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Factors that influence the acceptance of the Revenue Management System at the eThekwini Municipality in KwaZulu-Natal

By

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ABSTRACT

Traditional business processing models have been transformed by the intervention of technology. Technology has generally improved levels of productivity, efficiency, and accuracy when it comes to the processing of data. These attributes of the technological era have prompted many organisations to make a substantial investment in technological systems with the expectation of making achieving a competitive advantage and an elevated level of maturity of technology usage. This trend has been followed in the domain of public sector governance with many South African municipalities opting to follow the business model of using technological systems to replace manual systems and to redesign process models so that there is a strong alignment with the technology. However, the expectation of success due to technological intervention does not always guarantee a successful outcome.

This has been prompted in response to anecdotal evidence that attests to a failed information system used by the eThekwini Municipality in the province of KwaZulu-Natal. The main purpose of the system is to collect revenue from the citizens of the municipality based on services that are delivered at the municipality. The empirical phase of the study focused on the use of the Revenue Management System (RMS) at the eThekwini Municipality, South Africa.

The study is aimed at evaluating the user acceptance of the RMS by employees of the eThekwini Municipality. The objective of the study is to ascertain the influence that technology acceptance factors play on the end users' intention to accept the RMS at the eThekwini Municipality. The Unified Theory of Acceptance and Use of Technology model was used to underpin a quantitative empirical phase. The main output from the study is the analysis of a set of technology acceptance factors that influence the usage of the system.

Primary data was collected using questionnaire from 180 employees, and only 105 responses of which only 102 were useful. The Statistical Package for Social Sciences (SPSS) was used to analyse the primary data collected. Descriptive and inferential statistics were used to address the research objectives. The research findings of this study have revealed that performance expectancy, effort expectancy and facilitating conditions are the factors that significantly influence employees' behavioural intention to accept and use RMS at the municipality. With the research findings and the recommendations presented, the management should ensure that the RMS at the municipality is improved, this will contribute to the optimum usage of the system thereby improving staff morale and contribute towards better service delivery to the citizens of the eThekwini Municipality.

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ABBREVIATIONS

ABBREVIATION	DESCRIPTION
ATU	Affect Towards Use
AU	Actual Use
BI	Behavioural Intention
BPR	Business Process Re-engineering
CO	Complexity
C-TAM-TPB	Combined Theory of Planned Behaviour/Technology
DOI	Diffusion of Innovation
DSS	Decision Support System
EE	Effort Expectancy
ERP	Enterprise Resource Planning
FC	Facilitating Conditions
HCI	Human Computer Interaction
ICT	Information and Communication Technology
IDT	Innovation Diffusion Theory
IT	Information Technology
JF	Job Fit
LC	Long-term Consequences
MM	Motivational Model
MPCU	Model of PC Utilisation
PC	Personal Computer
PE	Performance Expectancy
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
RMS	Revenue Management System
SAP	Systems, Applications and Product
SC	Social Conditions
SI	Social Influences
SDT	Self-Determination Theory
SF	Social Factors
SPSS	Statistical Package for the Social Sciences
TAM, TAM2, TAM3	Technology Acceptance Model
TPB	Theory of Planned Behaviour

TRA	Theory of Reasoned Action
UAT	User Acceptance Testing
UTAUT, UTAUT2	Unified Theory of Acceptance and Use of Technology
UI	User Interface
UKZN	University of KwaZulu Natal
UX	User Experience

<div align="center">**CHAPTER ONE**</div>

1.1 Introduction

In this chapter, the Revenue Management System (RMS) is introduced and the role that it plays at the eThekwini municipality. The research problem statement is discussed, this section together with the background details the problems that are faced by government institutions. The five research questions that the study aims to answer are provided as well as the objectives of the study. The first four research questions are guided by the study's theoretical framework. This chapter further discusses the significance of the study and concludes with the dissertation structure.

The Revenue Management System is a system that is used at the eThekwini Municipality in KwaZulu-Natal, South Africa to perform revenue management related tasks more efficiently. RMS utilises data from the municipality, to assist the municipality in making informed decisions. RMS uses the data to perform analysis of the financials, and this helps in the calculation of rates (Guadix et al.,2010). The purpose of the study is to determine the factors that influence the acceptance of the Revenue Management System so that recommendations can be made to improve user acceptance of the RMS.

At eThekwini Municipality, using the RMS is important as it reduces the total workload of manually performing revenue management tasks which could be time consuming. Performing revenue management tasks manually results in increased errors and poor decision making (Mazibuko, 2014). The main sources of revenue for the municipality are the costs incurred in providing services to the citizens of the municipality in the form of water, electricity, rates, and waste collection. It is one of the most important systems at the eThekwini Municipality as it generates income for the city. The system plays a mission critical role in ensuring the delivery of service to the citizens of the eThekwini Municipality.

The "mission critical" role played by the RMS creates a situation where failure or a lack of performance of the system will result in a dysfunctional municipality. One aspect of the system that could compromise its effectiveness in meeting its objectives is the acceptance of the system from the perspectives of functionality, usability, reliability, and performance. These factors contribute to the overall user experience (UX) of using the system and describes the feelings of users towards a system (Punchoojit and Hongwarittorrn, 2017).

The old generation staff at the eThekwini Municipality still prefer to do things manually rather than on the system to perform their task mainly because of their reluctance and complexity inherent to the activity of engaging with the RMS. The reluctance to use the RMS is exacerbated by the user interface which many of the current cohort of staff members consider as too complex to use. This phenomenon of user apprehension because of a complex user interface is discussed in Nielsen (1994) where there is a recommendation made for a system to be easy to use, so that users can obtain high levels of productivity.

1.2 Background

One of the main problems with RMS is that it is not a stable system (Williams, 2017). It is not a simple system, when using the RMS, it is not possible to work on one screen. The user finds themselves having to move out of the screen that they are working on to a different menu item to get the information that they need, even the auditors experienced difficulties when they audit the system (Ndaliso, 2017). According to Magubane (2019), because of the RMS challenges the city's water consumption volumes were unknown for almost a year. As a result of the above determining water losses has not been possible for the city for the period under review. The financial analysis for the water unit has been delayed due to the absence of valid water sales volume. According to Ndaliso (2019), the electricity unit has issues with the systems inability to track and monitor expenditure.

The Msunduzi Municipality's SAP system is a typical example. The Msunduzi Municipality has recognised many flaws in its SAP system. The configuration of business intelligence module is incorrect resulting in inaccurate revenue reports e.g., (aging report not categorised properly and billing of service report is not available) (Ntuli, 2019). Another deficiency identified includes incorrect monthly customer statements. There was a problem in the way debt was written off. A major outcome was that the user acceptance and the user experience of using the SAP system at the Msunduzi Municipality was low.

A similar example is the Johannesburg municipality. This municipality also has a problematic billing system dating back to 2009. The result of this challenge is incorrect billing, late bills, lost credit notes, and non-corresponding meter numbers. All these failed systems costed millions to implement and continue to cost the municipalities (Mkentane, 2021).

The current study has been proposed to address the issue of a failed municipality system in terms of the system's ability to meet functional requirements as well as ensure a positive user experience. The consequence of not addressing this problem is that the lack of system

performance will result in the generation of excessive costs that will be incurred by the system that will be reflected in poor service delivery to the citizens of the eThekwini Municipality. Considering the scope of this study, the empirical phase focused on the acceptance and use of the RMS at the eThekwini Municipality and the study's results will have a direct bearing on the end users of the system at eThekwini Municipality in KwaZulu-Natal.

1.3 Research Problem Statement

The RMS is used at eThekwini municipality and eThekwini municipality is a government institution. The mandate of the public sector is to improve the general welfare of society by delivering public goods and services to individuals, playing a critical role in both the country and the global economy. Previous research mentions that there are many bottlenecks in government departments which are linked to acceptance of new technology, amongst which are lack of attention to change management process and acceptance by end-users (Singh and Travica, 2018; Kaisara, 2009; Abrahams, 2009; Singh and Averweg, 2015).

There have been many studies undertaken that focus on governmental information systems and many of these studies show that there has been some improvement with these government information system with users starting to use them more. However, Tarhini et al (2015) has identified many barriers to the acceptance and adoption of information systems some of which are technical, but most of these factors are human behavioural factors that are centred on human resistance to embrace change. This is supported in Venkatesh & Davis (2000) study, where they say there has been a lot of progress made with regards to the development of software applications, but still systems are not being used to their full functionality. Davis (1989) suggests that user acceptance determines either the success or failure of software systems.

According to Gcora and Chigona (2019), South African municipalities are starting to introduce information systems to assist in enhancing service delivery and to ensure proper management of public resources. However, despite their benefits of improving service delivery at municipalities their usage has not been accepted. Saravanan and Sundar (2015) also emphasized that users might not accept the system if business process re-engineering is not done accurately as the system might have functionalities that the organisation does not require. Hence, the need to conduct a study that will investigate the factors influencing the acceptance and usage of the RMS by employees at eThekwini municipality.

1.4 Research Questions

The main research question is:

How do technology acceptance factors influence the behavioural intention of employees at the eThekwini Municipality to accept the RMS?

1. How does *performance expectancy* influence the behavioural intention to accept the RMS at the eThekwini Municipality?
2. How does *effort expectancy* influence the behavioural intention to accept the RMS at the eThekwini Municipality?
3. What is the relationship between *social influence* and the behavioural intention to accept the RMS at the eThekwini Municipality?
4. What is the influence of *facilitating conditions* and the behavioural intention to accept the RMS at the eThekwini Municipality?
5. How can employee's *experiential knowledge* of the RMS be used to influence the behavioural intention of accepting the RMS at the eThekwini Municipality?

1.5 Research Objectives

Aim of the study:

The main aim of the study is to identify factors that enhance user acceptance of the RMS and contribute towards ensuring that there is an improvement in the usage of RMS at the eThekwini Municipality in KwaZulu-Natal.

The Objectives of the study are:

1. To determine how performance expectancy influences employees' intention to accept the RMS at the eThekwini municipality.
2. To determine how effort expectancy influences employees' intention to accept the RMS at the eThekwini municipality
3. To ascertain the role that social influence plays in employees' intention to accept the RMS at the eThekwini municipality
4. To ascertain how facilitating conditions influence the employees' intention to accept the RMS at the eThekwini municipality.
5. To invoke experiential knowledge as a basis from which enhancements can be suggested for the use of the RMS

1.6 Significance of the Study

This research will be helpful to employees of the eThekwini Municipality in KwaZulu Natal, but the results may be beneficial to all other municipalities that are using the Revenue Management System. This study will assist in obtaining better knowledge of factors

influencing the acceptance of the system and this understanding will contribute to the study's conclusion in providing knowledge of how user acceptance may be improved.

1.7 Dissertation Structure

Chapter 1: presents the introduction of the study and the background. In the problem statement, the problem was identified and clarified. The chapter concludes by discussing the aim, objectives, and significance of the study.

Chapter 2: examines existing related literature. The chapter starts with the introduction, and then focuses on information systems (ERP Systems) and details the technology acceptance factors. The next section focuses on technology acceptance and adoption literature. Last section of the literature review focuses on the theoretical framework and the chapters conclusion.

Chapter 3: consists of the introduction, the study's research design and research paradigm, the ethical considerations of the study, the population and data sampling methods which include the sample size; data-collection methods. The discussions also include instrument that is used to collect data, data analysis, reliability and validity of the instrument and ethical clearance. The questionnaire has been explained briefly.

Chapter 4: presents the response rate and the analysis of the data collected and findings.

Chapter 5: discusses and interprets the findings of the study and provides conclusion and recommendations.

<p style="text-align:center;">CHAPTER TWO: LITERATURE REVIEW</p>

2.1 Introduction

The current chapter presents the examination of existing literature for user acceptance of software systems. Ideas in relation to the study that have been established by others is provided in this review. First part of the review focuses on information systems (ERP systems and DSS) literature. The second part focuses on technology acceptance factors. The third part of the review focuses on system acceptance and adoption literature. The last part of the review concentrates on the framework that will guide this study. Adoption of municipal information systems especially at eThekwini municipality has not been addressed properly in the literature and there appears to be a gap in the literature and the researcher hopes to fill this gap.

One of the objectives of information system success is satisfying users in terms of functionality and user experience. Research has been directed at exploring and assessing information system satisfaction. Assessing this together with its determinant is critical as it can quantify the success of the information system investment. Before, user satisfaction was used as a replacement for information system success. User satisfaction is an evaluation made by a user to assess the abilities of an information system. Factors of user satisfaction have been explored to see users' acceptance of the information system. To promote user acceptance of information system use, it is vital that users' expectations and needs are understood (Kassim et al., 2012).

2.2 Information Systems/ Enterprise Resource Planning/ DSS background

In order to contextualise the role that information systems play in organisations, an overview of the specific types of information systems used in organisations will be provided. This discussion will make reference to decision support systems (DSS) and Enterprise Resource Planning (ERP) systems. The RMS used at the eThekwini Municipality plays the role of an ERP as well as a DSS. The technology acceptance literature in the context of an ERP system and DSS has a strong alignment with acceptance and adoption of the RMS.

2.2.1 Enterprise Resource Planning (ERP) Systems

The dynamics in processes in the organisations at the inception of information systems resulted in the implementation of ERP systems in organisations (Bazhair & Sandhu, 2015). The distinct difference between the two is that an information system performs the tasks of collection, storage, and distribution of data, drawing up reports, and providing information support for management decisions. It streamlines and speeds up the exchange of information between the

departments (Das Neves et al., 2004). According to Shaiti & AIMuhayfith (2020), an ERP is part of the bigger management information system that leads in the simplification of routine operations. ERP's use data to predict business development outcomes and make appropriate decisions.

Organisations are making large investments into ERP systems and expect to reap the benefits of these systems, in improving efficiency of the organisational processes, that is why adoption of these systems has become increasingly important. These systems implementations are important as the organisations are looking at obtaining competitive advantage from these systems (Bazhair et al., 2015). The financial benefits of the ERP systems are the main reason why organisations adopt these systems. However, the adoption is not based only on the cost factors and may be dependent on other issues.

2.2.2 Advantages of an ERP System

Aremu et al (2018) supports other researchers who have stated that ERP systems come in many forms and is some type of information system that can be utilised to improve business process efficiency. ERP systems also enhance decision-making, improve information (flow, accessibility, and visibility) in the organisation. These can improve employee's productivity and organisational efficiency when they are utilised fully (Ram et al.,2013). This adoption and implementation do however not guarantee improvements in business competitiveness. With reduced paperwork and no requirement for manual data entries, there are minimal or no human errors that can be expected to occur. Since data is no longer stored on paper, the need for warm bodies to enter data into the system where it is converted into digital format is non-existent. They also promote transparency where information is visible to all who are intended to see or utilise it. This allows organisations to know exactly where they stand and know how they are doing. With customer information no longer sitting in files or spreadsheets somewhere, access to customer information has become easier and this has improved the relationship and communication with customers drastically (Hayes, 2022). This has the potential to increase revenue.

2.2.3 ERP Failures

Most failures of ERP systems are associated with user's willingness to accept or use these systems. The success of ERP systems is dependent on the attitudes, and behavioural intentions of the users who use those systems (Aremu et al., 2018). How users perceive these systems also has an impact on the success or failure of ERP implementation. The key factors of failure

of these systems implementation and the inability of business to get their return on investment have been linked to lack of acceptance and under-utilisation of these systems (Hassan, 2017). Researchers have paid more attention to behavioural factors that can aid in boosting users of ERP system to accept and utilise these systems. Many examples show that ERP implementation has failed and resulted in organisations losing their resources (Saadé et al., 2017). According to Hayes (2022), although these systems come with many benefits, it takes a long time to implement them, and only good planning can assist. Data has to be moved from the old system to the new system, each time checking if there are no duplicates, and this consumes a great deal of time. Once implemented a huge amount of time has to be allocated to learning and understanding them properly. Another aspect that takes time is getting used to utilising these systems. Once the business is up and running with these systems, they still need to give it time for them to start seeing the result or the benefits that they anticipate seeing. As long as they are aligned with the organisations business processes then they are guaranteed to one day see the benefits. ERP systems come with so many functionalities and they can get very complex sometimes, naturally they are not simple systems since they have so many capabilities. These systems are costly due to the fact they have to be maintained and there has to be regular updates and, in some instances, more resources may be required, and this also come with its own cost (Rosovsky, 2021).

2.2.4 Decision Support Systems

A decision support system (DSS) is some sort of information system that assists organisations in decision-making that require judgment. This information system assists in analysing big volumes of unstructured data and collecting information that can help in problem solving (Segal, 2021). A DSS is either human powered, automated, or both. The acceptance of new technologies is vital as organisations are investing big amounts of money in these new technologies. When the new technology is accepted by users, then system success increases (Leonard, 2004). Rogers (1995) referred to adoption as choice that one makes to make full use of an innovation, and he referred to rejection as decision that one makes not to adopt the available innovation.

The adoption process is a sequence of stages that an adopter of the technology passes before the adopter accepts the new system. Premkumar and Roberts (1999) introduced the five stages which form part of the adoption process: Awareness stage; is the stage where one is gaining information about the technology, persuasion stage; is the stage where one is influenced to adopt the available technology, decision stage; is the stage where one decides to adopt or not

adopt the technology, implementation stage; is the stage where the technology is being implemented and lastly confirmation stage; is the stage where the outcome is evaluated with expectations. In the many studies that have been undertaken to examine the acceptance and the adoption of DSS it is discovered that when users adopt the new system, this brings about benefits from that system and the opposite happens when they are not willing to accept the system (Davis & Venkatesh, 1996).

2.2.5 Advantages of DSS

The advantages of this information system are that it's a decision support system and it speeds up the decision-making process. It has an ability of collecting and analysing data (Segal, 2021). It encourages training within the organisation, as some skills must be developed to implement and run a DSS. Since it automates processes, it means a lot of work is cut down and hence the managers will have more time available to spend on decision making (Laka et al., 2021). It saves a lot of time since it produces data as and when required (Katrych, 2022).

2.2.6 Failures of DSS

If incorrect data or information is entered into the system it could yield wrong results, resulting in wrong decision making (Rehman, 2021). This is not what organisations want after investing so much money and time on these systems. Some managers tend to stop applying their minds and acumen and rely too much on the output that they receive from these systems.

2.3 Factors Influencing Technology Acceptance

The Technology Acceptance Model (TAM) consisted of two important factors which are perceived usefulness (PU) and perceived ease of use (PEOU). Initial studies on technology acceptance were centred on this model. While PU had a focus on the value that may be derived from the system in terms of functionality and productivity, PEOU focused on the system's usability. Due to challenges regarding the reliability of TAM to offer explanations for technology acceptance, the UTAUT was introduced to improve the predictive capacity of TAM. Although the UTAUT model introduced additional constructs to accurately predict user acceptance of technology, the construct that is strongly aligned to user experience (UX) and general usability of the system and the role it plays in end user acceptance of a system was retained (Chao, 2019).

The role played by technology acceptance has been widely documented in studies that have been underpinned by theoretical models that resonate with technology adoption theory. However, according to Issa and Isaias (2015), usability and HCI are also significant factors

that influence the adoption and technology usage. Because HCI knowledge can influence the user experience and the usability of software systems. HCI concentrates on what the users see when they access the system, things such as font, text, font size. Usability is concerned about how easy it is to use what you see when you open the system. It is important that developers, analysts, and designers understand what users want in order to produce workable and usable systems. The subsequent discussion elaborates on the concepts of usability and other factors that influence technology acceptance.

2.3.1 Usability

Usability is the capability of a system to provide safe, effective, and efficient condition for users to perform tasks. In software engineering, an object is usable if it allows the user to accomplish their task with ease and at a desired time frame. The object can be a system, application, or anything that the user interacts with (Tan, 2009). Usability in systems is the measure of how a system or product can be utilised to accomplish its goals in a fulfilling and efficient manner. It measures system or product competence. In the 80s during its inception, it was utilised to substitute user-friendly which was said to be very ambiguous. Since usability measures a product or solutions competence, it is vital to users and it determines whether users can accomplish their goals, or whether they need to look for other solutions. A usable system or product must have the following characteristics. It must be easy to use even in the first attempt and it should be easy to familiarise. It must be easy for users to remember the interface. It should make it easy for users to accomplish their goals (Punchoojit et al., 2017).

Effort expectancy is influenced by system navigation, system learnability, which are usability features and these influence user's willingness to use the system (Alshehri et al., 2020). Aini (2019) states that PE is the main driver in behaviour of the users, and ease of use (EE) influence the sense of usability, instead of directly affecting the behaviour of the users (BI). It's been revealed that education and training can boost how a user feels about the usability of the technology and boosts the motivation to use it.

2.3.2 Ease of use

The study by Venkatesh and Bala (2008) talked about the ease of use of the system, which is equated to the system's usability. Ease of use describes how easily users can use a software and it is invisible. Ease of use is a fundamental part of user experience and it's also a central usability concept. Ease of use is a system quality that shows that people will prefer to interact with a software if they think that the software does not require too much effort. Gefen and

Straub (2000), propose that ease of use will not have an important influence on usage for something that is task oriented, such as making a purchase online, but will be significant in a task that is more essential, such as gathering information. Ease of use is strongly related to effort expectancy.

A study by Ramayah and Lo (2007), found that systems which appeared to be easy to use and easy to understand, would be more useful from the user's perspective. Bruggen and Wieranga (2005), assumed that ease of use will be positively related to the individual impact of the systems. The success of the system depends on the ease of use of the system. It can be concluded that ease of use is one of the technology factors that play a significant role in system performance. Bruggen et al (2005), propose ease of use as one of the antecedents that influence system performance.

2.3.3 Functionality of the system

According to Rouse (2005), functionality is the quality of being suitable to serve the proposed purpose while the international Standard Organisation (2017) refer to functionality as a set of attributes with functions that satisfy the needs of the user. Additionally, according to Lu et al., (2012), information system's functionality is the ability of the system to provide its users what they expect in executing their tasks. Vera and Edore (2015) emphasised that the alignment of functionalities of the system with user requirements is key and determine its effectiveness for a given task. DeLone and McLean (2016) supported by Cenfetelli (2008) claimed that functionality is an important indication for assessing the effectiveness of the system. Venkatesh et al., (2008) observed that both attitude of users and perceived usefulness relate to the rate of use of the new technology. It cannot be argued that the system functions are important in a new system.

2.3.4 Reliability of the system

Another critical feature of software quality is reliability (Osaki, 2012). According to Madan and Dubey (2012), for the system to be considered reliable it must preserve its performance level under specified conditions for the stated time. Wangila (2014) mentioned that the level of performance of a system is stated during system development and must be sustained throughout even when software faults occur. Tworek (2018) stated that the maximum reliability of the system is achieved when the system is accurate, safe, available, accepted, and has a short response time and responsive support service. The importance of system's reliability and

performance is notable therefore, the level of system reliability could affect the level of users' satisfaction in the process of adopting the Systems

The UTAUT constructs of social influence, performance expectancy, and effort expectancy predict behavioural intentions to use the technology and performance expectancy has the strongest influence (Madigan, 2016). Alshehri et al., (2020) noticed that in an organisation Performance Expectancy was the most visible construct for behavioural intention to use a new technology, and the other two construct were not noticeable. For current use of new technology, facilitating condition and behavioural intention were noticeable but the strongest construct is facilitating condition. This means that in organisations where using a new technology is not compulsory, performance expectancy is the most critical factor in determining employees' acceptance and use of technology. Employees were not influenced by social pressures to utilise technologies.

2.3.5 Performance

Performance is an important software quality attribute; it is a very important trait for every software to have. This dimension of quality involves measurable attributes. These measurable software attributes include responsiveness, stability, scalability, speed, and resource usage. Responsiveness measures how fast a software responds to commands and prompts, this may include how fast search results populate. Stability measures how stable or reliable a software is overtime. A scalable software supports a growing or a shrinking number of users without a drop in performance. Speed measures how fast actions are completed within the software, e.g., how fast one can login to the software. Performance in a nutshell refers to a software's operating characteristics (Cui, 2021 & Hamilton, 2023). It is related to performance expectancy of the UTAUT. The greater the software performance, the better your experience will be when you use the system.

2.4 Factors contributing to the success or failure of ERP system implementation

Gcora and Chigona (2019) believe that while integrated systems are introduced by South African municipalities, these systems are not extensively used. According to Sanchez and Bernal (2007), implementation of ERP systems is a reasonable investment but due to the complex nature of these systems this leads to failure in implementation. The failure rate is still relatively high, at least 60 % of these systems are classified failures (Wong et al., 2005). Detailed in the below section are various factors that either inhibit or assist ERP implementation success:

2.4.1 Change Management

Failures under this category include lack in the following: training, skill, and communication. It also includes lack of employee engagement, low employee morale and resistance to change (Proctor & Doukakis, 2003). A change management team is expected to make certain that the organisation is ready for the change that is coming when a new ERP system is implemented in the organisation. This team will also deal with resistance to change. Olugbara et.al., (2014) referred to change management as an approach of predicting change that is anticipated to come with the implementation of the ERP system and then successfully handling it. Every time a new system or application is implemented, change management team must ensures that the organisation is ready for the change that is anticipated to come. The key duty of change management teams is to deal with the resistance to change and this must be dealt with as early as possible.

2.4.2 Communication

Tarhini et al., (2015) also cited that during ERP system implementation communication is one of the most difficult to manage. Dlodlo (2011) suggests that organisations that are implementing ERP systems should start communicating the projects objectives, status, and scope very early to project team members and the whole organisation at large, this communication should not only stop at senior manager level. Management teams who do not understand the change process and underestimate the complexity of these systems causes ERP implementations to suffer. These projects cost a lot of money and management who fail to manage change cause these projects not to achieve the intended benefits (Aloini et al., 2012). According to Saleem et al., (2016), mangers who favour their old ways of doing things do not really like to change their existing process to the new ones, they further noted that usually employees are able to determine if the ERP will succeed or not.

Wright (2016) believes that effective communication of the implementation process of the system to users is critical as it has the ability to increase acceptance. According to (Bano et al., 2017), interaction between the users and developers of the system ensures that feedback from users on the system functionality is acknowledged and incorporated into the system. Belief and attitude of users change as they gain experience, this is according to the study by (Bhattacherjee and Premkumar 2004).

2.4.3   Business Process Re-engineering (BPR) and ERP

Research by Olugbara et al., (2014), advises that organisations who are implementing ERP systems should use certain methods to match their business processes to their requirements. However, Wang (2016) found it surprising that ERP implementing organisations do not contribute much to the process re-design as they are not engaged at the early stages of implementation. This does not yield good results and leads to poorly designed systems. According to Saravanan and Sundar (2015), users might not accept the system if business process re-engineering is not done accurately as the system might have functionality that the organisation does not require or miss functionality that the system is expected to have. When implementing, some requirements should be priorities as a system might not meet all the user requirement at once. Some requirements which are not high priority may be looked at, at a later stage. This is done to manage scope creep and to ensure that the ERP system is implemented on time.

It should be noted that some system implementation projects don't start on time because of time limitations and pressures at work and this causes the gathering of system requirements to be done in a hurry and as a results users are not made to understand clearly how their business process fits in the ERP system Chang (2016). According to Chen (2001), organisations embarking on these implementations should get ready to change the way they do business and try to fit what they do to the system that is being implemented.

Business process re-engineering that is not done properly leaves some organisations with no choice but to hard code the system as a temporal easy remedy. Zach et al., (2014) talks about the disadvantage of hard coding the system as it may make the system inflexible to future upgrades, he suggests that it should be avoided.

Zach et al (2014) advised business that they can customise using process modelling tools and this is done without much code changes. Shen et al. (2016) indicated that some organisations transformed their business routines to suit the new systems requirements and the functionality adopted as the most effective method in defining new requirements. Shen et al. (2016) supports other researchers such as Saravanan and Sundar (2015), that implementations and re-engineering should be incremental as ERP projects generally take long to complete. According to Ahmed et al., (2003), business process re-engineering should not be the only focus, this focus should be extended to transforming employees to knowledgeable workers who may reap the benefits from the new business process.

2.4.4 Vendor Support and implementation

System implementation at municipalities follow a top-down approach, meaning that the systems are implemented by consultants and only introduced to the people who will be using them afterwards. Users who are not involved in the implementation may experience problems because of non-involvement (Gcora and Chigona 2019). This is the case at eThekwini municipality where most of the ERP system are implemented by external vendors, RMS being an example (Shaikh, 2018). According to Olugbara et al., (2014), most ERP implementations have consultants who are unskilled and don't understand requirements and cannot give business professional advice. They also noticed that some countries have a lack of good vendors with the skill and capability to choose from and this contributes to disaster in ERP implementation. Some countries have special empowerment requirements/ rules which suggest that local companies should be supported and sometimes these preferred local companies are not competent enough to successfully carry out such massive system implementations. Because of these rules that favour local companies over efficient and well-established companies, organisations end up having to choose from limited number of vendors who may not have the expertise to carry out this massive task.

2.4.5 Senior Management Support

For ERP's to be successful they should be planned, and organisations need to be aware that implementing such systems may knock their productivity down before it goes up again (Hassan and Mathiassen 2018). Hassan et al. (2018) adds that for ERP implementation to be successful, those implementing should plan, organise, and coordinate appropriately. A critical fact when implementing is that organisations should gather a team of devoted team members with good intention and these team members should get a lot of support from management. Each member in the project team must be ready to receive and accept advice from the implementation partner consultants.

One of the reasons for failure of ERP implementations is caused by organisations failing to agree on organisational goals (Al-Mashari and Al-Mosheleh 2015). Mashari et al., (2015) continue to say that misalignment between IT strategy and business strategy contributed massively to this failure. According to Umble (2002), organisations implementing ERP systems should have clear reasons and motives why they are implementing these systems, they should also be in a position to provide the critical business functions that would be addressed by the ERP system. Al-Mashari et al., (2015) re-emphasis the leading cause of ERP failures to being the misalignment of IT strategy and corporate strategy.

Sharing the organisational vision with all employees and with those who might have interest can reduce ERP implementation failures. Organisations are also required to provide a clear role that the new system will play in the organisation. Luijten et al. (2014) confirmed that learning should be enforced by managers and mindset of employees should be shifted to focus on learning.

"Lack of management commitment" was recognised by Huang and Palvia (2001) as a leading risk among ten other risks that lead to system implementation failure. Esteves et al. (2001) agree with Huang and Palvia (2001) that management support is needed, and their commitment is required to ensure that there are always resources available. Management support through strategic campaigns highlighting the importance of ERP systems is important for employees. Management in the implementation process have to show interest and point out the need and purpose of the ERP system, this is necessary for project execution. Lack of commitment and support from management hinders project implementation success, again this is a big risk in system implementation.

2.4.6   User Training

Training team's inability to evaluate readiness of employees before the project commences is a major issue impacting system implementation. The purpose of this evaluation is to try and figure out if employees are ready for the new system. Change, training, and communication teams should lead this organisation readiness process. Implementing ERP systems becomes more riskier if undertaken without prior planning and without doing feasibility studies (Shen et al., 2016).

During system implementation companies are encouraged to train and support users (Noudoostbeni et al., 2010). To encourage users to have confidence in the system, a lot of ERP training must be provided (on the job training). Dorobat and Nastase (2010) agrees that organisations should educate and train employees and keep them up to date with the project's implementation process. If organisations are not committed to the training, this could lead to failure. Implementing these systems requires a budget and full commitment from the client and the implementation partner as consultants will be needed to advise with regards to the preparation for the implementation.

2.4.7   User Acceptance

User Acceptance Testing (UAT) is a process of involving users of the system once they have been identified. These users will provide their requirements and they will actively test the

system as development progresses (Tarhini et al.,2015). Tarhini et al., (2015) suggests involvement of employees throughout the ERP implementation project, since they are the ones that are most affected by the system change. By involving employees at the beginning of the project makes them understand the system better and this makes it easier for them to accept the system. They further acknowledged that deadlines can be unrealistic sometimes and work must be delivered in a short period. Due to these tight schedules, users often rush the testing and sometimes its overlooked altogether, resulting in shabby systems.

2.5 ERP Acceptance and Adoption

According to usability expert Nielsen (1994), usability is a minor issue compared to system acceptability which is a bigger issue. Software system adoption and acceptance has hurdles which may revolve around resistance to change. There has been a lot of progress made with regards to the development of software applications, but still systems are not being used to their full functionality (Venkatesh and Davis, 2000). User acceptance determines either the success or failure of software systems (Davis, 1989).

Organisations are driven by improvements in technology and hence a need for information systems adoption is crucial. The literature on technology adoption is dominated by a presence of theories such as the Technology Acceptance Model (TAM), Unified Theory of Acceptance Use of Technology (UTAUT), Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB) and the Diffusion of Innovation (DOI) Theory (Lai, 2017).

2.5.1 Theory of Reasoned Action

Theory of Reasoned Action (TRA) is among the very first technology acceptance theories, it was developed by Ajzen and Fischbein (1975). This theory laid a foundation for many theories that come after it. The UTAUT, TAM and TAM2 are example of such theories. The (TRA) explains human behaviour and its used mainly in social psychology to predict technology acceptance. This theory assumes that one's behaviour is affected by their behavioural intention. This theory has two key factors which are subjective norms and attitude towards behaviour. This theory assumes that people calculate and evaluate their appropriate behavioural assertions continuously and they are makers of rational decisions. According to Lai (2017), attitude is a negative and positive feeling that one poses when performing an intended behaviour. Subjective norm is another critical factor in the TRA. This theory attempts to clarify the relationship between attitudes and behaviours of humans. It predicts human behaviour based on their pre-existing attitudes. Figure 2.1 presents the elements of TRA.
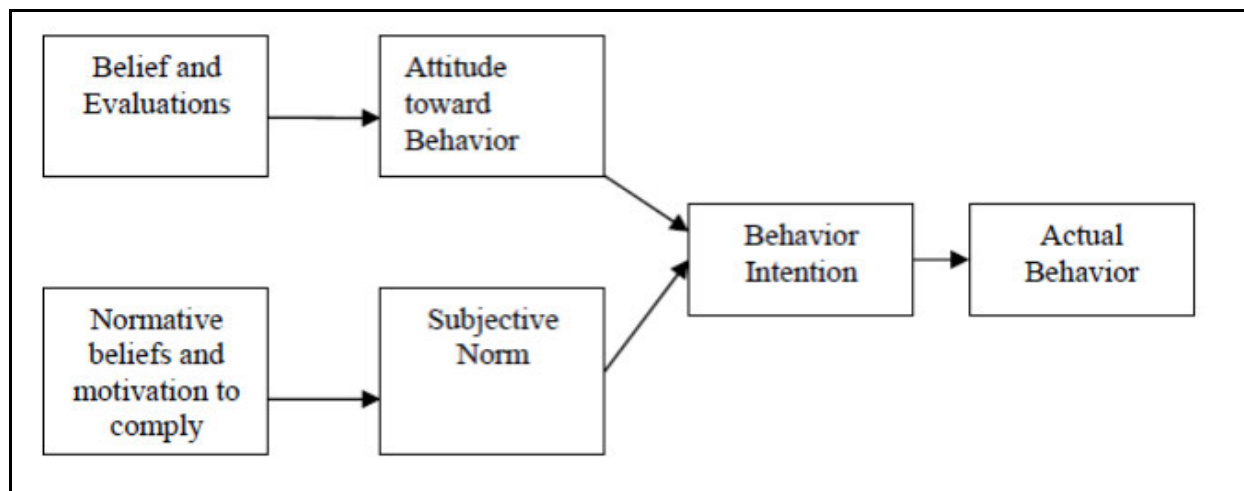
Figure 2. 1:Theory of Reasoned Action

Source: (Fishbein and Ajzen, 1975)

2.5.2 *Theory of Planned Behaviour (TPB)*

The Theory of Reasoned Action's extension is the Theory of Planned Behaviour. It was formed to improve the predictive power of the TRA, and it links belief to behaviour. Ajzen believes that the three components of the TPB which are subjective norms, attitude, and perceived behavioural control, together shape one's behavioural intentions. Perceived behaviour control was not a component of TRA and its addition to the TPB was to improve predictive behaviour (Ajzen, 2011). Perceived behavioural control is a level in which one believes that they can execute a given behaviour and subjective norm is one's behaviour, which is influenced by what those close to them think, it could be their friends, family, or colleagues. Attitude is the ability of assessing one's own behaviour and involves considering the outcomes of engaging in a given behaviour. Behavioural intentions are indicative of one's willingness to perform a behaviour (Fishbein and Ajzen, 2010). Subjective norm and perceptions of behavioural control are supposed to feed into behavioural intentions. According to Ajzen (1991), subjective norms, attitudes, and perceived behavioural control predict the intention, which in turn predicts the behaviour.

This theory is mainly used in the field of psychology (social and health). TPB has become one of the most regularly cited and significant theories for the prediction of human social behaviour. Although it has become popular in the years but there is some critics and debate associated with it. Some have rejected it as adequate in explaining human social behaviour (Wegner, 2002; Uhlmann and Swanson, 2004). Those who oppose this theory accept its reasoned action assumptions but question its limiting conditions and its adequacy. Another opponent of this

theory and other reasoned action models say it does not take mental and emotional psychology into account. They further notice that these reasoned action theories are too rational and processes that are known to prejudice one's judgement and behaviour are also not considered. Another downfall of this theory is that it does not consider economic or environmental factors that have the ability to affect one's intention to execute a given behaviour (Hagger, 2015). Over the past years, some constructs of the TPB and other added components from behavioural theory were utilised by researchers to make it a more integrated model.

2.5.3 Technology Acceptance Model

The TAM model is based on the Theory of Reasoned Action by Ajzen and Fishbein. According to Davis (1989) it predicts and explains behaviour in variety of areas. This model examines technology acceptance behaviour in information systems. This theory has been validated by literature and can be used on all types of users and technologies.

The TAM has five constructs which are perceived usefulness (PU), perceived ease of use (PEU), attitude towards use (ATT), behavioural intention (BI) and actual use (AU). TAM determines the users' application and technology acceptance. PU is one's belief that their performance will improve because they are utilising a technology (Davis, 1989). ATT is a positive or negative attitude towards an application or system. BI is the intent by a user to use a technology, believing that the technology will enable them to achieve their goals. AU is a measure of how often and how much the users are using the given technology (Davis, 1989).

PEU of the TAM affects PU and assumes that users are likely to think that the RMS is useful if it is easy to use. One's attitude towards the use of a technology is affected by both PEU and PU and once users view the technology as useful and easy to use then they develop a positive attitude towards the technology. Hence, an individual is more likely to continue using a technology once they have developed a positive attitude towards it.

2.5.4 Extension of the Technology Acceptance Model (TAM2)

This theory, the TAM2 was developed by Venkatesh and Davis (2000). They achieved this development by adding cognitive instrumental processes and social influences on the original TAM. The cognitive instrumental processes comprise output quality, job relevance, result demonstrability and perceived ease of use. Inversely, social influences comprise images and subjective norms. Venkatesh et al., (2000) used the same definition for subjective norm like in TRA (Fishbein and Ajzen 1975). According to (Kelman, 1958; Warshaw, 1980), subjective norm has an effect on intention in mandatory contexts. If an individual observes that an

important social act can punish nonbehavioral or reward behaviour, then they will adjust their behaviour accordingly. While social influences can influence intention indirectly through internalisation and identification in voluntary contexts. Internalisation describes a process when an individual incorporates others belief into their own belief structure. Identification means becoming one's own (a member) in a social group. TAM2 retains the same concept as that of PEU of the TAM as a direct element of PU. Experience and voluntariness are the moderating variables in this theory. According to Wu et al., (2011), the TAM2 has removed attitude variable which is present in the TAM. In this model subjective norms on behavioural intention to use effects are ignored.
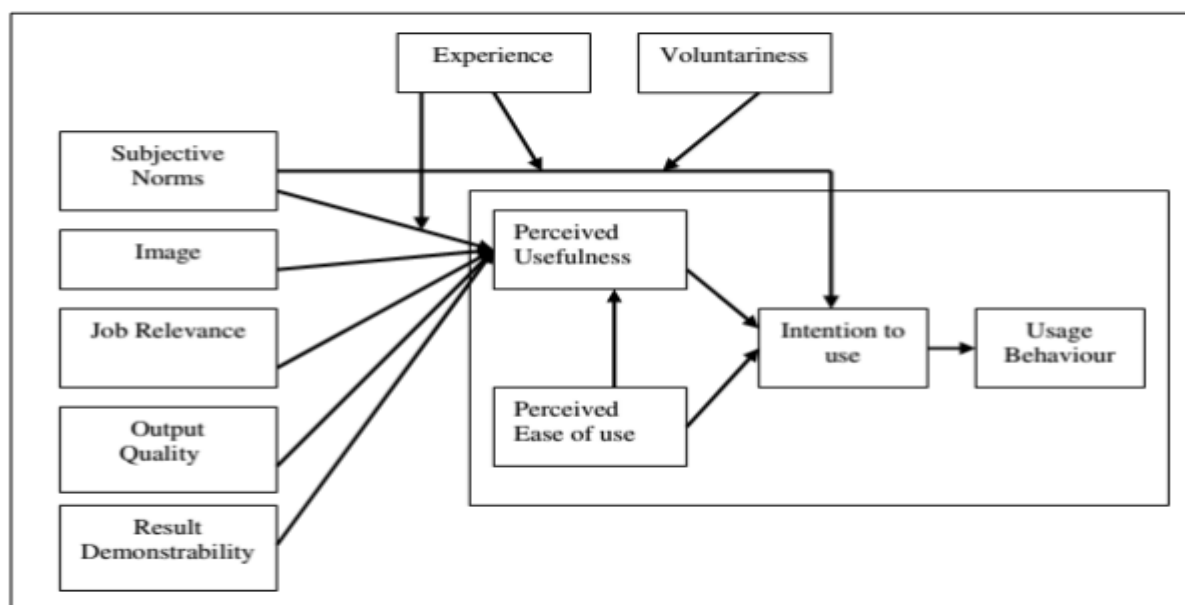
Figure 2. 2: Extension of the Technology Acceptance Model (TAM2)

Source: Venkatesh & Davis (2000)

Figure 2.2 shows the TAM2 model with the constructs associated with this model. The moderating variables are experience and voluntariness.

2.5.5 *Extension of the Technology Acceptance Model (2008) (TAM3)*

To enhance the TAM model Venkatesh and Bala (2008) added computer anxiety, computer self-efficacy, perception of external control, and computer playfulness dimensions to the TAM. This model incorporates actual system usability and not perceptions. Perceived enjoyment and objective usability are the two adjustment variables that have been added to the TAM3. This theory is built by synthesising the prior TAM theoretic frameworks using four classifications. The classifications are system characteristics, individual differences, social influence and facilitating conditions (Howard et al.,2010). In TAM3, the perceived ease of use is described

by computer playfulness, computer self-efficacy, computer anxiety, perception of external control, perceived enjoyment, and objective usability and perceived usefulness is described by job relevance, subjective norms, result demonstrability and image. This model is criticised for having too many variables which have too many relationships among each other. This model is very good for decision making especially for urban managers.

2.5.6   *Combined TAM and Theory of Planned Behaviour (C-TAM-TPB)*

Taylor and Todd (1995) established the C-TAM-TPB by linking the predictors of TPB with the TAMs perceived usefulness and ease of use to improve the prediction of IT acceptance (Surendran, 2012; Taylor and Todd, 1995). This theory has been supported by numerous scientific research and was created because of inadequate control factors in the TAM model (Chen, 2013). It has added subjective norm as well as perceived behavioural control into the TAM.

Taylor and Todd's theory is an IT model which is appropriate for use for users who are experienced and users who are inexperienced. C-TAM-TPB is utilised to predict usage behaviour of users before they have any experience with the system (technology). It is true to say that this model may be utilised on people who have used the technology before as well as on people who have never used the technology before for predicting usage (Kripanont, 2007). Momani and Jamous, (2017) noticed that there is a difference in the influence of the elements of usage depending on whether the user is experience or not, and for the experienced users there is a connection between behaviour and behavioural intention. The intentions of users who are inexperienced are predicted better by the variables in the model that are the intentions of experienced users (Taylor & Todd,1995). It's concluded that communicating information to users who are inexperienced may have a substantial effect on intentions, but it may not translate to behaviour altogether. To conclude, the results indicated that C-TAM-TPB is a suitable model for predicting information technology usage at different levels of user experience

2.5.7   *Diffusion of Innovation Theory (DOI)*

Diffusion of Innovation theory, states that the system will gain momentum over time and spread to a wide population. This theory does not work with prevention of behaviour (Rogers, 1995). According to Dooley (1999) and Stuart (2000), this model has been applied in political science, communication, history, economics, health, technology, and education. This theory is extensively used in technology diffusion and adoption area. Roger's theory is used in higher

educational environments and is very suitable for examining the adoption of technology (Medlin, 2001).

2.5.7.1 *Diffusion of Innovations four key elements*

The Diffusion of Innovation theory components are innovation, time, communication channels, and social system. Innovation is referred to as a practice that is viewed as new by an individual. If the individual believes the innovation is new, then that may still be innovation for them even if it was invented very long ago (Rogers, 2003). Communication channels is the second element of this theory, and it's the process in which participants create and share information through given channels to meet a common understanding. Time is the third element in this theory and is the most ignored in most behavioural studies. The last element is social system and it's a set of integrated units that jointly engage in problem solving to accomplish a desired goal. Including the time measurement in this theory is one of its strengths (Rogers,2003).

2.5.7.2 *The innovation decision process*

This decision process starts from the time of first encounter with the innovation up until a time that one develops an attitude towards it to the phase of deciding whether to accept or reject the innovation. The final stage is the implementation of a new idea. This decision process involves five steps namely: knowledge, persuasion, decision, implementation, and confirmation and they follow each other in that sequence.

2.5.8 *Model of PC Utilisation* (MPCU)

The Model of Personal Computer Utilisation derived from Triandis' (1977), aims to predict individual acceptance and (PC) utilisation, and complements the perceptions put forward by TAM. This framework describes how social behaviour takes place and states the factors that stimulate this behaviour. Behaviour is determined by people's attitudes, their social norms, habits, and effect of behaviour (Thompson et al., 1991).

Behaviour intention is not incorporated in this model since this model assesses actual computer usage behaviour. Habits are excluded in this model because they have a repetitious relationship with current use in the context of PC utilisation. MPCU explicitly assesses the direct influence of affect towards use (ATU), facilitating condition (FC), long term consequences (LC) of use, social influences (SI), complexity (CO), and job fit (JF), on behaviour. Results confirm that the four elements; social factors, Job fit, complexity and long-term consequences have a significant influence on Personal Computer usage. The other two elements; facilitating condition and affect toward use however do not have an effect on PC usage. Habits are not included in this

model even though they are powerful in predicting behaviour (Taherdoost, 2017). MPCU is successful in explaining the usage power (Momani, 2020) but has 24% explanatory power. MPCU in particular, has been widely applied in the ICT field. This theory is a competitor to the TRA and TPB perception.

2.5.9   Motivational Model (MM)

Deci and Ryan (1985) originally created the Motivational Model, but it was later tested by Davis et.al (1992). It is adapted from the psychological domain to fit the information technology field. This theory assumes that system use in the workplace is determined by two factors of motivation which are intrinsic and extrinsic motivation. Intrinsic motivation is disregarding the performance outcome that might be obtained and focusing on enjoying using the technology. Extrinsic motivation is doing a task because it seems to be helpful in obtaining valued outcome, (e.g., raise or improved job performance). Davis et.al (1992) research findings show that how useful a computer is seen to improve performance in the workplace influences one's intention to use that computer, how they feel while using that computer also has an impact. Vallerand, (1997) gives examples of extrinsic motivation which are perceived ease of use, PU, and subjective norm. Sharma and Mishra (2014) agree that the feeling of satisfaction and pleasure are related to intrinsic motivation. This model explains only 28% of the variance in usage as supported by the authors if this model (Venkatesh and Speier, 1999).

2.5.10 Self-Determination Theory (SDT)

The establishment of Motivational Model Theory is a great collaboration and led to the formation of the Self-Determination Theory (SDT). This theory is based on the fact that the best method to get one to perform tasks or do work is to reinforce their behaviour with rewards (O'Hara, 2017). According to (Legault, 2017), this model's foundation is rooted on human's personality and motivation concerned with how a person interacts with and depends on the social environment. Motivation Model is based on psychological needs and their role in growth and self-determined motivation. It describes the effect of the social and cultural context that enables people's basic psychological needs. Legault, (2017) further states that humans try to understand themselves and progress by integrating new experiences; by refining their needs and interests, and by connecting with others and the world at large. This model is used across life domains including work, sports, relationships, religion, health, and education.

The motivation types are illustrated in figure 2.3.
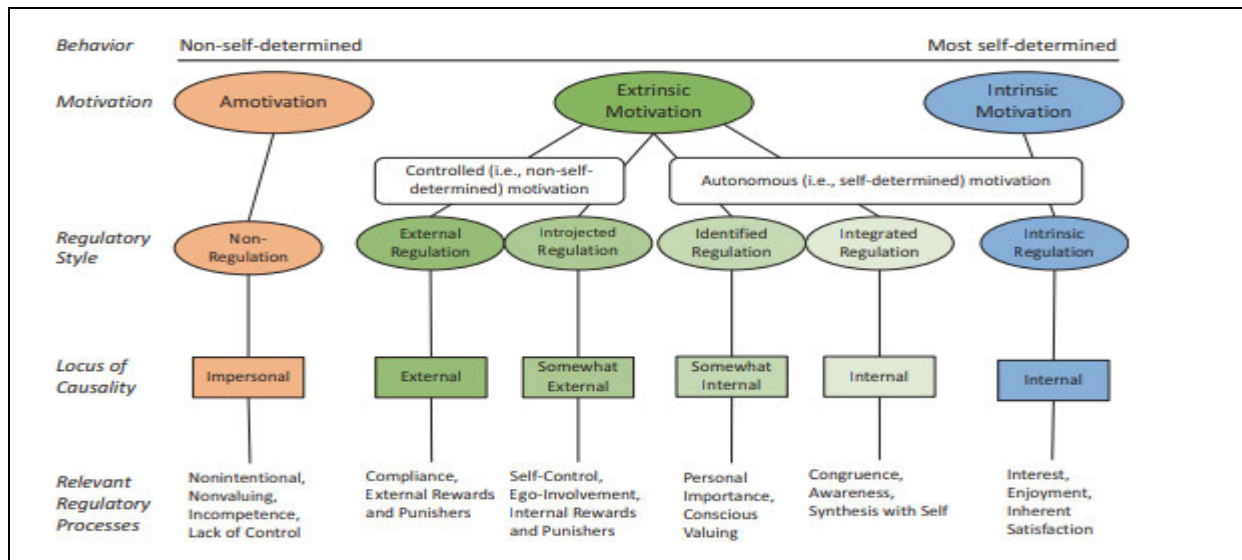
Figure 2. 3: Types of Motivation

Source: Deci and Ryan (1985)

Extrinsic Motivation is when praise and reward are utilised for specific activities whereas Intrinsic Motivation is driven by outside factors for example (doing something because you like how it makes you feel). Amotivation on the other hand is reduced motivation to perform a particular task (Lee,2015)

2.5.11 Extended Unified Theory of Acceptance and Use of Technology (UTAUT2)

The latest IT acceptance theory the UTAUT2, was established by Venkatesh et al., (2012). It is an extension of the UTAUT which has been utilised in many research studies to predict behaviour. The developers of this model extended this model to incorporate the consumer context factor. To achieve this extension, they included three variables these are (hedonic motivation, price value and habit). The mentioned additional independent variables have been incorporated to fit into the consumer technology use context. Furthermore, by Venkatesh et.al incorporating these variables into the UTAUT, they successfully expanded the framework. Voluntariness is omitted in this theory.

Researchers from different countries are recommended to use this model, mainly countries that are not so technologically advanced. UTAUT2 is the most comprehensive model and considers cultural, social, technological, and other relevant behavioural predictors (Alkhwaldi and Kamala, 2017). The researcher has a leaning towards the UTAUT model because it can explain at least 70% of the variance in user intention. Preference for this framework is explored in the subsequent sections.

2.6 The Study's Theoretical Framework

The theory that will be guiding this study is the Unified Theory of Acceptance and Use of Technology by Venkatesh et al (2003). While other theoretical frameworks have been discussed in the preceding sections, this may be seen as a deviation, however from the researcher's viewpoint it is imperative that they are discussed as they give better understanding of the main construct that determine human's technology adoption. The preceding models may also be viewed as a guide to how the researchers preferred theoretical framework was formed. The UTAUT is the researcher's preference since its comprehensive and was formed because of reviewing and synthesising eight models which are: the Motivational Model, the TAM, Theory of Planned Behaviour (TPB), combined TAM and TPB, Theory of Reasoned Action, Model of PC Utilisation, Innovation Diffusion Theory, and Social Cognitive Theory (Dwivedi et al., 2019). Critically analysing and examining this theory shows what it's an excellent research method as many of the other technology acceptance models are subsets of this model. It is a very powerful model (Alkhasawneh et al., 2015). It has a high explanatory power. The UTAUT is established for examining technology acceptance and adoption. This model mixes the TAM's Perceived Usefulness and Perceived Ease of Use and refers to them as Effort Expectancy and Performance Expectancy respectively. Facilitating Condition and Social Influence are additional variables in this model. The four constructs are critical elements of the intention to adopt a technology or information system.

2.6.1 Application of the UTAUT

The UTAUT has been used successfully in many studies by many authors in many countries. Since its creation, it has been used in municipal studies by Hobololo and Mawela (2017) in their study to explore cell phones usage in the Buffalo City metropolitan municipality. Murenzi (2016) also used the UTAUT in the study on e-Government by selected municipalities in South Africa and Rwanda. The results show that 33 % of the respondents do not know anything about computers and the remaining 75 which is high don't have sufficient knowledge and are unskilled in the work arounds of the computer. Since they are unskilled and cannot use computers efficiently, then they cannot benefit from e-government services provided. Moon and Norris (2005) argued that it is impossible for one to arrive at an intention to use e-government services, if one does not have computer skills and knowledge. They can only benefit if they are competent in using a computer. It has also been used by other authors outside of South Africa. It has been used on mobile services' study by Koivumäki et al., (2008). The results are in alignment with those of Moon and Morris (2005), they show that if users have

mobile services skill, it will cause them to understand them more and the intention to continue use will increase. They also found that understanding the device and having usage skills had an influence on the consumers' usage intention. It has also been used by (Williams et al., 2015; Al-Qeisi et al., 2015; Attuquayefio, 2014; Kohnke et al., 2014) and many more in their studies. It has also been used as a combination with a Technology Acceptance Model and a combination with Social Cognitive Theory.

2.6.2   Limitations of other theoretical frameworks

Much research has been undertaken to address the limitations of technology acceptance theories and models (Williams et al., 2015; Moghavvemi et al., 2013). The research performed by Venkatesh et al., (2003) envisioned to outline some key limitations of studies performed over older theories. These are the three limitations of the previous studies: they were complex and unsophisticated organisational technologies. They were performed on academic location rather than on employees of an organisations who were actual users of the systems. Most of the testing operations were not able to generalise mandatory usage settings.

2.6.3   Comparing UTAUT and previous models

After Venkatesh et al., (2003) had completed the comparison of the different models, they found that the other eight technology acceptance models that they used had an explanatory power from 17% to 42% for explaining variance in BI, when he compared them to the UTAUT which had a higher power in explaining variance. Since the UTAUT was formed by synthesising the models, it shares some characteristics with one or more constructs of the other models. UTAUT has an advantage of being viable even after extension. It has benefits such as being flexible, robust, good predictor of technology acceptance. It has all these benefits but uses a few constructs. According to Hennington and Janz (2007), the TAM is very limited and restrictive and cannot be considered as comprehensive. MPCU is complex and difficult to understand because it contains a lot of constructs. UTAUT determinants have a relationship with major software quality requirements. It was not developed to test user technology acceptance only but also to test usage satisfaction. Although the UTAUT is the most comprehensive model, it is not general. Since the UTAUT has less constructs, that makes it less complex and more understandable. It is one of the most integrated technology models. UTAUT is mainly used in organisational settings.

Neufeld et al., (2007) confirms that UTAUT has served as a baseline model since it was developed. It can be applied in both structural and non-structural settings. In the section below, the four constructs which are predictors of behaviour are discussed.

2.6.4 Performance Expectancy

Shin (2009), states that performance expectancy (PE) is how much users believe that utilising the system will help them perform better. Compeau and Higgins (1999) further state that the theoretical background of PE is derived from Technology Acceptance Model, Social Cognition Theory, and Innovation Diffusion Theory. Variables connected to PE are the strongest in predicting the intention to use the technology. Zhou et al., (2010) discovered that PE, SI, and facilitating conditions influence user adoption.

2.6.5 Effort Expectancy

Effort Expectancy (EE) is associated with how simple it is to utilise the system. It comes from the perceived ease of use factor as planned in Technology Acceptance Model. Davis (1989) discovered that a system which seems to be easy to use has a greater chance of being accepted. Venkatesh et al., (2003) also supports this and says the issue of EE plays a positive role in technology acceptance theory and is regarded as one of the main contributors to the Behavioural Intention (BI) of an individual to accept a technology.

How easy it is to use a system has an influence in how users feel when they use the system, which is user experience. User experience reveals how a user perceives a system or product before, during and after using it (Punchoojit et al.,2017). According to Yong (2013), user experience (UX) is how a user feels about a system, product, or service before or after use. User's experience from the time that the user first uses the system, or product throughout is an important concept in user experience. Three characteristics are used to explain user experience. The first is the holistic nature of user experience which includes qualities such as visual, auditory aspects. The second is that user experience pays a lot of attention to the user's perceptions. User experience is concerned about how users feel. The third is that UX has value in the development of a product or service. The aim of designing for User Experience is to reassure positive feelings and lessening negative feelings towards the product. Usability and UX differ but not completely, they are related. A good-looking system or product might induce positive first-time experience, however, if the system or product was not usable this could ruin the complete user experience (Yong,2013).

2.6.6 Social Influence

Social influence (SI) is the level in which a person feels that other's, (it could be their bosses), believe they should use the system (Diaz and Loraas, 2010). According to Rajan and Baral (2015), there is practical evidence that the behaviours as well as the attitudes of other people in a user's social circles influence their actions concerning the use of the system or technology. SI plays a major influence especially in the workplace where an employee might believe their manager wants them to use the system for them to achieve their tasks (Rajan and Baral, 2015).

2.6.7 Facilitating Conditions

Facilitating conditions (FC) is the degree in which employees believes that there is organisational and technical infrastructure available to support the use of the RMS. Another model that shares the same idea is model of Personal Computer Utilisation by Thompson et al., (1991). The construct of FC includes technological and or organisational environment factors that are aimed at removing usage barrier. Gupta et al., (2008) discovered that all the UTAUT constructs completely impact the use of the technology. The factors which are critical in enabling FC are Training and support, Project communication and belief in the system (Sussy et al., 2016).

2.6.8 Behavioural Intention

Behavioural Intention (BI) is the intent by a user to use a technology, believing that the technology will enable them to achieve their goals more effortlessly (Ajzen and Fishbein, 1977). Venkatesh et al., (2003) believes that BI has an influence on the use of technology.
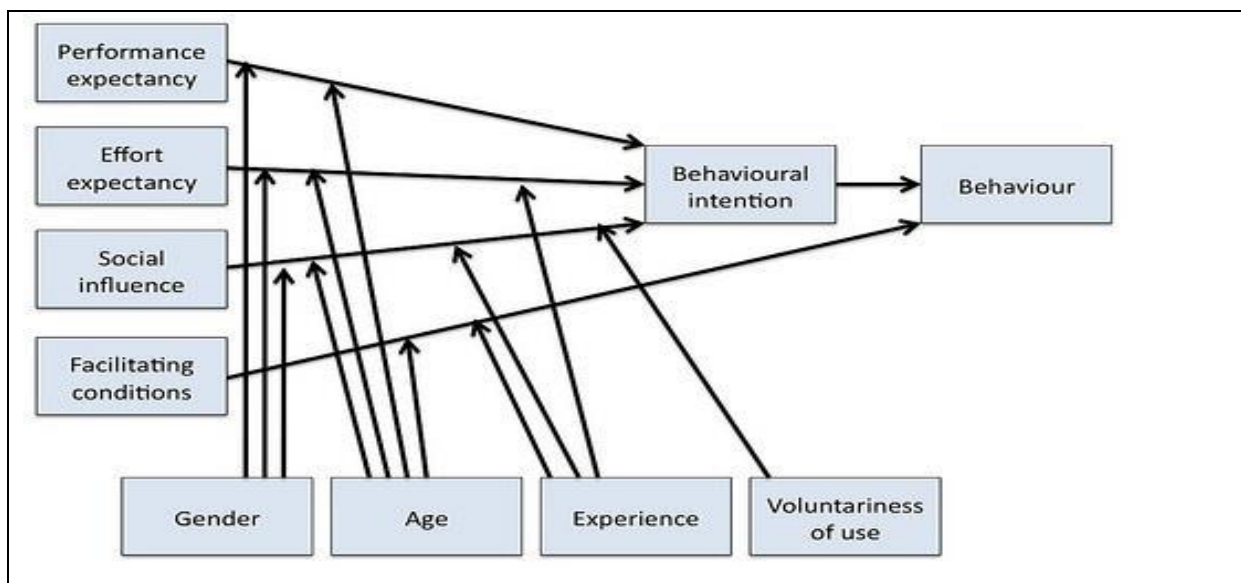
Figure 2. 4: The UTAUT Framework

The UTAUT Framework is illustrated in Figure 2.4 with the four constructs: Social Influence, Performance Expectancy, Effort Expectancy, and Facilitating Conditions. Gender, experience, and age are theorised to facilitate the impact of the four constructs on behavioural intention and technology acceptance. The researcher will conduct the study using all the four constructs of this framework.

2.7 Theory of Phenomenology

The last open ended research question on "experiential knowledge" was guided by the theory of phenomenology. Phenomenology is the study of structures of experience, or consciousness, the structures of experience ranging from perception, thought, memory, imagination, emotion, desire and social activity. Husserl (1977) called these forms of experience "intentionality", the directedness of experience toward things (objects). This philosophical framework or the theory of subjective reality plays a key role in understanding the subject regarding a particular event or phenomena relating to one's life (Qutoshi, 2018). The experience of the object in this study, is the experience of the RMS

Phenomenology tells how experience can be used to understand phenomena. Phenomena which are the "appearance of things", or things as they appear in our experience, or the way one experiences things. Since this theory talks to direct experience taken at face value with a belief that behaviour is determined by phenomena of experience, it gives in-depth understanding of phenomena embedded within the participants views and perspectives (Qutoshi, 2018). According to Husserl (1913/1962) phenomenology allows the researcher to look closely at the phenomena under study. Since the participant's response is not restrictive, they are able to give in-depth information about their knowledge and experiences.

2.8 Conclusion of the Literature Review

It is notable that the factors that influence the adoption of software system's impact on public, private sectors and academia has been well researched. The advantages and failures of ERP systems and DSS were highlighted in this chapter. The relationship between usability and user experience has been established in the literature review. What causes ERP system implementations to succeed, or fail was also discussed. These are very critical factors as they determine whether the implementation of an ERP system succeeds or not. The different frameworks for establishing system acceptance have been discussed and the UTAUT is the preferred framework. A comparison was made between the researchers preferred framework

with other theoretic frameworks, this follows a section where limitations of the other frameworks were discussed. It was outline in the study that the UTAUT is one of the most comprehensive frameworks after the UTAUT2, but the research has leaning towards the UTAUT model because it has been applied and tested so extensively. This adaptation of the UTAUT model for the current study is warranted and supported as a viable strategy as attested to by studies such as Alotaibi and Wald (2013) and Alkhasawneh et al., (2015). The UTAUT is preferable to other models for this study because it has usability and user experience factors incorporated within it and for its explanatory power. The last section of this chapter talks about phenomenology, and they reason why the researcher opted to use this theory. The next chapter elaborates on the research methodology employed by the study.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter's first section discussed the research design. The research instrument and process of choosing the sample size are also discussed. The data analysis section discusses the tests that were performed in order to answer the research questions. Furthermore, the study discusses how reliability and validity were explored in the study. The study takes place in a government institution and the target population is in relation to the size of this this institutions population. The last section discusses how ethical clearance was obtained.

3.2 Research Design

Research design provides a framework for the collection of data and analysis of data. A choice of research design reflects decisions about the priority being given to a range of dimensions of the research process. These may include the connections between variables, understanding behavior and the meaning of that behavior in its specific social context (Creswell & Plano Clark 2007). However, Yin (2014) defines a research design as a logic that links the research questions to the data collected and conclusions drawn.

3.3 Research Approach

There are three types of research design approaches: qualitative research design, quantitative research design and sequential explanatory mixed methods design.

3.3.1 *Qualitative Approach*

The aim in a qualitative approach is to understand the phenomenon from the participants' perspective as they make meaning of their world. Qualitative Research is primarily exploratory research. It is used to gain an understanding of underlying reasons, opinions, and motivations (Creswell, 2013). Qualitative research design follows interpretivist (constructivist) paradigm. Research paradigm is a set of common beliefs shared between scientists about how problems should be understood and addressed. This approach opposes positivism (Haq, 2015). Advantages of qualitative approah is that it offers predictive qualities, it allows for human instinct to play a role and it allows creativity to be a driving force. Disadvantage of this approach is that it's not a statistically representative form of data collection, it relies upon the experience of the researcher. It can be difficult to replicate results and there are high chances of losing data.

3.3.2 Quantitative approach

Quantitative research is a technique that guides the process of collecting and analysing data and present the data in such a way that the objectives of the study are achieved (Bell and Waters, 2018). Unlike qualitative research, which is defined and measured according to textual and verbal responses, quantitative research is defined and measured by responses that are explicitly numeric. According to Slevitch (2011), quantitative research is regarded as the organized inquiry about phenomenon through collection of numerical data and execution of statistical, mathematical, or computational techniques. The source of quantitative research is positivism paradigm that advocates for approaches embedded in statistical breakdown that involves other strategies like inferential statistics and testing of hypothesis. According to (Dash, 2005) the paradigm of positivism has its roots in the world of science where phenomena is assumed to be measurable and directly observable, and the metrics associated with these phenomena accurately reflect its attributes. In quantitative research, the typical instrument for data collection is a survey that is conducted using a questionnaire (Abawi, 2017). The researcher has opted for the questionnaire as a data collection method. Some of the advantages of this approach are that findings can be generalized if the selection process is well-designed, and sample is representative of study's population. Relatively easy to analyze, data can be very consistent, precise, and reliable. It allows you to reach a higher sample size. The disadvantages are related secondary data is sometimes not available or accessing available data is difficult. It is difficult to understand the context of a phenomenon and data may not be robust enough to explain complex issues.

3.3.3 Mixed methods

Mixed methods research is the type of research in which a researcher combines elements of qualitative and quantitative research approaches. Mixed methods are useful in understanding contradictions between quantitative results and qualitative findings. Mixed methods give a voice to study participants and ensure that study findings are grounded in participants' experiences although this approach might take longer (Johnson and Onwuegbuzie, 2004). Mixed Methods follow pragmatist paradigm because it uses both quantitative and qualitative methods for attaining the best possible opportunity for answering the research questions. Advantages of mixed methods: It provides stronger evidence for a conclusion through convergence, and it uses strengths of one method to overcome the limitations in another method. Mixed methods provide stronger evidence for corroboration of findings through triangulation. The disadvantage is that mixed-method studies are fundamentally

challenging because they often take twice the work and require methodological expertise in multiple areas. Inequality between different methods may result in unequal evidence within the study

3.3.4 Approach adopted for this study

The study may be viewed as primarily quantitative with a routine alignment to a typical UTAUT based study. However, there is a minor component of the empirical phase of the study where respondents are provided with an opportunity to convey an open-ended response based on their experience of using the RMS. The reason why the researcher opted for a minor component of the empirical phase to be qualitative, was to complement or supplement the data received through the quantitative technique. Even though the study is purely quantitative it helps to have a bit of qualitative in the study, the qualitative data brings a more in-depth understanding or meaning to the data (Creswell, 2013). Quantitative research is a technique that guides the process of collecting and analysing data and present the data in such a way that the objectives of the study are achieved and the UTAUT model is well known for meeting the objectivity criteria (Bell and Waters, 2018). However, the qualitative data provides the researcher with an opportunity to acquire an in-depth interpretation of respondents' perceptions of the RMS.

3.4 Population and Data Sampling Methods

3.4.1 Population

A population is the participants of the research such as humans and the group from which conclusions will be drawn, in the scientific methodology. Due to cost and large numbers, it is impossible to involve everyone in the research (Wright, 2005).

3.4.2 Sample

The **sample** is the group of individuals that data was collected from at eThekwini municipality. According to McCombes (2019), this group of individuals is specific.

3.4.3 Sample size

The size of the population determines the sample size, in other words the larger the population size the larger the sample size will be. The population size is usually given to the Researcher (McCombes, 2019). The sample size of the study is 180.

Subjects in this study are employees of the eThekwini Municipality in KwaZulu-Natal who are using the Revenue Management System. The Population is the entire group of RMS users at

the eThekwini Municipality from which conclusion is drawn. The researcher used the probability sampling method. This sampling method is generalisable unlike the non-probability sampling method which is not generalisable and is bias (Taherdoost, 2016). The type of sampling that was used is called "Stratified random sampling". The researcher used proportional allocation strategy. From a list of employees, the researcher randomly selected every 2nd or 3rd employee in the department. This was repeated for the second and the third department. The randomly selected participants were emailed the questionnaire. The email had a link that directs them to the questionnaire. The sample consisted of participants from revenue, electricity, and solid waste departments. The other departments who are also using RMS were excluded. The sampling details per department are shown in Table 3.1.

Figure 3. 1: Sample number of users per department

Department	Number of Users	Stratum / Subgroup	Percentage
Revenue	820	130	15.8%
Electricity	48	20	41%
Durban Solid Waste	60	30	50%

eThekwini Municipality is a Municipality in South Africa and has over 25 branches. It consists of over 27786 employees and there is about 1933 of these employees who are using the Revenue Management System which is under research. The target population chosen by the researcher comprises of staff of all levels, but heads of departments and Deputy heads were eliminated in this research.

3.5 Data Collection Methods

3.5.1 Primary Data Collection

Data that the researcher collected from the source is called Primary data and it was used for the empirical analyses. Surveys and interviews are used to collect this data (Hox, 2005). The researcher distributed the web-based survey in a form of questionnaire via email to employees who are using the Revenue Management System in the departments listed in Table 3.1. According to Ball (2019), the advantages of using Web-based surveys is that they are cost effective, save time, accessible, more accurate and produce quick results.

3.5.2 Questionnaire Construction Process

According to Phellas et al., (2011), a questionnaire is an affordable and unfailing technique for collecting large amount of data. Questionnaires were constructed using Microsoft forms online data   collection   tool   which   is   accessible   at:

. The questionnaire which is the primary data collection instrument for the current study is explained in the discussions that follow.

Section A: consists of demographic details. In this section demographic and background information of participants was collected. This section consisted of a total number of eight questions. These questions were asked to try get knowledge of the participant's gender, age, department where they work, how long they've been working in those departments as well as how long they have been using the system that is under research. How much they know computers was also evaluated.

Section B: consists of questions that are defined by the basic constructs of the UTAUT model. The dependent variable for questions under Section B is behavioural intention. This Section consisted of 18 questions, an overview of the listing of number of questionnaire items is illustrated in Table 3.2.

Figure 3. 2: List of Questionnaire items

Construct	Number of questionnaire items
Effect Expectancy (EE)	4
Performance Expectancy (PE)	4
Social Influence (SI)	3
Behavioural Intention (BI)	3
Facilitating Conditions (FC)	4

Section C: consists of an open-ended platform where respondents were provided with an opportunity to provide an insight into their experience of using the RMS. This section which is question 5 of the research questions deals with "experiential knowledge", has no dependent variable, and adds depth of meaning to section B. In this section the researcher wanted experienced users to guide or advise on deeper understanding how the system can be made acceptable. Data received from this section was used to verify if data received through qualitative supplements the data received through quantitative. The study's detailed questionnaire is available in Appendix 2.

The researcher was required to submit the following letter to request approval prior to data collection. **Application for permission to conduct research letter:** This letter was sent to eThekwini Municipality the organisation where the researcher conducted the research. In

response to this letter the eThekwini Municipality sent a **Gatekeepers letter** (permission to conduct study).

3.5.3   Pilot Test

To confirm that the questions are clear the researcher conducted a pilot test. This was done with the focus of improving the quality and efficiency of the questionnaire. The pre-test was done in the following way:

- Researcher requested 16 users of the Revenue Management System to complete the questionnaire 2 weeks before actual web-based survey was distributed
- The questionnaire had a cover letter and instructions on how it should be completed.
- The users had to complete the questionnaire in the presence of the researcher in case there was any confusion.
- When the users completed with the questionnaire, the researcher had a discussion with them to determine if the questionnaire was clear enough. This feedback assisted the researcher in strengthening the quality of the research questions so that it will be easy for the main respondents of the study to understand.

3.6 Data Analysis

According to Chiasson and Gregory (2014), after data is collected it needs to be cleansed to improve the quality of the data. After data was collected, it was cleansed to ensure that only clean data is used. To analyse data, after data cleansing the researcher used the Statistical Package for Social Sciences (SPSS). Pie charts, frequency tables, and bar charts were used to represent the data.

3.6.1   The Study's Hypotheses

The study's hypotheses read as follows:

Hypothesis 1:

H_0: Performance expectancy **insignificantly** influence an employee's intention to accept the RMS

H_A: Performance expectancy **significantly** influence an employee's intention to accept the RMS

Hypothesis 2:

H_0: Effort expectancy **insignificantly** influence an employee's intention to accept the RMS

H_A: Effort expectancy **significantly** influence an employee's intention to accept the RMS

Hypothesis 3:

H_0: Social Influence **insignificantly** influence an employee's intention to accept the RMS

H_A: Social Influence **significantly** influence an employee's intention to accept the RMS

Hypothesis 4:

H_0: Facilitating Conditions **insignificantly** influence an employee's intention to accept the RMS

H_A: Facilitating Conditions **significantly** influence an employee's intention to accept the RMS

3.6.2   Data Preparation

According to Chiasson and Gregory (2014), after data is collected it needs to be cleansed to improve the quality of that data to enable reliable data analysis. This is called data preparation and was done before the data was processed. It involved editing, reformatting data to make the data correct. The researcher used descriptive and inferential statistics for analysing the data.

3.6.3   Descriptive Statistics

These descriptive statistics will present the reader with data in an aggregated form. This type of analysis is very easy to interpret (Fisher and Marshall, 2009). The descriptive data made use of mean, median, mode and percentages.

3.6.4   Inferential Statistics

Inferential statistics was used to make predictions about a large population. It showcases the relationship between different variables instead of single variable (Simonsohn et al., 2019). Inferential statistics allowed the researcher to predict, generalise and draw conclusions beyond the data (Dilevko, 2007). The following statistics were performed.

- To determine the reliability of the research instrument Cronbach alpha was used.
- To determine the relationships between behavioural intention and the other four constructs (PE, EE, SI and FC) Correlation analysis was utilised.
- To determine the capacity of the independent variables to predict the outcome towards behavioural intention as the dependent variable, Regression analysis was utilised.
- The **t-test** was used to determine whether there is a statistically significant agreement or disagreement of the employees.

This chapter presents the analysis of the web-based questionnaires that were distributed to employees of a public sector establishment in eThekwini Municipality in KwaZulu-Natal. SPSS software was used for statistical analysis processing. After the pilot test the researcher made some changes to Section C of the questionnaire. This section consisted of a single open-ended question and allowed the participants to suggest how the RMS could be a better-quality system. The participants felt that the question was not clear enough and requested that an element for expressing improvement be added to the questionnaire to make it clearer. The researcher responded by amending the questionnaire to satisfy the request made by the participants and the participants of the pilot agreed that it is now clearer and more flexible.

3.7 Validity And Reliability

To ensure the integrity of the study has been maintained, the constructs of research reliability and validity were used. Validity is linked to the accuracy and correctness of measured results and reliability is linked to consistency of the measured results (Lakshmi and Mohideen, 2013). The Cronbach's alpha coefficient was utilised for the 4 UTAUT constructs to ensure the inter-item reliability of the question items that were used in the questionnaire. The study's validity was explored via the use of the research instrument that have already been validated by Venkatesh et al. (2012).

3.8 Ethical Consideration

The researcher attained Ethical clearance from the Research Office of the UKZN in compliance with the ethical principles of research. The study adheres to confidentiality and anonymity as per principles of research (Mondal, 2020). Participants were made aware that they are not forced to participate and can withdraw at any time and that their confidentiality will be respected.

3.9 Conclusion

The purpose of this chapter was to provide an in-depth description of the research methodology. The chapter discussed the research approach used in the study and how data was collected and analysed. More details about the target population, sample and sample size were provided. In depth description on ethical consideration, permission to conduct research, ethical clearance, validity, and reliability of the instrument were discussed. Questionnaire was discussed briefly. Descriptive and Inferential statistical analysis were discussed. The chapter also provides reasons for the techniques employed. The next chapter provides details about the data analysis and interpretation of the findings.

CHAPTER FOUR: DATA ANALYSIS

4.1 Introduction

This chapter presents the response rate and the analysis of the data collected via SPSS version 27. The questionnaire distributed consists of 27 questions which are divided into three sections. Section A consists of 8 questions which deal with the demographics and background information of the participants. Section B consists of 18 questions which answers the research objectives of the study by using a comparative five-point Likert-type scale ranging from 1-5, whereby 1 = strongly disagree and 5 = strongly agree. And lastly, section C consists of 1 open ended question which provides insight into the employee's perception of the RMS being either an excellent system or needs improvement and will be analysed using thematic analysis.

In presenting the data, the researcher made use of frequency tables and pie charts to present the demographics and background information of the participants. Descriptive analysis was carried out and presented using bar charts. Inferential statistics such as normality test, t-test, correlation, reliability test and regression analysis were carried out. Thematic analysis was also carried out on section C of the questionnaire to understand employees' experience, perception, and views towards the usage of the Revenue Management System. Consequently, the results obtained from the analysis of data were interpreted and discussed.

4.2 Sample and Response Rate

The sample size of 180 was drawn using a confidence interval of 0.05 and a confidence level of 95%. However, of the 180 questionnaires that was surveyed to the employees at the eThekwini Municipality, only 105 employees attempted the survey. Accordingly, 102 questionnaires were considered valid representing a response rate of 56.67%.

4.3 Section A: Demographic and Background Information of Participants

Section A of the questionnaire seeks to get an understanding of the participants background and demographic information. Here participants were asked to provide information pertaining their job title, department, gender, years of experience using RMS, age, position of employment, length of employment at the Municipality and their computer experience. The purpose of these questions was to understand how these variables influence employees' acceptance of the Revenue Management System at the eThekwini Municipality. Table 4.1 demonstrates the distribution of the demographic and background information of the employees, the frequency, and valid percentages of the distribution.

Table 4. 1: Demographic and background information of participants

Variables		Frequency	Percent	Valid Percent	Cumulative Percent
Job title	Manager	32	31.4	31.4	31.4
	Accountant	13	12.7	12.7	44.1
	Consultant	6	5.9	5.9	50.0
	Trainee	12	11.8	11.8	61.8
	Administrators	38	37.3	37.3	99.0
	No response	1	1.0	1.0	100.0
Department	Revenue	67	65.7	65.7	65.7
	Solid waste	21	20.6	20.6	86.3
	Electricity	12	11.8	11.8	98.0
	No response	2	2.0	2.0	100.0
Gender	Male	42	41.2	41.2	41.2
	Female	60	58.8	58.8	100.0
Years of experience using RMS	1-3yrs	22	21.6	21.6	21.6
	4-6yrs	72	70.6	70.6	92.2
	7-9yrs	8	7.8	7.8	100.0
	10yrs +	0	0.0	0.0	100.0
Age	18-30yrs	19	18.6	18.6	18.6
	31-40yrs	41	40.2	40.2	58.8
	41-50yrs	28	27.5	27.5	86.3
	51-60yrs	14	13.7	13.7	100.0
	61yrs +	0	0.0	0.0	100.0
Position of employment	Manager	10	9.8	9.8	9.8
	Supervisor	28	27.5	27.5	37.3
	Mid-Employees	55	53.9	53.9	91.2
	Trainees	7	6.9	6.9	98.0
	Contractors	2	2.0	2.0	100.0
Length of employment at the Municipality	0-2yrs	13	12.7	12.7	12.7
	3-5yrs	21	20.6	20.6	33.3
	6-10yrs	28	27.5	27.5	60.8
	11-15yrs	21	20.6	20.6	81.4
	16yrs +	19	18.6	18.6	100.0

Computer Experience	0-2yrs	0	0.0		0.0
	3-5yrs	11	10.8		10.8
	6-10yrs	17	16.7		27.5
	11-15yrs	23	22.5		50.0
	16yrs +	51	50.0		100.0
	Total	**102**	**100.0**	**100.0**	

4.3.1 *Job title of participants*

This section seeks to find out the job title of the participants that participated in the study. Figure 4.1 presents the employees' responses on their job titles.
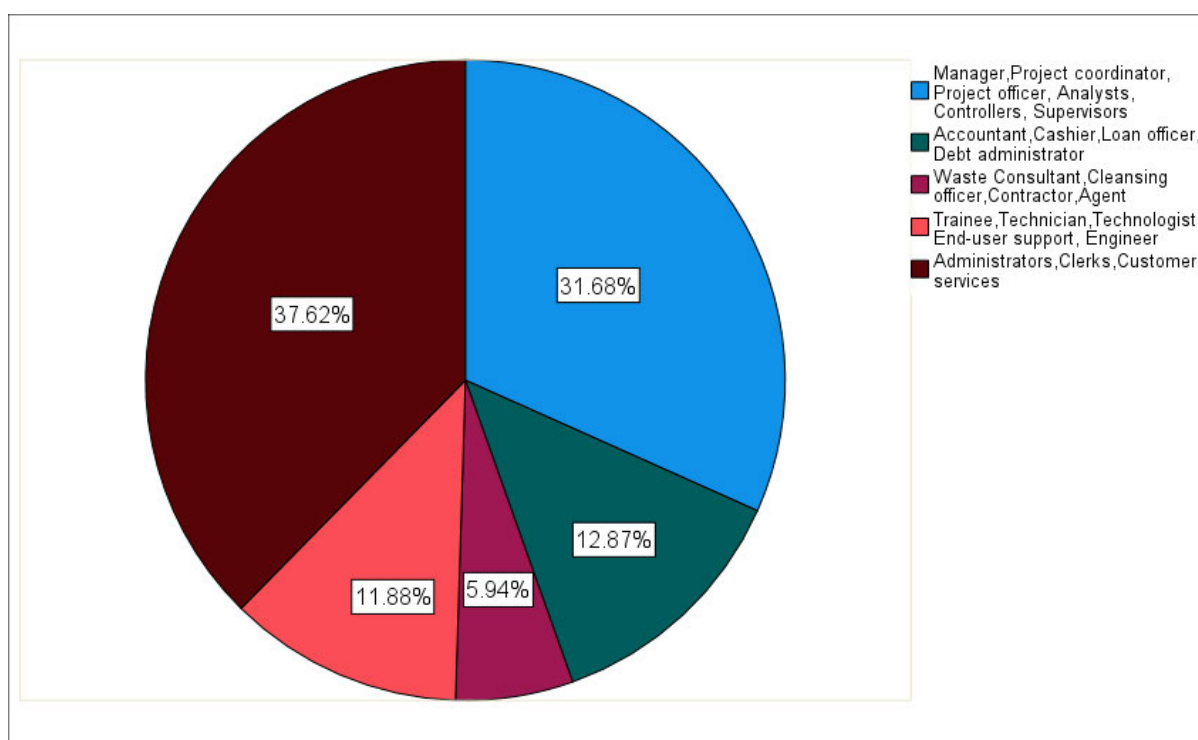
Figure 4. 1: Job Title of Participants

Consequently, the information in the Figure 4.1 reveals that 31.68% of the employees fall under the job title categories of manager, project coordinator, project officer, controller, supervisor, and analysts. Above twelve percent (12.87%), falls under job title categories of accountant, cashier, loan officer and debt administrator while 5.94% of the employees are either waste consultant, contractor, cleansing officer, contractor, or agent. These groups are followed by the trainee, technologist, technician, end user support administrator and engineers which make up 11.88% of the population sample, whilst the categories of the administrators, clerk, principal

clerk, customer services and expenditure admin makes up 37.62% of the sample. This result indicates that majority of the participants are administrators.

4.3.2   Department of participants

The participants were asked to identity their department. Figure 4.2 presents the response of employees with regards to their departments.
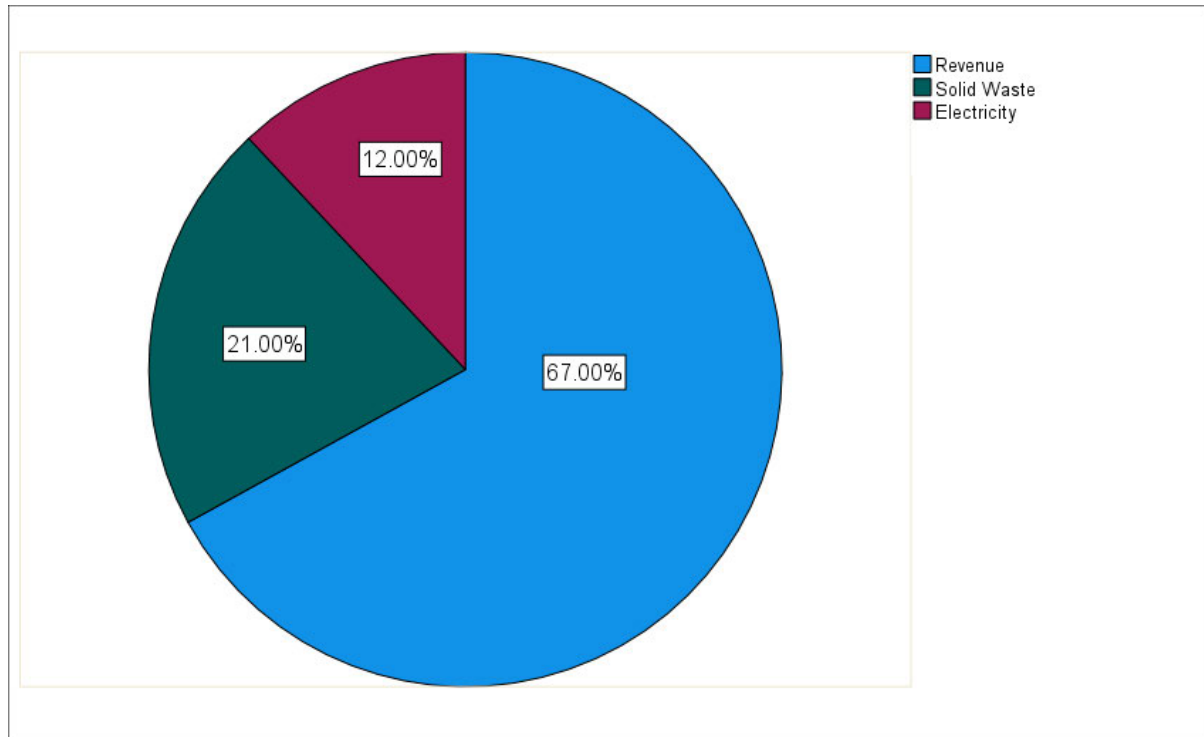
Figure 4. 2: Department of Participants

From Figure 4.2, it was revealed that 67% of the employees are from the revenue department, 21% are from the solid waste department while 12% of the employees are from electricity department. Hence, indicating that majority of the employees are from the revenue department, this is not a surprise as there are many sub-departments under the revenue department.

4.3.3   Gender of the participants

To determine the gender of the participants, the participants were asked to identify their gender. Figure 4.3 presents the responses of the employees that participated in the study with regards to their gender.
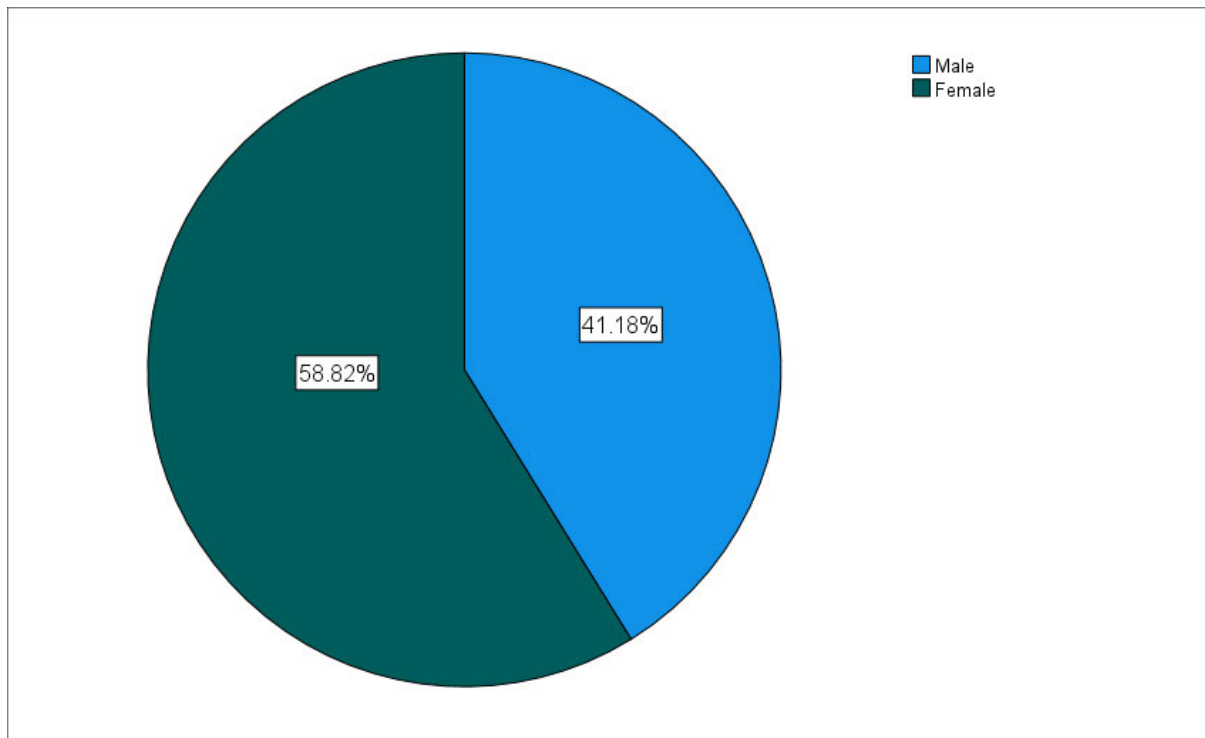
Figure 4. 3: Gender of Participants

As represented in Figure 4.3, the result reveals that 41.18% of the employees were male while 58.82% were female. This result shows that there were more female employees who participated in the study than men.

4.3.4 *Years of experience using RMS*

In order to determine the years of experience that the participants have been using RMS at the municipality. The participants were asked to identify their years of experience in using RMS and their response is presented in Figure 4.4.
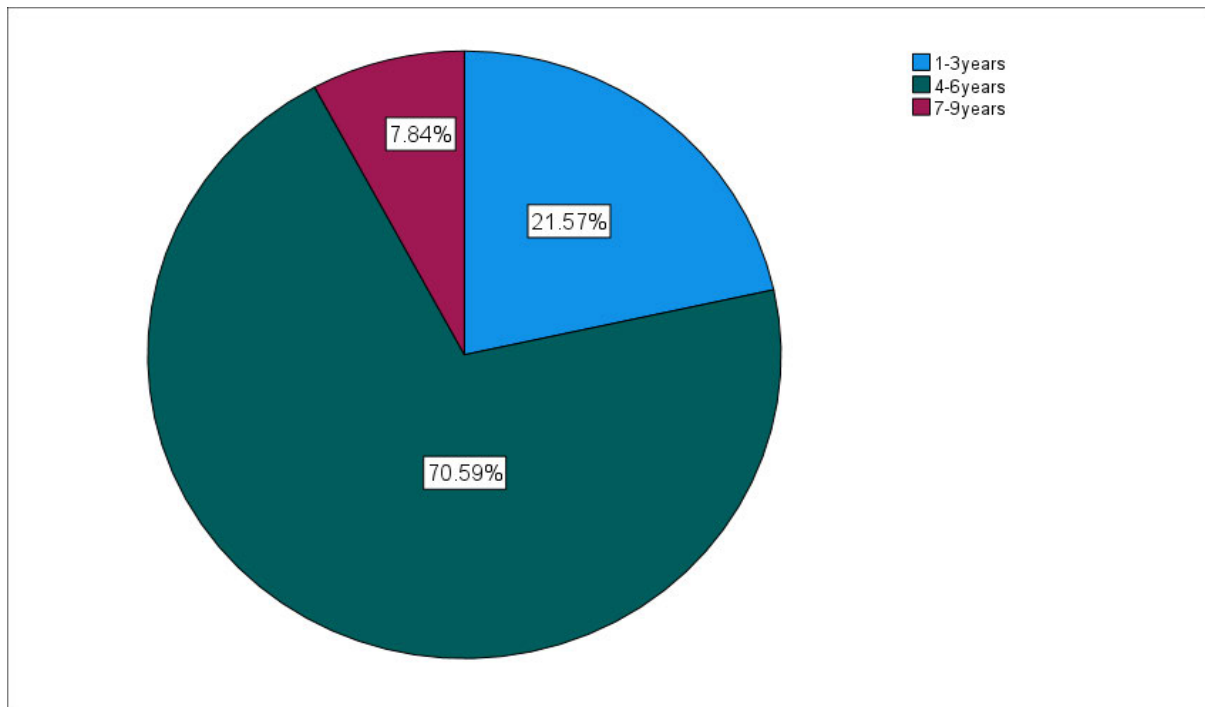
Figure 4. 4: Years of experience using RMS

Figure 4.4 seeks to find out the participants years of experience using the revenue management system (RMS). From Figure 4.4, it was revealed that 21.57% of the employees have been using RMS for 1-3years while 70.59% have been using RMS for 4-6years. Additionally, 7.84% have used RMS for 7-9 years. Sadly, none of the employees have used RMS above 9 years. This result indicates that majority of the participants have been using RMS at the municipality for over 3 years.

4.3.5   *Age distribution of the participants*

To determine the age of the participants, the age was categorized, and the participants were asked to identify their age distribution. The participants responses to the question are established in Figure 4.5.
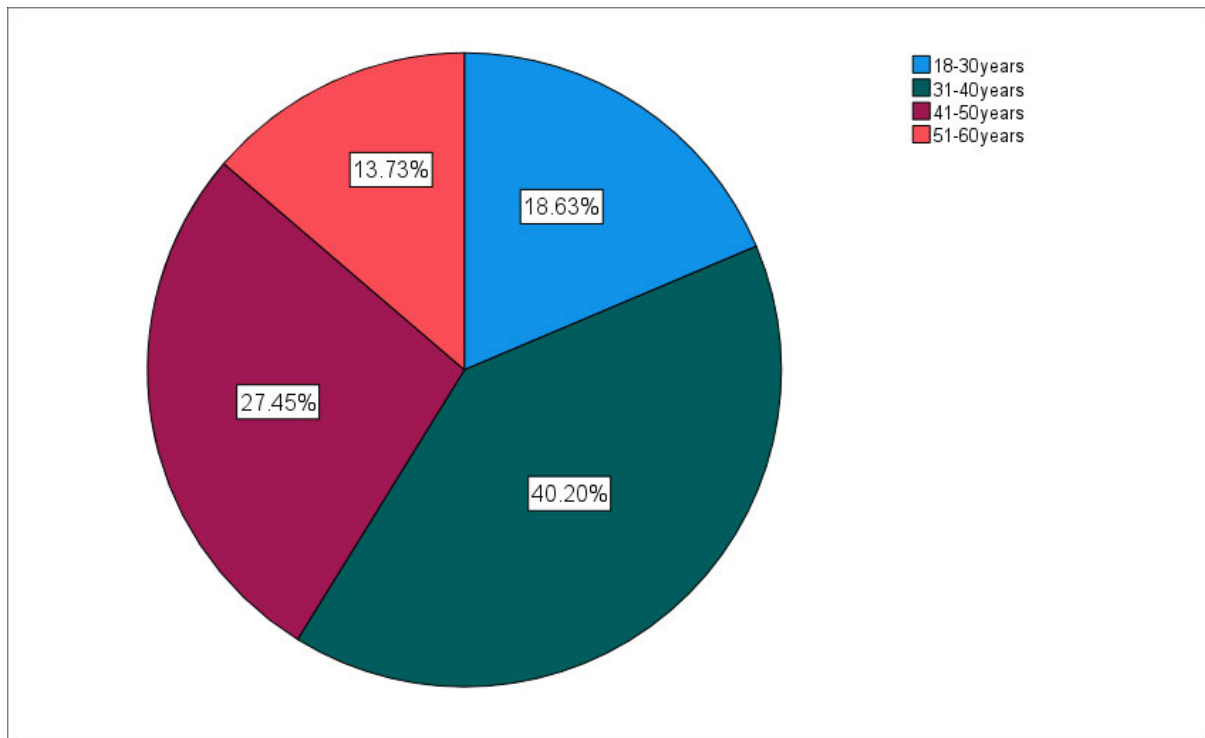
Figure 4. 5: Age distribution of Participants

Figure 4.5 shows the age distribution of participants. As shown above 18.63% of the employees were between the ages of 18-30years, 40.20% represents ages between 31-40years, 27.45% represents ages between 41-50years while 13.73% represents ages between 51-60 years. There was no employee above the age of 60 years. Hence, majority (40.20%) of the employees who participated are in the middle age group which is between 31-40 years.

4.3.6   Position of employment of participants

To determine the employment position of the participants, the participants were asked to identify their position of employment. Their response to the question is illustrated in Figure 4.6.

45
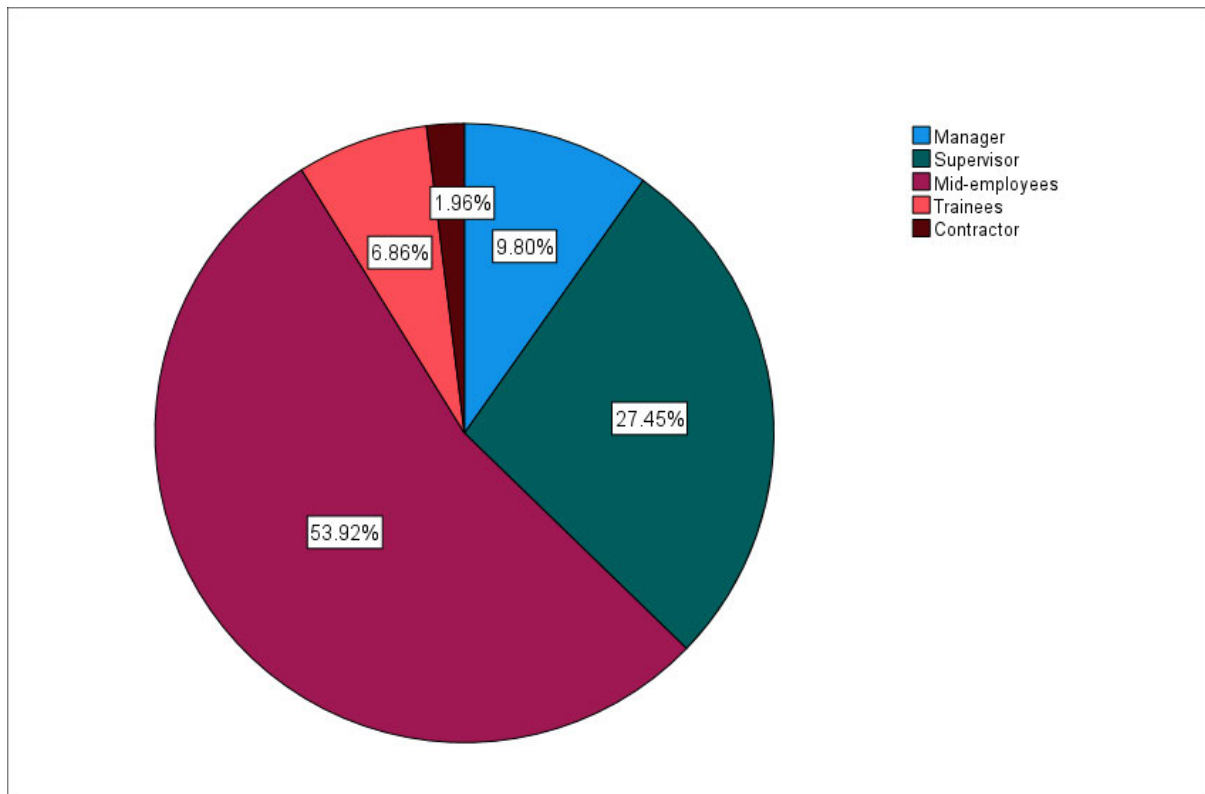
Figure 4. 6: Position of employment of Participants

From Figure 4.6, it can be ascertained that 9.80% of the employees are managers, 27.45% are supervisors, 53.92% are mid employees, 6.86% are trainees, and 1.96% are contractors. This result signifies that majority (53.92%) of participants in the research study are mid-employees.

4.3.7   Participants' length of employment

In order to determine how long the participants have been working at the municipality, the participants were asked to identify their length of employment. The response of the participants on their length of employment at the municipality is presented in Figure 4.7.
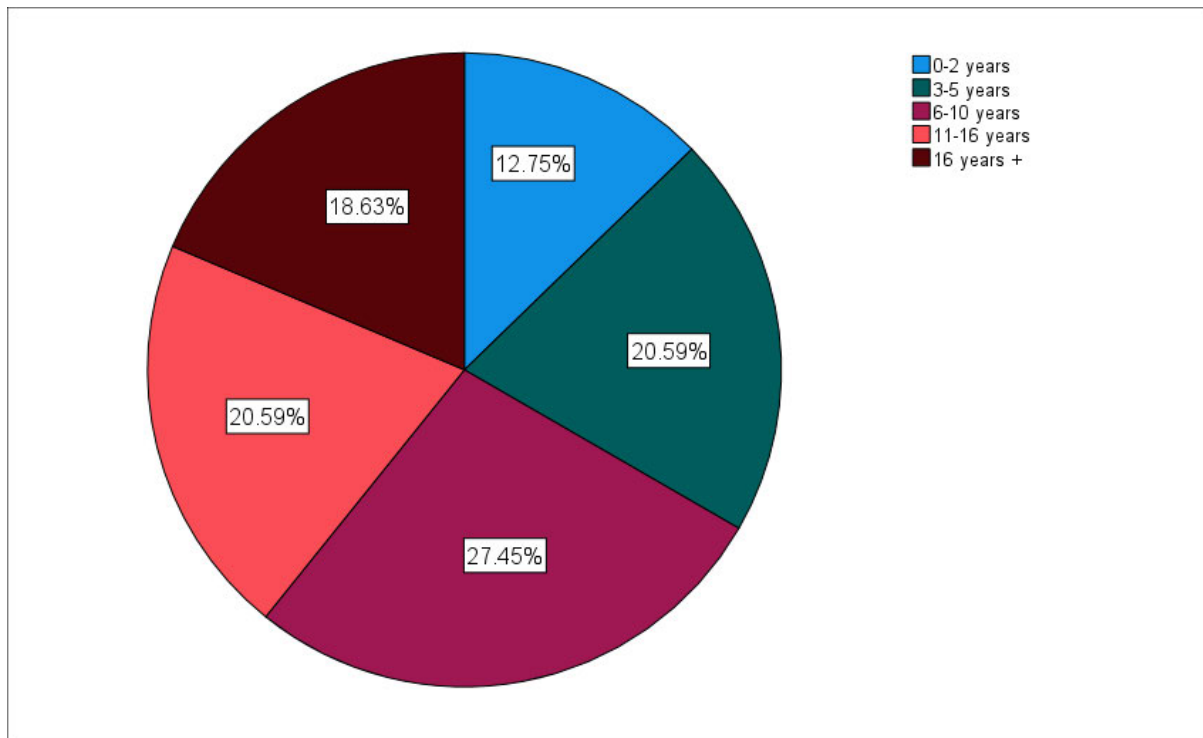
Figure 4. 7: Participants' length of employment

Figure 4.7 shows how long the employees have been employed at the municipality. It was revealed that 12.75% of the employees have been employed between the duration of 0-2 years, 20.59% are in the duration of 3-5 years, 27.45% have been employed at the municipality between the duration of 6-10 years, 20.59% are in the duration category of 11-16 years while 18.63% have been employed at the municipality for over 16 years. This result indicates that majority of the participants have been working at the municipality for over 5 years.

4.3.8 Computer experience of participants

To determine the computer experience of the participants, the participants were asked to identify the years of experience in using computers. The statistics for the participants' years of experience in using computer is illustrated in Figure 4.8.
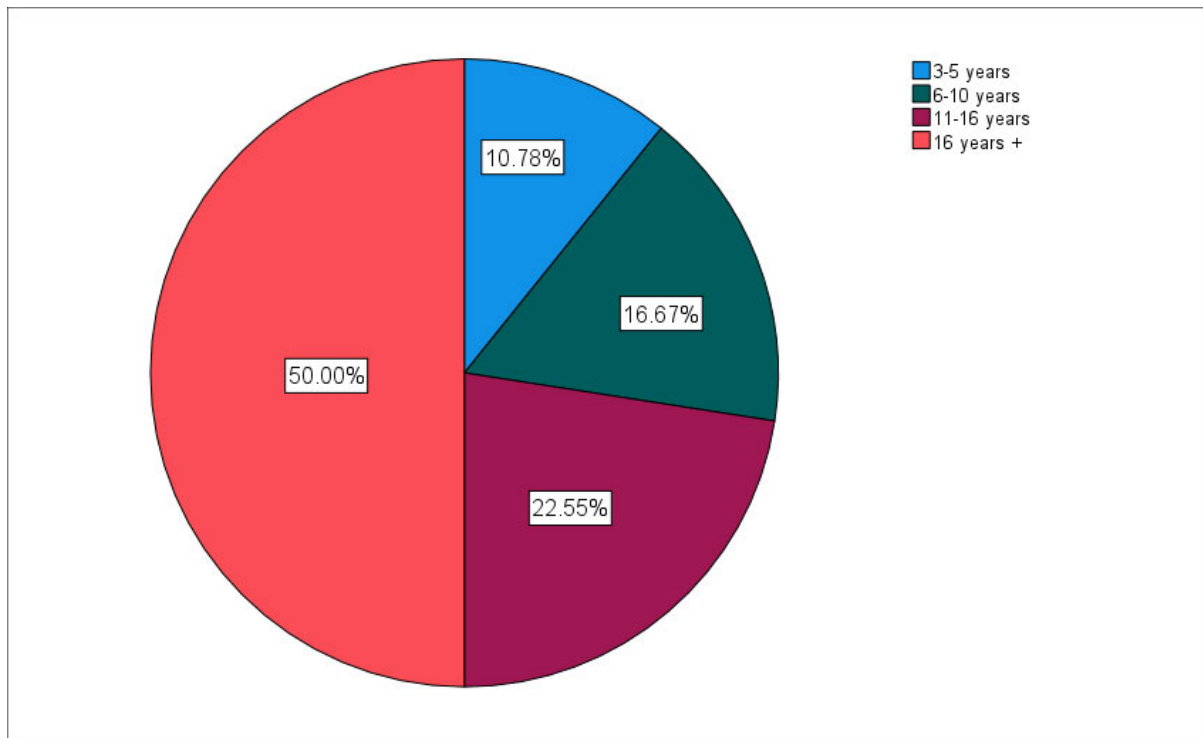
Figure 4. 8: Computer experience of Participants

Figure 4.8 shows how long the participants have been using computers. It was discovered that 10.78% have been using computers between 3-5 years, 16.67% have been using computers between 6-10 years, 22.25% have been using computers between 11-16 years, while 50% of the employees have been using computers for over 16 years. This result demonstrates that majority of participants have been using a computer for over 10 years.

4.4 Section B: Descriptive Analysis on the Acceptance of RMS

This section seeks to establish the factors influencing employees' acceptance of the Revenue Management System (RMS) at the eThekwini Municipality as delineated in section B of the research instrument. The employees who participated were requested to rate their level of agreement with the descriptions as regards the acceptance factors obtained from literature using the UTAUT model's constructs. The questions were answered using a 5 point/Likert scale-ranging from 1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree and 5-Strongly Agree. The findings are presented on the sub sections below.

4.4.1 Percentage distribution of performance expectancy

This section seeks to find out how performance expectancy influences employee's intention to accept the use of RMS at eThekwini municipality. Performance expectancy (PE) is referred to how much users believe that utilising a system will help them perform better. The system in

this study is referred to as the Revenue Management System (RMS). The participants' responses on their level of agreement are illustrated in Figure 4.9.
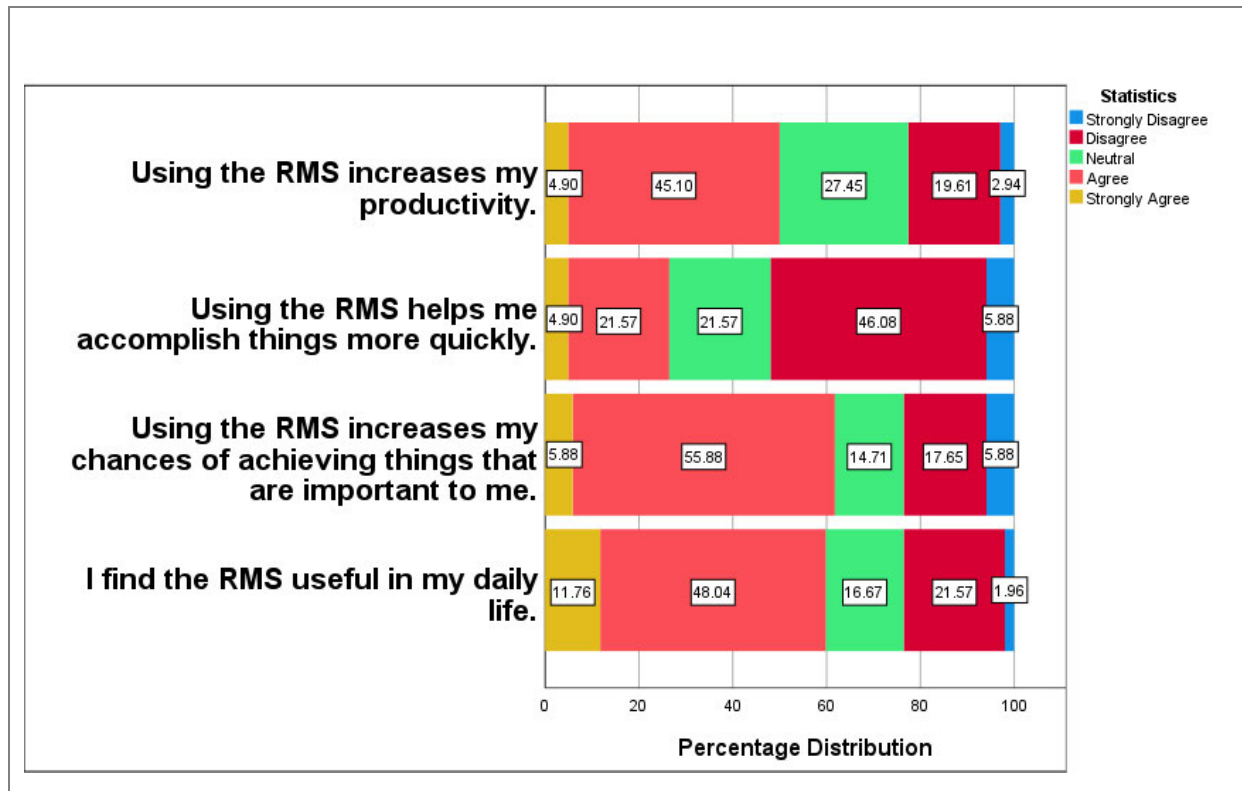
Figure 4. 9: Percentage Distribution of performance expectancy

Figure 4.9 revealed that 59.98% (strongly agree and agree) agree that they find RMS useful, 61.76% are in agreement that using RMS increases their chances of achieving things that are important to them, 26.47% agreed RMS helps them to accomplish things more quickly while 51.96% disagreed with the statement. Only 50% are in agreement that RMS increases their productivity. Hence, this result signifies that that majority of employees that accept the use of RMS at eThekwini municipality found it useful because it increases their chances of achieving things that are important to them at work.

4.4.2 Percentage distribution of effort expectancy

Effort-Expectancy (EE) is associated with how easy it is to use a system, therefore, this section seeks to find out how effort expectancy influences employee's intention to accept the use of RMS at eThekwini municipality. The participants' responses on their level of agreement are presented in Figure 4.10.

Figure 4. 10: Percentage Distribution of effort expectancy

From Figure 4.10, it was discovered that only 40.24% of the employees are in agreement that learning how to use RMS is easy for them while 47.06% totally disagreed. A higher percent of 65.68% are in agreement that their interaction with RMS is clear and understandable. Only thirty seven percent (37.27%) of the employees agreed that they find RMS easy to use while 49.02% are in disagreement with the statement. But those that agreed that it is easy to become skilful at using RMS consisted of 56.86%. This result indicates that the RMS at the municipality is difficult to learn and use, this may be because they prefer and are used to the former system (COINS).

4.4.3   Percentage distribution of social influence

Social influence is the degree whereby the behaviours as well as the attitudes of other people in a user's social circles influence their actions concerning the use of a system or technology in this case this is the RMS. In accordance with this, this statement seeks to explore the effects of social influence on employee's intention to accept the use of RMS at eThekwini municipality. The participants' responses on their level of agreement are presented in Figure 4.11.
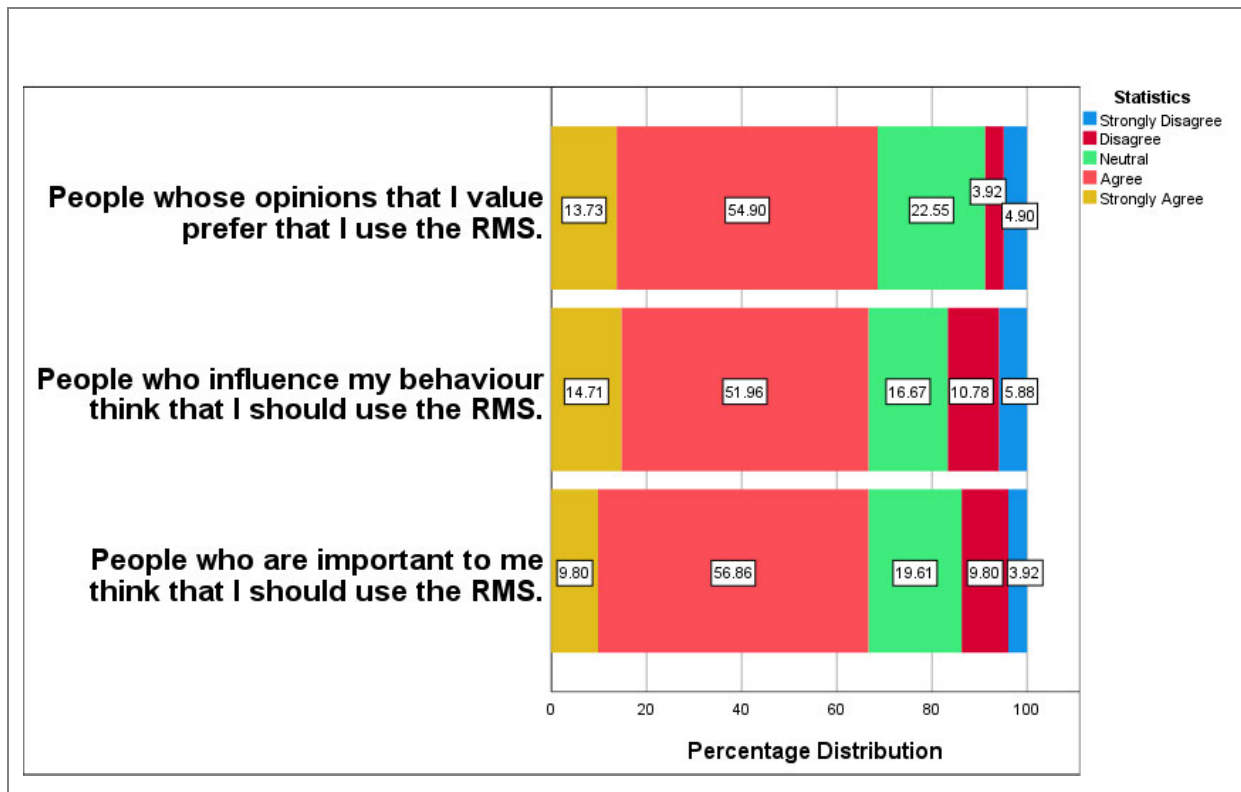
Figure 4. 11 Percentage Distribution of social influence

The result presented in Figure 4.11 revealed that 66.66% of the employees agreed that people who are important to them think that they should use RMS, 66.67% also agreed that people who influence their behaviour think that they should use RMS and 68.63% are in agreement that those whose opinions they value prefer that they utilise RMS. Interestingly, this is evident that social influence has an effect on the employees, especially in the workplace where the manager wants the employees to utilise the system in order for them to accomplish their tasks quickly.

4.4.4 Percentage distribution of FC on employee's intention to accept the use of RMS

Facilitating conditions (FC) is the degree in which a person believes that there is organisational and technical infrastructure that is available to support the use of the RMS. This construct, therefore, sought to ascertain how facilitating conditions influence the employees to accept the use of RMS at eThekwini municipality. The participants' responses on their level of agreement are presented in Figure 4.12.
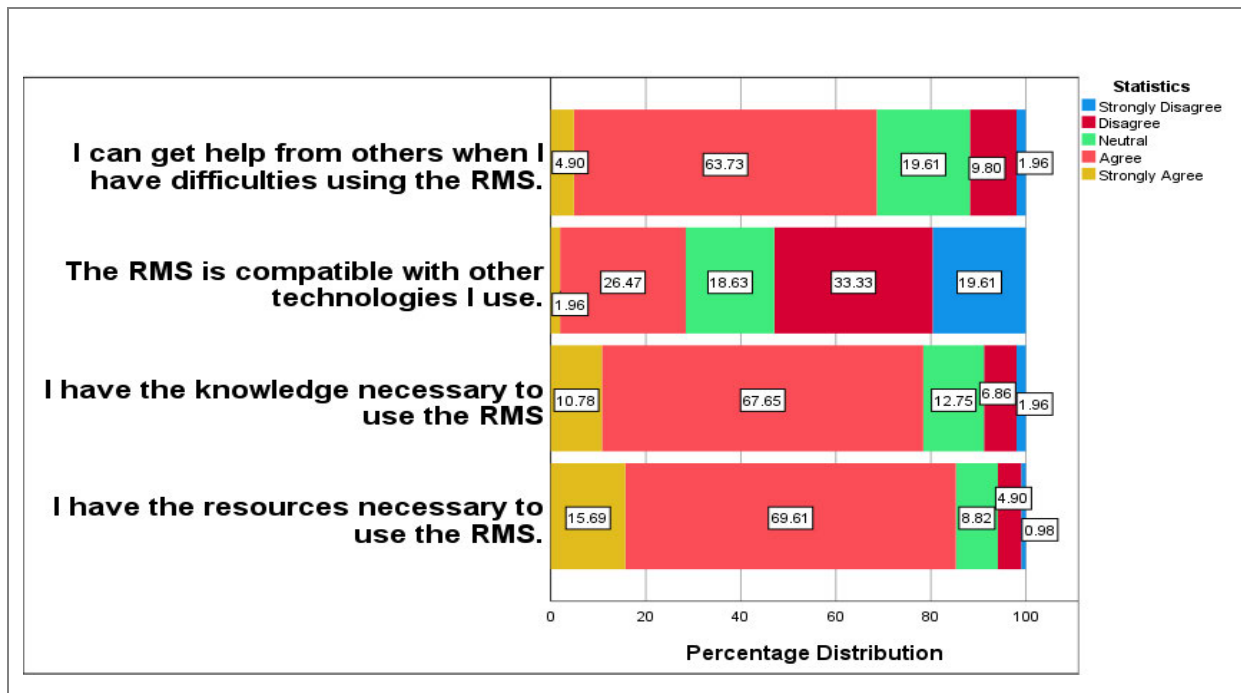
Figure 4. 12: Percentage Distribution of facilitating conditions

Figure 4.12 shows that 85.3% of the employees are in agreement that resources necessary to use RMS are available at the municipality, 8.82% were neutral while 5.88% disagreed. Equally, 78.43% agreed that they have the knowledge necessary to utilise the RMS, 12.75% were neutral while 8.84% disagreed. Similarly, 68.63% are in agreement that they can get help from others when having difficulties using RMS, 19.61% were neutral while 11.76% disagreed. However, only 28.43% agreed that RMS is compatible with other technologies that they use, 18.63% were neutral while 52.94% disagreed with the statement. This result indicates that the employees are aware that the municipality has the infrastructure available to support the use of RMS, but the employees are unsatisfied because the RMS is not compatible with other systems that are used at the municipality.

4.4.5 Employees' behavioural intention to accept the use of RMS

Behavioural intention is the intent by a user to use a technology/system, believing that the technology/system will enable them to achieve their goals more easily. Therefore, the researcher seeks to measure employee's behavioural intention to accept the use of RMS at eThekwini municipality. The participants' responses on their level of agreement are presented in Figure 4.13.

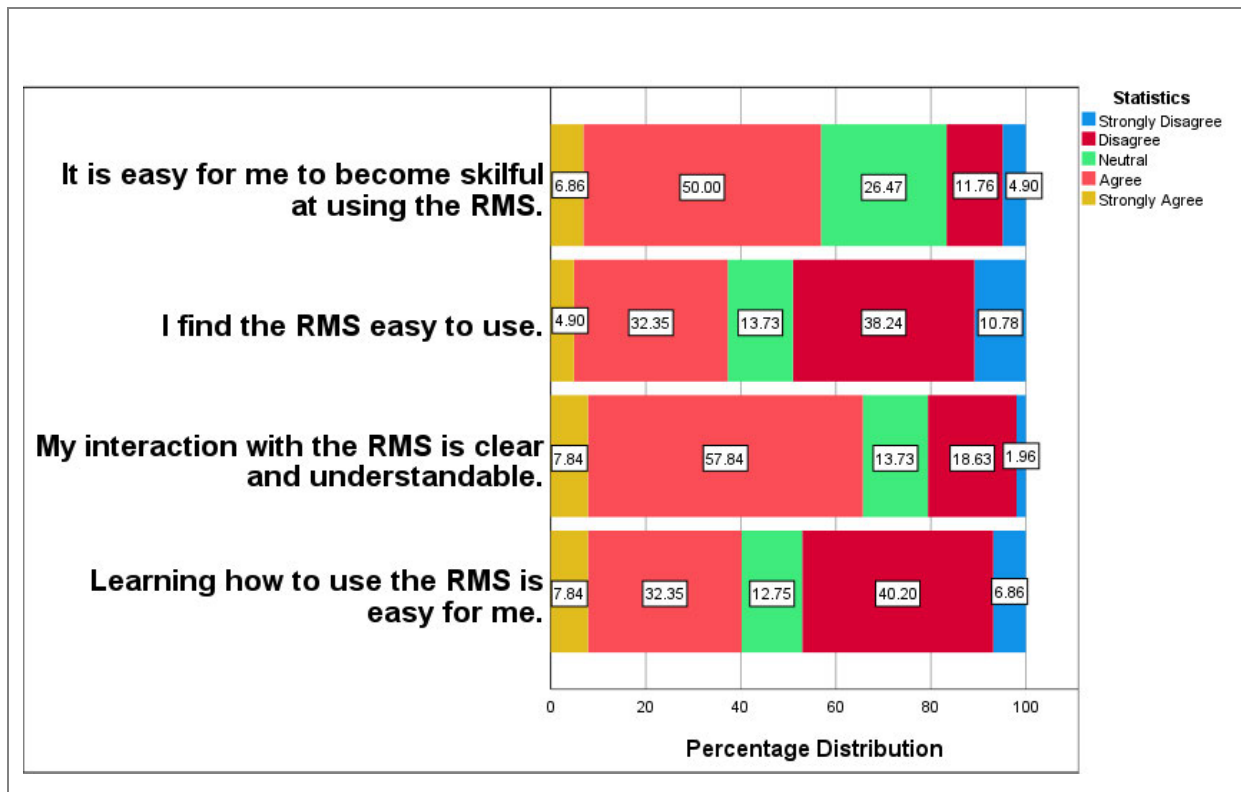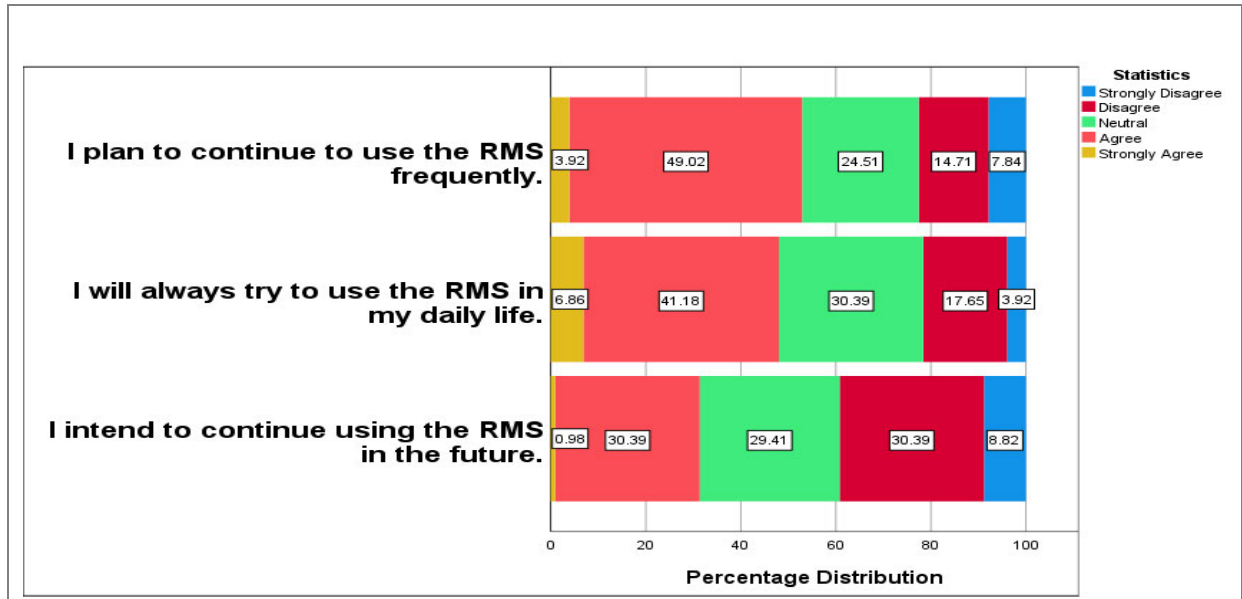**Figure 4. 13: Percentage Distribution of behavioural intention**

The result presented in Figure 4.13 revealed that 31.37% intend to continue using RMS in the future, 29.41% were neutral while 22.55% disagreed, 48.04% agreed to always try to use RMS in their daily life and 52.94 % agreed on planning to continue using RMS frequently. It is evident that employees' behavioural intention has a significant impact on the use of RMS in the future.

4.5 Reliability Analysis

To ensure reliability of the research instrument, Cronbach's alpha coefficient was utilised on the four constructs from the UTAUT theory which are eighteen (18) questions from the questionnaire. Cronbach's Alpha coefficient is usually used for assessing the scale's internal consistency reliability especially when Likert items are being summed up in order to create a composed scale. Table 4.2 presents the reliability statistics of the research instrument.

Table 4. 2: Reliability Statistics

Constructs	No of items	Cronbach's Alpha
Performance Expectancy	4	0.792
Effort Expectancy	4	0.775
Social Influence	3	0.708
Facilitating Conditions	4	0.677
Behavioural Intention	3	0.672

From Table 4.2, performance expectancy attained the highest Cronbach's Alpha value of 0.792, followed by effort expectancy with 0.775 and social influence with 0.708 and Facilitating conditions attained the value of 0.677 while behavioural intention which is the dependent variable attained the lowest value of 0.672. According to Tavakol and Dennick (2011), Cronbach's Alpha value close to 0.7 is acceptable but a value lower than 0.07 could be as a result of redundancy in the questions. Hence, the data is internally consistent and considered reliable.

4.6 Normality Test

Normality test was carried out to ascertain if the data set is normally distributed by testing for Skewness and Kurtosis. According to Pallant (2013), for data to be normally distributed, the skewness and kurtosis values is presumed to be in the interval of -2 to +2. Table 4.3 presents the Skewness and Kurtosis values for the 6 UTAUT constructs. As shown on Table 4.3, the value for skewness is between -0.050 and -0.919 with standard error = 0.239. Accordingly, the study's data fit the profile for parametric statistical analysis and the techniques that will be used are the t-test, Pearson correlation and regression analysis.

Table 4. 3: Skewness and Kurtosis values for UTAUT constructs

Construct	N	Skewness	Standard Error of Skewness	Kurtosis	Standard Error of Kurtosis	Minimum	Maximum
PE	102	-0.154	0.239	-0.292	0.474	1.25	5.00
EE	102	-0.050	0.239	-0.270	0.474	1.00	5.00
SI	102	-0.919	0.239	0.775	0.474	1.00	5.00
FC	102	-0.653	0.239	1.959	0.474	1.00	5.00
BI	102	-0.270	0.239	-0.474	0.474	1.33	5.00

4.7 Inferential Statistics

Inferential statistics is used to make predictions about a large population. It showcases the relationship between different variables instead of single variable (Simonsohn et al., 2019). Inferential statistical tests such as Pearson correlation, t-test, and multiple regression analysis were performed to determine the connection or relationship between the dependent and independent variables.

4.7.1 Test to determine UTAUT constructs

An inferential statistical test such as T-test was carried out to determine if there is a statistically significant agreement or disagreement of the employees on each measure, this is established by examining their means to a scalar of '3'. This indicates that any mean value that is greater than 3 signifies significant agreement, while any mean value that is less than 3 signifies disagreement. Below are the T-test results.

For performance expectancy, the result from t-test revealed that there is significant agreement that employees find RMS useful in their daily life, (M=3.46, SD=1.02, t(102) = 4.56, p=0.00); RMS increases their chances of achieving things that are important to them, (M=3.38, SD=1.03, t(102) = 3.73, p = 0.00); RMS helps them in accomplishing things more quickly, (M=2.74, SD= 1.02, t(102) = -2.61, p = 0.01) and RMS increases their productivity, (M=3.29, SD=0.94, t(102) = 3.16, p = 0.00). This implies that the employees perceive that RMS at eThekwini municipality is useful to them.

For effort expectancy, t-test revealed that there is significant disagreement that it is easy for the employees to learn how to use the RMS, (M=2.94, SD=1.15, t (102) = -0.52, p=0.61) and they find RMS easy to use, (M=2.82, SD= 1.15, t (102) = -1.55, p = 0.123). However, there is significant agreement that employees' interaction with RMS is clear and understandable, (M=3.51, SD=0.95, t (102) = 5.41, p = 0.00) and easy to become skilful at using RMS, (M=3.42, SD=0.96, t (102) = 4.44, p = 0.00). This implies that although the employees perceive that interaction with RMS is clear and understandable, as well as easy for them to become skilful at using RMS but they find RMS difficult to learn and use.

For social influence, the result from t-test proved that there is significant agreement that people who are important to the employees think that they should use RMS, (M=3.59, SD=0.94, t(102) = 6.34, p=0.00); similarly, people who influence their behaviour think that they should use RMS, (M=3.59, SD= 1.06, t(102) = 5.62, p = 0.00) and people whose opinions they value prefer that they use RMS, (M=3.69, SD= 0.93, t(102) = 7.43, p = 0.00). This indicates that employees perceive that their intention to accept the use of RMS at eThekwini municipality is influenced by their family and friends, as well as their managers and colleagues.

With regards to facilitating conditions, the t-test result demonstrate that there is a significant agreement that the employees believe that the resources necessary to use RMS is available at the municipality, (M=3.94, SD=0.73, t(102) = 13.04, p=0.00); that the employees have the knowledge necessary to use RMS, (M=3.78, SD= 0.80, t(102) = 9.86, p = 0.00); that RMS is

compatible with other technologies that they use, (M=2.58, SD= 1.14, t(102) = -3.74, p = 0.00) and that they can get help from others when having difficulties using the RMS, (M=3.60, SD= 0.81, t(102) = 7.44, p = 0.00). Thus, indicating that indeed there is the existence of organisational and technical infrastructure available at the municipality to support the employees on the use of RMS.

Finally, on the behavioural intention to accept and use RMS, the t-test result revealed that there is significant disagreement on employees' behavioural intention to continue using RMS in future, (M=2.84, SD=0.99, t (102) = -1.60, p = 0.11). However, there is significant agreement that employees will always try to use RMS in their daily life, (M=3.20, SD=0.97, t (102) = 3.66, p = 0.00) and plans to continue using RMS frequently, (M=3.26, SD=1.02, t (102) = 2.61, p = 0.01). This signifies that behavioural intention has a positive effect on employee's behavioural intention to accept the use of RMS at eThekwini municipality.

4.7.2   Bivariate Relationship between the Study's Independent and Dependent Variables

To determine the linear relationship between two variables, bivariate correlation is used. In this study, data is represented by ordinal scales and accordingly, the data are normally distributed. Hence, Pearson correlation was used to determine the relationship between employee's Behavioural Intention (BI) to accept the use of RMS at eThekwini municipality and Performance-Expectancy (PE), Effort-Expectancy (EE), Social Influence (SI) and Facilitating Conditions (FC). Table 4.4 presents Pearson correlation on the relationship between the variables.

Table 4. 4: Pearson correlation

Pearson correlation		PE	EE	SI	FC	BI
PE	Pearson Correlation	1	0.680**	0.193	0.593**	0.615**
	Sig. (2-tailed)		0.000	0.052	0.000	0.000
	N	102	102	102	102	102
EE	Pearson Correlation	0.680**	1	0.092	0.688**	0.632**
	Sig. (2-tailed)	0.000		0.357	0.000	0.000
	N	102	102	102	102	102
SI	Pearson Correlation	0.193	0.092	1	0.212*	-0.012
	Sig. (2-tailed)	0.052	0.357		0.033	0.907
	N	102	102	102	102	102

FC	Pearson Correlation	0.593**	0.688**	0.212*	1	0.566**
	Sig. (2-tailed)	0.000	0.000	0.033		0.000
	N	102	102	102	102	102
BI	Pearson Correlation	0.615**	0.632**	-0.012	0.566**	1
	Sig. (2-tailed)	0.000	0.000	0.907	0.000	
	N	102	102	102	102	102
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Saunders, Lewis and Thornhill (2016) posit that p-value is the number between zero (0) and one (1). They also assert that a p-value is used in all hypothesis tests to evaluate the strength of collected data. In this study, the p-value can be interpreted as:

• The value p≤0.05 indicates strong evidence, therefore, null hypothesis is rejected.

• The value p>0.05 indicates weak evidence, therefore, null hypothesis is not rejected (refer to Table 4.5 for the set of null hypotheses that will underpin the correlation analysis).

From Table 4.4, it can be deduced that:

• There exists a strong positive correlation between Performance Expectancy and Behavioural Intention which was statistically significant (r =0.615, n=102, p<0.01, two-tailed).

• There was a strong positive correlation between Effort Expectancy and Behavioural Intention which was statistically significant (r =0.632, n=102, p<0.01, two-tailed).

• There was a negative correlation between Social Influence and Behavioural Intention (r =-0.012, n=102, p>0.01, two-tailed).

• There exists a moderate correlation between Facilitating Conditions and Behavioural Intention (r =0.566, n=60, p<0.01 two-tailed).

Table 4. 5: Summary of Hypothesis Testing

Hypothesis	Relationship tested	Results
H₀	Performance expectancy insignificantly influence an employee's intention to accept the RMS	Rejected
H_A	Performance expectancy significantly influence an employee's intention to accept the RMS	Supported (p<0.05)

H₀	Effort expectancy insignificantly influence an employee's intention to accept the RMS	Rejected
Hₐ	Effort expectancy significantly influence an employee's intention to accept the RMS	Supported (p<0.05)
H₀	Social influence insignificantly influences an employee's intention to accept the RMS	Supported (p>0.05)
Hₐ	Social influence significantly influences an employee's intention to accept the RMS	Rejected
H₀	Facilitating conditions insignificantly influence an employee's intention to accept the RMS	Rejected
Hₐ	Facilitating conditions significantly influence an employee's intention to accept the RMS	Supported (p<0.05)

Findings from the hypothesis testing (see table 4.5) revealed that there was strong evidence that performance expectancy, effort expectancy and facilitating conditions influence employee's intention to accept the use of RMS at eThekwini municipality. This finding indicates that factors that play an important role in the employees' behavioural intention towards the acceptance of a system are performance expectancy, effort expectancy and facilitating conditions and is supported by Andwika and Witjaksono, 2020; Maznorbalia and Awalluddin, 2021; Saputra et al., 2021. On the other hand, social influence does not influence employee's intention to accept RMS, indicating that it totally depends on the individual to make the choice and not from family and friends and this finding is supported by Andwika and Witjaksono (2020).

4.7.3 Multicollinearity Test of UTAUT Constructs

Before carrying out a regression analysis, multicollinearity test was first employed to establish if there is a high or strong correlation among the variables. Variance inflation factor (VIF) and tolerance is used to check for multicollinearity. Pallant (2013:158) defined tolerance as "an indicator of how much of the variability of the specified independent is not explained by the other independent variables in the model while Variance Inflation Factor (VIF) is just the inverse of the tolerance value". Accordingly, when the value of tolerance is less than 0.1 or

when the Variance Inflation Factor is more than 3, then there is problem of multicollinearity (Pallant, 2013). Table 4.6 presents the result from the multicollinearity test.

Table 4. 6: Test Multicollinearity between the UTAUT constructs

Coefficients[a]								
		Unstandardized Coefficients		Standardized Coefficients				Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	0.885	0.372		2.382	0.019		
	PE	0.324	0.100	0.331	3.247	0.002	0.498	2.007
	EE	0.261	0.107	0.275	2.439	0.017	0.405	2.470
	SI	-0.145	0.074	-0.146	-1.955	0.053	0.932	1.073
	FC	0.259	0.127	0.211	2.043	0.044	0.483	2.071
a. Dependent Variable: BI								

From table 4.6, the collinearity statistics for Tolerance is less than 0.1 and the VIF values are less than 3. This result indicates that there was no problem of multicollinearity and there is no high correlation among the variables, therefore, the data is suitable for regression analysis.

4.7.4 Multiple Regression Analysis between the UTAUT constructs

Multiple regression is referred to as a statistical technique that "tells you how much of the variance in your dependent variable can be explained by your independent variables" (Pallant, 2013:153). In this research, this analysis was performed to ascertain the capability of all independent variables to predict the outcome towards the dependent variable. Effort Expectancy (EE), Performance Expectancy (PE), Social Influence (SI) and Facilitating Conditions (FC) are the independent variables while the dependent variable is Behavioral Intention (BI). The regression analysis on the UTAUT constructs is presented in Table 4.7.

Table 4. 7: Multiple Regression analysis between the UTAUT constructs

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.706[a]	.499	.478	.55901
a. Predictors: (Constant), FC, SI, PE, EE				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.

1	Regression	30.191	4	7.548	24.153	.000ᵇ
	Residual	30.312	97	.312		
	Total	60.502	101			
a. Dependent Variable: BI						
b. Predictors: (Constant), FC, SI, PE, EE						

Table 4.7 shows how the independent variables (effort expectancy, performance expectancy, social influence and facilitating conditions) can impact employee's behavioural intention (BI) to accept the use of RMS at eThekwini municipality. The result revealed that the combined variables significantly predicted behavioral intention with R=0.71, R2=0.50, Adjusted R2=0.48, F (4,97) =24.15, p<0.005. The Adjusted R squared value was 0.48 indicating 48% of variance in employee's behavioural intention to accept the use of RMS at eThekwini municipality, as a result, other factors might be considered for the missing variance.

4.7.5 Summary of Statistical Results on UTAUT Constructs

The statistical results on the summary of the UTAUT constructs, performance expectancy, effort expectancy, social influence, facilitating conditions and behavioural intention on the employees' acceptance and the use of RMS at eThekwini municipality is presented on Table 4.8.

Table 4. 8: Summary of statistical results on UTAUT constructs

Constructs	Mean	Median	Standard deviation
Performance Expectancy	3.22	3.25	0.79
Effort Expectancy	3.17	3.25	0.82
Social Influence	3.62	4.00	0.78
Facilitating Conditions	3.48	3.50	0.63
Behavioural Intention	3.13	3.00	0.77

The statistical results on the summary of the UTAUT constructs above demonstrates that majority of the employees are of the opinion that performance expectancy, effort expectancy, social influence and facilitating conditions influences their intentions towards the acceptance and the use of RMS at eThekwini municipality. This therefore means that the employees perceive that the use of RMS will benefit them towards carrying out their daily tasks at the municipality. Comparing the mean to the maximum score of 5, social influence ranked the highest with the mean score value of 3.62, thus, signifying a positive direction towards the acceptance and use of RMS.

4.8 Section C: Thematic Analysis on Participants' Experience using RMS

Qualitative research is often used to understand, describe, and interpret experiences and perceptions towards uncovering meaning in a particular context (Maguire and Delahunt, 2017). In this study, the researcher utilized the section C of the questionnaire to understand employees' experience and perception while using the Revenue Management System, also to describe if RMS is an excellent system to use or a system that can be improved upon. However, this section presents the thematic analysis on the open-ended questions on section C of the questionnaire. Out of the 102 employees that participated in the survey (quantitative study), only 73 responded and expressed their perceptions on the use of RMS. The qualitative data provided the researcher with an opportunity to obtain a deeper insight into respondents' perceptions of the RMS. This insight was analysed and used to complement the quantitative data collected.

Thematic analysis is a flexible method that is used for analysing qualitative data with the aim of understanding the experiences, thoughts, or behaviours across a data set and are represented in themes – constructed patterns that are derived from data set that informs the research question (Kiger and Varpio, 2020). According to Lochmiller (2021), thematic analysis involves three elements which includes - categories, individual codes, and researcher-produced themes. **Individual codes**: This is the first cycle of the analysis where the researcher familiarises with the data with the aim of identifying meaningful and relevant texts which will be used for analysis in subsequent coding cycles (Lochmiller, 2021). In this study, the researcher familiarised herself with the data and used code to describe the employees' experiences and perspectives towards answering the research question.

Categories: This is the second cycle as described by Lochmiller. In this cycle, the focus should be on producing categories that defines the related portion of the data using the previously coded texts (Lochmiller, 2021). According to Lochmiller (2021), "these categories define (un)related and (dis)similar patterns in codes that the efficiency of themes does not allow a researcher to report". For this study, the researcher produced categories that enhanced the interpretation of data for better understanding.

Researcher-produced themes: Developing categories is a crucial step towards the development of themes. Researcher-produced themes are themes created by the researcher to conveys the meaning of many codes (Wæraas, 2022). Themes can be described as patterns of common meaning which binds a central concept (Braun and Clarke, 2020). In this study, the researcher searched for phrases that represents the opinions of the employees and coded them

in themes. From those responses, three themes emerged which spoke to the research question. The first theme focuses on how easy RMS is, the second theme focuses on the challenges experienced while using RMS and the third them focuses on the need to improve RMS. The themes are:

1. Satisfied
2. Not satisfied
3. Need for improvement

Accordingly, the percentage of the responses are 12.33% for satisfied, 45.21% for not satisfied and 42.47% for the need for improvement respectively.

4.8.1 Satisfied

In this theme, only few of the participants are satisfied with the use of the revenue management system (RMS) at the municipality. According to Althunibat et al., (2022), user satisfaction demonstrates user's response towards the effective use of a system. In order words, the users of RMS are satisfied when the system meets its requirements and needs. Higher user satisfaction leads to greater acceptance and use of RMS. The ease-of-use factor influences the information system's acceptance. Some of the participants in this study perceived that RMS is easy to use and this is reflected in the participant's views below:

> *"RMS is easier to use and more advanced compared to other systems that were used in the past. It is more useful, and all the imperative information are included in the system, and in line with fourth industrial revolution" (SA5)*

> *"RMS is an easy-to-understand system that makes life a little easier" (SA6)*

Participants of the current research acknowledge that RMS is beneficial to them because RMS is available and easily accessible at the municipality. The availability and accessibility of RMS is as a result of it being the only system that is used at the municipality for revenue purposes. The responses are cited below in the following quotes:

> *"RMS is reliable and efficient" (SA8)*

> *"RMS is our revenue system, and it is a very important system at the municipality. It has improved a lot in the years" (SA2)*

When employees are satisfied about the RMS, they will be enthusiastic about work, thereby translating into more user interactions and higher productivity. Ease of use is one of the

functions of an information system, it reduces the energy and time needed carry out work functions (Andwika and Witjaksono, 2020). Although some participants in this study are satisfied with RMS and perceive that the system is user friendly, but they hope for improvement in the future. Some of the responses given by the participants are the following:

"Although RMS is easy to navigate; I do feel that it can still be improved to facilitate all the unit's needs" (SA9)

"Based on my job duties I am required to pull out some of the findings from RMS, so in that way I use RMS more frequently. In my own opinion I find it useful and properly functional enough since I am able to pull out data that assists me in executing my tasks as an accountant. However, there are areas of development there and there maybe to improve UI so that the system can be more user friendly and more of an interactive system" (SA4)

"RMS is an interface system that we use and was not given a choice, so we had no option but to embrace it and move forward, yes, it is user friendly, and once you interact with the system you are able to find your way around, not 100% to what we expected, but we are doing something with what we have. lots of change request and additional UI's or options pending our requests" (SA3)

"My experience with RMS is only on Workflow, we normally use it to process adjustments. It does what it's supposed to do. Hope in future we will not have to do adjustments, but the system should have the capability to do this" (SA7)

4.8.2 Unsatisfied

In this theme, majority of the participants are unsatisfied and expressed their concerns and frustration towards the use of RMS at the municipality. Unsatisfied in this study means that the employees are not happy with the use of RMS because of the challenges they face while using the RMS, hence affecting the behavioural intention to use RMS. Participants noted different challenges such as the perplexity of RMS, integration challenge and network challenge. Below are the responses from the participants that perceive that RMS is difficult and complicated:

"It's a difficult system, end users struggle to understand how to process simple task, what used to be a one screen activity has become 3 to 5 screen exercise" (NSA3)

"I would like the RMS to be like other systems that are not complicated" (NSA33)

On the other hand, a participant perceived that RMS is not a difficult system but still experience various challenges when using it for receipting. The participant claimed that when a debit or credit is passed on a customer's account, transactions/adjustments does not appear on the customer's account which indicates that there is a problem with the RMS and requires a solution to correct the issue.

Additionally, participants expressed concern over the sluggish nature of the RMS. They perceive that the system is slow and freezing all the time, hence lengthening the time frame required to execute a task. According to Chopra et al., (2022), a saggy IT infrastructure most times leads to the sluggish processing speed of an ERP system. Some of the views expressed by the participants in this regard are:

"It's very slow and its always freezing" (NSA8)

"RMS is very slow and inefficient" (NSA12)

"It's limited to what I do in my department, most of the times its very slow" (NSA10)

"We only use the system for metre related purposes, after going on site to check metre readings. The problem is that it's very slow" (NSA22)

"The RMS system freezes most of the time" (NSA16)

"This revenue management system looks like it's still in development stage. Always breaking, one problem after the other, no joy in using it" (NSA18)

"I joined rate clearance after working for finance, now I always compare the systems that we used there to RMS which is a coughing system. It coughs non-stop. I am not happy with it" (NSA27)

One of the interesting things that was revealed in this study is that the old system which the municipality had in place – COINS, was identified by the participants as the best fit for the municipality. This was because COINS was perceived to be useful as well as perform so many functionalities that the new system -RMS could not perform as shown in the comments below.

"Coins was a better revenue system" (NSA11)

"If I have to choose between RMS and COINS the system that comes before it, I would definitely choose COINS but I am sort of used to using it" (NSA6)

"Before RMS there was a COINS a system that RMS replaced. That system was so simple, everything was a click of a button. It had less queries and it was so easy to work with. With RMS we cannot pull out our own reports and we need to rely on the RMS guys to give us reports. We cannot get information from other systems using RMS. I have become used to the issues that we currently experience" (NSA17)

Some of the participants reported that they are not happy with the system (RMS) because the system is always faulty, and they are being charged at a cost whenever they request for an enhancement of what was supposed to come with the system. This is supported by the following comments.

"RMS is a faulty system; it always has issues. They fix one thing and the other thing breaks. It's not a system that functions smoothly" (NSA23)

"My experience with using RMS is not a good one. It always has issues. It doesn't operate smoothly like it should. When they fix it to do enhancements of what was supposed to come with the system, they want money for it" (NSA32)

"Some simple system functionalities that a normal system would have RMS doesn't have. When requested then it's deemed an enhancement or change request and that comes at a cost. It was meant to have similar or almost similar capabilities as COINS but that is nothing close. Apart from all the issues that we usually have with the system we have learnt to find ways to work around those issues. I am now used to the system" (NSA33)

4.8.3   Need for improvement

The integration of ERP system is usually challenging, when integrating a new system with an old or outdated system (Mahmood et al.,2019). Mahmood et al., (2019) emphasised that lack of strategies with regards to integration results in loss of data, delays, poor performance and inefficiency of the new ERP system as well as lack of trust in the new system. Hence the need for an effective integration strategy and proper alignment of technologies with the existing practices. Majority of the participants reported that RMS is not integrated and compatible with

other systems that is being used at the municipality and therefore makes it difficult for them to generate reports, hence the need for improvement. This is seen in the comments below:

"According to my own experience RMS is not well designed in terms of technology architecture which affects the scalability of it. It is not easily integrated with other functional systems within the organisation" (NI12)

"RMS needs to be aligned with all current network-based systems, lots of fields are outdated, it does not have capability to upload all customers information including pdf (i.e., id copy, company information)" (NI15)

"It needs to have the capability to integrate with other systems/ applications" (NI16)

"RMS can be improved. I would like to be able to pull out all reports on my own and not rely on the data warehouse team for some reports. I would also like that while I'm using RMS, I must be able to see data from other systems. It must be fully integrable" (NI29)

"As a clerk there's quite a number of systems that I use in my daily duties, and it would be easy for me if RMS would be able to integrate with most of the systems instead of having different stand-alone systems. I would also appreciate the ease of use, and be able to gain more access that can assist in making my job easier rather than relying on someone and making requests every time I need some of the information that is on RMS. We'll authorised access to certain part of RMS. We'll assigned user roles" (NI13)

"RMS functionality must be enabled to integrate with other systems" (NI18)

"A smart system uses less manual or human intervention, unlike RMS. When we process refunds there has to be that warm body intervention. I usually need accurate data from the GIS system, the valuation roll to perform my tasks but I can't using the current RMS system. Another problem is that when data was being migrated from the old COINS system, it was not cleansed, and this has left the RMS with a lot of inaccurate data. I don't trust the data that is on the system that is why I would have to constantly compare with what's on the GIS and Valuation roll" (NI24)

According to Vasconcelos and Cavique (2022), data cleansing is the process of removing noise while identifying outliners, filling missing values as well as correcting inconsistencies in a data

set. The authors emphasised that challenges are being encountered while integrating data from different sources because the data comes from transactional system sources and must be converged in order to provide information for business decision or understanding. Participants maintained that RMS does not have this function and therefore affects their productivity, hence the need for this function to be added to RMS. Their responses are illustrated below.

> *"Data cleansing still needs to happen on RMS. I can confirm that there are always frequent requests for data to be cleansed. I can say that some data which is in RMS is inaccurate this happened when data was moved from the old system to RMS, but data cleansing is ongoing" (NI30)*

> *"It can be improved. Data cleansing and data integrity is required on RMS. RMS should be integrated with our other systems Val Roll and IRCAM and DMS. The Electricity Department needs to improve their RMS functionality as there seems to be gaps resulting in the illegal consumption of electricity, viz property owners not being billed for electricity used. Electricity department need to be able to generate more reports to improve the way they work. I am comparing RMS to coins here as I used to receive a COIN'S report of all meters disconnected but advancing- The disconnection needs to be reissued or a reconnection processed (seems RMS cannot generate a report like this)" (NI8)*

Some of the factors contributing to the success or failure of ERP implementation have been identified in literature and these are change management, Business Process Re-engineering (BPR) as well as vendor support and implementation. Most ERP that are implemented have poorly skilled consultants who fail to understand business requirements and offer professional advice, RMS being an example (Olugbara et al. 2014; Shaikh, 2018). This usually has effect on the users because of the non-involvement of the users. This makes the users believe that the system is a rushed system and lacks proper planning and designing. Their statements are seen below.

> *"RMS was a rushed system; it looks like no planning took place. COINS was a better system. They should have made something along the lines of COINS" (NI31)*

> *"RMS could be improved by redesigning the program design and coding to completely do away the need for workflow configuration. If all the users who capture documents and all the users who authorise documents had been given their RMS UI activity*

accesses according to a better designed primary key then the whole concept of workflow roles could be done away with, thus having a system that functions smoothly without the continual need for workflow configuration" (NI10)

Hassan (2017) highlighted that the key factors on the failure ERP systems implementation and the inability of business to get their return on investment are linked to lack of acceptance of these systems. Hence for the systems to be accepted, it should be designed in a way that it will be user friendly and easy to navigate as expressed in the comments below.

"The system needs to be user friendly as to pointing the icons of the system and they need to improve the import and export function to easily produce reports on the system" (NI9)

"When I first opened RMS, it looked beautiful, very colourful. But while I started using it, it was not so friendly. I am not confident with using it. A lot still needs to be done" (NI21)

"At first, the experience was not good due to its user interface which is not user-friendly, and the functionality seemed to be all over the place. There were too many changes during the development stage and people were trained during the development time which created more confusion. The functionality was confusing therefore even though the system has been live for some time but there are still things to learn from the system" (NI2)

"RMS is not user friendly. Its frequently changing its billing engine that results on incorrect billing of customers There is no uniform on calculations some accounts bill less by 1cent some correct on same products" (NI22)

However, participants mentioned the areas where they need improvement on the system in order for them to carry out their duties effectively, efficiently, as well as serve their customers better and improve service delivery at eThekwini municipality. These areas are real time reporting and the ability to filter fields.

"System can still be improved especially on providing real time reports such as productivity and performance report" (NI20)

"RMS need to improve on the ability to filter exact fields required by the user for specific needs (NI11)"

It should be noted that the lack of end-user training increases the risk of information systems implementation failure. Therefore, users' satisfaction should be taken into consideration so that users daily work processes will become more effective and simpler without the need to depend on external support and services. To increase user satisfaction, it is recommended that training programs be made available to enable the users to understand the system and how to use it.

4.9 Conclusion

The findings obtained from the quantitative analysis and the findings obtained from the qualitative data were presented in this chapter. Descriptive analysis on the biographical and background information of the participants was presented in pie charts and the findings from the factors influencing the employee's intention to accept the use of RMS at eThekwini municipality was presented in stack bar chart. Inferential statistics was interpreted. Chapter five will discuss the summary of findings, the overall study's conclusion, recommendations and provide way and direction for further research.

CHAPTER FIVE: CONCLUSION

5.1 Introduction

This chapter is the final chapter and discusses and interprets the findings of the study, which were analysed and offered in the previous chapter's recommendations, limitations, and direction for future research as well as the overall study's conclusion. The main aim of this study is to find and identify the factors that will enhance user acceptance of the RMS and contribution towards ensuring that there is an improvement in the usage of RMS at the eThekwini Municipality in KwaZulu-Natal. The interpretation of this study's findings is in relation to the research questions that are guiding this study.

5.2 Discussions on the Research Findings

This study employed the UTAUT model to provide insight into the factors influencing the employees' acceptance of the Revenue Management System at the eThekwini Municipality in KwaZulu-Natal. The findings from the descriptive statistics on the biographical and background information obtained from the employees revealed that majority of the employees that participated are administrators, from the revenue department, females, who have been using RMS at the municipality for over 3 years, in the middle age group which is between 31-40 years, mid-employees, have been working in the municipality for over 5 years and have been using computer for over 10 years.

5.2.1 How does PE influence the behavioural intention to accept the RMS?

In order to determine how performance expectancy influences employees' intention to accept the use of RMS at the eThekwini municipality, the influence was measured based on four statements:

(i)   I find the RMS useful in my daily life.
(ii)   Using the RMS increases my chances of achieving things that are important to me.
(iii)   Using the RMS helps me accomplish things more quickly.
(iv)   Using the RMS increases my productivity.

Performance expectancy (PE) is how much users believe that utilising the RMS will help them perform better. The results suggest that there is a positive relationship between performance expectancy and employees' behavioural intention to accept the use of RMS at eThekwini municipality. This result suggests that the employees at eThekwini municipality that accept the use of RMS perceive it to be useful because it is the revenue system that is being used in the

municipality and helps them to perform their work effectively and efficiently. According to Saputra et al., (2021), the efficiency and effectiveness of RMS will increase the employees' performance, thereby increasing the employees' acceptance and usage of the RMS at the municipality.

The theory of Venkatesh et al., (2012) is supported in this study's findings, which states that performance expectance has a significant impact on behavioral intention as well as other existing studies (Ayaz and Yanartaş, 2020; Andwika and Witjaksono, 2020; Saputra et al., 2021).

5.2.2 How does EE influence the behavioural intention to accept the RMS?

Effort Expectancy is to how easy it is to utilise systems. To determine how effort expectancy influences employees' intention to accept the use of RMS at the eThekwini municipality, its influence was examined through four statements:

(i)   Learning how to use the RMS is easy for me.
(ii)   My interaction with the RMS is clear and understandable.
(iii)   I find the RMS easy to use.
(iv)   It is easy for me to become skilful at using the RMS.

The results of the study indicate that effort expectancy has a significant influence on employees' intention to accept the use of RMS at the eThekwini municipality. This implies that the employees perceive that it is easy for them to navigate and use RMS in performing their duties at the municipality. According to Venkatesh et al., (2012), it is of human perception that the lesser the effort to use a technology or system, the higher the use of such a technology or system. Issa and Isaias (2015) also highlighted that usability and HCI are among the factors that influence the adoption and technology usage.

The findings of this study support the findings of (Andwika and Witjaksono, 2020; Saputra et al., 2021) that using a system that is perceived to be easy to use will increase the usage of such a system. Therefore, it is important that developers, analysts, and designers understand what users want and tailor it during implementation in order to produce functional and usable systems.

5.2.3 What is the relationship between SI and the BI to accept the RMS?

Social influence (SI) is the level in which a person feels that other's, (it could be their bosses), believe they should use RMS to execute their jobs. In order to ascertain the role that social

influence plays in employees' intention to accept the use of RMS at the eThekwini municipality, three questions were examined:

(i) People who are important to me think that I should use the RMS.

(ii) People who influence my behaviour think that I should use the RMS.

(iii)People whose opinions that I value prefer that I use the RMS.

The result from this study revealed that there is a negative correlation between SI and employees' BI to accept the use of RMS at the eThekwini municipality. This implies that the employees feel that their intention to adopt and use RMS at the municipality should be personal and does not need the opinions from friends, managers, or their superiors to use RMS at the municipality. This insignificant influence may be directed to lack of encouragement from superiors and colleagues as they might be having challenges with the RMS as well or might be lacking knowledge of the RMS or might have different perceptions of RMS.

The results of this study do not support Venkatesh et al., (2012) theory, which states that social influence has a significant effect on intention to use a system. However, this study's findings reaffirmed the studies of Andwika and Witjaksono (2020) and Saputra et al., (2021). In this regard, it is crucial to provide the necessary support to the managers in order to influence the employees. Additionally, the perception of the employees towards the use of RMS can be increased by training the employees on how to use RMS, as well as providing manuals on the usage so that employees can consult the manuals anytime they are having any challenges/difficulties while using RMS.

5.2.4   *What is the influence of FC and the behavioural intention to accept the RMS?*

Facilitating conditions is the degree in which employees believes that there is organisational and technical infrastructure available to support use of the RMS. Four statements were examined to ascertain how facilitating conditions influences employees' intention to accept the use RMS at the eThekwini municipality:

(i) I have the resources necessary to use the RMS.

(ii) I have the knowledge necessary to use the RMS

(iii)The RMS is compatible with other technologies I use.

(iv)I can get help from others when I have difficulties using the RMS.

The findings show that there is a significant relationship between the employees' behavioural intention and facilitating conditions. This implies that facilitating conditions plays a crucial

role in influencing the employees to accept the use of RMS at eThekwini municipality. There is no doubt that with the technical and organisational infrastructure, the necessary resources, and skills as well as the support for a system, employees will be encouraged to use and accept the RMS (Maznorbalia and Awalluddin, 2021).

The findings of this study are in line with previous studies (Andwika & Witjaksono, 2020; Maznorbalia and Awalluddin, 2021). According to Andwika and Witjaksono (2020), increase in the value of employee trust in the organisational and technical infrastructure available, will lead to a higher acceptance and usage of RMS. Again, employees use of RMS will be significantly enhanced if RMS is compatible with other systems that they use, therefore, RMS should be designed in such a way that it will be compatible with other system that is being used at the municipality.

5.2.5   *How can experiential knowledge be used to influence Behavioural Intention*

In a view to invoke experiential knowledge as a basis from which enhancements can be suggested for the use of the RMS at the municipality, an open-ended response was required by the employees on their experience of using the Revenue Management System so as to establish if the RMS at the municipality is an excellent system to use or one that can be improved upon.

During the analysis of data, three main themes emerged in connection with employees' experience and perception on the Revenue Management System at the municipality. The themes were satisfied, not satisfied and the need for improvement on the RMS. The findings of this study demonstrate that many of the employees are not satisfied with the RMS at the municipality and therefore demand that the RMS should be improved.

The employees accept that the RMS is the only revenue system that is being used at the municipality, but they continue to go through so many challenges as they try to navigate through the system to perform their jobs. Those challenges are as a result of the system not being user friendly. Some of the participants indicated that the RMS is slow most of the time and freezes a lot, complicated and difficult, as well as its lack of integration capability to integrate with the other systems that are use at the municipality.

However, majority of the employees believes that there is room for improvement on the RMS. The areas of improvement that were raised are that the system should be designed such that it is user friendly, generate reports in real time, uniform billing of customers, addition of data cleaning and the ability to filter fields. The implication of the above discussions is that they were happier with the COINS system because it had all the required features, therefore the

current system needs to be aligned with the needs of the employees for full acceptance and usage of the RMS by the employees.

5.3 Recommendations

From the beginning of this research, it was justified that the main aim of this study was to get better knowledge of factors that influences the acceptance and the use of the RMS at the municipality. This understanding will add to the body of knowledge that will inform the managers and the employees using RMS at the municipality towards obtaining an improved understanding of the system and contribute towards better service delivery to the citizens of the eThekwini Municipality. Based on the research findings, the following recommendations are made:

- The study established that the employees perceive that the use of RMS helps them perform their duties effectively and efficiently, but they face several challenges while using the system, which affects their intention to use RMS. Therefore, to increase the use of RMS at eThekwini municipality, the researcher recommends that employees should be trained on how to operate the system so that the employees can perform their work with ease and effectively. Further, effective communication should be made between the developers and the users (employees) during the implementation process so as to improve the system functionality and increase user's acceptance.

- The result of the study confirmed that the RMS at the municipality is difficult to learn and use, hence the researcher suggests that RMS should be user friendly so that it will be easy for the employees to navigate through the system and perform their jobs effectively and efficiently. Again, manuals should be made available and accessible so that the employees can be able to consult it anytime they are facing challenges or get stuck with the system.

- The study's outcome also established that the infrastructure available to support the use of RMS are insufficient, because the RMS at the municipality is not compatible with other systems that they use. Therefore, to increase the use of RMS at eThekwini municipality, the researcher recommends that RMS should be designed to be a fast system in such a way that at one click one should be able to get the required information timeously and that the RMS should be compatible with other system used at the municipality. Also, functionalities that were in the COINS system should be incorporated into the RMS.

5.4 Limitation of the Study and Direction for Future Research

This research study is limited to employees using RMS at eThekwini municipality in only three departments, revenue department, solid waste department and electricity department. There is a possibility that the employees may have not responded honestly, as they were concerned about organisational protocol breaching and the fear of the study's results being made public. Hence, the data collection instrument may likely include undetected biases as a result of the employees' halo effect. Therefore, it is essential that this research study's findings be interpreted with respect to these limitations. Second limitation is with regards to sample size. Initially the researcher used "The Researchers Advisors" in (Appendix 1) to determine the sample size but due to operational constraints limitation of the overhead imposed on the employees of the organisation the researcher had to reduce the sample size.

The research findings have aroused some ideas for further research. It is proposed that future studies can be conducted to expand the study to target a larger population by incorporating all the departments in the municipality. Additionally, other moderating factors should be incorporated in measuring the influence of employees' intention towards the acceptance and use of RMS at the municipality.

5.5 Overall Study Conclusion

This study was aimed at addressing the issue of a failed municipality system in terms of the system's ability to meet functional requirements as well as ensure a positive user experience. It was established that the acceptance and use of RMS at the municipality is crucial and as such offers great significance towards employees' job productivity. Despite the challenges being faced by the employees on the user experience on the RMS, it has been revealed that the improvement on the current RMS will permit the employees to perform their jobs more effectively, efficiently, and timeously. The research findings of this study have revealed that effort expectancy, performance expectancy, and facilitating conditions are the factors that significantly influence employees' behavioural intention to accept and use RMS at the municipality. With the research findings and the recommendations presented, the management of the municipality and the managers at the departments should ensure that the RMS at the municipality is improved so that the employees will use the system more effectively and efficiently towards giving a better service delivery to the citizens of the eThekwini Municipality.

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7. APPENDICES

7.1 Appendix1: Sample Size Table

Required Sample Size[†]

Population Size	Confidence = 95%				Confidence = 99%			
	Margin of Error				Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1067	427	636	827	1119
1,500	306	515	759	1297	460	712	959	1376
2,000	322	563	869	1655	498	808	1141	1785
2,500	333	597	952	1984	524	879	1288	2173
3,500	346	641	1068	2565	558	977	1510	2890
5,000	357	678	1176	3288	586	1066	1734	3842
7,500	365	710	1275	4211	610	1147	1960	5165
10,000	370	727	1332	4899	622	1193	2098	6239
25,000	378	760	1448	6939	646	1285	2399	9972
50,000	381	772	1491	8056	655	1318	2520	12455
75,000	382	776	1506	8514	658	1330	2563	13583
100,000	383	778	1513	8762	659	1336	2585	14227
250,000	384	782	1527	9248	662	1347	2626	15555
500,000	384	783	1532	9423	663	1350	2640	16055
1,000,000	384	783	1534	9512	663	1352	2647	16317
2,500,000	384	784	1536	9567	663	1353	2651	16478
10,000,000	384	784	1536	9594	663	1354	2653	16560
100,000,000	384	784	1537	9603	663	1354	2654	16584
300,000,000	384	784	1537	9603	663	1354	2654	16586

7.2 Appendix 2: Questionnaire

7.2.1 SECTION A- Demographics

General instructions

Please read the following questions to determine the user experience factors that influence the acceptance of the Revenue Management System (RMS) at the eThekwini Municipality in KwaZulu Natal. The questions below have been designed to gain insight into the user's acceptance of the RMS and their intention to continue using the system.

Please read and complete the following questionnaire. Please select your response by making a cross (X) in the appropriate boxes.

DEMOGRAPHIC AND BACKGROUND INFORMATION

Job Title/ Position		
Department		
Gender	Male	Female
Years of experience using RMS		
Age		

1. Position of Employment

Current employment level	Please Tick Appropriate box (X)
Manager	
Supervisor	
Mid-Employees	
Trainees	
contractors	

2. Length of employment at the Municipality

Length of Employment	Please Tick Appropriate box (X)
0 – 2 Years	
3 – 5 Year	
6 – 10 Years	
11 – 15 Years	
16 Years +	

3. Computer experience

Number of years using Computer	Please Tick Appropriate box (X)
0 – 2 Years	
3 – 5 Year	
6 – 10 Years	
11 – 15 Years	
16 Years +	

7.2.2   SECTION B – Close ended

Please read the following sentences and rate on a scale of 1- 5 how much you agree/ disagree.

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

UTAUT Questionnaire

Construct	Description	1 represents *Strongly Agree* and 5 represents *Strongly Disagree*				
		1	2	3	4	5
Performance Expectancy	I find the RMS useful in my daily life.					
	Using the RMS increases my chances of achieving things that are important to me.					

	Using the RMS helps me accomplish things more quickly.					
	Using the RMS increases my productivity.					
Effort Expectancy	Learning how to use the RMS is easy for me.					
	My interaction with the RMS is clear and understandable.					
	I find the RMS easy to use.					
	It is easy for me to become skilful at using the RMS.					
Social Influence	People who are important to me think that I should use the RMS.					
	People who influence my behaviour think that I should use the RMS.					
	People whose opinions that I value prefer that I use the RMS.					
Facilitating Conditions	I have the resources necessary to use the RMS.					
	I have the knowledge necessary to use the RMS					
	The RMS is compatible with other technologies I use.					
	I can get help from others when I have difficulties using the RMS.					
Behavioural Intention	I intend to continue using the RMS in the future.					
	I will always try to use the RMS in my daily life.					
	I plan to continue to use the RMS frequently.					

7.2.3 SECTION C - Open Ended

Please provide an open-ended response on your experience of using the Revenue Management System that provides an insight into your perception(s) of the system being an excellent system to use or one that can be improved upon. How can it be improved if you believe that it needs some improvement?

Thank you for your response!

UKZN HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE (HSSREC)

APPLICATION FOR ETHICS APPROVAL

Information Sheet and Consent to Participate in Research

Date:

Greetings,

My name is Zandile Khumalo (Student No. 200203268), and I am currently studying for a Master of Commerce (MCom) degree at the University of KwaZulu-Natal (UKZN), in the School of Management, Information Technology and Governance. The discipline of my study is in Information Technology (IT). The contact details for myself as well as my supervisor and the academic department at UKZN are listed below:

Researcher Name: Zandile Khumalo; email: 200203268@stu.ukzn.ac.za; zandie001@yahoo.com

Mobile Contact Number: +27 798494630

Supervisor Name: Dr S Ranjeeth; email: ranjeeths@ukzn.ac.za

Office contact Number: +27 33 260 5641

Department of Information Systems & Technology: +27 33 260 5704; + 27 31 260 7051

You are being invited to consider participating in a study titled: *Factors that influence the acceptance of the Revenue Management System at the eThekwini Municipality in KwaZulu-Natal*. The aim and purpose of this research is to assist in obtaining better knowledge of factors that influence the acceptance of the Revenue Management System (RMS) at the eThekwini Municipality. This knowledge will enable an understanding of how the usability and functionality of the RMS may be improved to enhance productivity and general user motivation to use the system. The researcher would like to enlist the assistance of employees from the Revenue, Electricity and Solid Waste departments in the eThekwini Municipality.

The duration of your participation if you choose to participate and remain in the study is expected to be approximately 20 minutes.

It is envisaged that the outcome of this study will influence the development of enterprise resource planning (ERP) systems so that the development effort is aligned to expectations of the end user community. This study will provide knowledge that may be used in the context the eThekwini Municipality as well as make a contribution towards theoretical knowledge of ERP systems development in general.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (approval number_____).

In the event of any problems or concerns/questions you may contact the researcher at (provide contact details) or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557- Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

Your participation in the study is voluntary and by participating, you are granting the researcher permission to use your responses. You may refuse to participate or withdraw from the study at any time with no negative consequence Your anonymity will be maintained by the researcher and the School of Management, I.T. & Governance and your responses will not be used for any purposes outside of this study.
All data, both electronic and hard copy, will be securely stored during the study and archived for 5 years. After this time, all data will be destroyed.

If you have any questions or concerns about participating in the study, please contact me or my research supervisor at the numbers listed above.

Sincerely

(Zandile Khumalo)

CONSENT TO PARTICIPATE

I _____(Name) have been informed about the study entitled (*Factors that influence the acceptance of the Revenue Management System at the eThekwini Municipality in KwaZulu-Natal*) by Zandile Khumalo.

I understand the purpose and procedures of the study.

I have been given an opportunity to ask questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study, I understand that I may contact the researcher at (provide details).

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557 - Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

_____   _____

Signature of Participant   **Date**

_____   _____

Signature of Witness   **Date**

(Where applicable)

_____   _____

Signature of Translator   **Date**

(Where applicable)

7.4 Appendix 4: Ethical Clearance

UNIVERSITY OF KWAZULU-NATAL
INYUVESI
YAKWAZULU-NATALI

09 June 2022

Zandile Rosemary Khumalo (200203268)
School Of Man Info Tech & Gov
Westville Campus

Dear ZR Khumalo,

Protocol reference number: HSSREC/00004207/2022
Project title: Factors that influence the acceptance of the Revenue Management System at the eThekwini Municipality in KwaZulu-Natal
Degree: Masters

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 23 May 2022 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

This approval is valid until 09 June 2023.
To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,

Professor Dipane Hlalele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee
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