industrial revolution (4IR) (Ross & Maynard, 2021; United Nations (UN), 2023a; World Economic Forum (WEF), 2023). Xu et al. (2018), described 4IR as the use of digital and connected technologies to enable and improve people's lives. The 4IR is distinct from the previous industrial revolutions (IRs) where the first was based on water and steam, with the second focusing on electricity consumption for massive production, and the third being marked by information technology and computers for automation of production (Lavopa & Delera, 2023; Mapadimeng, 2019; Ross & Maynard, 2021; Xu et al., 2018). In essence, the 4IR is an extension of the third industrial revolution (IR) and is generally viewed as a joint industrial and digital revolution (Chou, 2018; Mahmood & Hussin, 2018; Ross & Maynard., 2021; WEF, 2023). Chou (2018) explained that the 4IR has but has not taken full shape as more technological breakthroughs are emerging. Li et al. (2017) outlined that there are three technological drivers of the 4IR, and these are physical, biological, and digital technologies. Essentially, the 4IR is characterised by the internet of things (IoT), artificial intelligence and machine learning, cloud computing and big data, blockchain technology, and digital economy (Li et al., 2017; Lavopa & Delera, 2023).

2.2.1 Internet of Things

Internet of Things (IoT), which is defined as a system of integrated digital technologies comprising various software applications, computers, and machines, has enabled a new level of connectivity as things around us are connected digitally through networking technologies and with less human interference (Chou, 2018). For example, a self-driving Google car with road updates and weather conditions, real-time traffic and other information exchanges is the application of the concept of IoT (Farooq et al., 2015). The origins of what is called the internet nowadays dates as far back as 1969, when the Information Processing Techniques Office

(IPTO) launched the Advanced Research Projects Agency Network (APRANET), the first packet switching network (Hauben & Hauben, 1997). The introduction of 5G IoT aims to instantly to connect several devices within the same network architecture, thereby providing a flourishing environment for the development of other technological advancements (Chettri & Bera, 2019). Essentially, the IoT impacts almost all spheres of human life and, as such, governments across the globe are working towards the increase of internet connectivity (Enterprise Engineering Solutions (EES), 2023). Furthermore, Internet of Things (IoT) plays a pivotal role in supporting the efforts to achieve the 2030 Sustainable Development Goals (SDGs) (Libelium, 2023; UN, 2023b).

2.2.2 Artificial intelligence and machine learning

Although these terms are used interchangeably, they mean different things (Kühl et al., 2022; Winkler, 2020). In layman terms, artificial intelligence (AI) deals with the transfer of human cognitive abilities to machines, and these abilities include perceiving, reasoning, learning, interacting with the environment, problem solving, and decision-making (Kühl et al., 2022). Machine learning (ML), a subset of AI, relates to the use of data by computers to improve embedded cognitive skills, which is parallel to the way humans process new information to improve their cognitive skills (Kühl et al., 2022). Mahesh (2020) defines ML as a scientific field of study in which computers use different algorithm capabilities to analyse and use data efficiently by solving the problem of the abundance of data sets without being explicitly programmed (Mahesh, 2020). In the same vein, Moubayed et al. (2018) mentions that the main objective of ML is to train computers to utilise data to solve a specified problem.

According to Carrasquilla and Melko (2017), AI and ML experts have been developing applications with remarkable abilities to recognise, classify and characterise complex data. The creation of ChatGPT is a perfect illustration of the powerful synergy between AI and ML (Zemp, 2023). Essentially, AI and ML are now being applied in various industries, such as healthcare, retail, finance, gambling, manufacturing, education, transportation, social media, and communication (Dhillon & Singh, 2019; Goodell et al., 2021; Ibrahim & Abdulazeez, 2021; Keshari, 2022; Mention, 2019; Rai et al., 2021; Ray, 2019).

2.2.3 Cloud computing and big data

According to Salmo and Parmar (2022), cloud computing encompasses interconnected servers that are providing service in various forms over the internet. Similarly, Shukur et al. (2020) define cloud computing as a group of remote servers which are integrated to provide service on the internet by allowing clients to retrieve, store and use data from remote areas.

There are four types of cloud services, and these are infrastructure as a service (IaaS), platform as a service (PaaS), software as a service (SaaS), and serverless computing (Microsoft, 2023). Cloud computing, through IaaS, is the enabler of big data as it provides large data storage space without incurring high costs of physical infrastructure (Microsoft, 2023; Muniswamaiah et al., 2019). However, recent reports have suggested that some big entities are now considering moving their computing from the cloud, back to business premises owing to high costs (Robinson, 2023). Thus, it can be inferred that cloud computing costs vary with the size of the business. Big data can be defined as the data, which is enormous, difficult to analyse, store and manage through databases (Muniswamaiah et al., 2019). In essence, cloud computing providers such as Amazon, Google, International Business Machines Corporations (IBM), Alibaba, and Microsoft, among others, have changed the business landscape significantly and provide new ways for businesses and consumers to consume big data (Neves et al., 2016).

Based on a report by Ernest & Young (2022), cloud computing has been a catalyst to the immense transformation during the pandemic, as the adoption of cloud computing technology accelerated in other industries such as healthcare, food, education, and information technology (IT) (Amankwah-Amoah et al., 2021; Ernest & Young, 2022; Qasem et al., 2019).

2.2.4 Blockchain technology

A blockchain can be defined as a distributed digital record, consisting of cryptographically connected blocks of data (Masama & Bruwer, 2022). Blockchain technology (BT) aims to enhance decentralisation, transparency and immutability (Leible et al., 2019). According to the global blockchain survey by Deloitte (2020), BT has graduated from being a trial technology to being a disruptive and game-changing technology. Owing to its immutability feature, synergy between BT and AI in cybersecurity is imminent, where AI will focus on detection and prevention of threats (Zemp, 2023). Another imminent disruptive synergy between BT and AI should give rise to an AI autonomous decentralised organisation (AI DAO) (Gonfalonieri, 2020). A DAO is an organisation that operates with minimum human interference, through a set of computer programs known as smart contracts (Gonfalonieri, 2020). Although BT is currently applicable to a variety of industries, it is threatening to disrupt the finance sector with its focus on decentralised finance (DeFi) (Masama & Bruwer, 2022).

2.2.5 Digital economy

All of the above-mentioned components accelerate digital transformation, consequently enhancing the growth of digital economies (EES, 2023). In the finance sector, the introduction

of DeFi is a perfect illustration of how the economy is becoming non-physical (digital) through the prevalent use of digital platforms (digital markets) (Deloitte, 2023). A digital economy can be defined as an online economic activity comprising people, businesses, devices, data and processes (Deloitte, 2023). Digital platform is a collective term used to represent the online applications that facilitate the interactions from business to customer (B2C), customer to business (C2B), business to business (B2B), and customer to customer (C2C) (Deloitte, 2023; Hänninen et al., 2017; Piasna & Drahokoupil, 2019; Ruggieri et al., 2018). Although the use of digital platforms is not entirely new, recent studies have shown how such platforms have lately created a new phenomenon of technological business models in several industries (Galhotra & Dewan, 2020; Koutsimpogiorgos et al., 2020; Ruggieri et al., 2018; Simsek et al., 2022).

The industries that have significantly leveraged digital economies are transportation, finance, and retail (Bank for International Settlement (BIS), 2020:2; Boulianne & Larsson, 2021; De Reuver et al., 2018; Henama & Sifiso, 2017; Mashkina et al., 2020; Van Soest, 2023). The synergy between the transportation industry and the food retail industry has been in the headlines over the past few years, mainly because of the coronavirus pandemic of 2019 (COVID-19) pandemic (Telukdarie et al., 2020). Although the whole food retail industry saw major digital transformation, the restaurant sector benefited more (Maharaj, 2023). One major digital transformation was the use of the online ordering system (OOS), particularly in restaurants (Consumer Goods Council of South Africa (CGCSA), 2020; Raj et al., 2020).

2.3 The impact of COVID-19 on digital transformation in the restaurant sector

Given that the COVID-19 pandemic had many negative effects in various industries across the globe (Discovery, 2020), there are, however, some key positives that emanated because of the pandemic (Nelson, 2020). In the restaurant sector, two major positives are 1) the rapid increase in the use of online ordering system (OOS), and 2) the provision of employment through the gig economy expansion (Rahman et al., 2022; Mendonça et al., 2023).

2.3.1 Online ordering system

Although the first recognised online sale was recorded in 1994, the roots of digital economy go back to the early 1970s when university students arranged the sale of marijuana over APRANET (Power, 2013). The online ordering system (OOS) often works hand in hand with delivery services, and consequently most delivery service providers also allow customers to order via an application or website. Although some sources claim that the first deliveries took place in 1974 and 1984, there is contrary evidence suggesting that the first delivery was in 1768 and the first food delivery advertisement was in 1906 (Eveleth, 2013; Fessenden, 2015;

Seouland, 2016). However, one thing is for certain: the concepts of online ordering and delivery have evolved significantly, mainly because of the IoT. In recent years, the effects of the COVID-19 pandemic lockdown restrictions extended to the hospitality and tourism industry, forcing restaurants to close temporarily or to limit the number of customers in the premises (CGCSA, 2020; Raj et al., 2020). Restaurants were already using the OOS before the pandemic, and there was significant growth already in this area of OOS; however, its use was fuelled by the pandemic (Horta et al., 2022; Jun et al., 2022; Lin et al., 2022; Sitas et al., 2022;). Faced with the threat of business closure, most restaurants were forced to embrace OOS coupled with the delivery service (Gursoy & Chi, 2020; Raj et al., 2020; Talamini et al, 2022). In most cases the OOS and delivery services were offered by third parties since they had already invested in such services prior to the COVID-19 pandemic (Raj et al., 2020). In essence, the usage of OOS in the restaurant sector has increased tremendously over the past years and has helped many businesses, particularly small businesses, to weather the financial storm since the lockdown restriction period (Kim et al., 2021; Raj et al., 2020).

2.3.2 Benefits of online ordering systems

Restaurants using OOS (OOSs) had a competitive advantage to those which could not access the system (Reddy & Aradhya, 2020). Since the COVID-19 outbreak, restaurants have become more dependent on third-party platforms for online ordering and food delivery services, while others closed owing to a lack of digital capacity (Raj et al., 2020). The advantages of using an online food delivery platform were obvious during the outbreak of COVID-19 as it facilitated customer access to online ordering and delivery while enabling restaurant owners to keep operating (Rajvanshi, 2023). However, the use of OOSs was previously expected to boost the profitability of restaurants through increased sales as these OOSs were expected to expand the market of restaurants (Hemana & Sifolo, 2017). In fact, research shows that reasons such as productivity, sales volume, frequency of sales, accuracy of orders and convenience to customers enhanced the adoption of online ordering systems in restaurants even before the pandemic (Muriuki & Ogot, 2018). The online ordering system is effective, convenient, user friendly, and was perceived to improve the restaurant business sector (Adithya et al., 2017; Rajvanshi, 2023). Research has indicated that a plethora of restaurants were adapting to using digital food apps and online technology to increase exposure and to gain wider customer reach (Huang and Siao, 2023; Karthika & Manojanaranjani, 2018; Sin et al., 2021). Some restaurants allow customers to order through the restaurant's website to retain the customer data while food delivery is handed over to a third party (Luna, 2020). Website design can build trust with customers while using apps to order food (Ghelani & Hua, 2022).

Instead of using third-party platforms, restaurants can also use an in-house OOS. Although it is expensive to set up the infrastructure, it results in cost saving in the long term as there will be no need to pay the high commission being charged by third-party service providers (Feldman et at., 2019). Unfortunately, many restaurants could not afford to set up the required infrastructure in a brief time. Hence, they used the available third-party services to remain in business during COVID-19 (Raj et al., 2020). In addition, businesses using in-house OOSs have greater control of the delivery process (Gera et al., 2018). However, using in-house OOSs requires significant marketing costs to increase the awareness of the service. For most restaurants it is expensive to pay marketing costs as they struggle to get funding (Sin et al., 2021). Cost is the motivating factor for why most restaurant owners outsource an online delivery system (See-Kwong et al., 2017). The benefits of outsourcing OOSs to a third party include growth in revenue, extensive customer outreach, convenience and cost effectiveness (See-Kwong et al., 2017). Notwithstanding the benefits of these OOSs, they also attract additional financial and operational risks, which could impact the profitability of restaurants negatively overall (Niu et al., 2021).

2.3.3 Gig economy

Another contribution of the COVID-19 pandemic, particularly in the restaurant industry, is the rapid expansion of the gig economy, which was already on an upward trajectory before the pandemic (Edward, 2021; Wu et al., 2019). The gig economy is an informal labour market characterised by short-term and flexible work and is also known by other terms, such as freelancing, sharing economy, on-demand economy, and platform economy (Booth, 2021; Bulian, 2021). The gig economy has been there for decades and is present in almost all industries, sometimes acting as the breeding ground for successful entrepreneurship (Bulian, 2021; Kulach, 2023; Upwork, 2023). Although some do gig work in addition to their formal jobs, most gig workers are self-employed; and all gig workers are either pulled or pushed to the gig economy (Bulian, 2021; Dawson & Henley, 2011).

In the food delivery sector, gig jobs are accessible through a digital platform and drivers are paid based on each task (gig work) performed, with most drivers being pushed into the food gig economy (Healy et al., 2017; Lepanjuuri et al., 2018). Of the US$204 billion generated globally by the gig economy, the transportation service accounts for approximately 60% (Kulach, 2023). With the food delivery gig economy being 100% digital, it has unfortunately eroded the role, value, and the organisational human resources (HR) functions such as the recruitment process, good working conditions, and training and development, to mention a few (McDonnell et al., 2021). Simply put, food delivery gig workers do not exercise the same rights and benefits which generally protect employees, and they usually work under poor

conditions with less pay (Koutsimpogiorgos et al., 2020). Consequently, recent studies are advocating for better working conditions and the regulation of the delivery service business, to protect drivers against exploitative working conditions (Rahman, 2022; Rani & Dhir, 2020).

2.4 An overview of different restaurant categories during COVID-19.

2.4.1 Fine dining

In Europe, during the pandemic, countries and states recorded severe declines in sit-in arrangements which were followed by a complete ban of dine-in restaurants after the World Health Organization declared a pandemic status (Dube et al., 2021). As this restaurant model is identified by customer bookings, tables, waitering staff, and manual menus (Mealey, 2019), it suspended all its normal activities under social distancing measures. The closure of the fine dining restaurant reached unprecedented proportions as indicated by the first quarter of 2020 (Brizek et al., 2021). This phenomenon was also observed in Europe, Asia and African countries as the dining restaurants ceased to operate under lockdown regulations (Bhoola, 2022; Cheng, 2022; Demeyer, 2020). However, by the end of March 2020 the re-opening process slowly began in the global economy after authorities eased lockdown restrictions and encouraged restaurants to operate using the online delivery system (Gursoy & Chi, 2020; Harchandani & Shome, 2021).

2.4.2 Quick service

As opposed to fine dining restaurants, a quick service restaurant, also known as a fast-food restaurant, offers a quick service with a limited menu of food that is mostly prepared in advance and ready for takeaway or to enjoy seating down (Weng et al, 2017). Even though quick service restaurants took a financial hit not less than other restaurants, research shows that the negative impact of COVID-19 differed between fast-food restaurants and other restaurants and the negative impact was smaller for quick service compared to full-service restaurants (Li, 2021; Yang et al., 2020). This is also found in a research study by Wang et al. (2022), where results show that restaurants were affected differently by lockdown and re-opening measures. In a comparative study between China and the USA it was established that in both countries quick service restaurants were negatively impacted by COVID-19; however, because of China's strict regulations over COVID 19 it outperformed many countries resulting in a quick recovery (Li, 2021). According to Becker et al. (2020), well established quick service restaurants doubled down on their online channel and website services, allowing online food ordering, and offering delivery service in compliance with COVID 19 regulations. Most small- and medium-sized quick service restaurants closed their doors but only those with

online ordering stayed operational during COVID 19 (Wang et al., 2022). Home delivery became a critical step in the food cycle to avoid human contact. As a result, in a quick service restaurant, food handlers were provided with protective gear such as gloves when delivering food (Abdelrassoul & Kozmal, 2020).

2.4.3 Virtual/digital kitchens

Lestari et al. (2022) explain the importance of the utilisation of digital technology in restaurants to ensure that these businesses were sustainable during the pandemic and in the future. The effect of COVID 19 on businesses forced restaurants to improve their in-person business model to an online model by modelling into digital kitchens which were slowly gaining popularity before the pandemic (Kulshreshtha & Sharma, 2022). As restaurant operators shifted their operations to online amid COVID 19, research shows that digital kitchens became the best alternative model for hotels in China (Susilowati et al., 2021). This restaurant model emphasised delivering food and maintaining no contact (social distancing) with customers (Volpe, 2020), which was in line with regulatory measures to curb the spread of COVID 19. Ghost kitchens can be identified in three separate ways and sizes. For instance, a restaurant operator can choose between a pop-up ghost kitchen and a shared kitchen. The former can be identified as a dedicated kitchen space utilised for online orders in a traditional restaurant, whereas the latter is characterised by a space that is rented out to various brands of restaurant operators to prepare food which is ordered online via a food app. The last form of ghost kitchen is called a kitchen pod, which operates and prepares food in a small container with outfitted kitchens (Volpe, 2020). The concept of this business model is to circumvent costs (cost-effective) associated with rent and high operating costs in a full-service restaurant (Cai et al., 2022). The main advantage of this business model is that it does not require a huge capital outlay to set up, requires only a small space to operate in and does not need waiters because of no contact with customers (Cai et al., 2022). Operating in a ghost kitchen, there are several other benefits to restaurant operators, such as maintaining low operational and fixed costs, paying minimum rent, saving time and the ability to expand (Muller, 2018). Instead of operating in a full scale, a digital kitchen can operate in a low rent food preparation space with minimum kitchen staff by providing online ordering through a third-party food delivery platform with digital payment options (Muller, 2018). Digital kitchens showed exponential growth during the COVID-19 pandemic as they provided a contactless service through online food delivery platforms such as Uber Eats (John, 2021). The rise of digital kitchens was driven by the total closure of dining and full-service restaurants which resorted to innovative solutions and adopted digital menus and online delivery systems to stay connected with customers (Brewer & Sebby, 2021).

2.5 The breakdown of a third-party online ordering platform business model

According to Chan (2021), a food delivery platform acts as an intermediary between eaters and restaurants as the purpose of this business model is to provide meal delivery logistic services. This is also supported by Wang et al. (2022) when they echoed that an online platform connects restaurants, customers and couriers directly via various smart mobile terminal devices. Furthermore, Alvarez-Palau et al. (2022) also wrote that a platform functions as a marketplace where customers can search and find different local restaurants online and where restaurants can outsource meal distribution services. In a study aimed at analysing an online food delivery platform business model, Wenger (2021) emphasised key activities of a platform business model, which include: 1) recruiting restaurants without food delivery system to be listed on the food delivery platform; 2) handling logistics by taking responsibility for a delivery system and taking into account that there are enough couriers for food delivery; 3) providing customer service to help out with problems arising from food ordered online via a third-party delivery platform as customers do not have direct contact with a restaurant; 4) maintaining and improving the platform by making sure it runs smoothly; 5) creating promotional activities and investing in advertising, especially when entering new geographic markets; and 6) collecting data, analysing it for better customer service, and personalising the customers' journey on the platform. Among other technologies used in an online ordering platform business model, machine learning algorithms and AI are used to process all the data pertaining to customers, food and restaurants (Kumar et al. 2021). Machine learning is also used for product suggestion, sales forecasting and route planning for deliveries. In addition, cloud computing technology also plays a vital role in an online ordering platform as it connects people and restaurants in real-time and ensures that the right product is delivered at the right place at the right time (Kumar et al. 2021; Ray, 2019). However, according to Heiland (2020), a challenge confronting online ordering platforms today is to coordinate restaurants (suppliers), eaters (demand), and a courier (gig work) efficiently through a food app which is represented in Figure 2.1:

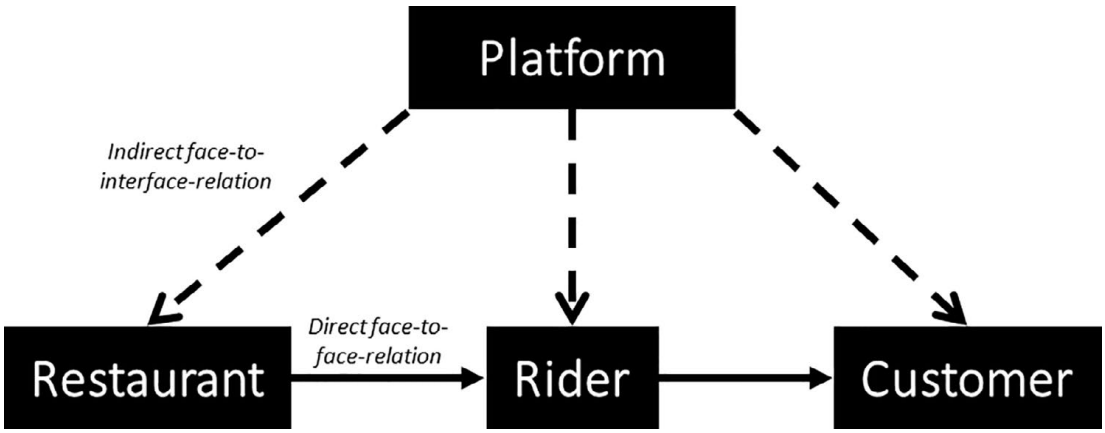

Figure 2.1. Indirect and direct interactions of online food delivery platform
(Source: Heiland, 2020:2)

2.5.1 Restaurant

Before a restaurant can collaborate with an online food delivery platform the following three main criteria are identified to support the cooperation (Wenger, 2021) A restaurant without a delivery system or infrastructure to take orders online is interested in signing up a contractual relationship with a platform; 2) the restaurant intends to gain access to a new market segment and therefore is using the platform to gain more visibility and to tap into new markets; and 3) the restaurant wants to increase its overall revenue. After the criteria have been met, the restaurant can sign up with a third-party online ordering and delivery platform. According to Sudra (2020), the partnership agreement with a third-party delivery platform allows a restaurant to use a network of independent drivers and couriers who operate under the platform as delivery partners. Sudra (2020) also indicates that this partnership allows a restaurant to enter the on-demand delivery industry without a huge capital outlay in developing an in-house delivery app which requires a restaurant to invest capital into equipment, facilities and people. There are various apps for different business models, ranging from grocery stores, household supplies, medicine and food. In a food delivery platform business model delivery companies develop apps which can be downloaded onto smartphones and used for various functions. These on-demand food delivery apps can be categorised based on the following different features: 1) customer-driven app; 2) vendor-driven app; and 3) driver partner app (Bhatt, 2024; Sudra, 2020). A customer-driven application allows eaters to order food on a digital menu from different restaurants listed on the application. Subsequently, when customers order through the platform via a food delivery app downloaded onto their

smartphones, the order information is then transmitted to a courier and the restaurant kitchen, ensuring prompt preparation of dishes requested by an eater (Wang et al., 2022). A vendor/restaurant app is then used by a restaurant to view and manage incoming orders, whereas a driver partner app is used to notify a courier driver of new orders to pick up. In addition, in a driver partner app, a courier may be able to see the status of the order and the delivery details including a restaurant's location (Bhatt, 2024).

2.5.2 Couriers (riders)

On the other hand, Chan (2021) describes the process of recruiting couriers through the food delivery app in the following manner:

i. A platform uses an open-door recruitment policy, and the applicants are not streamed based on their educational background/job experience.

ii. The minimum requirement is to know how to ride a bike and to have a licence.

iii. A courier is required to buy their own bike and gear, including the equipment for delivery like a bag.

iv. A courier is required to own a smartphone to open an account and sign up.

v. Then they must download the app onto the smartphone to learn how to use it.

vi. The courier must accept the terms of the service or agreement with the platform. These terms specify that a courier is an independent service provider.

Furthermore, although courier drivers are working independently through the platform, Edward, (2021) writes extensively about a new form of algorithmic control that has emerged with the platform business model where platform workers are managed indirectly and monitored through the application while being expected to perform to the best of their ability. Tironi and Albornoz (2022) argue that when couriers sign up with a food delivery platform, they subject themselves to remote digital surveillance. A digital footprint in courier services, such as distance travelled in a week, GPS routes, and the courier's earnings serve as valuable data points that can be used by a platform to analyse the performance and anticipate the behaviour of couriers (Tironi & Albornoz, 2022). Customer ratings are also used as a mechanism to control the behaviour of a courier; for example, if a courier driver has been rated poorly previously and their rating score is below a certain percentage that is considered unacceptable by the platform, it may result in deactivation of the account (Tironi a& Albornoz, 2022). According to Griesbach et al. (2019), food delivery platforms also offer a limited

freedom to couriers as they control their activities. Algorithmic control measures, such as an incentive pricing mechanism, are often used to encourage couriers to go online and accept orders to meet the customers' high demand. For instance, a platform will offer a decent rate during peak hours to increase the labour supply of courier drivers (Griesbach et al., 2019).

2.5.3 Customers

Last, in this three-sided market, where three parties (restaurants, delivery workers and consumers) interact with each other for goods and services, the platform acts as a mediator to facilitate the exchange (Rani & Dhir, 2020). The customer is the starting point of interaction, whereas a user, a rider or an eater can go through an app, nominate their requirements, and specify the location of the pick-up or the address where the food ordered online will be dropped, depending on the purpose of the application (Healy et al., 2017). A customer can order from multiple restaurants in one order. If different restaurants appear in a single order, the customer's order can be delivered in a non-split or a split delivery. The former means that one courier delivers the order at one time, whereas the latter indicates that the customer's order will be delivered by different courier drivers at different times (Wang et al., 2022). Through the app a customer can also access live tracking and the movement of a food courier (Kumar et al., 2021). Furthermore, a customer can pay using either a credit card or cash on delivery. Because delivery platforms provide a secured payment architecture through the E-Payment system, customers normally pay electronically as this payment architecture uses encrypted and coded technology to protect the information of the customers from cyber criminals (Ghosh & Saha, 2018).

2.6 Revenue streams for a third-party online ordering platform business model

In an online food delivery business model, the primary revenue stream to the platform is based on a subscription model, restaurant commission fee, customer delivery fee, in-app advertising, per-click service, service fee and other revenue streams, as depicted in Table 2.1.

Table 2.1: Revenue streams for a third-party online platform business model

Restaurants				**Customers**			
Commission Fee		In-App Advertising Fee		Delivery Fee		Subscription Fee	Service Fee
Percentage on meal price	Fixed amount per order	Cost per Click	Fixed amount	Based on distance	Based on purchase value		

(**Source**: Wenger, 2021:25)

According to Ahuja et al. (2021). delivery platforms make money via various revenue streams: commission fee paid by restaurants (typically 15% to 30%), customer delivery fee (usually R2 to R5), and in-app advertising. According to Ji et al. (2019), platform owners increase their advertising through the app in an effort to attract more app users and expand revenue sources. To restaurants, food delivery platforms represent a digital marketplace through which their menus can be seen and the platform functions as the advertiser, seller and technology provider while it charges restaurants a fee for advertising, or commission sales made via the platform (Alvarez-Palau et al., 2021). In addition to restaurant fees, Consumer Report (2022) writes that consumers also pay a variety of fees to the platform when ordering via an app: subscription fee, delivery fee, and service fee. However, Consumer Report (2022) also writes that a key challenge to customers is that a platform can bundle fees together confusingly, failing to make it transparent as to what charges are paid to a driver, which fees serve which purpose and how much of the amount paid by customers will go to the platform, rather than to the restaurant. Similarly, Luna (2020) also writes about lack of transparency and illegal tactics employed by food delivery companies, such as delivering food without a restaurant's consent and changing menu prices to manipulate customers. Which is why, in the USA, a national restaurant association and third-party delivery platforms developed policies and legislation for transparent and fair delivery practices (Fantozzi, 2020). Wenger (2021) writes in depth about other revenue streams that a platform uses to generate profits. He further argues that this business model is not yet profitable. Similarly, Alvarez-Palau et al. (2022) also mention that food delivery platforms have struggled so far to make profits and have adopted new business strategies to capture additional revenue streams like creating their own food brands through ghost kitchens. Interestingly, research also shows that the market growth for food delivery platforms has doubled since the pandemic and the trend has continued post pandemic (Ahuja et al., 2021).

2.7 The ICT development in the restaurant sector

Today, everything can be ordered and paid for online as the e-commerce market continues to grow in grocery stores, hotels and flight bookings as well as in the restaurant business (Alcedo et al., 2022; Chen, 2019; Kirby-Hawkins et al., 2019). In particular, the food delivery service has been undergoing a transitional period with the continuous changing behaviour of consumers as the new online food delivery system captures the markets (Han et al., 2022). A rapid development in information and communication technology along with the emergence of mobile applications has changed the way companies interact with their customers (Van Veldhoven & Vanthienen, 2022). According to Song et al. (2021), today's economic activity to meet the demands of consumers restaurants has developed ICT infrastructure such as the online food ordering system which provides customised products and services**.** In research

conducted by Yunis et al. (2018), it was established that ICT is developing fast and plays a significant role in improving business performance and economic growth, and in contributing to the social status of businesses. Taylor (2015) mentions that without concern about the size of a business, ICT has the potential to contribute significantly to the growth, profitability, productivity, and competitiveness of a business. The same is echoed by Hagsten and Kotnik (2017) when they state that it is important for small businesses to participate in the use of ICT as it unleashes its full potential and opens new markets for these entities. According to Tambe et al. (2022), innovation and technology improvements will spin the fast-food industry in a new direction and dictate the growth of this sector. The use of ICT has been studied as a major technological improvement in the fast-food sector (Chen et al., 2018). Zou and Cheshmehzangi (2022), and Park (2023) state that the fast-food service technology landscape is growing as restaurants experience a huge transformation through the expansion of ICT innovations and the use of mobile applications. Furthermore, according to Botti and Monda (2021), the incorporation of ICT into restaurants has brought momentous changes in the way restaurants interact with customers. For instance, the emergence of food delivery apps makes it easy for customers to make comparisons and to order from different restaurant menus on their phones and have the food delivered fast to their desired location (Song et al., 2021). The OOS is one of the latest developments of ICT. This technology-driven OOS is designed for eaters to order online from a wide range of fast-food outlets via a mobile food application compatible with a smartphone or restaurant's web page, with an option to get food delivered or to collect it from the restaurant (Kimes, 2011; Patel, 2015). The growing mobile phone market and the simultaneous development of various apps is changing the ways of interacting with a brand (Dirsehan & Cankat, 2021). The increasing usage of mobile apps and the penetration of smartphones has provided convenient ways for customers to shop online and for companies reaching out (Song et al., 2021). In a restaurant context, mobile food ordering apps represent a digital shift from the conventional method of ordering directly from a restaurant using a telephone (Kapoor & Vij, 2018). Mobile food ordering apps are constantly changing consumer habits and how food is consumed (Dirsehan & Cankat, 2021). Benefits of using such apps are convenience, fast delivery, a variety of restaurants to choose from and promotions. With the subsequent development of various food ordering apps by digital food delivery platforms such as Uber Eats, the food delivery market has been redefined (Gupta & Duggal, 2020). The food delivery market has become a global market worth more than 150 billion dollars with its growth having tripled since 2017. The most mature delivery markets in the world include Canada, Australia, United Kingdom and the United States. Big players, among others, such as Just Eat, Delivery Hero and Uber Eats, have successfully brought out new innovative business models disrupting the market and receiving a huge amount of market share internationally over the past two decades (Wenger, 2021).

2.8 The use of online ordering systems by South African restaurants

In the South African restaurant sector, the rise of the OOS has its roots in the phone call ordering system, believed to have been pioneered by Mr Delivery, a multi-restaurant delivery business founded in 1992 (Independent Online (IOL), 2007). Since 1992, Mr. D had dominated the food delivery business in South Africa (Webster & Masikane, 2021). However, in 2016 a subsidiary company to Uber entered the food delivery market in South Africa and became a popular brand known as Uber Eats (Lala, 2019; The Competition Commission, 2022; Webster & Masikane, 2021). Originally, Mr. D was an independent company until its amalgamation with Takealot, which revamped the strategy of the company from a phone call-based food delivery system into a food delivery platform operating on a mobile food app. Furthermore, the advent of COVID-19 accelerated the use of this online ordering technology in local restaurants with online food ordering and delivery platforms playing a key role in keeping restaurants active economically (Henama, 2021; Raj et al., 2020). However, a challenge, according to Dano and Chopra (2021), is that most restaurants struggled to manage operating costs relating to third-party online food ordering and delivery platforms. Niu et al. (2021) also echoed that many restaurants have considered establishing in-house delivery because of high commission rates charged by third-party online delivery platforms. The majority of restaurants indicated that the partnership with third-party delivery companies negatively affects their revenue negatively and they have decided to operate independently from the platform (See-Kwong et al., 2017). Some local restaurants like The Flying Pan, UCOOK, and others are operating on websites and allow their customers to order through websites instead of a food app (Vadukiya, 2020). Indicated in Table 2.2 are different food delivery apps in a food delivery service in South Africa and other countries.

Table 2.2: Different food delivery apps

Third-party/ in-house food delivery services	Year of foundation	Country of origin	Reference
Mr D	1992	South Africa	Gilbert (2017)
Uber Eats	2014	USA	Webster and Masikane (2021)
Orderin	2012	South Africa	Ellis (2021)
Bolt Food	2019	USA	Schulze (2019)
McDelivery	1993	USA	DBpedia (2023)

Restaurant operators signing up with a food delivery platform can have benefits such as advertising, market growth, competitive advantage, customer reach, etc. (The Competition Commission, 2022). On the other hand, the commission fee paid to a delivery platform hurts the profitability of a restaurant and represents a financial risk which is why some restaurants decided to have in-house delivery (Li & Wang, 2020; Niu et al., 2021). If restaurants are not profitable under third-party delivery platforms, it prompts consideration of using alternative business strategies to access online markets. In addition, if the commission paid to the platform affects a restaurant's profitability adversely, it is of paramount importance to identify and minimise financial risks as part of an effective risk management initiative. Therefore, developing a comprehensive risk management is imperative for restaurants to counter the potential financial risks that might emanate from using third-party food delivery platforms. Priskila and Rina (2019) suggest that an integrated risk management system in restaurants can help to identify potential risks and analyse the impact of these risks on business operations to avoid future financial losses.

2.9 Risk and risk management

Risk is inevitable in all spheres of life, particularly in the business world (Alderson et al., 2022; Association of Chartered Certified Accountants (ACCA) Global, 2023; Bruwer, 2016; Dhlamini, 2022; Masama, 2017). Although risk is prevalent in all areas of life, it is defined differently from one field to another. In his study, Masama (2017) provided a non-exhaustive list of risk definitions clearly showing the differences and similarities of definitions used in the business world. From this list, Masama (2017) conceptualised the risk definition to the probability of a threat or an opportunity materialising, thereby influencing the attainment of sustainability by a business. This conceptualised definition is supported by Firoozye and Ariff (2015) when they defined risk as uncertain events which will impact the attainment of business objectives (positively or negatively). The Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2018a:1) also states that the effects of risk can be positive or negative.

Restaurants, just like any other businesses, are susceptible to four major categories of risks: strategic risks, operational risks, reporting risks, and compliance risks (Deloitte, 2023; Hopkin, 2018; Kiseleva et al., 2018; Masama, 2017). These four categories are discussed below.

- *Strategic risks* – Strategic risks refer to risks that influence the attainment of strategic objectives (ACCA Global, 2023; Dhlamini, 2022; Taylor, 2012). Generally, strategic risks determine whether a set business strategy will achieve its intended goals, and these risks emanate from both the internal and external business environment (ACCA Global, 2023; Dhlamini, 2022). Examples of strategic risks include changes in economic conditions,

technological advancements, changes in legislation, changes in consumer demand, access to long-term financing, and competition (ACCA Global, 2023; Institute of Risk Management, 2002:3; Masama, 2017). In essence, strategic risks that are not adequately or effectively managed threaten business existence (Masama, 2017).

- *Operational risks* – These are risks that originate from people, processes, systems, and external events, thereby resulting in business loss (Audit Board, 2018; Chartered Institute of Management Accountants (CIMA), 2008). Operational risks often result in financial losses, ultimately leading to business closure (Masama, 2017). Examples of operational risks include employee theft and fraud, product or service quality, lack of qualified employees, errors in processing transactions, and system failures (Ayandibu & Houghton, 2017; Hopkin, 2018; Masama, 2017).

- *Reporting risks* – Reporting risks refer to risks that influence the adequacy, reliability, and effectiveness of both internal and external reporting of business operations (Cohen, 2017; Masama, 2017). The information reported can either be financial or non-financial (Masama, 2017). Examples of reporting risks include the generation of incomplete reports, inaccessibility of information, and loss of information (Harrer, 2008; Masama, 2017).

- *Compliance risks* – These are risks that are associated with the adherence or non-adherence to relevant laws, regulations, policies, and procedures (Masama, 2017; COSO, 2020). Examples of compliance risks include adherence or non-adherence to local tax laws, to employment-related laws, and to health and safety rules (Masama, 2017).

Although all of the above risk categories affect restaurants, results from previous South African studies in this industry have found that operational risks and strategic risks affect restaurants the most (Chakabva, 2020; Masama, 2017). Although there seem to be no South African academic studies that have been conducted on risks emanating from OOS, the results are expected to be in tandem with those mentioned above.

2.9.1 Related risks in online ordering systems (OOSs) in restaurants

Although risks emanating from using an OOS are well documented, there are restaurants that are unable to identify these risks adequately (Chakabva, 2020). Hence, it is imperative to discuss some of the major risks emanating from the use of OOSs. Although risk can be positive (opportunity) or negative (threat), this section will focus on the negative risks since

the opportunities made available by using OOSs have been discussed above under section 2.3.2

Strategic risks

- *Change in customer preferences* – In addition to the in-house ordering systems that have been in use, the increased use of OOSs, especially during COVID-19, increased the number of third-party delivery companies (Chen & Huang, 2019; Oluwole, 2020; Smooth Commerce, 2023; Traynor et al., 2022). Consequently, the number of online ordering platforms at the disposal of customers have increased, thereby increasing choices available to customers (Chen & Huang, 2019). Various factors are considered by customers when choosing an ordering platform to use, with payment security and delivery time among the key factors considered (Chen & Huang, 2019). Thus, restaurants using a third party should be aware of this risk.

- *Driver-related risks* – Whether a restaurant is using its own delivery drivers or third-party drivers, there are risks that arise during food delivery (Arroyo Insurance Services, 2023). These risks include road accidents, slips and falls, wage lawsuits, auto liability and tampering (Heffernan Insurance Brokers, 2018; Wasserstrom, 2020). Although all the above driver-related risks affect both in-house and third-party delivery service, there are some risks where the liability does not affect the restaurant. Thus, it is crucial for restaurants to understand the driver-related risks that affect them, depending on the delivery service being used.

- *Competition* – To begin with, the increased usage of OOSs during COVID-19 resulted in more fast-food businesses being established (Ahuja et al., 2021; Gavilan et al, 2021; Sin et al., 2021). Consequently, this increased the level of competition in the industry as customers had more options to choose from (Ahuja et al., 2021). Furthermore, the use of OOSs enabled established restaurants to access markets that were inaccessible before (Sin et al, 2021; Smooth Commerce, 2023). In some instances, the competition is directly between third-party delivery platforms, which subsequently impact the individual restaurants using those platforms (Ahuja et al., 2021).

- *Control over delivery services* – In most cases, restaurants lose control of the delivery process as soon as the food is handed over to third-party drivers (Smooth Commerce, 2023). However, should anything go wrong with the delivery, customers still blame the restaurant (Hadfield, 2020). As a result, some restaurants are integrating with third-party delivery systems in a way that allows them to track the delivery process. Some restaurants

are implementing an in-house delivery system, thereby enabling them to track the delivery process (Smooth Commerce, 2023).

- *Control over customer data* – Most restaurants cannot keep up with the rapid industry change caused by technological advancements. Hence, these restaurants rely heavily on third-party service providers (Sin et al., 2021). One of the major risks of using third-party service providers is that restaurants do not control the customer data that is collected by these service providers (Smooth Commerce, 2023; Wasserstrom, 2020). On the other hand, restaurants using in-house OOSs can get valuable insights from the collected data.

Operational risks

- *Increased operating costs* – This is perhaps the most significant operating risk of using an OOS, particularly a third-party OOS (Dai & Wu, 2023; Hadfield, 2020; Sin et al., 2021). In the United States of America (USA), an increasing number of small restaurants have already protested these third-party platforms owing to high commission being charged (Luna, 2020). In some cases, local governments in those areas have had to place some restrictions on the commission being charged by third-party service providers to minimise operating costs on small restaurants (Luna, 2020). Furthermore, operating costs for restaurants are affected negatively by the discounts offered by restaurants in cooperation with third-party platforms (Tacit Corporation, 2022; Zheng & Guo, 2016). To minimise the effects of third-party costs, some restaurants are charging as much as 30% more on items listed on third-party platforms (Thompson, 2021). This shows clearly the significance of the extra cost caused by using third-party ordering and delivery services.

- *Food quality and safety* – Restaurants do not only lose revenue through increased costs when they receive orders through third-party service providers, but the food quality is also negatively affected (Dai & Wu, 2023; See-Kwong et al., 2017; Sin et al., 2021; Yuchen, 2020). At times, it takes long to deliver the food and the food is exposed to unfavourable weather conditions (Sin et al, 2021). The packaging used also contributes to compromising the food quality and safety (Dai & Wu, 2023).

- *Online ordering application challenges* – A key feature that contributes significantly to the success of any OOS is the design and smooth functioning of the ordering app (Fuentes et al., 2021). Poor application design and back-end glitches are the main challenges related to online ordering apps (Fuentes et al., 2021). Furthermore, most customers have limited phone storage, thereby limiting the number of applications they can install on their phones (Chen & Huang, 2019). Consequently, customers are likely to install online

ordering applications that give them a variety of options (Chen & Huang, 2019). Thus, restaurants should consider critically between using an in-house ordering app or a third-party ordering app.

- *Ability to meet customer demand* – Another operating risk emanating from the use of an OOS is the ability to meet the increased customer demand (Singh, 2023). Considering that this increased customer demand is rarely constant, restaurants need to be prepared.

Reporting risks

- *Accessibility of customer data* – The main reporting risk pertains to the accessibility of customer data, particularly when third-party companies are used (Smooth Commerce, 2023). Because customers interact with third-party ordering platforms, there is a significant amount of data that becomes unavailable to restaurants, thereby influencing the compilation of customer reports negatively (Sin et al., 2021).

Compliance risks

- *Food quality and safety* – Although many countries do not have regulations specifically for the food delivery sector (Dai & Wu, 2023), the regulations in the food industry generally apply to the online ordering business model. The food industry is one of the most highly regulated industries in the world, and South Africa is not an exception (ASC Consultants, 2022). Regulations in the food industry, particularly the restaurant sector, are mainly related to advertising, labelling, packaging, quality, safety, transportation, and hygiene on the premises (ASC Consultants, 2022). A study in China on food delivery services found that some businesses, particularly small, medium, and micro enterprises (SMMEs), engage in unsafe food production to cut costs associated with using third-party online ordering platforms (Dai & Wu, 2023). Furthermore, the delivery process often takes longer than expected, thereby compromising the quality and safety of the delivered food (Centers for Disease Control and Prevention (CDC), 2022).

  As expected, most of the OOS risks affecting restaurants fall under operational and strategic risks. The identification of the above risks is crucial if a restaurant is successfully to manage the risks emanating from using an OOS. Following the identification of risks (both positive and negative), the next step is to manage the identified risks adequately and effectively (Lam, 2017).

2.9.2 Enterprise risk management (ERM)

Following a conceptualized definition of risk management proposed by (Bruwer, 2016; Hopkin, 2018; Lam, 2017), the principal objectives of a comprehensive risk management should be to mitigate the risks and maintain residual risks at tolerable levels across the organisation (Dvorsky et al., 2021; Hopkin, 2018; Hubbard, 2020). The application of appropriate risk management strategies and controls can enable the accomplishment of these objectives.

In layman's terms, risk management entails the identification, analysis, evaluation, and treatment of risks across an organisation to achieve set objectives (Hopkin, 2018; Lam, 2017). The holistic management of risks in a business is referred to as enterprise risk management (ERM) (Beasley et al., 2017; Lam, 2017). Because of the importance of risk management, particularly ERM, many researchers and institutions have developed frameworks that guide businesses regarding the implementation of ERM (Masama, 2017). At the forefront of these frameworks is a well-publicised framework that was developed by COSO, commonly known as the COSO ERM Framework (COSO, 2017; Institute of Internal Auditors (IIA), 2022; PricewaterhouseCoopers (PwC), 2019). Figure 2.2 shows the components and principles of the COSO ERM framework (COSO, 2017).

Figure 2.2: COSO ERM Framework

Source: (PwC, 2019)

The above five components, together with the principles under each of them are discussed below (Chakabva, 2020; COSO, 2017; COSO, 2018b).

Governance and culture

Governance focuses on the actions of top management in the creation of the desired tone towards ERM, thereby reinforcing the importance of ERM in the business. Culture refers to the ethical values, expected behaviours and attitude towards risk in a business. The principles under this component are briefly discussed below.

- *Exercise board risk oversight* – The board of directors should set strategy, discharge governance responsibilities and ensure that management is supported in the achievement of set strategy and business objectives.

- *Establish operating structures* – The business should develop operating structures necessary to facilitate the achievement of strategy and business objectives.

- *Define desired culture* – The desired behaviour should be set that is in line with the entity's desired culture.

- *Demonstrate commitment to core values* – The top management should show commitment to the entity's core values.

- *Attract, develop and retain capable individuals* – The business should build human capital that is aligned to the set strategy and business objectives.

Strategy and objective setting

To achieve the set strategy, specific business objectives need to be determined, and the amount of risk the organisation is willing to take (risk appetite) while pursuing set objectives should be set. The setting of objectives should be thorough as they form the basis for risk identification. The principles under this component are discussed below.

- *Analyse business context* – The business should consider the effects of both the internal and external environment.

- *Define risk appetite* – The business should determine a risk appetite that creates, preserves, and realises value.

- *Evaluate alternative strategies* – Alternative strategies should be considered, together with their impact on the risk profile.

- *Formulate business objectives* – Business objectives required to support the strategy, considering risk in the process should be set at various levels.

Performance

The performance of a business is directly related to the achievement of set business objectives. Thus, risks that may impact the achievement strategy and business objectives should be identified, assessed, prioritised, and managed. A business should take a portfolio view of the number of risks assumed, and all stakeholders should be communicated with accordingly.

- *Identify risk* – The business should identify risks (both positive and negative) that impact the achievement of business objectives.

- *Assess severity of risk* – The severity of risks should be measured by multiplying the probability of materialising and the impact on business objectives (i.e., probability rating (4) x impact rating (3) = 12). Figure 2.3 shows how these two are used in assessing risks.

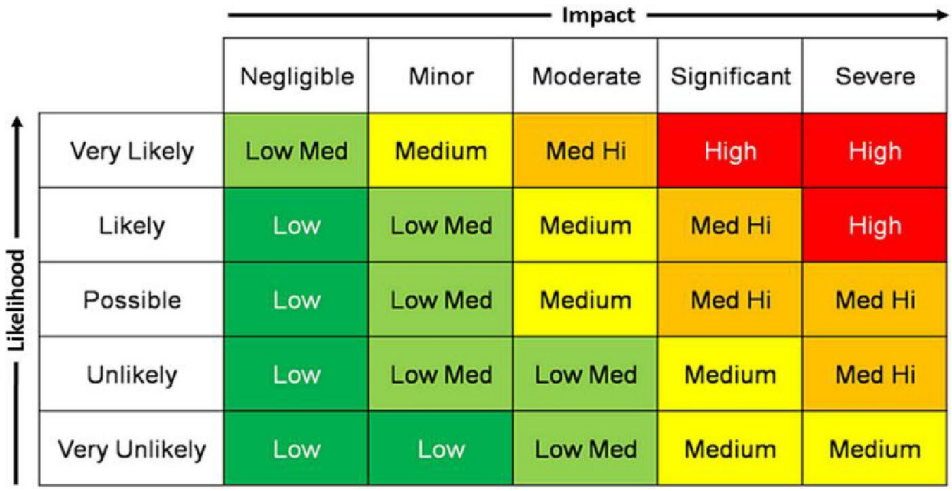

Figure 2.3: Risk matrix

(Source**:** Layton, 2023)

- *Prioritise risks* – Using the results from risk assessment, risks are prioritised according to their severity (combination of probability and impact). Risks with high probability and high impact on business objectives should be ranked higher.

- *Implement risk responses* – The business should identify and choose the appropriate responses to address the assessed risks, starting with those of a high priority. Although there are four common risk responses (accept, avoid, share, and manage), there is a fifth response which is pursue or exploit, and this applies to opportunities. Figure 2.4 shows how the four common risk responses are applied to negative risks (threats).

-Avoid the risk; -Reduce the risk;
-Transfer the risk; -Accept the risk.

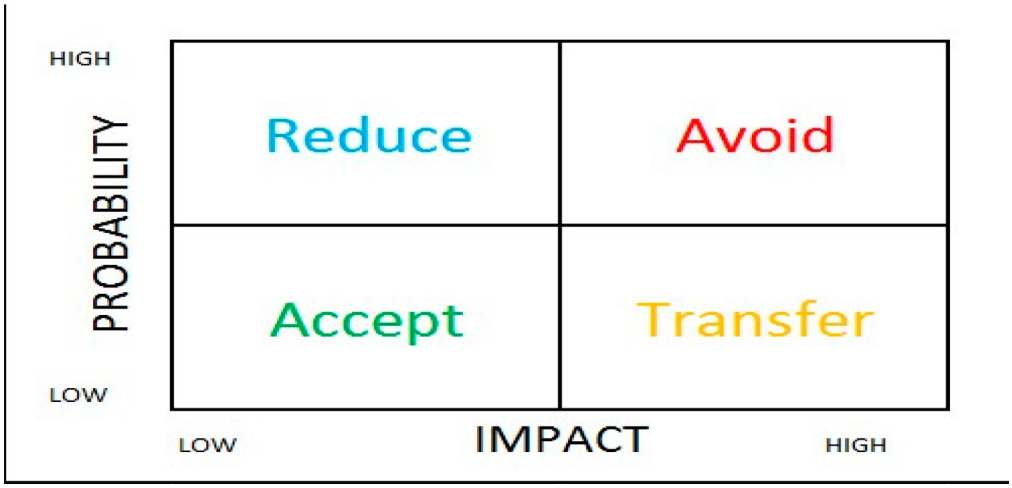

Figure 2.4: Four risk treatment options

(Source**:** Abu Kwaik et al., 2023)

- *Develop portfolio view* – The business should consider and evaluate the accepted risks holistically.

Review and revision

After the implementation of risk responses, business performance should be measured to determine the adequacy and effectiveness of the ERM components. Should the need arise, required revisions should be carried out.

- *Assess substantial change* – The business should identify and assess changes that may impact strategy and business objectives significantly.

- *Review risk and performance* – The business should assess the performance and have a relook at risks impacting performance.

- *Pursue improvement in ERM* – The business should improve ERM components that are not functioning optimally.

Information, communication, and reporting

The process of ERM requires continuous communication between internal and external stakeholders. Furthermore, communication should flow up, down, and across the business.

- *Leverage information systems* – The business should use its information technology system (ITS) to support ERM.

- *Communicate risk information* – The business should use various communication channels to support ERM.

- *Report on risk, culture and performance* – The business should prepare reports on risk, culture and performance at various levels across the entity.

The above COSO ERM is applicable to different types of entities, operating in any industry, and of any size (COSO, 2018b). Despite the well-documented benefits of ERM, South African restaurants tend to neglect this important area. Priskila and Rina (2019) assert the notion that poor risk management is among the main reasons that restaurant businesses are not sustainable. According to the results of a study on ERM in South African restaurants, it was found that restaurants use the COSO ERM framework components by chance, since they had no knowledge of ERM (Masama, 2017).

2.9.3 Risk management in South African restaurants

The point of departure is that most South African restaurants neglect the important area of risk management (Chakabva, 2020; Masama, 2017; Priskila & Rina, 2019). The study by Chakabva (2020) provides invaluable information pertaining to the possible reasons that South African restaurants tend to neglect ERM, as well as how these businesses engage in risk management. Below are some of the significant findings pertaining to risk management in South African restaurants.

- *Factors influencing the implementation of ERM* – According to this study, the factors that influence the implementation of ERM in restaurants include level of education, position in the business, and period in the position. This affirms the notion that most South African business owners have lower academic qualifications, and lack the requisite risk management skills (Fatoki, 2014; Smit, 2012). In the same vein, those restaurants that have an employed manager tend to take ERM more seriously since these managers have better qualifications.

- *Risk management identification methods* – The study found that most entities identified risks based on previous occurrences, experiences of other businesses, and complaints from customers. Evidently, the risk identification process is reactive, in that entities respond after the occurrence of something.

- *Risk evaluations* – Although more than half of the respondents (52%) made use of probability and impact ratings, they did not multiply the two ratings to get the total severity score to be used in risk prioritisation.

- *Risk responses* – As expected, a significant number of respondents (49%) used risk avoidance, followed by 12% who used risk sharing. This supports the notion that most restaurants use insurance to minimise financial losses (Smit & Watkins, 2012). Furthermore, the results indicate that owners are more likely to avoid risks than managers, a notion that has been alluded to above.

With regard to risks related to OOS, South African restaurants are using several risk management controls which include:

- requiring drivers to produce immigration documentation (for foreigners) and IDs (for South African);
- requiring drivers to have a valid South African driver's licence;
- requiring drivers to get a criminal background check;
- requiring drivers to insure their bikes and cars;
- using food packaging that minimises tampering and preserves the food temperature;
- partnering with third-party service providers; and using in-house OOS. (Krishnan & Das Nair, 2021; Krook, 2023; Mr D Food, 2023; Vergidis, 2022).

South African restaurants should consider applying formal ERM with regard to managing risks emanating from OOS. This will enhance value creation and preservation when using OOS.

2.10 Conclusion

This chapter has expanded on the previous one, emphasising the driving forces behind the fourth industrial revolution and online ordering systems. The chapter continued by synthesizing online ordering systems (OOSs) and digital technology within the context of the Fourth Industrial Revolution (4IR), showing their interdependence and how they rely on and integrate tools like artificial intelligence (AI) for customization and demand prediction (Shorbaji et al, 2025), and blockchain technology to secure online payments (Talukder et al., 2022). In particular, it highlights the significant impact of digital technology across multiple industries, including the digitalisation of the restaurant sector through the use of information and communication technology (ICT). Online ordering systems (OOSs) represent the latest ICT advancements in the restaurant industry. The chapter also examined the crucial role that online ordering systems have played in the restaurant industry during the COVID-19 pandemic, and how this technology continues to transform the restaurant business. Finally, the chapter examined the risks and the strategies for managing the risks associated with outsourcing

online ordering systems to a third-party service provider. In addition, although international research studies have written broadly on the utilization, benefits, and the risks associated with outsourcing online ordering systems (OOSs), there is limited availability of regional research studies investigating their impact on the sustainability and the financial implications for local restaurants. A large proportion of the existing literature tends to focus more on developed economies such as the USA, UK, China, and India. This leaves a contextual gap in understanding South Africa's restaurant industry's adoption of online ordering systems (OOSs) and how local restaurant operators manage the risks emanating from outsourcing these systems to third-party service providers. Therefore, this research study aims to fill this contextual gap by examining the impact of online ordering systems within the Cape Town restaurant industry.

CHAPTER THREE: RESEARCH METHODOLOGY

3. Introduction

In chapter one, the problem statement, research questions, and objectives framing this research study were clearly delineated. However, the main objective of the study was to investigate the impact of online ordering systems (OOSs) on Cape Town restaurant industry. This focused on the view of restaurant operators on operations, outsourcing risks, financial implications, and business sustainability outcomes. To address this objective, chapter three established the following: (1) the research paradigm, methodological approach as well as the research design; (2) the demarcation, population and sampling techniques; (3) data collection methods used in the study; (4) To ensure the credibility of the study, the chapter further detailed procedures implemented to ensure validity, reliability and ethical conduct. In addition, the researcher adopted a deductive approach which is aligned with positivist paradigm. This approach enabled a researcher to formulate broader theoretical assumptions regarding online ordering systems (OOSs) and their adoption by restaurant operators, subsequently testing these assumptions through the collection and analysis of empirical data. This focused on identifying patterns, relationships, and outcomes, rather than generating new theories, consistent with the process of deductive reasoning.

3.1 Research paradigm

A research paradigm refers to a set of philosophical perspectives and beliefs that shape the research process and how a researcher approaches and conducts their studies (Abbadia, 2022). It serves as a framework for conducting research while it influences the choice of methods/techniques a researcher will use to collect and analyse data (Abbadia, 2022). Because the study was empirical in nature, it fell within the positivistic research paradigm, in which quantitative research methods such as survey and statistical analysis are employed to gather empirical data and uncover patterns within the data being studied. Considering that the researcher is supportive of a positivistic research paradigm and used a survey research method to collect data, a quantitative research methodology was found to be appropriate for this study. Furthermore, the research adopted a descriptive and exploratory approach to investigate the integration of online ordering systems (OOSs) by Cape Town restaurant operators. The exploratory element enabled a researcher to gain insights into the integration process of online ordering systems (OOSs). This was complemented by a descriptive approach which provided a detailed account of characteristics, patterns, and risk management practices observed in the industry. This approach did not aim to establish causal relationships or test of Hypotheses; therefore, no hypotheses were formulated.

3.2 Research approach

Notwithstanding the above, there are three available alternatives regarding the research methodology of any study, namely qualitative methodology, quantitative methodology and mixed-methods research methodology (i.e., both qualitative and quantitative) (Creswell and Crewell, 2017). Qualitative and quantitative research methodology are regarded as a research strategy whose fundamental differences are based on numbers versus words. These differences explained in Table 3.1:

Table 3.1: Features of qualitative and quantitative research

Table 3.1: Features of Qualitative & Quantitative Research

Qualitative research	Quantitative Research
The aim is a complete, detailed description.	The aim is to classify features, count them, and construct statistical models in an attempt to explain what is observed.
Researcher may only know roughly in advance what he/she is looking for.	Researcher knows clearly in advance what he/she is looking for.
Recommended during earlier phases of research projects.	Recommended during latter phases of research projects.
The design emerges as the study unfolds.	All aspects of the study are carefully designed before data is collected.
Researcher is the data gathering instrument.	Researcher uses tools, such as questionnaires or equipment to collect numerical data.
Data is in the form of words, pictures or objects.	Data is in the form of numbers and statistics.
Subjective – individuals interpretation of events is important ,e.g., uses participant observation, in-depth interviews etc.	Objective: seeks precise measurement & analysis of target concepts, e.g., uses surveys, questionnaires etc.
Qualitative data is more 'rich', time consuming, and less able to be generalized.	Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.
Researcher tends to become subjectively immersed in the subject matter.	Researcher tends to remain objectively separated from the subject matter.

(Source: Langes, 2015)

Furthermore, Mouton (2011) defines research methodology as “an overall approach to the entire process of a research study and a technique for collecting and/or analysing data”. Mouton (2011) further argues that research methodology can be viewed as the step taken to implement research design.

3.3 Research design/strategy

The research design can be defined as a plan which gives direction as to how, where and what data will be collected to effectively answer the research questions and objectives of the prospective study at hand (Kashikola, 2019). Furthermore, research design of any study can be defined under the following categories namely: the type of data, source of data, nature of data and the level of control of data (Mouton 2011). Therefore, the research design in this study was based on the following approach in terms of the above-mentioned categories:

Type of study: two types of studies exist which can be defined as empirical and/or non-empirical. According to (Dan, 2017) empirical study is observational and experimental in nature whereas non-empirical study is theoretical in nature. This study was predominantly empirical in nature and primary data was collected through a survey although a review of literature was non-empirical (See chapter 2).

Source of data: there are two sources from which a researcher can obtain his/her data and there are namely primary data and secondary data (Kashikola, 2019). A researcher gathered both primary and secondary data in the following approach: the primary data was based on the responses obtained from respondents (restaurants managers and owners) through survey whereas, secondary data was based on the review of relevant literature which was later incorporated in chapter 2 by means of articles, books, and journals.

Nature of data: data can be distinguished between numerical and/or non-numerical. In terms of Kashikola (2019) regarding numerical data, emphasis is placed on the use of numbers or statistical methods in the collection and analysis of data whereas, non-numerical data lay emphasis on the use of words and/or texts. The data collection in this study was via a survey questionnaire and was predominantly numerical in nature with statistical methods employed to analyse this data (see Chapter 4). In addition, the secondary data incorporated in a previous chapter was predominantly non-numerical in nature (see Chapter 2).

Level of control: the purpose of control in data collection is to identify and eliminate errors in the data collected (Mouton, 2011). Even though a researcher did not exercise control over secondary data, the control was exercised in the collection of primary data. The control was exercised by means of structuring a questionnaire and piloting it, thereafter, making corrections based on the responses obtained from respondents. This was done so that the data collected and analysed is free from errors and is reliable for the purpose of this research.

Using the above as foundation, this research falls within the ambit of positivistic research paradigm, and it involved a large-scale survey research. This means that a researcher used

empirical observations under the assumption that there is an objective reality that can be studied through means of systematic observations and by employing statistical analysis to explain the phenomenon under study (Kashikola, 2019). This also means that quantitative methods by means of a survey questionnaire were employed to gather information and numerical data from a larger population group of restaurant owners and managers. According to Bruwer (2013) a larger-scale survey research is large amounts of data or information which could have not been easily obtained through interviews but rather collected mainly through a questionnaire from a larger number of participants. The advantage of the survey is that it can produce a large amount of data in a brief time for a low cost which made it easy for a researcher to deal with a larger population. The questionnaire used in this research is discussed below (see 3.6.1).

3.4 Demarcation/delimitation of study population

Before the collection of data which was based on the sample size of the study, and determining which data collection instruments will be used in the data collection process the demarcation of the study was clearly defined in advance and supported by the following criteria:

- The population of the study was limited to restaurants operating within the parameters of the Cape Peninsula (See Figure 3.1)

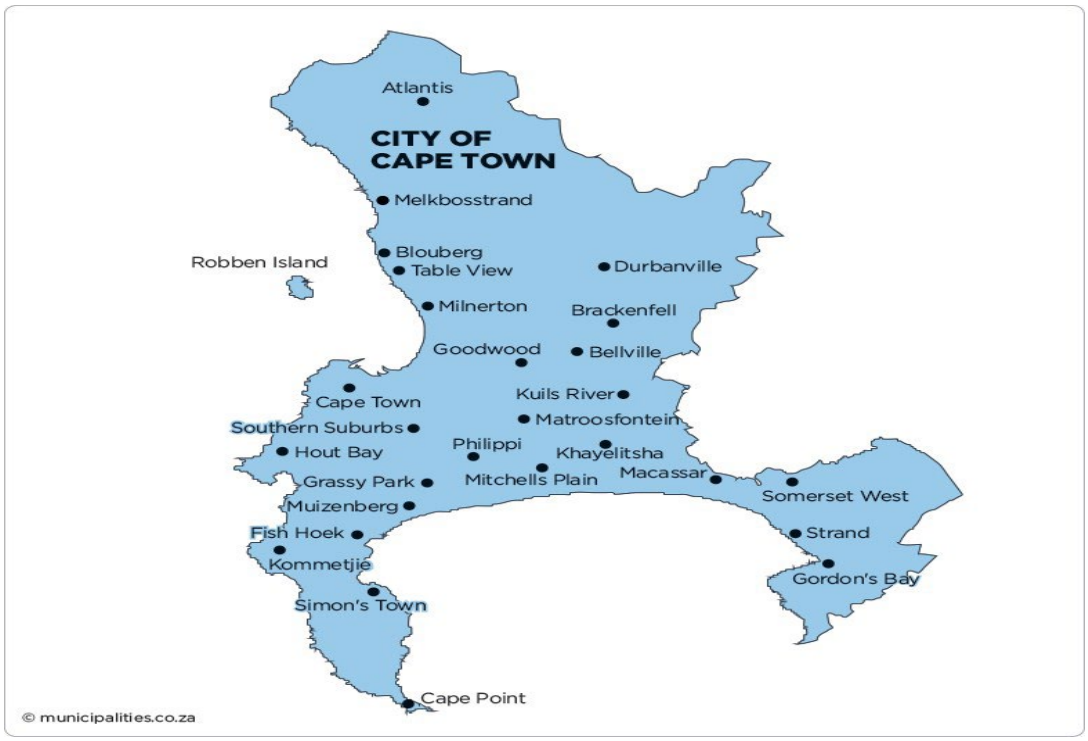

Figure 3.1: Cape Peninsula

(Source**:** Municipalities, 2024)

- The research participants must have been involved in the day-to-day operation of the restaurant as a manager and/or owner.

- The research participants must have been managing the restaurant for at least three years. The study assumed that three years' experience gained in the industry would give a manager a better insight and in-depth understanding of the use of online ordering and delivery systems.

- These restaurants must have existed for more than three years. The study assumed that if these restaurants operated during and post pandemic, they would have a better understanding of how online delivery systems have impacted on their profitability and operations up to this date.

- These restaurants must have employed less than 80 employees.

- These restaurants must have been operating within the parameters of the Cape Peninsula.

- These restaurants must have been either partnered or not partnered with a third-party food delivery app.

- These restaurants must have met all the requirements needed to qualify in the various categories of restaurants listed in Table 3.2:

Table 3.2: Different categories of restaurants

Category	Restaurant
A	Pizza restaurant
B	Fast casual restaurant
C	Fine dining
D	Quick service restaurant
E	Virtual/digital kitchen
F	Upscale casual

3.5 Population

Shulka (2020) refers to population as the entire set of items/units which possess a variable characteristic under study and for which research findings can be generalised. Shulka (2020) further explained that when the population is well defined a researcher selects a proper sample size which represents the entire population. The population of this research study focused entirely on restaurants operating in Cape Town, while the accessible population were restaurants within specific identified areas within the researcher's reach. After a target population was determined below it was deemed necessary to narrow it down to only restaurants operating in the identified areas. A certain practical criterion which focused on geographical proximity, easy accessibility, availability and the willingness of restaurant operators to participate was applied to select areas shown in Table 3.3.

Table 3.3 Identified areas of the population of the study

Number	Area	Restaurants accessed
1	CBD	58
2	Camps Bay	15
3	Waterfront	20
4	Green Point	10
5	Woodstock	15
6	Observatory	20
7	Stellenbosch	15
TOTAL		**153**

Table 3.3 represents several accessible restaurants in the identified areas of the study. The table also shows how many restaurants were accessed in each area followed by a discussion.

The target population was picked among student residential areas (i.e., Observatory, Stellenbosch, Woodstock) and areas within high economic activity such as Cape Town central district (CBD) and the surrounding areas (Sea Point, Camps Bay, and V&A Waterfront). As for the interest towards student residential areas, it has been studied that university students deliberately make use of online ordering systems to maintain a balanced diet and minimise the reasons to skip important meals during their busy university schedule (Wei &Das, 2018). Some research studies have highlighted that the perceived convenience accompanied with the time-saving aspect and the eagerness of students to use technology are the key factors that affect their intention to order meals online (Ramli et al., 2020; Ramli et al., 2021). In

addition, restaurants and hotels also formed part of the target population. As Cape Town is perceived to be the prime tourist destination (Thwala & Dube, 2023), these restaurants and hotels presumably serve this market. Therefore, a researcher expected some restaurants to offer online food delivery services in the above identified areas. Subsequently, a plethora of restaurants were accessed in these areas of which most of them had collaborated with the popular food delivery platforms like Uber Eats, Mr. D and Bolt food. Notwithstanding the above information, the exact number of restaurants operating in the identified areas remained unknown. For that reason, a researcher employed non-probability sampling techniques/methods to select a sample of restaurants to be studied. According to Babbie (2020) when the population being studied is unknown these techniques/methods are deployed. A discussion of the sampling techniques/methods follows.

3.6 Sample method/technique and sample size

Because this study entails a larger population of restaurants which cannot be all studied, a sample, which is an extract from a targeted population Babbie (2020) was then studied. All the restaurants making up the sample of the study were those being studied. To further elaborate the significance of sampling the population Babbie (2020) wrote that it is more practical and efficient to derive data from a sample/ subset of the population as opposed to derive data from the entire population of the study (i.e., census). He added that this is due to expenses associated with measuring the entire population which is most of the time not feasible to study. A sample must be representative of the population, meaning that it should reflect the population as the results based on the sample will be generalised to the population (Babbie, 2020). For example, if the study's target population is large, a researcher must select a larger sample size representing the targeted population. The results obtainable can then be generalised to the entire population. The initial sample size objective for this study was set at 150 restaurants. However, due to limited access and non-responsiveness from some restaurants only 133 were included in the final sample. Among these, 120 responded favourably, constituting 90% response rate. To achieve this, a researcher employed a mixture of convenience sampling methods and purposeful sampling methods (also referred to as non-probability sampling techniques) to select a sample of restaurants that were conveniently reachable for the purpose of this research study. Samples can be drawn from the population by using various sampling methods which are categorised in Figure 3.2 showing distinct types of sampling methods:

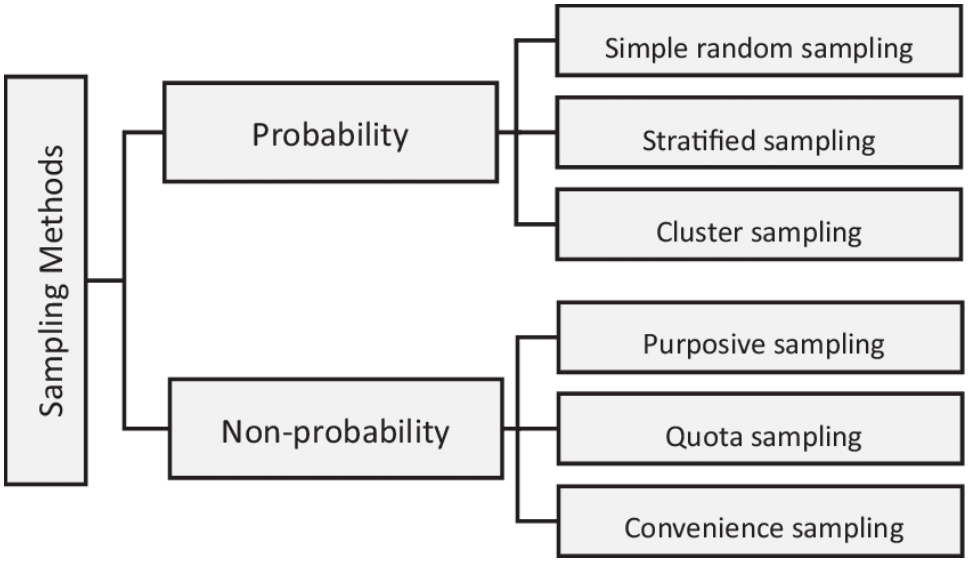

Figure 3.2: Basic sample methods

(Source: Sarstedt, 2017)

It is not the intention of a researcher to define all the distinct types of sampling methods exhaustively; however, all those methods that were applicable in this research will be discussed below:

Purposeful sampling method: is a process of identifying and selecting members/individuals or groups of individuals from the population especially, those that are well-versed in respect of the phenomenon of interest being studied (Kashikola, 2019). Embedded in this method is the ability to allow a researcher to identify the members of the population that can provide sufficient information pertaining to the phenomenon being researched. Within this context, a researcher employed this method to select restaurant managers and owners based on the knowledge and experience they had with the use of online food ordering and delivery systems.

Convenience sampling method: This sampling method selects the easiest members of the population which are conveniently reachable for the study (Babbie, 2020). A convenience sampling comprising 150 restaurants that participated in a survey between August and September 2023 was selected. This method allowed a researcher to easily access many restaurants at a minimum cost without a great deal of time, but the risk of bias was higher than in a random sample as each member of the population did not have equal chance to be included in a sample studied. For that reason, the results might not be generalisable to the entire population of restaurants operating in the Cape Peninsula.

3.7 Data collection instruments

Primary data (first-hand information collected directly from respondents particularly in a research study) were gathered from 150 restaurant operators or managers. Participants were

selected because of their involvement in the day-to-day operation of the business. This was achieved by means of a survey questionnaire. A questionnaire consists of questions that are systematically compiled and submitted to the population from which data or information is obtained (Babbie, 2020). The questionnaire was designed and distributed among restaurants within the CBD and the surrounding areas. In addition, secondary data, which can be collected from various sources such books, newspapers, and publications, were incorporated in Chapter Two of the study to supplement the primary data.

3.7.1 Survey questionnaire design

A survey design is the mechanism of designing and administering a data collection tool, which consists of a set of questions for the purpose of obtaining the information that the researcher is interested in (Babbie, 2020). A survey questionnaire for this study was designed to determine the impact of online ordering systems (OOSs) on Cape Town restaurants. This included a careful review of literature on online food delivery use and its influence on restaurants incorporating how restaurant operators are managing the risks of outsourcing this service to a third-party service provider. The online food ordering and delivery service was expected to dominate the restaurant industry post pandemic (Barnes, 2020). Therefore, reading current research articles and publications with up-to-date information regarding the status quo of the restaurant business, and reviewing related questionnaires applied in similar research studies, laid a foundation to construct the questionnaire tool. The questionnaire consisted of pre-populated and closed-ended questions. This was prompted by a sample size of 150 restaurants. Given the size of sample in this study, the questions were designed to be direct and concise with clear instructions to elicit quick responses, having considered factors such as time constraints, the willingness of respondents to take part in the study and the reality that it is easier for participants to respond to pre-populated and closed-ended questions than to open questions which require written responses. The questionnaire consisted of five sections, which were based on multiple choice questions, ranking-order questions where respondents answered by comparing items and placing them in order of their importance, Yes/No questions, and ticking boxes which represented the respondent's viewpoint. Most importantly, a Likert measurement scale was used in most questions. As discussed above, the questions are divided into five sections and are discussed thoroughly below in the following order:

Section A: Demographic information in relation to Cape Town restaurants

Section B: The extent to which restaurants use online ordering systems.

Section C: The benefits of using online delivery systems.

Section D: The risks emanating from the use of online delivery systems.

Section E: Risk management of online ordering systems.

3.7.1.1 Survey questionnaire tool – Section A

This section was designed to elicit general information about the restaurant and the involvement of the participants in the day-to-day business activities, including their positions, work experience and education background, the number of employees, the number of years the restaurant has been in existence, the category of the restaurant and the area in which a restaurant is operating. The purpose of this section was to authenticate each questionnaire completed. This section consisted of six questions (1-6), consisting of multiple-choice and ratio questions - see Table 3.4 below:

Table 3.4: Questions in a survey questionnaire tool

Question number	Question type	Question
1	Multiple choice	In which area of Cape Town do you operate?
2	Fill in the blank (Ratio)	How long has the business been in existence?
3	Fill in the blank (Ratio)	How many employees does the restaurant have?
4	Multiple choice	Are you the owner, manager, owner and manager or other?
5	Multiple choice	Which category is your restaurant?
6	Fill in the blank (Nominal)	What qualifications do you have?

3.7.1.2 Survey questionnaire tool – Section B

The objective of this section was to establish the extent to which restaurants in Cape Town use third-party online food ordering and delivery systems and to determine factors/reasons affecting their decision to outsource or not outsource an online food delivery service. The questions in the section identify factors affecting the decision to outsource and the reasons not to outsource these services. These questions consisted of ranking-order scale questions, Yes/No questions, multiple-choice questions and the Likert-scale questions. Ranking-order

scale questions of (1-5), where 1 is most important and 5 is least important were deployed below. Depicted in Table 3.5 below are the factors and reasons affecting the decision to outsource or not to outsource as per these questions.

Table 3.5: Questions in a survey questionnaire tool

Factors	Reasons
Increased revenue	Factors related to food.
Increased exposure	Strategic location
Wider customer reach	Customer affordability
Convenience	Cost related to commission paid.
Cost related to digital infrastructure	Little control over a delivery system.

Based on the above pre-populated table of factors which were perceived to affect the decision to outsource and the reasons not to outsource, the respondents were asked to answer this question by answering ranking-order scale questions of (1-5), which required respondents to rank the above-mentioned factors/reasons in order of their importance, where 1 is most important and 5 is least important. This tool was deployed to understand what affects the decision of a restaurant to outsource and what affects its reasons not to outsource an online delivery service to a third party. These questions started with the two following base statements: (1) The above-mentioned factors affected the decision to outsource: (2) The above- mentioned reasons affected the decision not to outsource: (see Table 3.6).

Table 3.6: Questions in a survey questionnaire tool

Question number	Question type	Question
1	Multiple-choice (Nominal)	Does your restaurant use third-party online ordering and delivery systems?
2	Multiple-choice (Nominal)	If yes, which mobile app do you use?
3	Multiple-choice (Ratio)	How long have you been using online mobile apps?
4	Ranking-order scale	Increase in revenue affects the decision to outsource.
5	Ranking-order scale	Increase in exposure affects the decision to outsource.
6	Ranking-order scale	Wider customer reach affects the decision to outsource.

Question number	Question type	Question
7	Ranking-order scale	Convenience affects the decision to outsource.
8	Ranking-order scale	Cost related to digital infrastructure and implementation of in-house delivery service affects the decision to outsource.
9	Ranking-order scale	Factors related to food affect the reason not to outsource.
10	Ranking-order scale	Strategic location affects the reason not to outsource.
11	Ranking-order scale	Customer affordability affects the reason not to outsource.
12	Ranking-order scale	Cost related to commission paid to a third-party delivery app affects the reason not to outsource.
13	Ranking-order scale	Little control over the delivery system affects the reason not to outsource.
14	Multiple-choice (Nominal)	How does outsourcing of online delivery systems impact on the restaurant's profitability?
15	Multiple-choice (Nominal)	Which of the following is generating more revenue for the restaurant?

3.7.1.3 Survey questionnaire tool – Section C

The objective of this section was to ascertain the benefits of using online ordering systems. The questions in this section consisted of multiple-choice and ranking questions - see Table 3.7 below:

Table 3.7: Multiple choice questions in a survey questionnaire tool

Question number	Question type	question
1	Multiple-choice	What are the advantages of using third-party online delivery service?
2	Multiple-choice	How satisfied is your restaurant with third-party delivery service?
3	Ranking-order scale	Rank the following delivery platforms in order of the best delivery service offered.

3.7.1.4 Survey questionnaire tool – Section D

The objective of this section is to identify the risks arising from using online ordering systems. The questions identified operational, strategic and compliance risks perceived to be emanating from the use of third-party online ordering systems. A five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree) was used and the questions started with the following base statement: My restaurant is faced with the following diverse set of risks, represented in Table 3.8:

Table 3.8: Likert-scale questions in a survey questionnaire tool

Question number	Question type	Question
1	Likert scale	My restaurant is faced with this operational risk: Lack of control over the online delivery system.
2	Likert scale	My restaurant is faced with this operational risk: system failure owing to load shedding
3	Likert scale	My restaurant is faced with this operational risk: high operating costs
4	Likert scale	My restaurant is faced with this operational risk: additional time delays
5	Likert scale	My restaurant is faced with this operational risk: late deliveries
6	Likert scale	My restaurant is faced with this strategic risk: reliance on a third-party online ordering system
7	Likert scale	My restaurant is faced with this strategic risk: weak business profitability
8	Likert scale	My restaurant is faced with this strategic risk: loss of customer loyalty to a third-party online ordering system
9	Likert scale	My restaurant is faced with this this strategic risk: changes in customer preferences
10	Likert scale	My restaurant is faced with this this strategic risk: changes in economic conditions

Question number	Question type	Question
11	Likert scale	My restaurant is faced with this compliance risk: adherence to health and safety risks
12	Likert scale	My restaurant is faced with this compliance risk: adherence to immigration laws
13	Likert scale	My restaurant is faced with this compliance risk: adherence to tax and labour laws
14	Likert scale	My restaurant is faced with this compliance risk: environmental risks (waste, etc.)

3.7.1.5 Survey questionnaire tool – Section E

The objective of this section is to determine how restaurant managers understand enterprise risk management and what initiatives are put in place to mitigate risks arising from online delivery platforms. The questions in this section comprised Yes/No questions - see Table 3.9 below:

Table 3.9: Yes/No questions in a survey questionnaire tool

Question number	Question type	Question
1	Yes/No	Does your restaurant understand enterprise risk management?
2	Yes/No	Have you implemented ERM (enterprise risk management) initiatives in your restaurant?
3	Yes/No	Does ERM add value to your restaurant?
4	Yes/No	Do you have your own online delivery system?
5	Yes/No	Do you have an alternative back-up plan for online delivery?
6	Yes/No	Do you plan to have your own online delivery system in future?

3.8 Data coding and analysis

This sub-section explains the data coding and analysis involved in this study. The data collected from the 116 returned questionnaires were initially coded in Notepad and then transferred to Excel and SPSS 29 for analysis. The data analysis involved both descriptive and inferential statistics.

Descriptive analysis included normal frequency counts, cross-tabulation charts, and cross-tabulation tables for a comprehensive presentation of the data. Inferential statistics involved the use of a non-parametric Chi-square test of independence to determine the influence of third-party online delivery mobile apps on the operations of restaurants in Cape Town.

3.9 Validity

Babbie (2020) explains that when the research data analysed fully reflects the research topic, research title, research problem and the phenomena being studied then the validity is evident. In essence, validity measures whether the research findings or data analysed are relevant and represent the construct of interest being investigated. To ensure validity, Babbie (2020) discusses the following validity measures that are predominant in any research study.

Content validity determines the extent to which a measurement instrument such as a questionnaire used in research reflects the construct being studied in terms of relevance and representativeness. For instance, to capture the breadth and depth of the concept being studied in this research, which was to investigate the extent to which restaurants use online delivery systems, the researcher developed the questionnaire items which effectively addressed all the relevant aspects of the use of online delivery systems and the risks emanating from the use of these systems. In addition, an extensive review of literature was conducted and served as a basis for developing a comprehensive questionnaire tool. This questionnaire tool was adopted from similar research studies and all the questions were unambiguous, clear and precise. Overall, the content validity was demonstrated by ensuring that the questionnaire instrument used in this research included a variety of investigative questions that reflected the subject matter being studied which, in turn, ensures the credibility and integrity of the research findings of this study.

Face validity refers to the extent to which an instrument appears to measure what it is intended to measure (Allen et al., 2023). To ensure face validity, the researcher conducted pilot testing with 10 restaurant managers and/or owners to evaluate the relevance, comprehensiveness and clarity of the questionnaire items, and the respondents provided positive feedback. The feedback from the pilot study confirmed that the questionnaire was understandable, relevant and fit for the study purpose. It is important to note, however, that the pilot study participants did not participate in the main survey. This was to ensure independency of the final dataset and prevent bias.

Construct validity evaluates how well the underlying construct being studied is accurately measured. This was demonstrated through consultation with existing literature to ensure that questionnaire items asked align and measure accurately the intended construct under study.

3.10 Reliability

On the other hand, reliability pertains to the consistency and stability of the measurement instrument over time, which is essential for trustworthy research results (Olmsted, 2024). In this study, reliability was ensured through several steps. First, the questionnaire instrument was developed using established questions from prior studies. This helps make sure the questions are reliable and consistently measure the intended study. Second, the instrument underwent pilot testing with a small sample of restaurant managers, and the feedback was positive, with items in a questionnaire confirmed to be clear, unambiguous, and consistently interpreted.

3.11 Ethical considerations

In research terminology, ethical considerations define the principles that guide a researcher throughout the research process, including when collecting data from the respondents who participate in the study. The initial step in this process is when the researcher conducting a study is approved by the research ethics committee of an academic institution involved in the research, which then grants them permission to conduct the fieldwork. In the case of this research study, the researcher received ethical clearance from the Cape Peninsula University of Technology research ethics committee which enabled the research to commence. This was followed by the application of the principles that guided the researcher when conducting their research in the field (Mouton, 2011). Babbie (2020) explained these principles as follows:

Voluntary participation means that participation is voluntarily determined by a respondent's willingness to take part in a proposed study**.** All the participants in this study were informed that their participation as well as their withdrawal from the study was voluntary.

Informed consent: Consent letters should be used as a basis to explain what the study entails for the participants to make an informed decision to consent to participate in any research study. All participants were given consent letters to sign, which indicated their willingness to participate in this study.

Confidentiality and anonymity: All respondents should be assured that all the information captured will be kept confidential and not used for any reason other than the research purpose. Simultaneously, the anonymity of respondents should be taken into consideration. Therefore, the anonymity of respondents who took part in this study was considered by keeping their opinions and personal information anonymous.

Protection from harm: All respondents must be protected from any harm pertaining to the research study and the research conducted should not be detrimental to the respondents' interests. To ensure protection, the researcher used a survey questionnaire tool which only

required a written/verbal response from respondents and consent letters with the clear purpose of the study were signed by respondents, thereby indicating that they understood the risks and benefits of the study. A clearance letter issued by the university also guaranteed the protection from harm to both the researcher and the participants. In addition to safeguarding participants from harm within the scope of this study, several other ethical considerations were addressed. Firstly, vulnerable populations, such as minors, individuals with cognitive impairments, were excluded from this study. Only restaurant managers and/owners who could make informed decisions were invited to participate in this survey. Secondly, the study implemented measures to prevent any form of discrimination. Participation was voluntarily and extended to all restaurant operators within the sampling frame, regardless of race, gender, age, cultural background and ethnicity. Responses were treated impartially, ensuring fairness and equality. Third, strict measures were implemented pertaining to data storage and confidentiality. Access was limited solely to the researcher and the supervisor, with all data retained in accordance with university policy.

3.12 Chapter conclusion

The purpose of this chapter was to describe the research paradigm, research approach and research design deployed in this study. It also served as a methodical approach to answer the research questions and research objectives based on the research problem identified in Chapter One. In addition, there was an in-depth discussion under the following sub-headings of this chapter: demarcation of the population; population of the study; sample methods deployed and sample size; data collection instrument deployed; data coding and data analysis; data validity; research limitations and last, ethical considerations. In the following chapter emphasis will be placed on the analysis and interpretation of the data collected.

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter focuses on the presentation of the results gathered from the fieldwork. The aim of the proposed study is to examine the impact of online food ordering systems on restaurants operating in Cape Town. The study specifically sought to ascertain the extent to which restaurants in Cape Town are using third-party online food ordering systems. More so, to establish the motivating factors to outsourcing online delivery service to a third-party service provider along with the benefits of using online ordering systems. Finally, to determine the risks of using these systems and to evaluate the adequacy and effectiveness of risk management measures adopted by restaurant operators.

This study recorded an adequate response rate. A total of 133 questionnaires were distributed by the researcher, and 124 were returned. Four of the returned questionnaires were excluded because they were not properly completed, with respondents filling less than 20% of the total items. As a result, 120 questionnaires were coded using SPSS version 28 for analysis. Some items within the questionnaires were left unanswered by certain respondents, as participants were required to respond to items they felt comfortable answering. The consent letter made it clear that participants could decline to answer any part or all of the items if they were unwilling to do so. The overall response rate was therefore calculated at 90%, derived from dividing the 120 completed questionnaires by the total of 133 distributed, which approximated to the nearest whole number. It is important to acknowledge that the amount of missing data varies among questionnaire items, stemming from the respondents omitting questions not directly relevant or applicable to their circumstances.

The first part of the report contains the respondents' demographic distribution. This includes the respondents' area of operation in Cape Town, years of existence of the business, numbers of employees the business has, respondents' position in the workplace, the category of restaurant and the highest academic qualification the respondent holds. The second part deals with descriptive and cross-tabulation analysis of questionnaire items.

The third part contains the research question answers, which start with non-parametric Chi-square analysis. The Chi-square table was designed to test the independent hypothesis to answer the research question of association/relationship among variables under consideration, followed by Chi-square and symmetric measure tables, and finishing with an associated graph of illustration.

This chapter provides insights obtained through our field investigation, focusing on

comprehending the adoption, motivations, advantages, and risks associated with the integration of third-party online food ordering systems in restaurants across Cape Town.

The research has five primary objectives, which are:

i. To ascertain the extent to which restaurants in Cape Town are using third-party online food ordering systems.

ii. To establish the motivating factors to outsourcing online delivery service to a third-party service provider.

iii. To determine the benefits of using online ordering systems.

iv. To identify the risks arising from using from using third-party online ordering systems.

v. To establish the adequacy and effectiveness of the risk management measures used by restaurants in Cape Town

4.2 Profile of the participants

The initial segment of the report outlines the demographic characteristics of our respondents, including:

- The area of Cape Town in which the business operates
- The business's years of existence
- The respondent's years of professional experience
- Numbers of employees the business has
- The respondent's position in the workplace
- The category of restaurant
- The respondent's highest academic qualification

4.2.1 Demographic overview

The demographic segment sheds light on the profiles of participants involved in this study, offering valuable insights into the backgrounds of individuals engaged in the exploration of third-party online food ordering systems in Cape Town restaurants. Recognising the socio-demographic characteristics of respondents is crucial to mitigate potential biases and ensure that research findings accurately reflect the diverse perspectives that may influence adoption rates, motivating factors for outsourcing delivery services, and the perceived benefits of

integrating online ordering systems in restaurant operations.

The research suggests that these socio-demographic factors could potentially impact the comprehension, implementation, and determinants of integrating third-party online food ordering systems in Cape Town restaurants, affecting aspects such as adoption rates, motivating factors for outsourcing delivery services, and the perceived benefits of online ordering systems.

Table 4.1: Demographic distributions of the respondents

Demography		Count	Percentage	Mode
In which Area of Cape Town does the business operate?	CBD	45	38.80%	CBD
	Sea Point	36	31.00%	
	Camps Bay	2	1.70%	
	Stellenbosch	12	10.30%	

Demography		Count	Percentage	Mode
	Observatory	16	13.80%	
	Woodstock	5	4.30%	
How long has the business been in existence?	1–2years	11	11.3%	3–4 years
	3–4years	38	40.2%	
	5–6years	19	19.5%	
	7–8years	6	8.3%	
	9–10years	13	14.5%	
	11years and above	8	6.2%	
How many employees does the business employ?	0–10	29	30.0%	11–20 employees
	11–20	44	45.4%	
	21–30	11	11.5%	
	31–40	8	8.2%	
	41 and above	5	5.2%	
You are the...{tick the best answer}	Owner	6	5.2%	Manager
	Manager	106	91.4%	
	Owner and Manager	2	1.7%	
	Employee	2	1.7%	
What category is the restaurant?	Quick service	19	16.7%	Fast casual
	Fast casual	53	46.5%	
	Fine dining	24	21.1%	
	Pizza restaurant	18	15.8%	
	Virtual/digital kitchen	0	0.00%	
	Upscale casual	0	0.00%	

4.2.1.1 Operational location in Cape Town

The demographic profile examines the operational locations of restaurant respondents involved in the survey, revealing insights into their geographical distribution across various regions in Cape Town. The breakdown is as follows:

i. CBD (Central Business District): 45 respondents (38.80%)

ii. Sea Point: 36 respondents (31.00%)

iii. Camps Bay: 2 respondents (1.70%)

iv. Stellenbosch: 12 respondents (10.30%)

v. Observatory: 16 respondents (13.80%)

vi. Woodstock: 5 respondents (4.30%)

This distribution highlights the diverse operational landscape of restaurants in Cape Town. Notably, the majority of respondents operate in the CBD and Sea Point areas, constituting 38.80% and 31.00% of the total, respectively. The relatively low representation in certain regions, such as Camps Bay and Stellenbosch, suggests potential areas for further investigation or targeted strategies.

Operational areas provide valuable insights into the geographical dispersion of restaurant professionals, contributing to a nuanced understanding of the work environments of the survey participants.

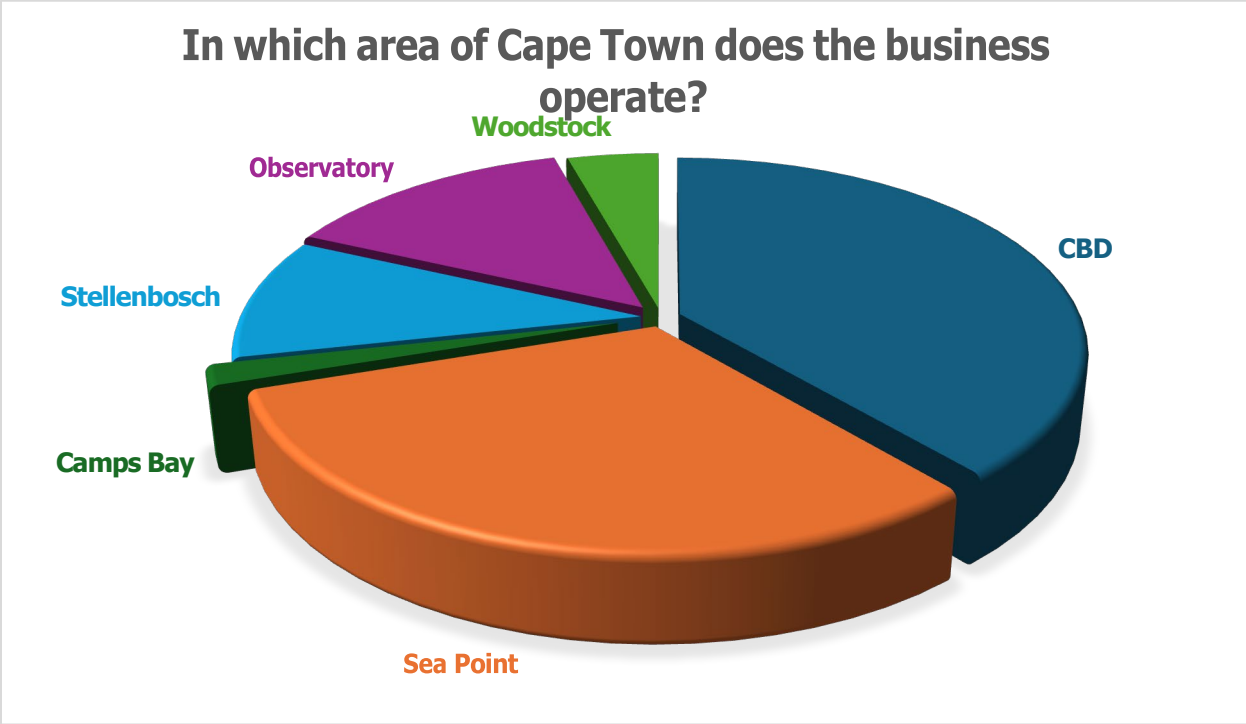

Figure 4.1: Distribution of business operating location in Cape Town

4.2.1.2 Years of existence of the business

Exploring the temporal aspect of restaurant operations, the demographic analysis delves into the longevity of businesses represented in the survey. The breakdown of respondents based on the duration of their business existence is as follows:

- 1–2 years: 11 respondent (11.30%)
- 3–4 years: 38 respondents (40.20%)
- 5–6 years: 19 respondents (19.50%)
- 7–8 years: 6 respondents (8.30%)
- 9–10 years: 13 respondents (14.50%)
- 11 years and above: 8 respondents (6.20%)

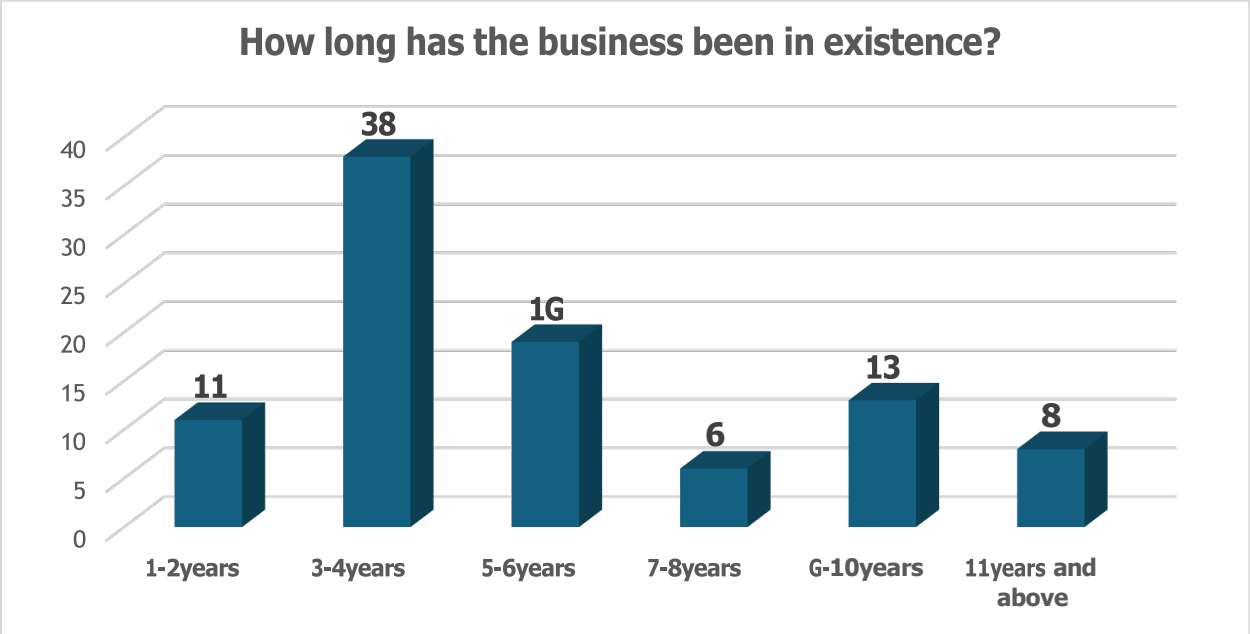

Figure 4.2: Distribution of years of existence of the business

This analysis provides insights into the temporal distribution of restaurants in Cape Town. Notably, a significant portion has been in operation for 3–4 years, constituting 40.20% of the total respondents. The varying representation in different business age categories suggests the need for targeted strategies or further exploration, especially for businesses with shorter durations such as 1–2 years. Understanding the temporal dynamics contributes to a comprehensive understanding of the challenges and opportunities existing within the restaurant industry.

4.2.1.3 Numbers of employees

Exploring the workforce structure of the surveyed restaurants, this demographic analysis provides insights into the distribution of respondents based on their employee count. The breakdown is as follows:

- 0–10 employees: 29 respondents (30.00%)
- 11–20 employees: 44 respondents (45.40%)
- 21–30 employees: 11 respondents (11.50%)
- 31–40 employees: 8 respondents (8.20%)
- 41 and above employees: 5 respondents (5.20%)

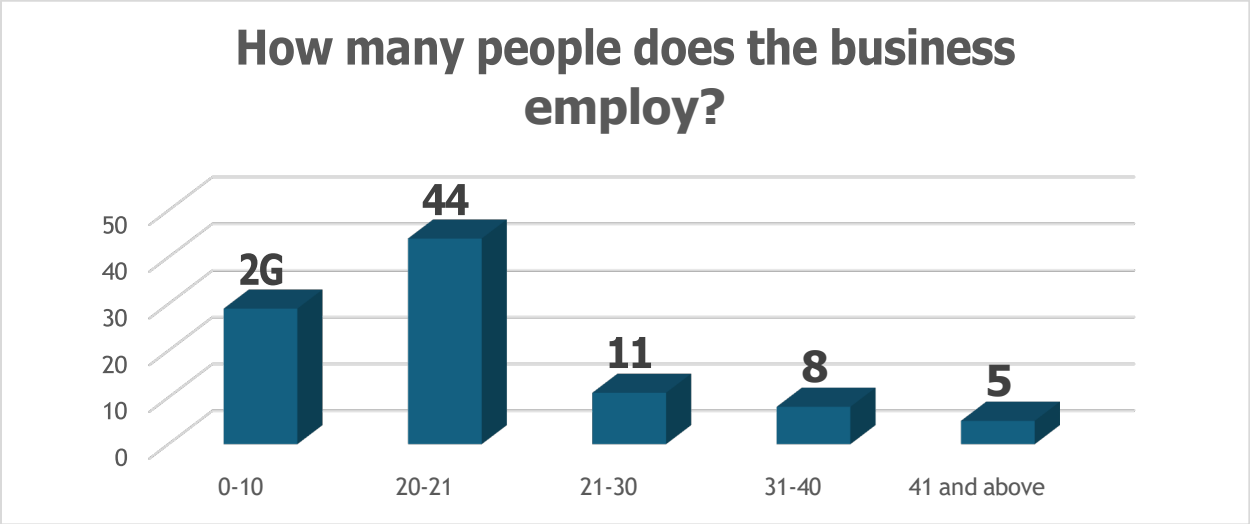

Figure 4.3: Distribution of numbers of employees

This distribution highlights the range of workforce sizes present in restaurants in Cape Town. The majority of respondents operate establishments with 11-20 employees, constituting 45.40% of the total, followed by those with 0-10 employees at 30.00%. The relatively lower representation in larger establishments with 31 employees or more suggests potential areas for further exploration in terms of workforce management strategies and operational dynamics.

Understanding the distribution of employee numbers provides valuable insights into the scale and structure of restaurant operations, contributing to a comprehensive understanding of the industry's workforce landscape.

4.2.1.4 Professional roles

Exploring the professional roles within the surveyed restaurants, this demographic analysis provides insights into the distribution of respondents based on their roles. The recalculated percentage to ensure a total of 100% is as follows:

- Owner: 6 respondents (5.20%)
- Manager: 106 respondents (91.40%)
- Owner and Manager: 2 respondents (1.70%)
- Employee: 2 respondents (1.70%)

Figure 4.4: Distribution of professional roles

This distribution illustrates the diverse professional landscape within the restaurant industry, where managers represent the majority at 91.40%. The presence of individuals serving both as owners and managers is notable at 1.7%. Recognising the variety of roles, from ownership to employment, contributes to a comprehensive understanding of the workforce dynamics in Cape Town's restaurants. Further exploration into the specific challenges and responsibilities associated with each role can enhance targeted strategies for industry development.

4.2.1.5 Categorisation of the surveyed restaurants

Examining the categorisation of the surveyed restaurants, this demographic analysis provides insights into the distribution of respondents based on their restaurant categories. The breakdown is as follows:

- Quick service: 19 respondents (16.70%)
- Fast casual: 53 respondents (46.50%)
- Fine dining: 24 respondents (21.10%)
- Pizza restaurant: 18 respondents (15.80%)
- Virtual/digital kitchen: 0 respondents (0.00%)
- Upscale casual: 0 respondents (0.00%)

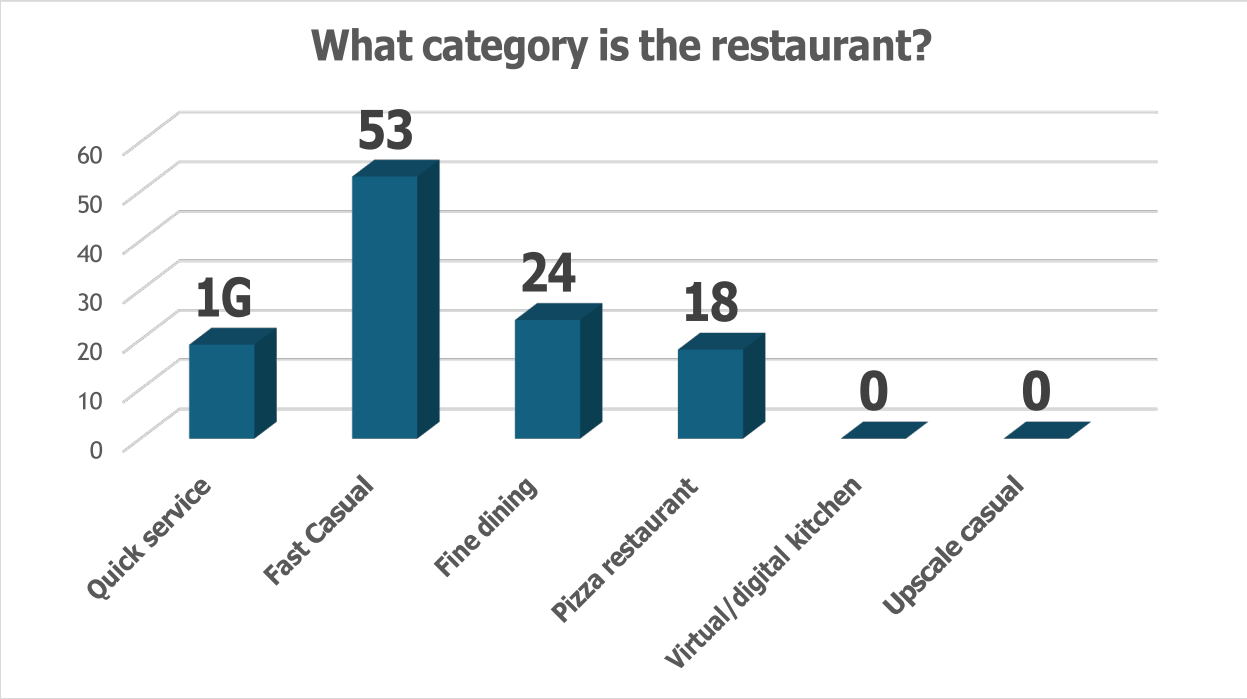

Figure 4.5: Distribution of categorisation of the surveyed restaurants

This distribution highlights the diverse landscape of restaurant categories in Cape Town. Notably, fast casual establishments represent the majority at 46.5%, followed by fine dining and quick service restaurants at 21.1% and 16.7%, respectively. The absence of respondents in the virtual/digital kitchen and upscale casual categories suggests areas for potential exploration or industry development.

Shifting the focus from geographical locations to restaurant categories provides valuable insights into the variety of dining experiences offered by surveyed professionals, contributing to a nuanced understanding of the restaurant industry in Cape Town.

4.3 Research questions analysis

This section empirically provides answers to the research questions raised in the course of this study to justify the attainment of research objectives quantitatively.

4.3.1 Research question 1

Objective 1

To ascertain the extent to which restaurants in Cape Town are using third-party online food ordering systems.

Research question 1

To what extent do restaurants operating in Cape Town utilise third-party online ordering systems?

Table 4.2: Extent to which restaurants in Cape Town are using third-party online food ordering systems

Does your restaurant use a third-party mobile app for online food ordering and delivery system?

Category	Frequency	Percent	Valid Percent	Cumulative Percent
No	4	.3	3.6	3.6
Yes	108	9.0	96.4	100.0
Total	112	9.3	100.0	

4.3.1.1 Does your restaurant use a third-party mobile app for online food ordering and delivery?

The data reflect that a substantial majority of respondents, 96.4%, affirmatively reported using a third-party mobile app for online food ordering and delivery systems in their restaurants. A minimal fraction, 3.6%, indicated not utilising such services. This distribution suggests a prevalent adoption of online food ordering systems among restaurants in Cape Town, emphasising the impact on the local dining landscape.

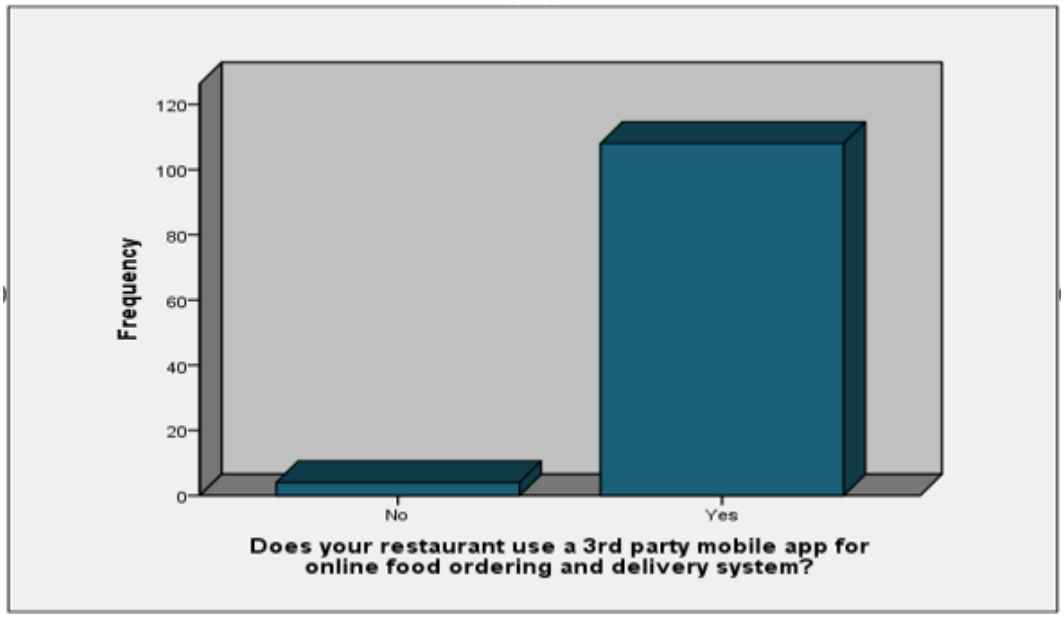

Figure 4.6: Extent to which restaurants in Cape Town are using third-party online food ordering systems

4.3.1.2 Cross-tabulation analysis of types of third-party mobile app online food ordering and delivery systems used by Cape Town restaurants

Table 4.2 reveals that over 90% of the restaurants in Cape Town use third-party mobile app online ordering systems. It is important to identify the different types of these systems available and their most preferred choices to understand the extent of their usage. Table 4.3 shows that most restaurants use multiple online ordering systems rather than relying on a single app, allowing them to reach more customers and giving customers the flexibility to choose their preferred app for online ordering.

The data indicate that 93% of the restaurants use Uber Eats as one of their primary mobile apps for online ordering. Similarly, 93% use Mr D, while 72.5% of restaurants use Bolt. Finally, less than 2% use Orderin. Most restaurants utilise the top three apps and report using all the most popular online ordering apps.

Table 4.3: Cross-tabulation analysis of mobile apps people use

	If Yes, which mobile apps do you use?		
	No	Yes	Total
Uber Eats	8	112	120
	6.7%	93.3%	100.0%
Mr D	8	112	120
	6.7%	93.3%	100.0%
Bolt	33	87	120
	27.5%	72.5%	100.0%
Orderin	118	2	120
	98.3%	1.7%	100.0%
All of the above	120	0	120
	100.0%	0.0%	100.0%
Total	287	313	600
	47.8%	52.2%	100.0%

Uber Eats

The data indicate a substantial majority, with 93.33% of respondents confirming the use of mobile apps for online food ordering, particularly citing Uber Eats as the predominant choice. Only a small fraction, 6.67%, reported not employing such apps, while no responses

Mr D

The data reveal a significant majority, with 93.3% of respondents confirming the use of a third-party mobile app for online food ordering and delivery systems, specifically mentioning Mr D as a popular choice. A minor fraction, 6.7%, reported not employing such services. This distribution underscores the widespread adoption of online food ordering systems, with Mr D being a prominent player, impacting the local dining landscape in Cape Town.

Bolt

The data illustrate a significant majority, with 72.5% of respondents indicating the use of a third-party mobile app for online food ordering and delivery systems, particularly favouring Bolt. A notable fraction, 27.5%, reported not utilising such services. This distribution highlights a substantial adoption of online food ordering systems, specifically through the Bolt app, influencing the local dining landscape among restaurants in Cape Town.

Orderin

The data indicate a minimal adoption of third-party mobile apps for online food ordering and delivery systems among respondents, with only 1.7% affirming the use of Orderin. A substantial majority, 98.3%, reported not utilising their services. This distribution suggests a limited impact of online food ordering systems, specifically Orderin, on the local dining landscape among restaurants in Cape Town.

All of the above

The data portray a unanimous adoption of third-party mobile apps for online food ordering and delivery systems among respondents, with 100% indicating the use of “All the above”. There were no reported cases of non-utilisation (0%) in this category. This distribution underscores a comprehensive adoption of online food ordering systems, emphasising a substantial impact on the local dining landscape among restaurants in Cape Town.

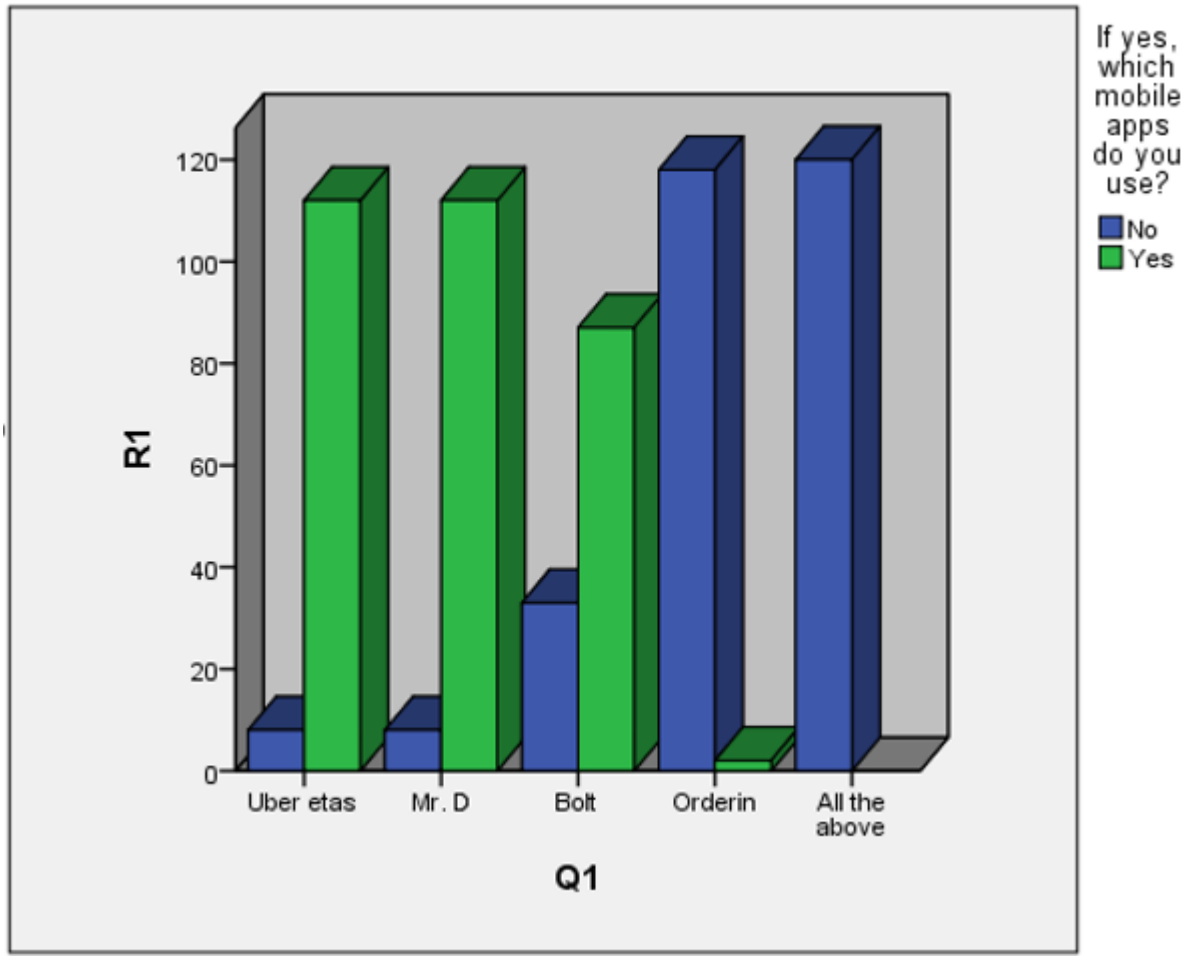

Figure 4.7: Extent to which restaurants in Cape Town are using specific third-party online food ordering systems

Table 4.4 reveals a Chi-square test of independence, showing a statistically significant difference in the types of third-party online ordering systems used by Cape Town restaurants.

The Chi-square test for independence indicated a statistically significant influence of the types of third-party online mobile ordering apps on their usage by Cape Town restaurants, X^2 (4, n = 116) = 436.393, p = 0.000. This implies that, despite the widespread adoption of third-party online ordering mobile apps by Cape Town restaurants, the extent of adoption varies significantly across different applications. The influence of third-party mobile ordering apps on restaurant operations is evident, but the level of adoption varies statistically across the different applications.

Table 4.4: Chi-square test analysis of extent to which restaurants in Cape Town are using third-party online food ordering systems

Chi-square test			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-square	436.393[a]	4	.000
Likelihood ratio	551.579	4	.000
Linear-by-linear association	371.932	1	.000
N of valid cases	600		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 57.40.

Table 4.5: Duration of using the mobile apps

How long have you been using mobile apps?

Category	Frequency	Percent	Valid percent	Cumulative percent
6 months	1	.1	1.0	1.0
2 years	7	.6	6.8	7.8
3 years	13	1.1	12.6	20.4
More than 3 years	82	6.8	79.6	100.0
Total	103	8.6	100.0	

4.3.1.2 How long have you been using mobile apps?

The provided data from Table 4.2 reveal that a substantial majority of respondents, amounting to 96.4%, affirmatively reported the use of a third-party mobile app for online food ordering and delivery systems in their restaurants. In response to the questionnaire question, “How long have you been using mobile apps?” the data indicate that one respondent (1%) reported using mobile apps for 6 months, 7 respondents (6.8%) for 2 years, 13 respondents (12.6%) for 3 years, and a significant portion of 82 respondents (79.6%) reported using mobile apps for more than 3 years. In addition, 17 respondents had missing responses to the question. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, emphasising the prolonged and widespread use of mobile apps in the local dining landscape.

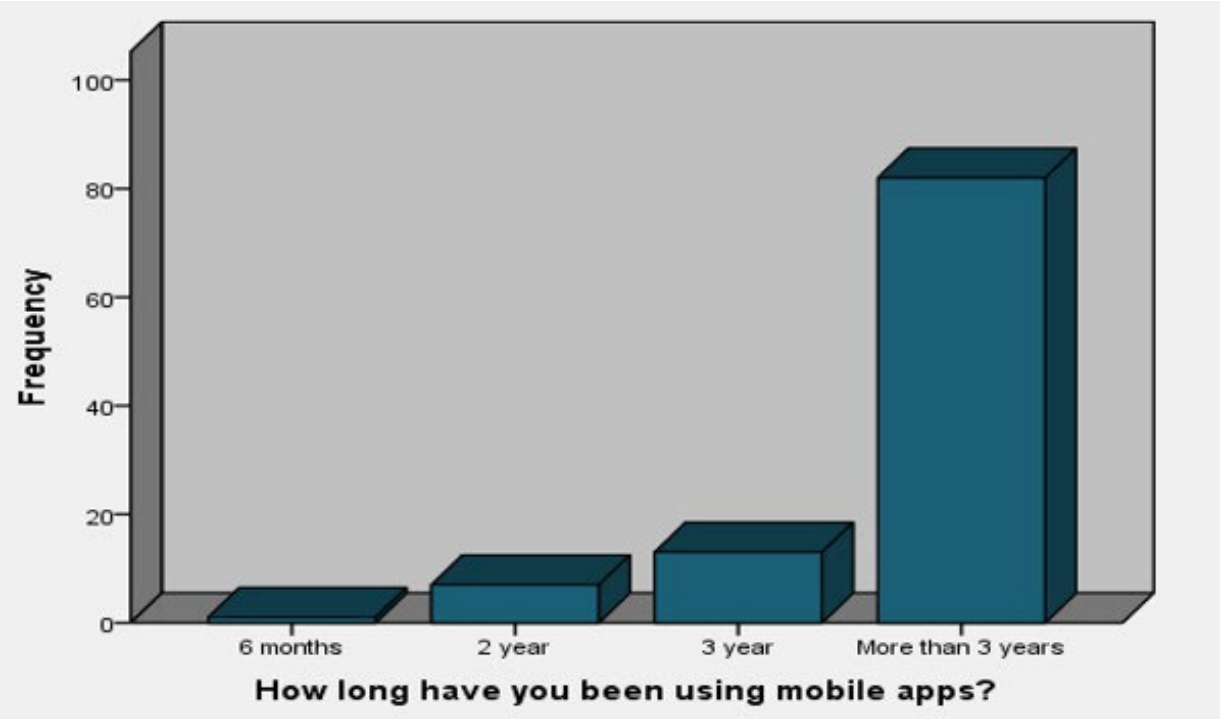

Figure 4.8: Duration of using the mobile apps

4.3.2 Research question 2

This second research question raised in the course of this study enquired into factors influencing outsourcing a delivery service to third-party service providers by Cape Town restaurants. The factors influencing outsourcing a delivery service to third-party service providers identified includes increased revenue, increased exposure, wider customer reach, convenience, cost related to digital infrastructure and in-house delivery service.

Objective 2

To establish the motivating factors to outsourcing online delivery service to a third-party service provider.

Research question 2

What are the factors influencing outsourcing a delivery service to third-party service providers?

Table 4.6: Cross-tabulation of motivating factors responsible for outsourcing food delivery service to a third-party online service provider

	Motivating factors responsible for outsourcing food delivery service to a third-party online service provider					Total
	Most Important	More Important	Important	Not Important	Least Important	
Increased revenue	20 17.7%	61 54.0%	28 24.8%	4 3.5%	0 0.0%	113 100.0%
Increased exposure	34 30.1%	58 51.3%	17 15.0%	4 3.5%	0 0.0%	113 100.0%
Wider customer reach	89 78.8%	18 15.9%	6 5.3%	0 0.0%	0 0.0%	113 100.0%
Convenience	25 22.1%	29 25.7%	37 32.7%	19 16.8%	3 2.7%	113 100.0%
Cost related to digital infrastructure and in-house delivery service	44 44.4%	12 12.1%	24 24.2%	13 13.1%	6 6.1%	99 100.0%
Total	212 38.5%	178 32.3%	112 20.3%	40 7.3%	9 1.6%	551 100.0%

4.3.2.1 Motivating factors responsible for outsourcing a delivery service to third party service providers

Increased revenue

The provided data indicate that a substantial majority of respondents, 113, affirmatively reported the use of a third-party mobile app for online food ordering and delivery systems in their restaurants. In response to the questionnaire question, “Motivating factors for outsourcing food delivery service to a third-party online service provider?” the data reveal that 20 respondents considered it “Most Important”, 61 respondents found it “More Important”, and 28 respondents regarded it as “Important”. Only a minimal fraction of four respondents deemed it “Not Important”, and none reported it as “Least Important”. In addition, seven respondents had missing responses to the question. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, emphasising the significance of outsourcing food delivery services to third-party online service providers for various motivating factors, particularly those perceived as important or more important by most respondents, thereby impacting the local dining landscape.

Increased exposure

The provided data reveal that a substantial majority of respondents, 113, confirmed their affirmative use of a third-party mobile app for online food ordering and delivery systems in their restaurants. Focused on the questionnaire question, “Motivating factors for outsourcing food delivery service to a third-party online service provider?” and the specific category “Increased exposure”, the data show that 34 respondents considered it “Most Important”, 58 respondents found it “More Important”, and 17 respondents regarded it as “Important”. A minimal fraction of four respondents deemed it “Not Important”, and none reported it as “Least Important”. In addition, seven respondents had missing responses to the question. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, emphasising the significance of outsourcing food delivery services to third-party online service providers for factors related to increasing exposure. This, in turn, highlights the substantial impact on the local dining landscape.

Wider customer reach

The provided data indicate that a substantial majority of respondents, totalling 113, affirmatively reported using a third-party mobile app for online food ordering and delivery systems in their restaurants. Specifically focusing on the questionnaire question, “Motivating factors for outsourcing food delivery service to a third-party online service provider?” and the designated category “Wider customer reach”, the data reveal that 89 respondents considered it “Most Important”, 18 respondents found it “More Important”, and six respondents regarded it as “Important”. Notably, none of the respondents deemed it “Not Important” or “Least Important”. In addition, seven respondents had missing responses to the question. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, highlighting the overwhelming importance attributed to outsourcing food delivery services to third-party online service providers for achieving a wider customer reach. This underscores the substantial impact on the local dining landscape.

Convenience

The presented data indicate that a substantial majority of respondents, 113, affirmed the use of a third-party mobile app for online food ordering and delivery systems in their restaurants. Specifically addressing the questionnaire question, “Motivating factors for outsourcing food delivery service to a third-party online service provider?” within the category “Convenience”, the data reveal that 25 respondents considered it “Most Important”, 29 respondents found it “More Important”, and 37 respondents regarded it as “Important”. In addition, 19 respondents

deemed it “Not Important”, while 3 respondents considered it “Least Important”. Moreover, seven respondents had missing responses to the question. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, underscoring the perceived importance of outsourcing food delivery services to third-party online service providers for the sake of convenience. The findings emphasise the substantial impact on the local dining landscape.

Cost related to digital infrastructure and in-house delivery service.

Of the respondents, 99 affirmed the utilisation of a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire query, “Motivating factors for outsourcing food delivery service to a third-party online service provider?” and the specific category “Cost related to digital infrastructure and in-house delivery service”, the data reveal that 44 respondents considered it “Most Important”, 12 respondents found it “More Important”, and 24 respondents regarded it as “Important”. Moreover, 13 respondents deemed it “Not Important”, while six respondents considered it “Least Important”. Notably, 21 respondents had missing responses to the question. This distribution emphasises the prevalent adoption of online food ordering systems among restaurants in Cape Town, underscoring the perceived significance of outsourcing food delivery services to third-party online service providers, particularly concerning cost-related factors associated with digital infrastructure and in-house delivery services. The findings highlight the consequential impact on the local dining landscape.

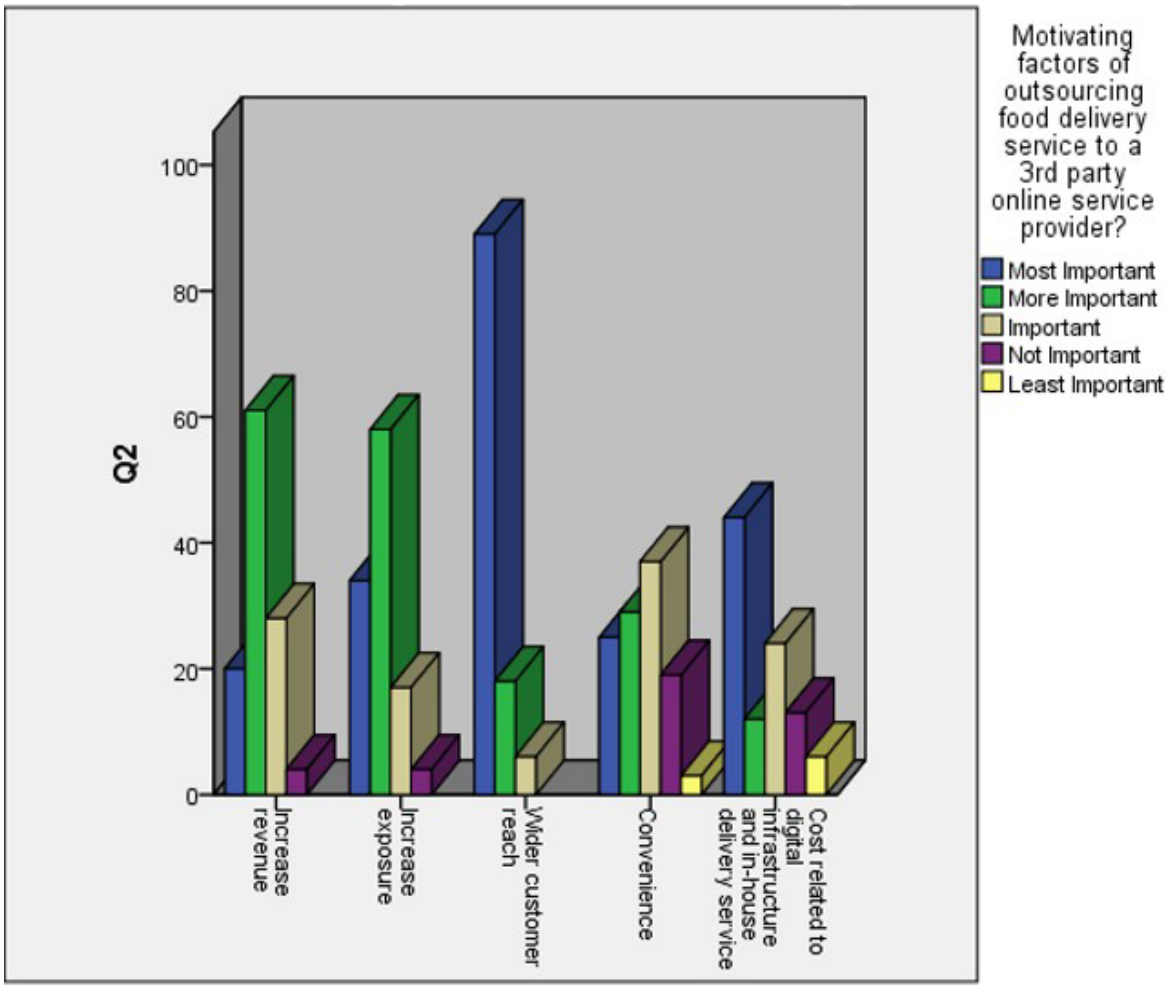

Figure 4.9: Factors influencing the decision to outsource food delivery service

Table 4.4 reveals a Chi-square test of independence, showing a statistically significant influence of various factors on the decision to outsource food delivery to third-party online ordering services by Cape Town restaurants.

The Chi-square test for independence indicated a statistically significant impact of the factors influencing the decision to outsource food delivery to third-party online ordering services by Cape Town restaurants, X^2 (16, n = 116) = 197.748, p = 0.000. This implies that factors such as increased revenue, greater exposure, wider customer reach, convenience, and costs related to digital infrastructure are influencing the decision of Cape Town restaurants to outsource food delivery to third-party online ordering services. The influence of third-party mobile ordering app services is determined by these factors, as identified in this study.

Table 4.7: Chi-square tests for factors influencing the decision to outsourcing food delivery service

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-square	197.748[a]	16	.000
Likelihood ratio	201.751	16	.000
Linear-by-linear association	6.459	1	.011
N of Valid Cases	551		

a. 5 cells (20.0%) have expected count less than 5. The minimum expected count is 1.62.

Table 4.8: Cros-tabulation analysis of factors affecting the decision not to outsource online food ordering and delivery service to a third-party service provider

	Factors affecting the decision not to outsource online food ordering and delivery service to a third-party service provider?						
	Most Important	More Important	Important	Less important	Not important	Least important	Total
Factor related to food	88 80.0%	11 10.0%	11 10.0%	0 0.0%	0 0.0%	0 0.0%	110 100.0%
Strategic location	5 4.5%	9 8.2%	18 16.4%	15 13.6%	34 30.9%	29 26.4%	110 100.0%
Customer affordability	5 4.5%	47 42.7%	28 25.5%	12 10.9%	11 10.0%	7 6.4%	110 100.0%
Cost related to commission fee	44 40.0%	49 44.5%	15 13.6%	0 0.0%	2 1.8%	0 0.0%	110 100.0%
Little control over a delivery	71 64.5%	31 28.2%	6 5.5%	0 0.0%	2 1.8%	0 0.0%	110 100.0%
Total	213 38.7%	147 26.7%	78 14.2%	27 4.9%	49 8.9%	36 6.5%	550 100.0%

4.3.2.2 Factors affecting the decision not to outsource online food ordering and delivery service to a third-party service provider

Factors related to food

The presented data underscore that a substantial majority of respondents, totalling 110, affirmatively utilise a third-party mobile app for online food ordering and delivery systems in their restaurants. Delving into

the questionnaire question, “Factors affecting the decision not to outsource online food ordering and delivery service to a third-party service provider?” and examining the specified category “Factors related to food”, the data reveal that 88 respondents considered it “Most Important”, 11 respondents found it “More Important”, and 11 respondents regarded it as “Important”. Notably, none of the respondents deemed it “Not Important”, “Less Important”, or “Least Important”. In addition, 10 respondents had missing responses to the question. This distribution emphasises the widespread adoption of online food ordering systems among restaurants in Cape Town, underscoring the predominant importance placed on factors related to food when deciding not to outsource online food ordering and delivery services to a third-party service provider. The findings highlight the consequential impact on the local dining landscape.

Strategic location

The presented data indicate that a substantial majority of respondents, comprising 110, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Factors affecting the decision not to outsource online food ordering and delivery service to a third-party service provider?” and the specified category “Strategic location”, the data reveal that five respondents considered it “Most Important”, nine respondents found it “More Important”, and 18 respondents regarded it as “Important”. On the other hand, 15 respondents deemed it “Not Important”, and 34 respondents considered it “Less Important”. In addition, 29 respondents rated it as “Least Important”, and 10 respondents had missing responses to the question. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, emphasising the diverse considerations related to the strategic location when deciding not to outsource online food ordering and delivery services to a third-party service provider. The findings highlight the consequential impact on the local dining landscape.

Customer affordability

The provided data indicate that a substantial majority of respondents, totalling 110, affirmatively reported using a third-party mobile app for online food ordering and delivery systems in their restaurants. Delving into the question, “Factors affecting the decision not to outsource online food ordering and delivery service to a third-party service provider?” and specifically examining the category “Customer affordability”, the data reveal that five respondents considered it “Most Important”, 47 respondents found it “More Important”, and 28 respondents regarded it as “Important”. Conversely, 12 respondents deemed it “Not Important”, while 11 respondents considered it “Less Important”. In addition, seven respondents rated it as “Least Important”, and 10 respondents had missing responses to the question. This distribution emphasises the prevalent adoption of online food ordering systems among restaurants in Cape Town, underscoring the various considerations related to customer affordability when deciding not to outsource online food ordering and delivery services to a third-party service provider. The findings highlight the consequential impact on the local dining landscape.

Cost related to commission fee

The provided data reveal that a substantial majority of respondents, totalling 110, affirmed the use of a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Factors affecting the decision not to outsource online food ordering and delivery service to a third-party service provider?” and specifically examining the category “Cost related to commission fee”, the data shows that 44 respondents considered it “Most Important”, 49 respondents found it “More Important”, and 15 respondents regarded it as “Important”. Notably, none of the respondents deemed it “Not Important” or “Least Important”. In addition, two respondents rated it as “Less Important”, and 10 respondents had missing responses to the question. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, underscoring the considerable significance of cost-related factors, particularly commission fees, when deciding not to outsource online food ordering and delivery services to a third-party service provider. The findings highlight the consequential impact on the local dining landscape.

Little control over a delivery

The provided data indicate that a substantial majority of respondents, totalling 110, affirmed the use of a third-party mobile app for online food ordering and delivery systems in their

restaurants. Focusing on the questionnaire question, “Factors affecting the decision not to outsource online food ordering and delivery service to a third-party service provider?” and specifically examining the category “Little control over a delivery”, the data reveal that 71 respondents considered it “Most Important”, 31 respondents found it “More Important”, and six respondents regarded it as “Important”. Notably, none of the respondents deemed it “Not Important” or “Least Important”. In addition, two respondents rated it as “Less Important”, and 10 respondents had missing responses to the question. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, emphasising the considerable importance placed on having control over the delivery process when deciding not to outsource online food ordering and delivery services to a third-party service provider. The findings highlight the consequential impact on the local dining landscape.

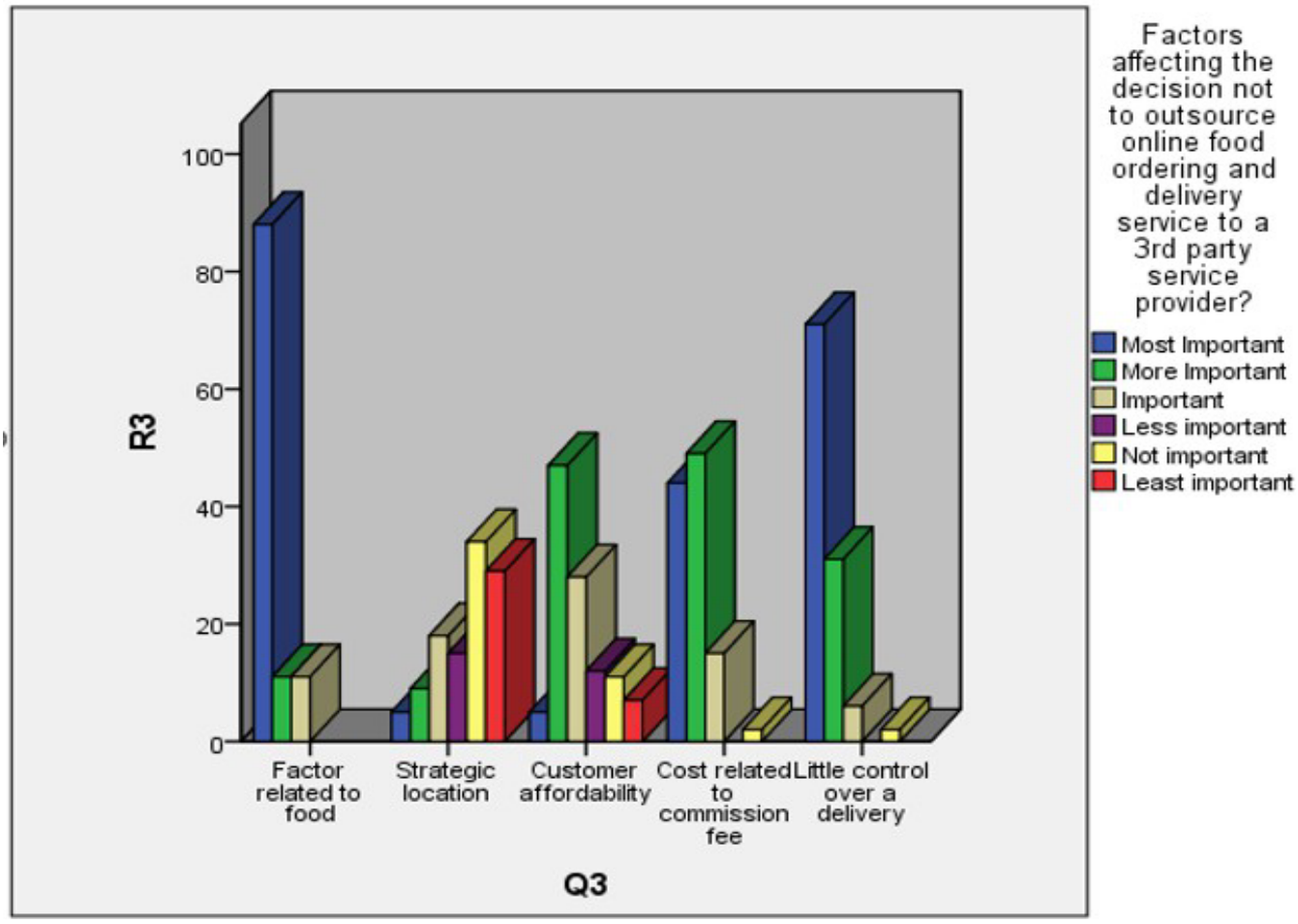

Figure 4.10: Factors affecting the decision not to outsource online food ordering and delivery service to a third-party service provider

Table 4.4 reveals a Chi-square test of independence, showing the statistically significant influence of various factors on the decision not to outsource food delivery to third-party online

ordering services by Cape Town restaurants. These factors also highlight the risks associated with outsourcing.

The Chi-square test of independence indicated the statistically significant impact of the factors influencing the decision not to outsource food delivery to third-party online ordering services by Cape Town restaurants, X^2 (20, n = 116) = 411.677, p = 0.000. This implies that factors such as food sensitivity, strategic location, customer affordability, costs related to commission fees, and limited control over delivery services are deterring the outsourcing to third-party online mobile app delivery services. The decision to avoid third-party online mobile app delivery services is influenced by these concerns.

Table 4.9: Chi-square tests for factors affecting the decision not to outsource online food ordering and delivery service to a third-party service provider

Chi-square Test			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-square	411.677[a]	20	.000
Likelihood Ratio	436.953	20	.000
Linear-by-Linear Association	22.979	1	.000
N of Valid Cases	550		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.40.

Table 4.10: How outsourcing of delivery service impacts a restaurant's profitability

How does outsourcing of delivery service impact on a restaurant's profitability?				
	Frequency	Percent	Valid Percent	Cumulative Percent
Negatively	8	.7	9.6	9.6
Positivity	75	6.3	90.4	100.0
Total	83	6.9	100.0	

4.3.2.3 How does outsourcing of delivery service impact a restaurant's profitability?

The provided data indicates that a substantial majority of respondents, comprising 120, reported using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focused on the questionnaire question, "How does outsourcing of delivery

service impact on a restaurant's profitability?" the data reveal that eight respondents perceived it negatively, 75 respondents saw it positively, and 37 respondents had missing responses. This distribution emphasises the widespread adoption of online food ordering systems among restaurants in Cape Town, shedding light on varying perceptions regarding the impact of outsourcing delivery services on a restaurant's profitability. The findings underscore the consequential influence on the local dining landscape.

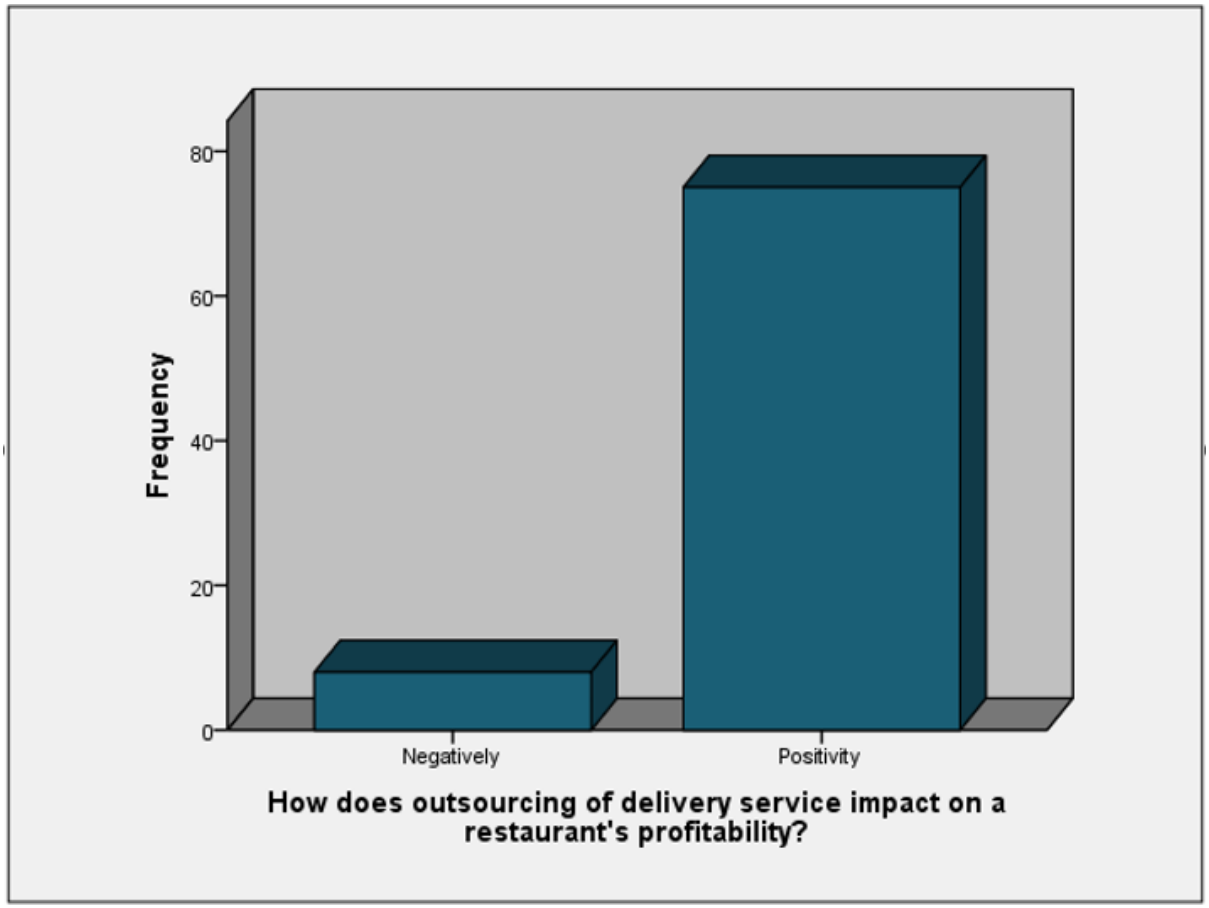

Figure 4.11: How outsourcing of delivery service impacts a restaurant's profitability

Table 4.11: Which of the following is generating more revenue for the business?

	Frequency	Percent	Valid Percent	Cumulative Percent
Eat in	66	5.5	57.9	57.9
Takeout/Takeaway	36	3.0	31.6	89.5
Third-party mobile food apps/Online food delivery	11	.9	9.6	99.1
In-house delivery	1	.1	.9	100.0
Total	114	9.5	100.0	

4.3.2.4 Which of the following is generating more revenue for the business?

The provided data illustrate that a substantial majority of respondents, totalling 120, affirmed using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Which of the following is generating more revenue for the business?” the data reveal that 66 respondents attributed more revenue to “Eat in”, 36 respondents to “Takeout/Takeaway”, 11 respondents to “third-party mobile food apps/Online food delivery”, and one respondent to "in-house delivery”. In addition, six respondents had missing responses. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, highlighting the diverse revenue sources and their respective impacts on the local dining landscape.

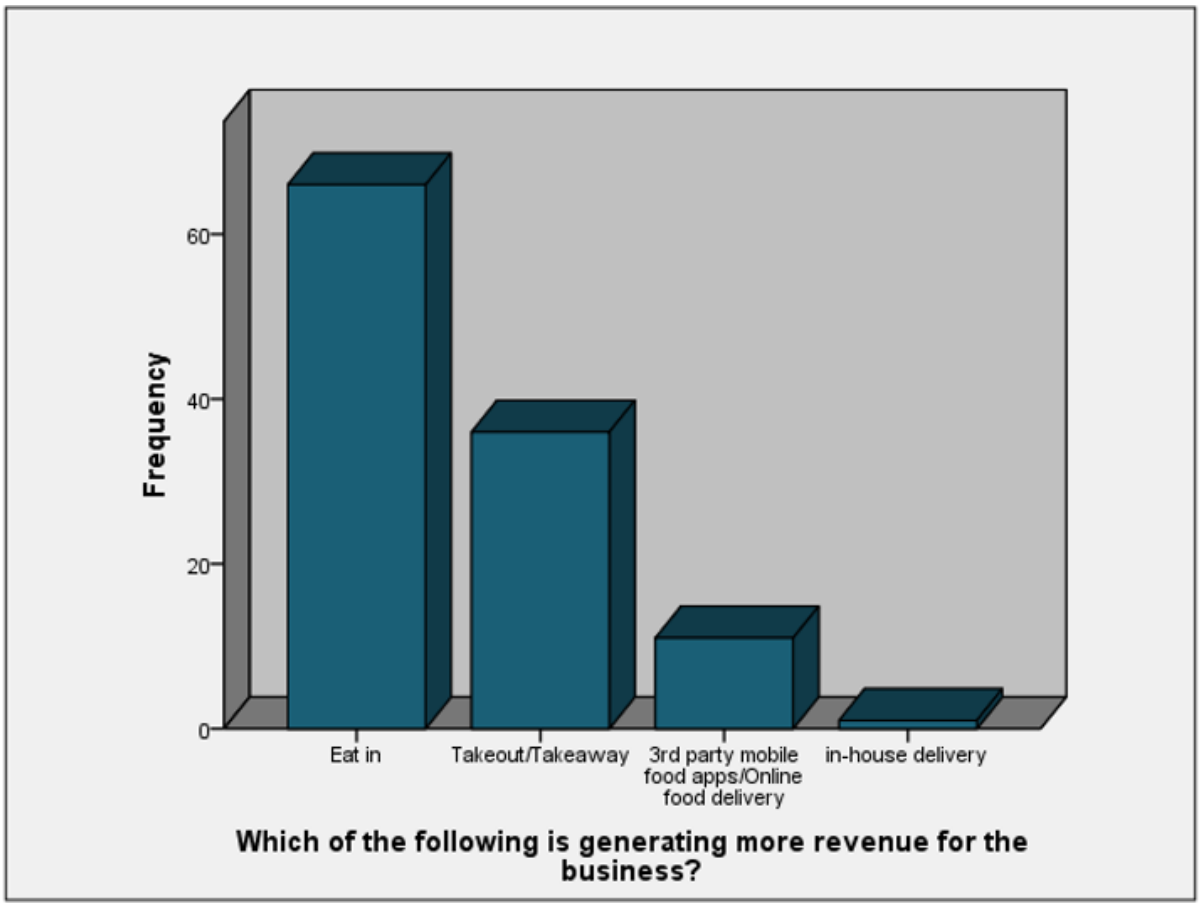

Figure 4.12: Which generates more revenue for a business?

4.3.3 Research question 3

Objective 3

To determine the benefits of using online ordering systems.

Research question 3

What are the benefits of using online ordering systems?

Table 4.12: What are the advantages of using a third-party online ordering and delivery system?

	Frequency	Percent	Valid Percent	Cumulative Percent
Enhances sales volume	4	.3	3.6	3.6
Branding promotion/awareness	4	.3	3.6	7.3
Competitive advantage	2	.2	1.8	9.1
Marketing of food products (via more promotions)	2	.2	1.8	10.9
All of the above	98	8.2	89.1	100.0
Total	110	9.2	100.0	

4.3.3.1 What are the advantages of using the third-party online ordering and delivery system?

The provided data indicate that a substantial majority of respondents, totalling 110, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. In response to the questionnaire question, “What are the advantages of using the third-party online ordering and delivery system?” the data reveal that four respondents identified “Enhances sales volume”, four respondents mentioned “Branding promotion/awareness”, two respondents highlighted “Competitive advantage”, and another two respondents emphasised “Marketing of food products (via more promotions)”. Furthermore, a significant majority of 98 respondents selected “All of the above”, while 10 respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, emphasising the perceived advantages, including enhanced sales volume, branding promotion, competitive advantage, and marketing of food products through promotions. The findings highlight the consequential impact on the local dining landscape.

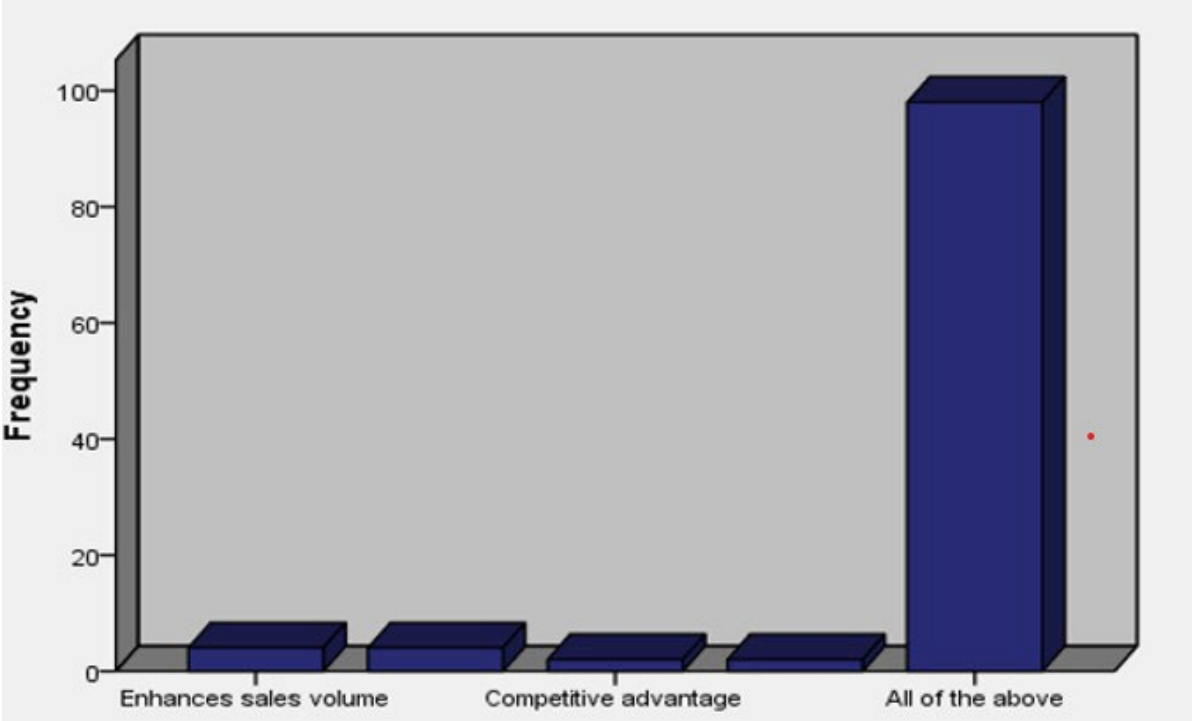

Figure 4.13: Advantages of the third-party online ordering and delivery system

Table 4.13: How satisfied are you with a third-party food delivery service?

	Frequency	Percent	Valid Percent	Cumulative Percent
Not satisfied	3	2.6	2.6	2.6
Satisfied	111	97.4	97.4	100.0
Total	114	100.0	100.0	

4.3.3.2 How satisfied are you with a third-party food delivery service?

The provided data indicate that a substantial majority of respondents, totalling 114, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. In response to the questionnaire question, “How satisfied are you with a third-party food delivery service?” the data reveal that three respondents expressed dissatisfaction, 111 respondents reported satisfaction, and six respondents had missing responses to the question. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, while also emphasising a high level of satisfaction with third-party food delivery services among the surveyed establishments. The findings highlight the consequential impact on the local dining landscape.

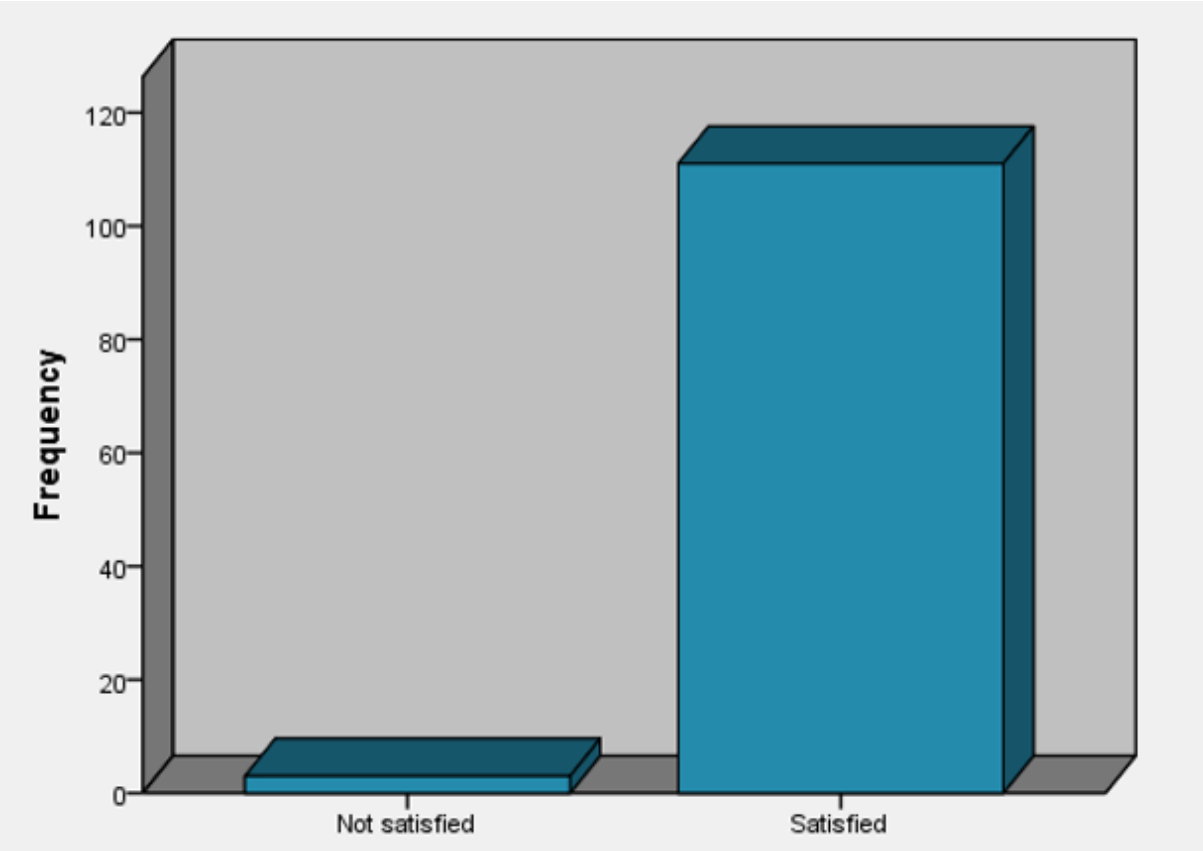

Figure 4.14: How satisfied are you with a third-party delivery system?

Table 4.14: Cross-tabulation analysis of platforms offering the best food delivery service

	Which one of the following platforms offer the best food delivery service?				
	Best	Better	Good	Worst	Total
Mr D	33	81	0	2	116
	28.4%	69.8%	0.0%	1.7%	100.0%
Uber Eats	83	33	0	0	116
	71.6%	28.4%	0.0%	0.0%	100.0%
Bolt	0	2	95	0	97
	0.0%	2.1%	97.9%	0.0%	100.0%
Orderin	0	0	2	0	2
	0.0%	0.0%	100.0%	0.0%	100.0%
Total	116	116	97	2	331
	35.0%	35.0%	29.3%	0.6%	100.0%

4.3.3.3 Which one of the following platforms offer the best food delivery service?

Mr D

The provided data indicate that a substantial majority of respondents, comprising 116, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Which one of the following platforms offers the best food delivery service?” within the category “Mr. D”, the data reveal that 33 respondents deemed it “Best”, 81 respondents considered it “Better”, and none rated it as “Good” or “Worst”. Moreover, four respondents had missing responses to the question. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, emphasising the perceptions of the surveyed establishments regarding the food delivery service provided by the “Mr. D” platform and its consequential impact on the local dining landscape.

Uber Eats

The presented data indicates that a substantial majority of respondents, totalling 116, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Which one of the following platforms offers the best food delivery service?” within the category “Uber Eats”, the data reveal that 83 respondents deemed it “Best”, 33 respondents considered it “Better”, and none rated it as “Good” or ‘Worst”. Moreover, four respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, emphasising the perceived excellence of the food delivery service provided by the “Uber Eats” platform and its consequential impact on the local dining landscape.

Bolt

Of the respondents, 97 reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Which one of the following platforms offers the best food delivery service?” within the category “Bolt”, the data reveal that none of the respondents rated it as “Best”, two respondents considered it “Better”, 95 respondents regarded it as “Good”, and none rated it as “Worst”. Moreover, 23 respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, emphasising the perceptions of the surveyed establishments regarding the food

delivery service provided by the “Bolt” platform and its consequential impact on the local dining landscape.

Orderin

The presented data indicates that a substantial majority of respondents choose the other forms of delivery rather than Orderin. The total respondents who chose Ordering numbering two, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Specifically addressing the questionnaire question, “Which one of the following platforms offers the best food delivery service?” within the category “Orderin”, the data reveal that none of the respondents rated it as “Best” or “Better”, two respondents considered it “Good”, and none rated it as “Worst”. However, a significant fraction of 118 respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, while also highlighting a notable lack of specific feedback regarding the perceived food delivery service quality of the “Orderin” platform. The findings emphasise the consequential impact on the local dining landscape.

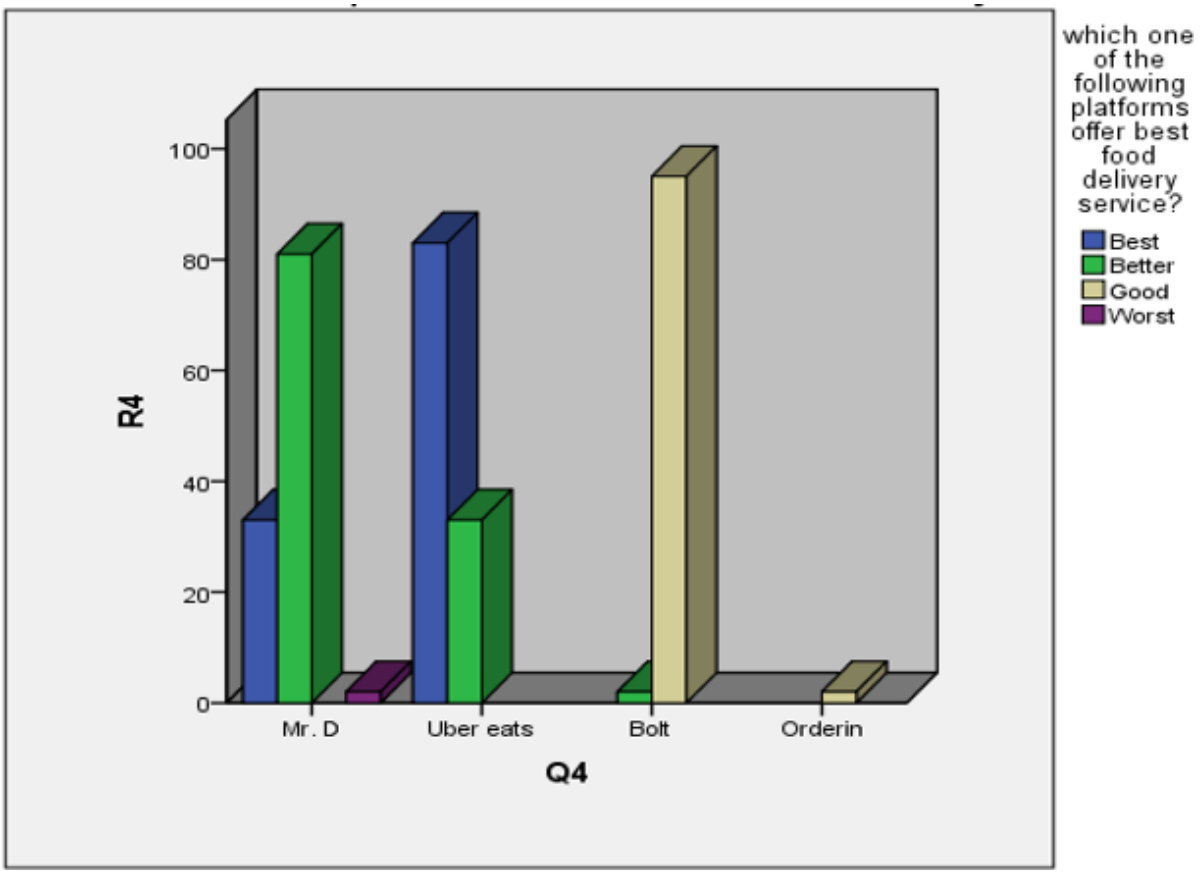

Figure 4.15: Cross-tabulation bar chart showing preference of Cape Town restaurants of third-party ordering services that offer best food services delivery

4.3.4 Research Question Four

Objective 4

To identify the risks arising from using online ordering systems.

Research question 4

What risks emanate from using online ordering systems**?**

Table 4.15: Cross-tabulation of operational risks restaurants are facing

	Which operational risks is your restaurant facing?					Total
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Lack of control over online delivery system	0 0.0%	0 0.0%	4 3.5%	49 43.0%	61 53.5%	114 100.0%
System failure (owing to load shedding)	0 0.0%	1 0.9%	4 3.4%	87 75.0%	24 20.7%	116 100.0%
High operating cost (result of commission fee paid to a third party)	0 0.0%	20 17.2%	76 65.5%	18 15.5%	2 1.7%	116 100.0%
Additional time delays (result of independent drivers)	0 0.0%	11 9.5%	41 35.3%	61 52.6%	3 2.6%	116 100.0%
Late deliveries	2 1.7%	18 15.5%	27 23.3%	68 58.6%	1 0.9%	116 100.0%
Total	2 0.3%	50 8.7%	152 26.3%	283 49%	91 15.7%	578 100.0%

4.3.4.1 Which operational risks is your restaurant facing?

Lack of control over online delivery system

The provided data indicates that a substantial majority of respondents, comprising 114, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Which operational risks is your restaurant facing?” within the category “Lack of control over the online delivery system”, the data reveal that none of the respondents strongly disagreed or disagreed, four respondents were undecided, 49 respondents agreed, and 61 respondents strongly agreed. In addition, six respondents had missing responses to the question. This distribution

underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, highlighting varying perceptions regarding the operational risks associated with the lack of control over the online delivery system. The findings emphasise the consequential impact on the local dining landscape.

System failure (owing to load shedding)

The presented data indicate that a substantial majority of respondents, comprising 116, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Which operational risks is your restaurant facing?” within the category “System failure (owing to load shedding)”, the data reveal that none of the respondents strongly disagreed, one respondent disagreed, four respondents were undecided, 87 respondents agreed, and 24 respondents strongly agreed. In addition, six respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, highlighting varying perceptions regarding the operational risks associated with system failure owing to load shedding. The findings emphasise the consequential impact on the local dining landscape.

High operating cost (result of commission fee paid to a third party)

The provided data indicate that a substantial majority of respondents, comprising 116, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question,” Which operational risks is your restaurant facing?” within the category “High operating cost (result of commission fee paid to a third party)”, the data reveal that none of the respondents strongly disagreed, 20 respondents disagreed, 76 respondents were undecided, 18 respondents agreed, and two respondents strongly agreed. In addition, six respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, highlighting varying perceptions regarding the operational risks associated with the high operating cost resulting from commission fees paid to third-party providers. The findings emphasise the consequential impact on the local dining landscape.

Additional time delays (result of independent drivers)

The presented data indicate that a substantial majority of respondents, comprising 116, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Which operational risks

is your restaurant facing?" within the category "Additional time delays (result of independent drivers)" the data reveal that none of the respondents strongly disagreed, 11 respondents disagreed, 41 respondents were undecided, 61 respondents agreed, and three respondents strongly agreed. In addition, six respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, highlighting varying perceptions regarding the operational risks associated with additional time delays resulting from independent drivers. The findings emphasise the consequential impact on the local dining landscape.

Late deliveries

The provided data indicates that a substantial majority of respondents, comprising 116, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, "Which operational risks is your restaurant facing?" within the category "Late deliveries", the data reveal that two respondents strongly disagreed, 18 respondents disagreed, 27 respondents were undecided, 68 respondents agreed, and one respondent strongly agreed. In addition, six respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, highlighting varying perceptions regarding the operational risks associated with late deliveries. The findings emphasise the consequential impact on the local dining landscape.

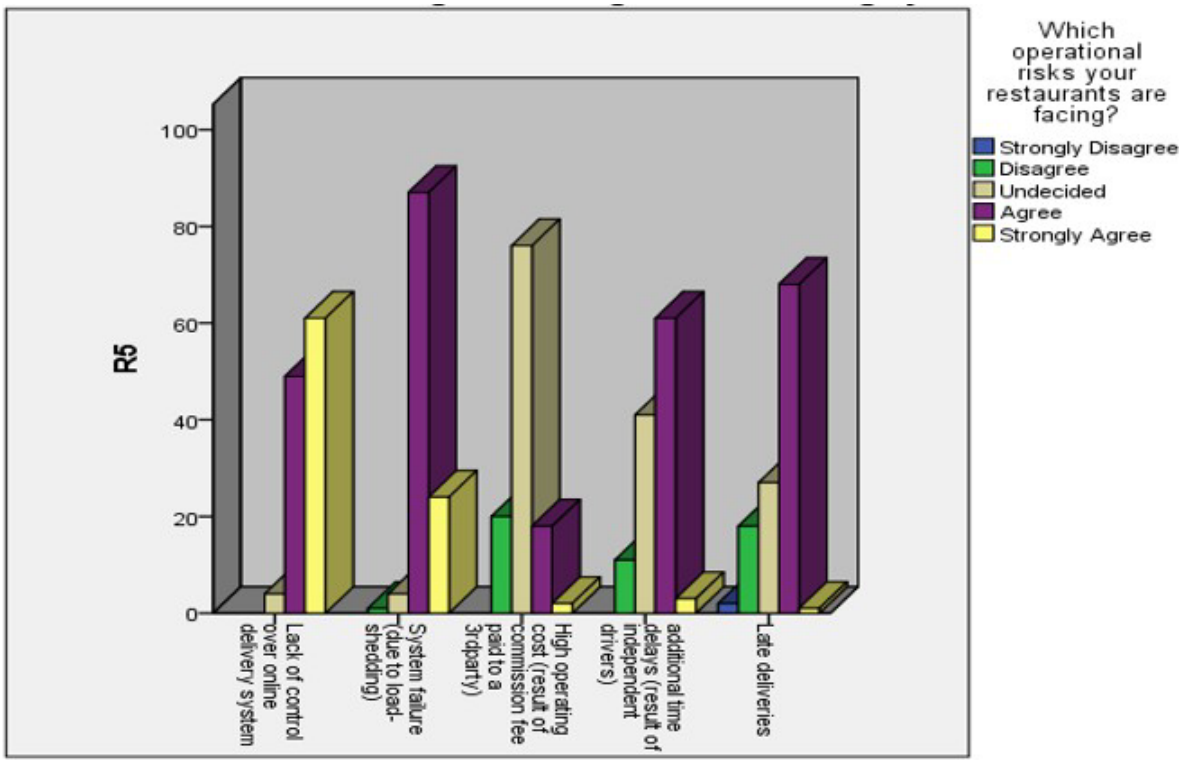

Figure 4.16: Associated operational risk of outsourcing to third-party online delivery services

Table 4.16: Cross-tabulation of strategic risks restaurants are facing post pandemic

	Which strategic risks is your restaurant facing post pandemic?					
	Strongly Disagree	Dis agree	Unde cided	Agr ee	Strongly Agree	Total
Reliance on a third-party operating system	0 0.0%	4 3.5%	3 2.6%	50 43.5 %	58 50.4%	115 100.0 %
Weak business profitability	6 5.2%	32 27.8%	56 48.7%	19 16.5 %	2 1.7%	115 100.0 %
Loss of customer loyalty to a third party	2 1.7%	4 3.5%	11 9.6%	84 73.0 %	14 12.2%	115 100.0 %
Changes in customer preferences	0 0.0%	4 3.5%	8 7.0%	83 72.2 %	20 17.4%	115 100.0 %

Table 4.16: Cross-tabulation of strategic risks restaurants are facing post pandemic

	Which strategic risks is your restaurant facing post pandemic?					
	Strongly Disagree	Dis agree	Undecided	Agree	Strongly Agree	Total
Change in economic conditions	4 3.5%	32 28.3%	70 61.9%	5 4.4%	2 1.8%	113 100.0%
Total	12 2.1%	76 13.3%	148 25.8%	241 42.1%	96 16.8%	573 100.0%

4.3.4.2 Which strategic risks is your restaurant facing post pandemic?

Reliance on a third-party operating system

The presented data indicate that a substantial majority of respondents, comprising 115, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Which strategic risks is your restaurant facing post pandemic?” within the category “Reliance on a third-party operating system”, the data reveal that none of the respondents strongly disagreed, four respondents disagreed, three respondents were undecided, 50 respondents agreed, and 58 respondents strongly agreed. In addition, five respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, emphasising varying perceptions regarding the strategic risks associated with reliance on third-party operating systems in the post-pandemic landscape. The findings highlight the consequential impact on the local dining landscape.

Weak business profitability

The presented data indicate that a substantial majority of respondents, comprising 115, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Which strategic risks is your restaurant facing post pandemic?” within the category “Weak business profitability”, the data reveal that six respondents strongly disagreed, 32 respondents disagreed, 56

respondents were undecided, 19 respondents agreed, and two respondents strongly agreed. In addition, five respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, emphasising varying perceptions regarding the strategic risks associated with weak business profitability in the post-pandemic landscape. The findings highlight the consequential impact on the local dining landscape.

Loss of customer loyalty to a third party

The provided data indicates that a substantial majority of respondents, comprising 115, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Which strategic risks is your restaurant facing post pandemic?” within the category “Loss of customer loyalty to a third party”, the data reveal that two respondents strongly disagreed, four respondents disagreed, 11 respondents were undecided, 84 respondents agreed, and 14 respondents strongly agreed. In addition, five respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, emphasising varying perceptions regarding the strategic risks associated with the potential loss of customer loyalty to third-party services in the post-pandemic landscape. The findings highlight the consequential impact on the local dining landscape.

Changes in customer preferences

The presented data indicate that a substantial majority of respondents, comprising 115, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Which strategic risks is your restaurant facing post pandemic?” within the category “Changes in customer preferences”, the data reveal that none of the respondents strongly disagreed, four respondents disagreed, eight respondents were undecided, 83 respondents agreed, and 20 respondents strongly agreed. In addition, five respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, emphasising varying perceptions regarding the strategic risks associated with potential changes in customer preferences in the post-pandemic landscape. The findings highlight the consequential impact on the local dining landscape.

Changes in economic conditions

The provided data indicate that a substantial majority of respondents, comprising 113, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, "Which strategic risks is your restaurant facing post pandemic?" within the category “Changes in economic conditions”, the data reveal that four respondents strongly disagreed, 32 respondents disagreed, 70 respondents were undecided, five respondents agreed, and two respondents strongly agreed. In addition, seven respondents had missing responses to the question. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, emphasising varying perceptions regarding the strategic risks associated with potential changes in economic conditions in the post-pandemic landscape. The findings highlight the consequential impact on the local dining landscape.

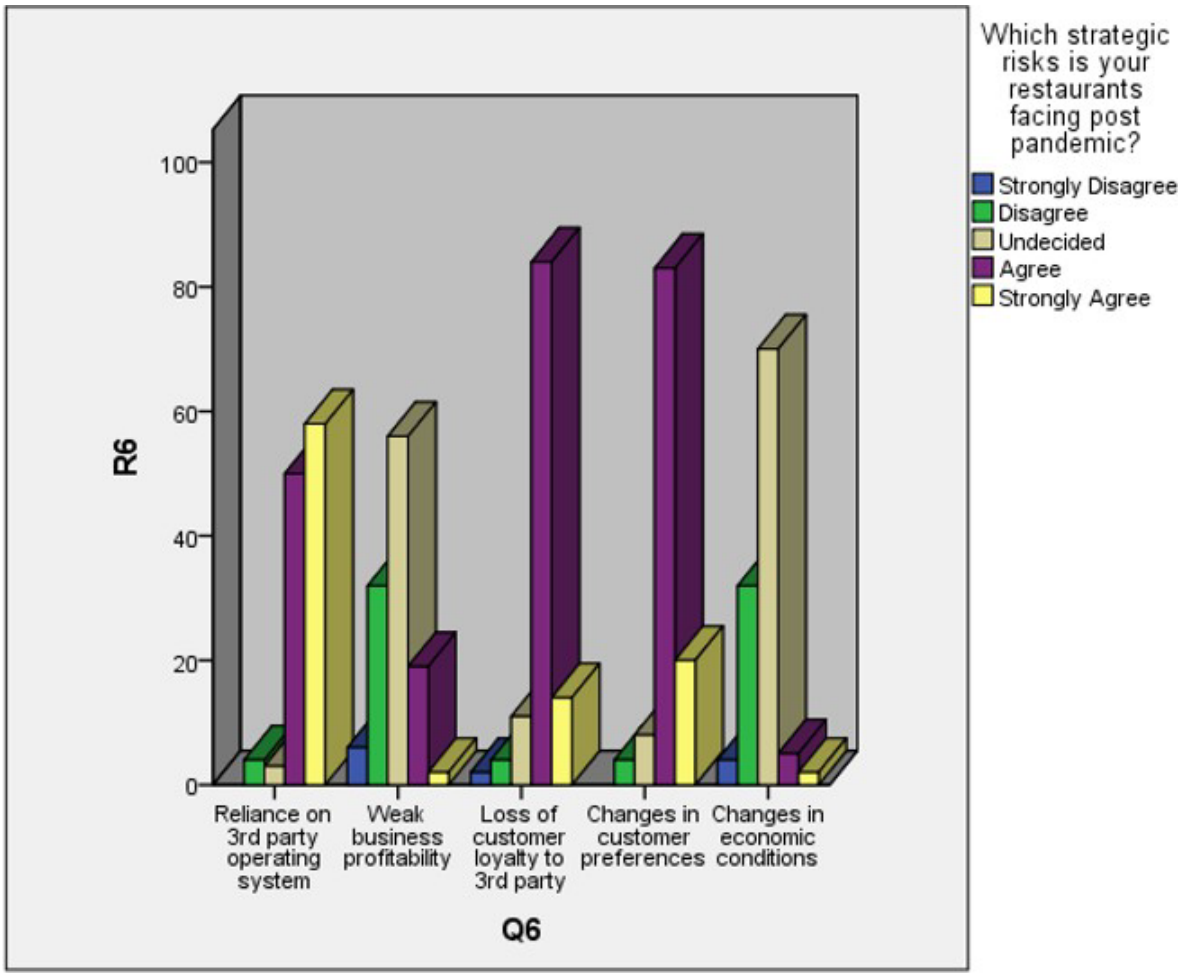

Figure 4.17: Risk arising from using online ordering systems

4.3.5 Research question 5

Objective 5

To establish the adequacy and effectiveness of the risk management measures used by restaurants in Cape Town.

Research question 5

How do restaurants in Cape Town manage the risks arising from using online ordering systems?

Table 4.17: Cross-tabulation analysis of understanding the enterprise risk management system

	Understanding of the enterprise risk management system		
	No	Yes	Total
Do you understand the enterprise risk management process?	38	77	115
	33.0%	67.0%	100.0 %
Have you implemented an ERM initiative in your business?	109	4	113
	96.5%	3.5%	100.0 %
Does ERM add value to your business?	52	65	117
	44.4%	55.6%	100.0 %
Total	199	146	345
	57.7%	42.3%	100.0 %

4.3.5.1 Do you understand the enterprise risk management process?

The provided data indicate that a substantial majority of respondents, comprising 115, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Understanding of the enterprise risk management system”, within the category “Do you understand the enterprise risk management process?” the data reveal that 77 respondents answered affirmatively with

“Yes”, 38 respondents indicated “No”, and five respondents had missing responses. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, while also highlighting variations in the understanding of the enterprise risk management processes among the surveyed establishments. The findings emphasise the impact on the local dining landscape and the potential implications for risk management practices.

4.3.5.2 Have you implemented an ERM initiative in your business?

The data provided indicate that a significant majority of respondents, amounting to 117, affirmed the use of a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Understanding of the enterprise risk management system”, within the category “Have you implemented an ERM initiative in your business?” the data show that four respondents answered positively with “Yes”, 109 respondents responded negatively with “No”, and seven respondents did not provide responses. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, while concurrently indicating a limited implementation of enterprise risk management (ERM) initiatives among the surveyed establishments. The findings highlight potential variations in risk management practices within the local dining landscape.

4.3.5.3 Does ERM add value to your business?

The provided data reveal that a significant majority of respondents, accounting for 117, affirmatively reported using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “Understanding of the enterprise risk management system”, within the category “Does ERM add value to your business?” the data show that 65 respondents answered positively with “Yes”, 52 respondents indicated “No”, and three respondents had missing responses. This distribution underscores the widespread adoption of online food ordering systems among restaurants in Cape Town, while also indicating varying perspectives on whether enterprise risk management (ERM) adds value to the surveyed establishments. The findings emphasise the impact on the local dining landscape and suggest potential variations in perceived value from risk management practices.

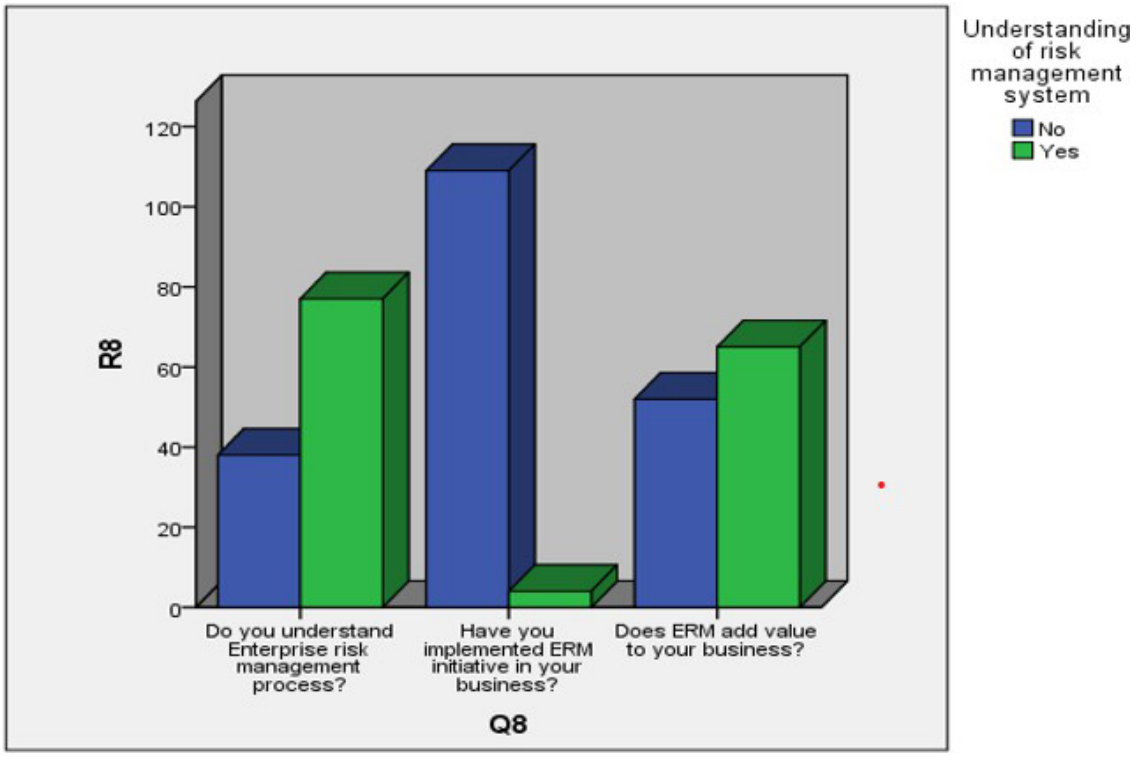

Figure 4.18: Extent to which restaurant managers understand risk management and its adequacy

Table 4.18: Cross-tabulation analysis of risk management initiatives implemented to mitigate risks

	What risk management initiatives are implemented to mitigate risks?		
	No	Yes	Total
Do you have your own online ordering system	22	98	120
	18.3%	81.7%	100.0 %
Do you have an alternative back-up plan for online ordering system	2	118	120
	1.7%	98.3%	100.0 %
Do you plan to have your own digital ordering system in future	87	33	120
	72.5%	27.5%	100.0 %
Total	111	249	360
	30.8%	69.2%	100.0 %

4.3.5.4 Do you have your own online ordering system?

The provided data indicate that a significant majority of respondents, comprising 120, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “What risk management initiatives are implemented to mitigate risks?” within the category “Do you have your own online ordering system?” the data reveal that 98 respondents answered affirmatively with “Yes”, 22 respondents indicated “No”, and there is no information regarding missing responses. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, while also highlighting a high implementation rate of having their own online ordering system as a risk management initiative among the surveyed establishments. The findings emphasise the impact on the local dining landscape and suggest proactive measures taken by establishments to manage risks in the online food ordering domain.

4.3.5.5 Do you have an alternative back-up plan for an online ordering system?

The provided data indicate that a substantial majority of respondents, comprising 120, reported affirmatively using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “What risk management initiatives are implemented to mitigate risks?” within the category “Do you have an alternative back-up plan for the online ordering system?” the data reveal that 118 respondents answered affirmatively with “Yes”, two respondents indicated “No”, and there is no information regarding missing responses. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, while also highlighting a high implementation rate of having an alternative back-up plan for the online ordering system as a risk management initiative among the surveyed establishments. The findings emphasise the impact on the local dining landscape and suggest proactive measures taken by establishments to manage risks associated with online food ordering systems.

4.3.5.6 Do you plan to have your own digital ordering system in future?

The provided data indicate that a substantial majority of respondents, comprising 96.4%, reported affirmatively to using a third-party mobile app for online food ordering and delivery systems in their restaurants. Focusing on the questionnaire question, “What risk management initiatives are implemented to mitigate risks?” within the category “Do you plan to have your own digital ordering system in the future?” the data reveal that 33 respondents (27.27%) answered affirmatively with “Yes”, 87 respondents (72.27%) indicated “No”, and there is no

information regarding missing responses. This distribution underscores the prevalent adoption of online food ordering systems among restaurants in Cape Town, while also indicating that a significant portion of surveyed establishments do not plan to have their own digital ordering system in the future. The findings emphasise the impact on the local dining landscape and suggest a potential shift in digital ordering strategies among the establishments surveyed.

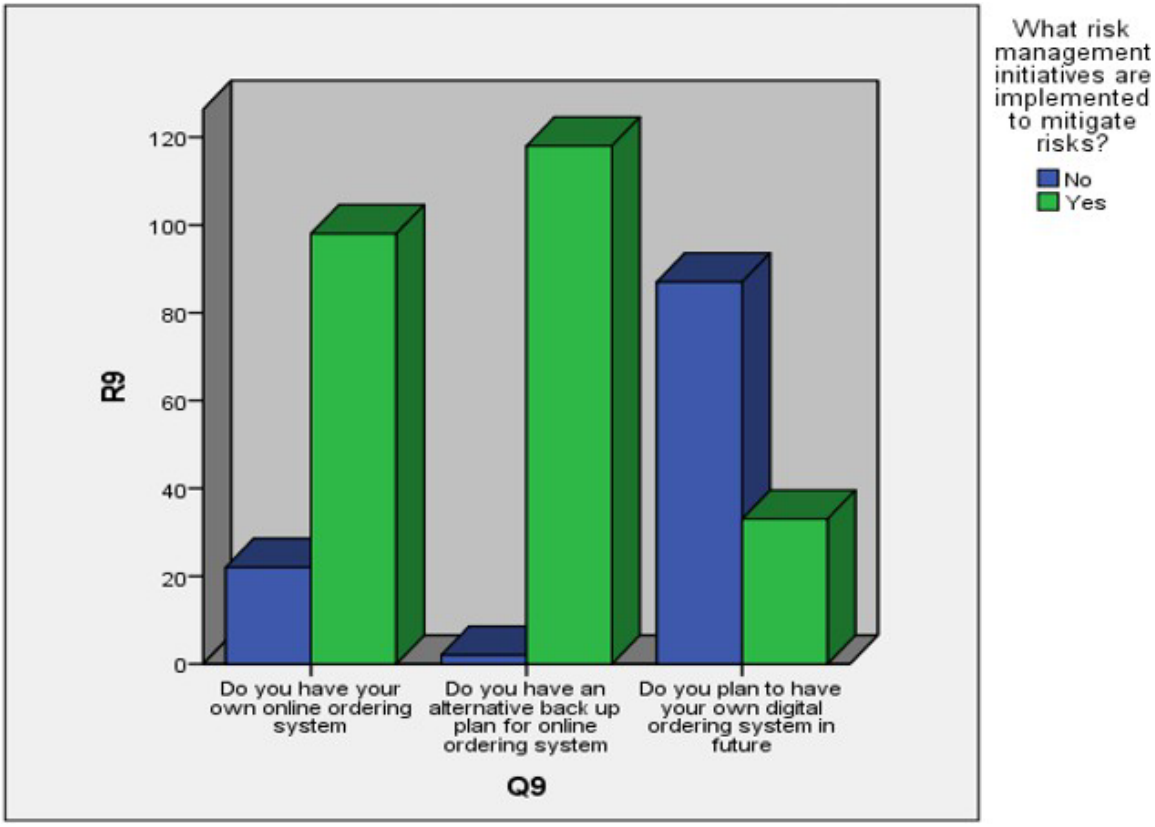

Figure 4.19: Effectiveness of risk management initiatives used by restaurants in Cape Town

4.4 Conclusion

This chapter presented data from 116 restaurants in Cape Town used in this study. It also provides empirical answers to the research questions raised during the study.

The first research question examined the extent to which restaurants operating in Cape Town utilise third-party online ordering services. The study concluded that 96% of the 116 restaurants surveyed use third-party online ordering services. Approximately 90% of these restaurants use the top three third-party services, which include Uber Eats, Mr D, and Bolt, while less than 2% use Orderin. Inferential statistics revealed by non-parametric cross-tabulation Chi-square tests, confirmed a statistically significant difference in the level of adoption across the various types of third-party online ordering mobile apps.

The second research question explored the factors influencing the decision to outsource delivery services to third-party providers by Cape Town restaurants. Factors identified in the literature include increased revenue, greater exposure, wider customer reach, convenience, and costs related to digital infrastructure and in-house delivery services. Descriptive cross-tabulation analysis, coupled with inferential statistics using the Chi-square test for independence, indicated a statistically significant impact of these factors on the decision to outsource food delivery to third-party online ordering services by Cape Town restaurants. The study found that increased revenue, greater exposure, wider customer reach, convenience, and digital infrastructure costs influence this decision significantly.

Conversely, factors presenting risks to outsourcing food delivery services to third-party mobile apps were analysed. Frequency analysis and the Chi-square test for independence indicated the statistically significant impact of these factors on the decision not to outsource food delivery to third-party online ordering services by Cape Town restaurants. Factors such as food sensitivity, strategic location, customer affordability, commission fees, and limited control over delivery services deter restaurants from outsourcing to third-party mobile app delivery services.

The study also investigated how outsourcing delivery services impacts restaurant profitability. The results revealed that over 90% of the restaurants affirmed that outsourcing impacted their profitability positively, with 75 out of the 83 of those agreed that it affect their profitability confirming the positive effect of outsourcing, while only eight restaurants indicated that outsourcing affected them negatively.

In conclusion, this chapter found that outsourcing to third-party food delivery online ordering services has a positive impact on restaurants, with many relying primarily on the customer reach provided by these services.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS OF THE STUDY

5.1 Introduction

The previous chapter delved into the examination and discussion of collected data regarding the impact of online ordering systems on Cape Town restaurants. In this chapter, we draw conclusions derived from the study's findings and offer recommendations. This chapter begins with a summary of the main objectives of the study in section 5.2. Thereafter, section 5.3 revisits the problem statement which is followed by the revisiting of the primary research question and related research objective in section 5.4. The chapter continues the discussion of findings in section 5.5. Section 5.6 discusses the conclusions of the study, section 5.7 is dedicated to recommendations of the study, and section 5.8 offers suggestions for further studies.

5.2 The summary of the objectives of the study

The aim of this study was to explore the influence of online ordering systems on Cape Town restaurants. This was inspired by the growth of these systems and their significance in the restaurant industry, especially during the COVID-19 pandemic. The study identified the gap between the development of innovative technologies in the restaurant industry and the risks accompanying these developments. While these restaurants are increasingly adopting these technologies to enhance operational efficiency, there is a paucity of studies investigating the long-term implications of outsourcing online ordering systems (OOSs) to a third-party service provider on the financial, operational and strategic performance of small and independent restaurants. Consequently, this research study examines the degree to which restaurants depend on a third-party food delivery platform for these systems and the long-term risks associated with outsourcing these systems.

5.3 The problem statement revisited

The problem statement is mentioned in Chapter One (section 1.2), addressing the problem statement of this study. The primary research question and the main research objective were also identified in Chapter One (section 1.4), laying a foundation upon which the conclusion and recommendations were based. The problem statement in this research study reads as follows:

The sustainability of restaurant businesses can be influenced adversely as a result of weak and ineffective risk management practices used by restaurant operators to mitigate a financial risk accompanying the use of third-party online food ordering and delivery systems.

The above-mentioned statement can lead to various consequences for the restaurant business. For instance, when restaurants are heavily dependent on a third-party service provider for online delivery systems and food delivery services without implementing strong risk management practices, they can become vulnerable to financial risks, such as increased cost, reduced profitability and even bankruptcy. COVID-19 illustrated a practical example of the vulnerability of restaurants, as numerous restaurant operators found their businesses facing an unprecedented challenge: the immediate and overwhelming reliance on third-party food delivery platforms, which had increased their commission fee charged and became the only viable mean for restaurants to stay operational. Notwithstanding the above, restaurants are also inherently exposed to other risks associated with adopting third-party online ordering systems, such as operational risks, strategic risks and compliance risks which are discussed in Chapter Two (section 2.10). To address the above-mentioned problem statement, the relevant primary research question and the main research objective are revisited below.

5.4 Revisiting the primary research question and the main objective

A research problem can be thoroughly investigated by answering both the primary research question and the main research objective, which are explained below:

- *What is the influence of online ordering systems on restaurants operating in the Cape Peninsula?*

The primary research objective stemming from the above primary research question reads as follows:

- *To determine the influence of online ordering systems on restaurants operating in the Cape Peninsula.*

To answer the primary research question and its associated primary research objective comprehensively, sub-questions and related secondary research objectives were formulated and are revisited below.

5.5 Revisiting the investigative sub-questions and related research objectives

Five investigative sub-questions and the related research objectives were formulated based on the primary research question and the main objective of the study, as mentioned above. These investigative sub-questions and their respective research objectives are revisited below.

5.4.1 The first investigative sub-question and its relevant research objective

To answer the primary research question, the first investigative question reads as follows:

- *To what extent do restaurants in Cape Town utilise a third-party online ordering system?*

The main aim of this question investigative research question was to attain the following secondary research objective:

- *To understand the extent to which restaurants in Cape Town are using third-party online ordering systems.*

In response to this research question, the results of the study found that 96% of the surveyed restaurants are utilising online ordering systems, with approximately 90% of these restaurants outsourcing these systems to the top three food delivery platforms like Uber Eats, Mr D, and Bolt, while fewer than 2% use Orderin (See Table 4.3). To emphasise the relevance of the results in this study, it was crucial to consider comparisons between similar research studies conducted in 2020 and in 2024. Research in South Africa revealed that food delivery platforms experienced significant expansion in major urban cities as online shopping reached a tipping point during the COVID-19 pandemic. The sector experienced a 66% growth from 2018 as more South African consumers transitioned to digital channels for their shopping (Malinga, 2021). Similarly, research study conducted in South Africa indicated a 7% year-on-year increase in the usage of mobile food apps in 2020 (Munday, 2021). These findings underscore a growing trend of restaurants collaborating with food delivery app companies, pointing to a widespread adoption of online ordering systems in the restaurant industry. Compared to other nations, a study by He (2021) in China found that, despite an 80% decline in takeout orders during the pandemic, 91.6% of operating restaurants had adopted third-party online food delivery apps, according to the report issued by Deloitte in March 2020. Furthermore, research conducted in Europe revealed that the meal delivery segment generated about $41 billion in revenue 2023, and it is expected that the European market for online food delivery will exceed $200 billion mark by 2028 (Blumtritt, 2021).

5.5.2 The second investigative sub-question and its relevant research objective

Stemming from the above main research question, the second investigative sub-question reads as follows:

- *What are the factors influencing outsourcing an online ordering system to a third-party service provider?*

The aim of this investigative research question was to attain the following secondary research objective:

- *To identify the motivating factors to outsourcing an online ordering system to a third-party service provider.*

The second research question explored factors influencing the decision to outsource delivery services to third-party providers. Identified factors include increased revenue, greater exposure, wider customer reach, convenience, and digital infrastructure costs.

Results are shown in Table 5.1.

Table 5.1: Motivating factors for outsourcing online delivery system to a third-party service provider

Rank	Particulars	Percentage
1	Wider customer reach.	90%
2	Increased exposure.	58%
3	Increased revenue.	54%
4	Cost related to digital infrastructure.	44%
5	Convenience.	22%

Descriptive cross-tabulation analysis and the Chi-square test for independence revealed that these factors significantly impact the decision to outsource food delivery to third-party services. Conversely, risks associated with outsourcing to third-party mobile apps were analysed. Frequency analysis and the Chi-square test for independence indicated significant impacts of factors such as food sensitivity, strategic location, customer affordability, commission fees, and limited control over delivery services. These factors deter restaurants from outsourcing to third-party mobile app delivery services.

Wider customer reach*:* Based on Table 5.1, wider customer reach is the number one reason influencing the decision to outsource, with approximately 90% of respondents identifying it as the most important factor in the decision to outsource to an online ordering system. Almost all respondents indicated that their aim is to reach more customers online through a third-party food app. The results of this research study align with the prevailing scholarly work on this

topic, which has established that the potential to engage broader customer audience online is a key factor influencing the decision to outsource to a third-party service provider, among other factors (See-Kwong et al., 2017; Sin et al., 2021). In addition, See-Kwong et al (2017) presented a more comprehensive qualitative analysis examining the key factors influencing the decision to outsource.

Increased exposure and increased revenue. Remarkably, a comparable number of respondents articulated two explanations for outsourcing an online ordering system. Increase in exposure is cited as the second most important factor by more than half (58%) of the surveyed participants when outsourcing to an online delivery system. Revenue increase was also cited by over half (54%) of the surveyed participants as the second most important factor in the decision to outsource. These results are consistent with the findings in similar research studies (Huang & Siao, 2023; Sin et al., 2021), which discussed the determinants and barriers to outsourcing to a third-party food delivery. Based on the findings above, it can be concluded that these two factors equally influence the decision to outsource an online ordering system to a third-party food delivery platform. The strategy of the restaurants is mainly aimed at reaching out a wider range of eaters online by increasing exposure, factors that will ultimately contribute to the increase in the revenue of restaurants (See-Kwong et al., 2017).

Cost related to digital infrastructure*:* Data revealed that cost related to digital infrastructure ranked number four, as reflected in Table 5.1, with less than half (44%) of the surveyed respondents citing it as the most important factor to the outsourcing decision. These findings are consistent with the existing literature. Prior research studies (Huang & Siao, 2023; Li & Wang, 2020) indicated that a choice made by a restaurant to outsource its online ordering systems to a third-party food delivery platform with digital capabilities is heavily influenced by its assessment of the perceived costs associated with setting up a digital infrastructure that is integrated with the restaurant's delivery system.

Convenience: The study also found that convenience ranked number five, as reflected in Table 5.1, with less than half (22%) of the surveyed respondents citing it as the most important factor to the outsourcing decision. Among other factors, this finding is considered to be one of the key elements of the outsourcing decision (Sin et al., 2021), although less than half of the respondents in this study cited it as a key factor. The observed findings highlight the determinants of outsourcing online ordering systems, which include potential reach of a wider range of eaters online, increased exposure, increased revenue, cost related to digital infrastructure, and convenience. Based on the findings it can be concluded that these factors serve as the primary catalysts for restaurant operators to entrust their online ordering systems to third-party food delivery platforms (See Table 4.6).

5.5.3 The third investigative sub-question and its relevant research objective

Stemming from the above main research question, the third investigative sub-question reads as follows:

- *What are the benefits of using a third-party online ordering system?*

The aim of this investigative research question was to attain the following secondary research objective:

- *To determine the benefits of using a third-party online ordering system.*

The third question explored the benefits of outsourcing online ordering systems. The identified benefits include enhanced sales volume, branding promotion/awareness, marketing of food products and competitive advantage. Data reveals that approximately 90% of restaurants enjoy all of the above-mentioned benefits when they sign up with a third-party service provider for online ordering systems. These results are consistent with findings in similar research studies (Du et al., 2021; Traynor et al., 2022), which also highlighted the above-mentioned benefits to be associated with outsourcing online ordering systems to a third-party service provider. Threse results highlight the widespread adoption of online ordering systems, emphasising the benefits associated with outsourcing these systems to a third-party delivery platform like Uber Eats, Mr D and Bolt Food (See Table 4.12).

5.5.4 The fourth investigative sub-question and its relevant research objective

Stemming from the above main research question, the fourth investigative sub-question reads as follows:

- *What risks emanate from using third online ordering systems?*

The aim of this investigative question was to attain the following research objective:

- *To identify the risks emanating from using online ordering systems.*

To answer the question above, a comprehensive literature review was undertaken in Chapter Two (section 2.9) to explore the risks and the corresponding risk management practices pertaining to the outsourcing of online ordering systems (OOSs). The findings revealed the existence of multiple categories of risks associated with outsourcing online ordering systems, such as financial risks, operational risks and strategic risks. The findings further suggest that the magnitude of these risks may not have a uniform impact on restaurants, as the survey

responses obtained indicate that the effect of these risks can vary significantly based on each circumstance. For example, focusing on the questionnaire question, “How does outsourcing of delivery service impact on a restaurant’s profitability?”, the findings show that financial risks have a positive effect on a restaurant’s profitability. Over 90% of the restaurants reported a positive impact on profitability, with 75 out of 83 respondents confirming the positive effects of outsourcing, while only eight indicated negative effects (See Table 4.10). These results, however, contrast with the existing literature on the profitability of restaurants when they outsource their online ordering and delivery system to a third-party service provider. For example, in a research study on the impact of online food delivery services on restaurant sales, Collison (2020) noted that the back-of-the-envelope calculations reveal an increase in a restaurant’s revenue but also indicate a decrease in profitability. This sentiment is also shared by Chen et al. (2022), who indicate that outsourcing of online delivery systems may affect restaurants’ profitability negatively.

On the other hand, operational risks which were identified as lack of control over online delivery system, system failure owing to load shedding, late deliveries, additional time delays owing to independent drivers and high operating costs because of commission fees, are discussed below and the results are shown in Table 5.2

Table 5.2: Results on operational risks

Question	Operational risks	Percentage
17.1	Lack of control over online delivery system	53.5%
17.2	System failure owing to load shedding	75%
17.3	Late deliveries	58%
17.4	Additional time delays owing to independent drivers	52.6%
17.5	High operating cost because of commission fees	15.5%

The survey data revealed that the majority (more than 53.5%) of respondents strongly agreed that lack of control over the delivery system represented a significant operational risk facing their businesses. More than three-quarters (75%) of the respondents agreed that load shedding coupled with system failures poses a significant operational issue. Similarly, the majority (over 58%) of the surveyed respondents indicated that late deliveries also pose an operational issue. In addition, more than half (52.6%) of respondents agreed to have experienced additional time delays owing to independent drivers. These results are consistent with a study conducted by Rajvanshi (2023), which identified similar issues related to online food ordering through third-party platforms. Specifically, the study found that system failures owing to technical problems can occasionally occur during the ordering process and lead to

delivery delays causing customer dissatisfaction. Furthermore, more than half (65%) of the surveyed respondents were undecided on whether commission fees charged pose a high operational cost (See Table 4.15). Although less than a quarter (15.5%) of the surveyed respondents agreed that high commission fees led to high operational costs, this sentiment is supported in similar research studies. For example, He (2021) found that a rise in the commission fees charged during the pandemic led to high operational costs and placed a financial burden on numerous restaurants. More than half of restaurant operators indicated that takeout orders fell over by 80% owing to a decline in food delivery orders. Moreover, in a research study on the impact of delivery apps commission rates on U.A.E restaurants, Dano and Chopra (2021) found that, during the COVID-19 pandemic, restaurant operators had brought delivery platforms into the spotlight by urging them to reduce their commission rates by 10% from 35% per order, as these were affecting their businesses negatively. Parallel to this, it has been found that numerous independent restaurants in South Africa frequently encounter a disadvantage when negotiating with local food delivery platforms, resulting in higher commission fees compared to those charged to larger restaurant chains (Ledwaba, 2023). As a result, these food delivery platforms addressed these concerns by introducing a standardised tiered commission structure for independent food outlets, offering various options with lower commission rates based on different service levels and ongoing costs (Ledwaba, 2023). Based on these findings, it can be argued that the high commission fees imposed by major local food delivery platforms, such as Uber Eats and Mr D, may sometimes present a substantial operational risk for many independent restaurants, depending on the economic circumstances faced by each business. The steep costs associated with outsourcing food delivery services may prevent small independent establishments from partnering with their preferred delivery platforms, potentially constraining their ability to offer this service to customers.

Strategic risks, which were identified as reliance on third-party operating systems, weak business profitability, loss of customer loyalty, changes in customer preferences and changes in economic conditions, are discussed below and the results are shown in Table 5.3

Table 5.3: Results on strategic risks

Question	Strategic risks	Percentage
18.1	Reliance on third-party operating systems	50.4%
18.2	Weak business profitability	28.7%
18.3	Loss of customer loyalty	73%
18.4	Changes in customer preferences	72.2%
18.5	Changes in economic conditions	61.9%

Data revealed that half (50.4%) of the respondents strongly agree that reliance on third-party operating systems amount to a strategic facing their restaurant. The overreliance on third-party mobile apps is supported in a study conducted by Meijerink et al. (2023). The study suggests that delivery platforms do not own restaurants or employ courier drivers, but that they exert control over the operations and the performance of restaurants using an online rating system. Restaurants can be evaluated based on metrics such as the speed of food preparation and the treatment of courier drivers. This allows a platform to monitor the number of orders accepted and declined by the restaurant staff. The speed at which a restaurant accepts and prepares orders has implications for its ranking in the list presented to customers in the app. If the restaurant underperforms, it is listed lower on the consumer app, which can lead to fewer orders and reduced revenue for the restaurant. Furthermore, a minority (less than 28.7%) of the surveyed respondents expressed disagreement that a diminished profitability constituted a strategic risk for their businesses as a consequence of outsourcing their online ordering and delivery system. Conversely, approximately half (48.7%) of the surveyed respondents were uncertain as to whether the weak business profitability represented a strategic risk for their businesses. The findings suggest diverse viewpoints among restaurant operators regarding weak profitability as a strategic risk confronting their enterprises. Notably, the majority (73%) of the surveyed respondents agreed that the loss of customer loyalty to third-party delivery apps represented a strategic risk for their businesses, despite not considering this factor to have a significant impact on their restaurant operations. The findings further demonstrated that the majority (72.2%) of the restaurant managers agreed that changes in customer preferences present a strategic risk to their businesses, as an increasing number of customers utilise food delivery apps when placing online orders; however, the shift was not perceived to have a significant impact on the restaurants. In addition, more than half (61.9%) of the respondents expressed uncertainty regarding whether their businesses experience changes in economic conditions. These findings indicate widespread online ordering systems, emphasising varying perceptions regarding financial risks, operational risks and strategic risks associated with outsourcing online ordering systems. Furthermore, stemming from the results it can be deduced that restaurants encounter multiple risks when outsourcing these systems to food delivery companies. These findings corroborate prior research studies in respect of the adoption of online ordering systems (OOSs). The findings underscore that despite restaurant operator's acknowledgement of financial and operational risks in outsourcing these services, many restaurants maintain partnerships with these platforms in pursuit of the expanded market access and revenue opportunities presented to them. In essence, restaurant operators acknowledge these inherent risks, as highlighted in the above-mentioned table (See Table 4.16)

5.5.5 The fifth investigative sub-question and its relevant research objective

Stemming from the main research question, the fifth investigative sub-question reads as follows:

- *How do restaurants in Cape Town manage the risks arising from using online ordering systems?*

The aim of this investigative question was to attain the following research objective:

- *To establish the adequacy and effectiveness of risk management measures adopted by restaurants in Cape Town.*

In relation to the question “What risks management initiatives are implemented to mitigate identified risks”, there are two sub-questions that were posed, namely: 1) “Do you have your own delivery system?”. 2) “Do you have an alternative back-up plan for online ordering systems?”. Of the respondents, 81% answered “Yes” to the first question, with 98% of the respondents citing “Yes” to the second question. These findings suggest that sampled restaurants have adopted proactive measures to mitigate risks associated with outsourcing (OOSs). Furthermore, regarding the understanding of the enterprise risk management system, there were three sub-questions asked, namely: 1) “Do you understand the enterprise risk management process?” 2). “Have you implemented the ERM initiative in your business?” and 3) “Does ERM add value to your business?”. Data reveal that more than half (67%) of the respondents answered “Yes” to the first question, while 96% answered “No” to the second question. Last, more than half of the respondents answered “Yes” to the third question. The overall findings underscore that these restaurants implement risk management measures actively to minimise the risks associated with outsourcing. In addition, the findings suggest that the restaurant operators possess sufficient knowledge and understanding of enterprise risk management (ERM), even though it is not fully implemented in their businesses. Based on the findings it can be concluded that numerous restaurants have adopted pertinent proactive risk management measures, driven by the perception that these risks do not necessitate the full adoption of enterprise risk management (ERM) strategies (See Table 4.12).

5.6 Conclusion

The restaurant–customer relationship has undergone a global shift in modern society, as indicated by the extensive review of the academic literature examining this dynamic. Technological advancement, evolving business models and changing customer behaviours

have all contributed to reshaping the multifaceted interactions and expectations that define this dynamic relationship in recent years. The in-depth examination of this study offers substantial insight into diverse elements of restaurant industry in Cape Town, with a direct focus on the influence of online ordering systems, factors affecting the decision to outsource these systems, the associated benefits, risk elements and risk management approaches employed by restaurant operators. The data from this research study suggest that online ordering systems are exerting a growing influence among the restaurants in Cape Town, as evidenced by the growing number of local food outlets collaborating with third-party service providers like Uber Eats, Mr D and Bolt Food for online ordering and food delivery services. Restaurant operators acknowledge that the growing popularity of these digital platforms has led to a sizeable portion of their eaters (customers) preferring to order online via a delivery app owing to its convenience. The key factors affecting the restaurants' decision to outsource an online ordering system to a third-party food delivery platform include convenience, expanded customer reach, cost related to digital infrastructure and the potential increase of revenue. Moreover, the implementation of these systems can yield valuable benefits to restaurants, including enhanced brand promotion, competitive advantage, increased sales volume and more effective marketing of food products through these digital systems. Notwithstanding the benefits mentioned above, the findings further suggest that the restaurants' daily operations are subject to a variety of inherent risks, such as financial, operational and strategic risks, which coexist with the associated benefits of outsourcing. Outsourcing an online ordering system to a third-party service provider can incur significant financial uncertainties owing to high commission fees charged by food delivery platforms to small and independent restaurants, contributing to elevated operational costs. Furthermore, delegating an integrated online ordering and delivery system to a third-party service provider can expose restaurants to several operational risks. These risks include limited oversight of the delivery process, potential system failures owing to software malfunctions or power outages, high operating expenses and late deliveries. Such risks can pose substantial challenges to the overall operations and performance of restaurant establishments. Last, delegating these systems to a third-party food delivery platform may introduce strategic risks, such as dependence on third-party online ordering systems, changes in economic conditions, and the potential for weakened business profitability, highlighting the wider implications of delegating online ordering systems to external providers. Owing to the potential risks associated with outsourcing the integrated online delivery system, restaurants should consider implementing enterprise risk management practices to mitigate these potential threats. As a measure of a risk management strategy numerous restaurant establishments have collaborated with multiple delivery platforms, rather than depending exclusively on a single provider. Moreover, some restaurants have even implemented their own internal delivery

system. The study found that, although restaurant owners and/or managers possess adequate knowledge of the enterprise risk management (ERM) system, they assert that it is not required to implement an enterprise risk management system to address all the risks involved in outsourcing the online delivery system.

5.7 Recommendations

- Restaurant owners and/or managers should aim to implement a robust comprehensive risk management approach to minimise the risks related to outsourcing the integrated online delivery system. This recommendation stems from the observation that many restaurants identify significant risks when outsourcing these systems.
- Restaurant owners and/or managers should also consult risk management specialists, particularly during the initial implementation phase of internet-based food delivery services. The study revealed that some restaurants lack comprehensive understanding of Enterprise Risk Management (ERM), making consultation imperative.
- Restaurant owners and/or managers should consider expanding their delivery services by providing eaters access to a diverse array of delivery platforms. This could include partnering with all digital apps like Mr D, Uber Eats and Bolt Food, and offering in- house delivery services. Offering various convenient options, such as carry-out or in- person collection, allows eaters to obtain their orders directly from the food service outlet. The study also found that numerous restaurants have already partnered with multiple service providers, which is necessary to avoid reliance on a single platform.
- Regulatory oversight by the South African government may be necessary to address the exploitation of gig economy workers (courier drivers) and to control the commission fee imposed on local restaurants by food delivery platforms. This is a necessity as the findings of the study highlighted concerns about high commission fees charged by third-party service providers.

5.8 Research limitations

In the research context, research limitation is used to explain matters and occurrences that arise in research which are not within the researcher's control and might influence the research outcome and interpretation (Simon & Goes, 2013). For this research study, limitations were identified and are addressed accordingly: The primary limitation of this study is that the data used were limited to restaurants in the Cape Peninsula, which may restrict the external validity of the findings. The restricted geographical scope may constrain the findings to a narrow perspective, and the view of the perceived risks associated with outsourcing online delivery systems may differ in other regions of South Africa. To obtain a more comprehensive understanding, a broader representation of other regions across the country would be beneficial. Another limitation is that the study adopted a quantitative research method to collect

data. While quantitative research methods provide valuable insights by means of numerical analysis, qualitative methods offer a deeper understanding of the study conducted by allowing participants to engage in open-ended discussions. Thus, future studies should consider both quantitative and qualitative methods as this will allow the respondents to engage at length to gain more insight and understanding of the perceived risks associated with outsourcing online ordering systems. Finally, the convenience sampling method was deployed to gather data, which may have led to selection bias and distorted the overall findings of the study. Thus, future research studies could employ alternative sampling techniques.

5.9 Suggestion for further studies

This study was limited to restaurants operating in the Cape Peninsula; therefore, further research studies should encompass other provinces with large cities where online ordering systems are prevalent, to assess comprehensively the risks associated with implementing these systems. Furthermore, given that this research study utilized purely quantitative methodology, future studies should consider the integration of qualitative approach methods, such as focus groups and/or interviews to enhance the survey findings. Last, to mitigate the potential selection bias stemming from the use of convenience sampling techniques, future research studies should adopt more robust sampling techniques, such as random sampling. This will enhance the representativeness of the findings of the study.

5.10 Implications of the study

This research study provides empirical data that expands upon the existing literature on digital platforms, outsourcing risks, and restaurant financial sustainability. It further contributes to the limited scholarly work on online ordering systems (OOSs) in South Africa, with specific focus on the Cape Town restaurant industry. Although international research studies have extensively explored the adoption and risks of outsourcing online ordering systems, there is a notable lack of documented information from developing economies, particularly African economies. Moreover, this study demonstrates how South African restaurant industry perceive and implement the online ordering systems (OOSs), thus bridging a gap in existing theoretical discourse often derived from developed economies. From a practical perspective, the findings have relevance for restaurant operators and policy makers. For restaurant operators and/or managers the study highlights the potential benefits and inherent risks of outsourcing online ordering systems (OOSs), enabling restaurant owners and managers to make more informed decisions. Moreover, the study underscores for regulatory authorities and policy makers the necessity to implement policies that balance digital innovation with fair business practices, business sustainability, and the protection of gig workers within the food delivery ecosystem.

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APPENDICES

Appendix A: Ethics approval

Cape Peninsula University of Technology

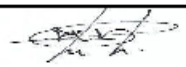
P.O. Box 1906 | Bellville 7535
Symphony Road Bellville 7535
South Africa
Tel: +27 21 4603291
Email: fbmsethics@cput.ac.za

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

The Faculty's Research Ethics Committee (FREC) on **14 June 2022**, ethics APPROVAL was granted to **Siyasanga Msi (210182741)** for a research activity at the Cape Peninsula University of Technology for **Master of Internal Auditing.**

Title of project:	The influence of using online ordering systems on Cape Town restaurants Supervisor (s): Dr A. Neethling

Decision: APPROVED

	28 July 2022
Signed: Chairperson: Research Ethics Committee	**Date**

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the CPUT Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study requires that the researcher stops the study and immediately informs the chairperson of the relevant Faculty Ethics Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing accompanied by a progress report.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines, and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, notably compliance with the Bill of Rights as provided for in the Constitution of the Republic of South Africa, 1996 (the Constitution) and where applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003 and/or other legislations that is relevant.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
7. No field work activities may continue after two (2) years for Masters and Doctorate research project from the date of issue of the Ethics Certificate. Submission of a completed research ethics progress report (REC 6) will constitute an application for renewal of Ethics Research Committee approval.

Clearance Certificate No | 2022 FBMSREC 038

Appendix B: Data management plan set

HEALTH SECURITY

A Data Management Plan created using Data Management Planning tool (DMP tool)

Creator: SIYASANGA MSI

Affiliation: Cape Peninsula University of Technology Template: Cape Peninsula University of Technology

Last modified: 22-08-2024

HEALTH SECURITY - DATA MANAGEMENT PLAN

DATA COLLECTION

What data will you collect/create?

Quantitative data will be collected on “The influence of online ordering systems on Cape Town Restaurants” by means of questionnaires.

How will the data be collected or created?

By way of questionnaires handed out to participants

DATA DOCUMENTATION AND METADATA

What documentation and metadata will accompany your dataset?

The dataset will be accompanied by comprehensive documentation that outlines the research objectives, methodology, data collection process, definitions of variables, and any transformations or preprocessing applied to the data. Metadata will include information on data sources, data formats, and any necessary codebooks or guides to interpret the data.

ETHICS AND LEGAL COMPLIANCE

How will you manage any ethical issues pertaining to data?

Ethical considerations will be addressed by obtaining informed consent from participants before data collection, ensuring the confidentiality and anonymity of participants, and adhering to relevant ethical guidelines and regulations for research involving human subjects.

How will you manage copyright and Intellectual Property Rights (IPR) issues?

Data will only be handled by myself and statistician and not shared with anybody. Responses will not be shared.

If any copyrighted materials or proprietary information are used in the research, appropriate permissions will be sought. The research findings will acknowledge and attribute any sources or materials used.

DATA STORAGE AND BACKUP

How will you store and back-up your data during the research?

Data will be stored securely on password-protected electronic devices and backed up regularly to secure cloud storage. Adequate security measures will be employed to prevent unauthorized access

How will you manage access and security?

Access to the data will be limited to authorised researchers only. Data sharing will follow a controlled access model, where data will be anonymised and aggregated to prevent individual identification

DATA SELECTION AND PRESERVATION

Explain which data should be retained, shared, and /or preserved?

All collected data should be retained for the purpose of research integrity and potential future audits. Aggregated and anonymised data may be shared with other researchers upon request, following a controlled access procedure.

DATA SHARING

How will data be shared?

Through controlled access mechanisms. Researchers interested in accessing the data will need to submit a request outlining their purpose and intended use of the data. Data sharing agreements will be established to ensure proper usage and compliance with ethical guidelines.

Are any restrictions on data sharing required?

Data sharing may be subject to restrictions to safeguard participant confidentiality and privacy. Only aggregated and anonymised data will be shared, and any potentially identifying information will be removed.

RESPONSIBILITIES AND RESOURCES

Who will be responsible for data management?

The primary researcher and supervisor will be responsible for data management, including collection, storage,

documentation, and sharing. What resources will you require to deliver your plan?

Resources required include hardware for data storage, secure cloud storage services, software for data analysis and documentation, personnel for data management, and if necessary, legal consultation for copyright and ethical considerations.

PERSONAL, SENSITIVE AND IDENTIFIABLE HUMAN RESEARCH DATA

Will you be collecting personal information?

Yes, if the participant is the owner or manager of the fast-food business and highest qualification.

List all the types of personal/sensitive/identifiable data you will be collecting.

SECTION A: DEMOGRAPHIC INFORMATION
1) In which **Area** of Cape Town do you operate in?
CBD ☐ Sea Point ☐ Camps Bay ☐ Stellenbosch ☐ Observatory ☐ Woodstock ☐
2) How **long** has your business been in **existence**? (years)
years
3) How many **employees** do you employ? (number)
employees
4) **You** are the. .. (tick the best answer)
Owner ☐ Manager ☐ Owner and manager ☐ Employee ☐
5) What **category** is a restaurant? (tick the best answer)
Quick service ☐ Fast casual ☐ Fine dining ☐ Café ☐ Virtual/digital kitchen ☐ Upscale casual ☐
6) What is your **highest academic qualification**?

Conduct a benefit/risk analysis to ensure that the benefit of collecting such data outweighs the risk and then motivate why you need to collect such information.

The risk to participants is minimal, as confidentiality and anonymity will be strictly maintained. The potential benefits of contributing to valuable research outweigh the limited risks associated with data collection.

Confidentiality, anonymity, and privacy of human participants.

Participants' confidentiality will be maintained by using anonymised data in analysis and reporting. Any potentially identifying information will be removed or aggregated to ensure privacy.

What happens to the information if a participant withdraws from a study?

If a participant chooses to withdraw from the study, their data will be excluded from analysis, and any collected data will be securely deleted to maintain their privacy and confidentiality.

After completion of the research, will the information be used for anything else in the future?

Yes, the information may be used for further research, academic publications, and presentations, all of which will follow ethical guidelines and data sharing agreements

Will study participants/groups etc. receive feedback before disseminating the results of the research?

Participants will be provided with a summary of the research findings upon request, ensuring transparency and reciprocity. Outline your informed consent process and details of the data management plan.

The informed consent process will involve explaining the research objectives, the types of data collected, how the data will be used, confidentiality measures, and the potential risks and benefits. Participants will be asked to sign a consent letter indicating their willingness to participate. The data management plan will ensure secure data storage, controlled access for sharing, anonymisation of data, and adherence to ethical guidelines throughout the research lifecycle.

Cape Peninsula University of Technology

Department of Internal Auditing & Financial Information Systems Ethics informed consent form

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

The importance of time in our days cannot be overemphasized. At the same time, sharing your time with someone can be very enriching, rewarding and fulfilling. You are kindly invited to participate in a research study being conducted by **Siyasanga Msi** (student number 210182741) from the Cape Peninsula University of Technology.

I would like to introduce my research to you. I am currently working on a Masters Research project in the field of Internal Auditing under the Department Internal Auditing and Financial Information Systems at the Cape Peninsula University of Technology. I am seeking your participation, to share approximately 10-15 minutes of your valuable time to conduct an online questionnaire-based interview. Granted, such permission will enable me to carry out surveys within the internal auditing/ compliance space.

The title of my research project is '**The influence of using online ordering systems on Cape Town restaurants**'. The main objective is to determine the impact of using online food ordering systems on restaurants operating in Cape Town, with the aim of enhancing effectiveness of these systems and to guide implementation of a risk management plan to mitigate the risks materialising from the fast growing use of these technologies within restaurant business in order to ensure sustainability.

Furthermore, owing to the COVID-19 pandemic a note should be taken that this letter only seeks permission for data to be collected using an online survey. The researchers' pledge, that all the survey data will be aggregated and organisational information will be treated with the strictest confidence; and that you are under no obligation to participate. All the information obtained will be used for research thesis and research publication purposes only. The final report will not include any identifying information of your organisation. Please feel free to contact student and/or supervisor with regards to any queries you might have. Your participation in the research project will be most appreciated.

Category of Participants (tick as appropriate):

Founder		*Employee*		*Owner*		*Manager*		*Manager/Director*	
Other (specify)									

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

	Date and stamp:
Signature of participant	

Researcher's Name: Siyasanga Msi	Tel: 072 9595 169
	Email:Konkemsi@gmail.com
Supervisor: Dr AC Neethling	
Contact number: 021- 460 3261	Email: vissera@cput.ac.za

Cape Peninsula
University of Technology

Research study conducted by: Siyasanga

Student number: 210182741

Nando's
Gardens
42 Kloof Street,
Ground Floor Eartgo Building, 8000
021 426 0240

Invitation to participate in an academic research study

Dear Madam/Sir

You are hereby invited to participate in a research study titled "The influence of using online ordering systems on Cape Town restaurants". To participate in this study, you must: 1) be a manager/owner/partner in a fast-food restaurant and 2) your business uses 3rd party online food ordering and delivery platforms like Uber eats, Mr. D and bolt food or uses in-house online delivery system.

The purpose of this proposed research study is to examine the influence of using online ordering systems on the sustainability of Cape Town fast-food restaurants especially, during and post COVID-19 pandemic which came along with lockdown restrictions impacting on restaurant business as a whole.

As the owner/partner/manager in a restaurant operating in the Cape Town, your views are valuable to this research study. Your Participation to this study is voluntary and you have a right to withdraw your participation at any given time without obligation. There are no risks associated with participating in this study as the information shared will be kept confidential in a strict and a professional manner.

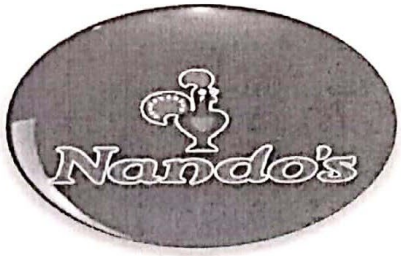
The study will not require your personal information but all questions will be based on the proposed study and all the responses will be anonymous. Hopefully, all information obtained will contribute to the well-being and the sustainability of fast-food restaurants using digital food ordering and delivery platforms in Cape Town. Your consent to participate in this study will be highly appreciated.

For further inquiries, you may contact me on 072 9595 169 or via email konkemsi@gmail.com or my supervisor email: VisserA@cput.ac.za. If you are interested to participate in this research study, Kindly sign below to indicate that you voluntarily taking part having read and understood the information provided above.

Name of the restaurant: _____

Respondent's signature: N.C Date: 31. 03. 22

Nando's
Gardens
42 Kloof Street,
Ground Floor Eartgo Building, 8000
021 426 0240



31/03/2022

To whom it may concern

This letter gives consent to Siyasanga Msi, an internal auditing student at CPUT, to conduct his research and studies at Nandoes (Pty) Ltd. It further allows him to conduct his survey with a manager/owner/partner, on a date and time that is suitable for both parties.

If you have any questions, please feel free to contact me:

Name: Nyameka

Surname: Qokama

Tel: 021 426 0240

Sincerely

Nando's.
Gardens
42 Kloof Street,
Ground Floor Eartgo Building, 8000
021 426 0240

02/04/2022

To whom it may concern

This letter gives consent to Siyasanga Msi, an internal auditing student at CPUT, to conduct his research and studies at WIMPY (Pty) Ltd. It further allows him to conduct his survey with a manager/owner/partner, on a date and time that is suitable for both parties.

If you have any questions, please feel free to contact me:

Name: Ikeneem

Surname: Lawrence

Tel: 0676948021

Sincerely

Ikawrence

WIMPY GOLDEN ACRE
SHOP 7 ADDERLEY STR
Tel. 021 425 6413
Date: 02/04/22

31/03/2022

To whom it may concern

This letter gives consent to Siyasanga Msi, an internal auditing student at CPUT, to conduct his research and studies at Pizza hut (Pty) Ltd. It further allows him to conduct his survey with a manager/owner/partner, on a date and time that is suitable for both parties.

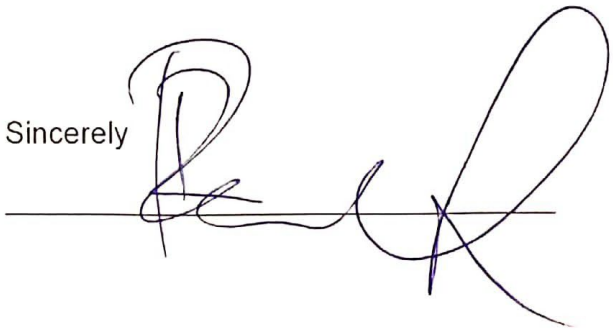
If you have any questions, please feel free to contact me:

Name: RETSEMO

Surname: BANDA

Tel: 021 207 4992

Sincerely



PIZZA HUT GARDENS
8 Kloof Street, Gardens
Tel: 021 207 4992
www.pizzahut.co.za

31/03/2022

To whom it may concern

This letter gives consent to Siyasanga Msi, an internal auditing student at CPUT, to conduct his research and studies at Chicken Licken (Pty) Ltd. It further allows him to conduct his survey with a manager/owner/partner, on a date and time that is suitable for both parties.

If you have any questions, please feel free to contact me:

Name: Thembela

Surname: Ntegi

Tel: 0214223045

Chicken Licken
48 Adderley Street
Cape Town
021 422 3045

Sincerely

T. Ntegi

Appendix C: Research questionnaire

RESEARCH QUESTIONNAIRE

RESEARCHERS DETAILS	
Name:	Siyasanga
Surname:	Msi
E-mail:	konkemsi@gmail.com
Contact number:	0729595169

RESEARCH TITLE
The influence of using online ordering systems on Capetonian restaurants.

CONFIDENTIALITY AND ANONYMITY
Please note that ALL information provided will be kept strictly confidential and that the anonymity of the respondent is guaranteed. The information provided will strictly be used for research purposes only. Respondents also may remove themselves from this study at any point in time as participation is voluntary in nature.

HOW THIS SURVEY WILL BE COMPLETED
This survey comprises of mostly close-ended questions which require the respondent to fill in a numerical digit and/or mark an ‘x’ in the most appropriate boxes. Clear instructions for each question are given under each section. If respondents do not understand a specific question, please feel free to contact any of the researchers on this page. Before completing this questionnaire, you should sign the consent letter.

PRIMARY OBJECTIVES OF THE SURVEY
The Faculty of Business at the Cape Peninsula University of Technology’s research niche area reads: "The effective management of fast-food restaurants". All business entities, including South African Small-Medium and Micro restaurants, face a wide range of risks in their day-to-day operations. Consequently, some researchers have conducted studies in order to determine the risks faced by Cape Town restaurant businesses, as well as the risk management initiatives used by

these food outlets to manage risks. However, there are few, if any, studies that focused on risks accompanying the adoption and the use of digital food ordering systems and online delivery platforms, and the associated risk management initiatives. Because these businesses have been affected by the outbreak of COVID-19 pandemic and have some risks which are common to them only, it is imperative to know how these business entities deal with these risks with special reference to online food ordering and delivery platforms offered to them by a third party. Hence, the main objectives of this study are to:

- Determine the influence of using online ordering systems on the sustainability of Capetonian fast-food restaurants.
- Identify risks from using these systems and offer a risk management guide to restaurant owners to enhance their business performance.

SECTION A: DEMOGRAPHIC INFORMATION

1) In which Area of Cape Town do you operate in?

1. CBD ☐
2. Sea Point ☐
3. Camps Bay ☐
4. Stellenbosch ☐
5. Observatory ☐
6. Woodstock ☐

2) How long has your business been in existence? (years)

_____ years

3) How many employees do you employ? (number)

_____ employees

4) You are the. .. (tick the best answer)

1. Owner ☐
2. Manager ☐
3. Owner and manager ☐

4. Employee ☐
5) What category is a restaurant? (tick the best answer)
1. Quick service ☐ 2. Fast casual ☐ 3. Fine dining ☐ 4. Pizza restaurant ☐ 5. Virtual/digital kitchen ☐ 6. Upscale casual ☐
6) What is your highest academic qualification?

SECTION B		
The objective of this section is to establish the extent to which restaurants in Cape Town are using third party online ordering systems and what factors influencing the decision to outsourcing food delivery service?		
To answer this section please mark X in the appropriate box		
7. Does your restaurant use a third-party mobile app for online food ordering and delivery system?		
7.1	Yes	
7.2	No	
8. If yes, which mobile apps do you use?		
8.1	Uber etas	
8.2	Mr. D	
8.3	Bolt	
8.4	Orderin	
8.5	All of the above	
9.**How long have you been using mobile apps?**		
9.1	6 months	
9.2	1 year	
9.3	2 years	
9.4	3 years	

9.5	More than 3 years	
10. Motivating factors of outsourcing food delivery service to a third-party online service provider?		
Please rank the following factors in order of importance from 1 to 6 where 1 is the most important to you and 6 is the least important to you.		**RANK**
10.1	Increase revenue	
10.2	Increase exposure	
10.3	Wider customer reach	
10.4	Convenience	
10.6	Cost related to digital infrastructure and in-house delivery service	
11. Factors affecting the decision not to outsource online food ordering and delivery service to a third-party service provider?		
Please rank the following factors in order of importance from 1 to 6 where 1 is the most important to you and 6 is the least important to you.		**RANK**
11.1	Factor related to food	
11.2	Strategic location	
11.3	Customer affordability	
11.4	Cost related to commission fee	
11.5	Little control over a delivery	
12. How does outsourcing of delivery service impact on a restaurant's profitability?		
12.1	Negatively	
12.2	Positively	
13. **which one of the following is generating more revenue for the business?**		
13.1	Eat in	
13.2	Takeout/Takeaway	
13.3	Third-party mobile food apps/ Online food delivery	
13.4	In-house delivery	
SECTION C		

The objective of this section is to ascertain the benefits of using online ordering systems.		
To answer this section please mark X in the appropriate box.		
14. What are the advantages of using third-party online ordering and delivery system?		
14.1	Enhances sales volume	
14.2	Branding promotion/awareness	
14.3	Competitive advantage	
14.4	Marketing of food products (via more promotions)	
15.5	All the above	
15. How satisfied are you with a third-party food delivery service?		
15.1	Satisfied	
15.2	Not satisfied	
16. which one of the following platforms offer best food delivery service?		
Please rank the following platforms (1 being the best) it terms of a delivery service offered.		**RANK**
16.1	Mr. D	
16.2	Uber Eats	
16.3	Bolt	
16.4	Orderin	
SECTION D		
The objective of this section is to identify the risk arising from using online ordering systems.		
To answer this section please mark X in the appropriate box.		
17. Which operational risks is your restaurant facing?		
	To answer this question please write down a number next to each reason provided below with each number represented as follows 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree)	
17.1	Lack of control over online delivery system	
17.2	System failure (due to load shedding)	
17.3	High operating cost (result of commission fee paid to a third party)	

17.4	additional time delays (result of independent drivers)	
17.5	Late deliveries	
18. Which strategic risks is your restaurants facing post pandemic?		
	To Answer this question please write down a number next to each reason provided below with each number represented as follows 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree)	
18.1	Reliance on a third-party operating system	
18.2	Weak business profitability	
18.3	Loss of customer loyalty to a third party	
18.4	Changes in customer preferences	
18.5	Changes in economic conditions	
19. Which compliance risks is your restaurant facing		
19.1	Adherence health and safety risks.	
19.2	Adherence to immigration laws	
19.3	Adherence to tax and labour laws	
19.4	Environmental risks (waste, etc.)	
19.5	**None of the above**	

SECTION E

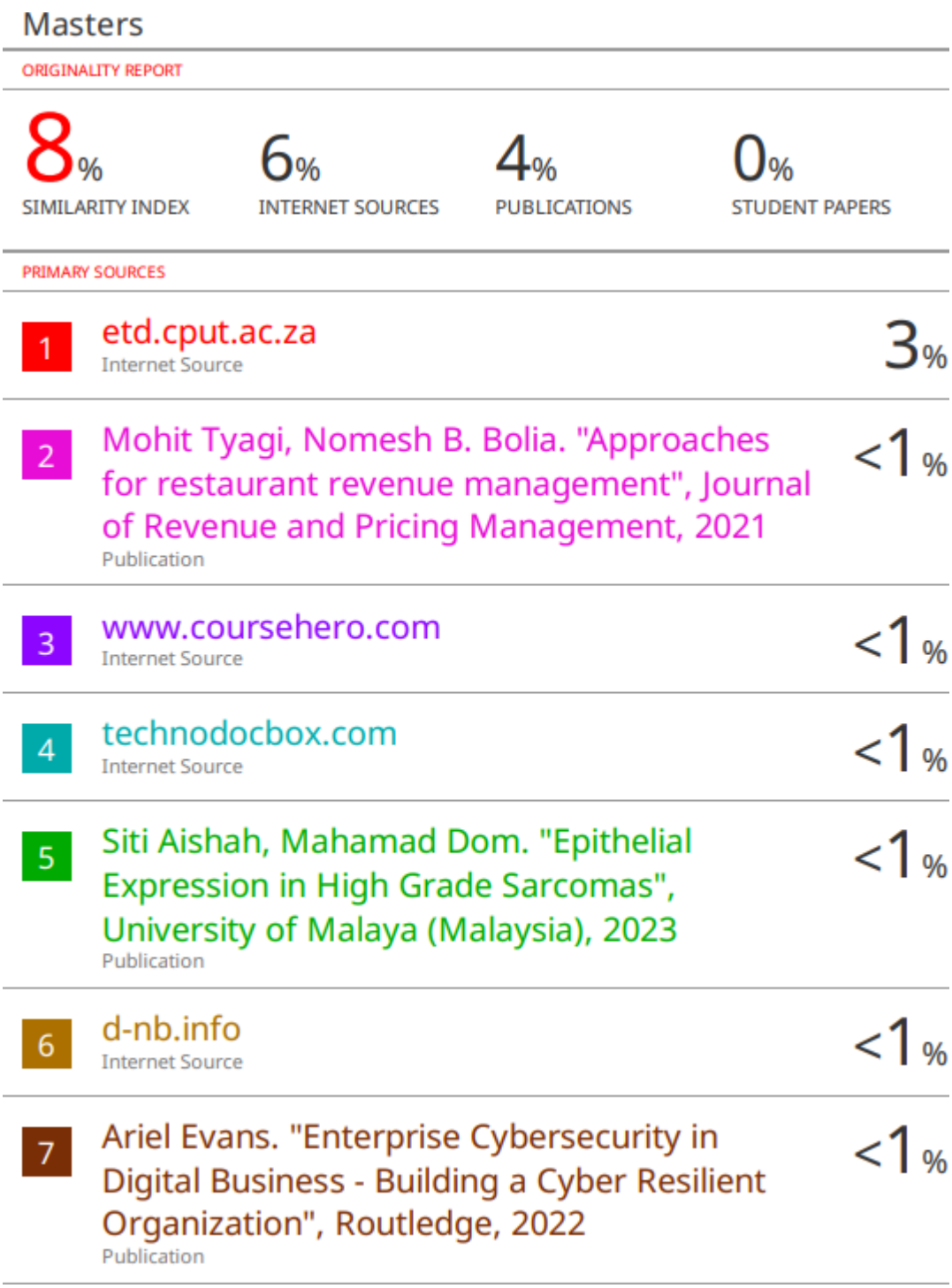
The objective of this section is to determine the extent to which restaurant operators understand risk management as well as the adequacy and effectiveness of risk management initiatives used by restaurants in Cape Town.

(To answer this section please Mark an 'X' in the appropriate box below.

20. Understanding of risk management system		YES	NO
20.1	Do you understand Enterprise risk management process?		
20.2	Have you implemented ERM initiative in your business?		
20.3	Does ERM add value to your business?		
21.What risk management initiatives are implemented to mitigate risks?			

21.1	Do you have your own online ordering system		
21.2	Do you have an alternative back-up plan for online ordering system		
21.3	Do you plan to have your own digital ordering system in future		
Thank you for your valuable time and participation. If you would like feedback on the findings of the research study, please e-mail Siyasanga Msi at the following e-mail address: konkemsi@gmail.com			

Appendix D: Turnitin report



Masters

ORIGINALITY REPORT

8%	6%	4%	0%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	etd.cput.ac.za Internet Source	3%
2	Mohit Tyagi, Nomesh B. Bolia. "Approaches for restaurant revenue management", Journal of Revenue and Pricing Management, 2021 Publication	<1%
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Editing Certificate

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Editing of a Master's Dissertation

I, Marietjie Alfreda Woods, hereby certify that I have completed the editing and correction of the treatise **The Influence of Online Ordering Systems on Cape Town Restaurants** by **Siyasanga Msi** in fufilment of the requirements for the **Master of Internal Auditing.** I believe that the dissertation meets with the grammatical and linguistic requirements for a document of this nature. The following aspects were covered in the process of the editing:

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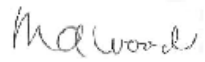

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