

**CUSTOMER PERCEPTIONS ON CUSTOMER RELATIONSHIP MANAGEMENT
(CRM) AND ITS POSSIBLE INFLUENCE ON REVENUE MANAGEMENT (RM) AT A
SELECTED WATER BOARD IN SOUTH AFRICA**

A thesis submitted in fulfilment of the requirements for the degree of

MASTER OF COMMERCE

Department of Management

RHODES UNIVERSITY

By

JOSHUA ANESU MANYONGANISE

g15m3144

<https://orcid.org/0000-0002-9976-9674>

October 2020

Supervisor: Mr. MJ Louw

Co-supervisor: Professor N Oosthuizen

DECLARATION

I, Joshua Anesu Manyonganise, hereby declare that:

- The content of this thesis entitled “Customer perceptions on Customer Relationship Management (CRM) and its possible influence on Revenue Management (RM) at a selected water board in South Africa;”
- All sources used or quoted, have been acknowledged and documented by means of references; and
- This thesis has not been submitted previously for a degree at any other tertiary institution.



Joshua Anesu Manyonganise
Department of Management
Rhodes University
October 2020

LIST OF ACRONYMS

CEO	Chief Executive Officer
CFO	Chief Financial Officer
CRM	Customer Relationship Management
CSS	Customer Service Support
DWA	Department of Water Affairs
ERAS	Ethical Review Application System
ERM	Enterprise Resource Management
NGO	Non-Governmental Organisation
WSA	Water Services Act
RM	Revenue Management

ABSTRACT

The primary activity of water boards is to provide water services (bulk portable, and bulk wastewater) to other water services institutions within its respective service areas. They may perform other activities under conditions set out in the Water Services Act of 1997. Water boards' revenues come from the municipalities they deliver services to. Not all municipalities have been paying for the services delivered to them, which led to the aim of this study being to gauge the perceptions of Water Board X and Water Board X's customers of selected Customer Relationship Management (CRM) factors (service quality, customer involvement, customer value, information technology, and management commitment) that may possibly influence Revenue Management (RM). This could possibly assist Water Board X in the future to improve its revenue and debt collection.

This thesis employed an interpretivist qualitative research methodology to explore its research aims and objectives. Open-ended semi-structured interviews were conducted with thirteen participants from Water Board X and four municipalities which Water Board X provides services. The data collected from the interviews were analysed manually through thematic analysis.

The outcome of the interviews noted that an organisation that delivered high levels of service quality to its customers, could possibly improve its RM as the customers are of the opinion that their needs and requirements have been met and would be willing to pay for the services rendered. It was furthermore found that an organisation that involves its customers could possibly improve its RM as the organisation constantly communicates with its customers during, for example, the different stages of a project to ensure that the organisation does not deliver a project that does not meet the customers' requirements at the end of the project life cycle. In addition the use of information technology played a pivotal in an organisation as the use of information technology assisted to develop effective methods in customer relationship management such as, data management, improving communication within the organisation, and with the customers, and the decision making. Furthermore, this study suggested the importance for an organisation to add value to the services that they deliver and for an organisation's management to be committed to ensure that their customers' expectations and requirements are met. The findings of the study suggest that CRM factors (service quality, customer involvement, customer value, information technology, and management

commitment) could influence RM, and it is suggested that Water Board X adopts CRM strategies accordingly to improve its RM. Some of these strategies include adopting a coherent and sustainable revenue strategy through the use of appropriate tariff structures that are simple, equitable, affordable, financially sustainable, and transparent for all; showing commitment by prioritising water loss management and by properly auditing water supplies and water treatment revenue while increasing efficiency in supply and revenue recovery as this allowed Water Board X to better serve its customers, improve its financial standing, and allocate funding for water infrastructure upgrades and to adopt technologies that are on the market as these technologies can detect leakages, manage payments, control water flow and transmit data.

Key words: *customer relationship management, revenue management, municipalities, water board.*

ACKNOWLEDGEMENTS

First, and most of all, I would like to give thanks to God for the strength that He gave me. By His grace, I managed to complete my thesis. I would also like to thank myself for believing in me, thank myself for doing all this hard work and lastly, to thank myself for never giving up when it all looked impossible.

I would also like to express my deepest gratitude to the following individuals who have contributed to the successful completion of my thesis.

- To my supervisor, Mr. Mattheus Louw, and co-supervisor, Professor Nadine Oosthuizen, for your continual support, words of encouragement, patience, guidance and transfer of knowledge that you gave me throughout my research, I will forever be grateful. Words cannot express how grateful I am to have you as my supervisors.
- To my parents, for giving me this opportunity to study a Master of Commerce by paying for my tuition, accommodation, transport costs to go and collect my data and for the pocket money. Thank you for the words of encouragement and the support you showed from the moment I started this journey until the end. My sister, Nyasha, thank you for the love and support you showed.
- To Miss Gamuchirai Kutukwa, for the inspiration, for your willingness to hear every rant I had, for helping to lighten up my mood whenever I was stressed and for being by my side every step of the way. Thank you, I appreciate you.
- To all my friends and extended family that encouraged me to keep pushing forward always and never give up.
- To the Department of Management, for taking me in as one of their own and making the environment friendly to work in. A special thank you goes to Mrs. Judy Seymour, Mrs. Naomi Watlon and Professor Lynette Louw.
- Lastly, to the participants, for without their contribution this thesis would not have been completed.

TABLE OF CONTENTS

CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1	CONTEXT OF THE RESEARCH	1
1.2	PROBLEM STATEMENT	2
1.3	CUSTOMER RELATIONSHIP MANAGEMENT AND REVENUE MANAGEMENT CONTEXTUALISATION	4
1.4	OBJECTIVES OF THE RESEARCH	7
1.5	RESEARCH METHODOLOGY	8
1.6	STRUCTURE OF THIS THESIS	9

CHAPTER TWO: REVIEW ON CUSTOMER RELATIONSHIP MANAGEMENT (CRM) AND REVENUE MANAGEMENT (RM)

2.1	INTRODUCTION	11
2.2	CUSTOMER RELATIONSHIP MANAGEMENT	11
2.2.1	Origin of CRM	12
2.2.2	CRM in context	13
2.2.3	Benefits and challenges of adopting a CRM approach	16
2.2.3.1	Benefits of adopting a CRM approach	16
2.2.3.2	Challenges of adopting a CRM approach	17
2.3	CRITICAL SUCCESS FACTORS OF CRM	18
2.3.1	Customer loyalty	19
2.3.2	Customer satisfaction	21
2.3.3	Service standards	22
2.3.4	Customer retention	23
2.4	CRM FACTORS IDENTIFIED FROM THE LITERATURE THAT MAY POSSIBLY INFLUENCE RM	25
2.4.1	Service quality	25
2.4.2	Customer involvement	27
2.4.3	Customer value	28
2.4.4	Information technology	30
2.4.5	Management commitment	32
2.5	REVENUE MANAGEMENT (RM)	35
2.5.1	Origin of Revenue Management (RM)	36
2.5.2	Revenue Management (RM) in context	38
2.6	REVENUE MANAGEMENT TOOLS	40
2.6.1	Pricing revenue management tools	40
2.6.2	Non-pricing revenue management tools and the revenue management system	41
2.7	MUNICIPAL REVENUE MANAGEMENT	42
2.8	SUMMARY	45

CHAPTER THREE: POSSIBLE INTEGRATION BETWEEN CUSTOMER RELATIONSHIP MANAGEMENT (CRM) AND REVENUE MANAGEMENT (RM)

3.1	INTRODUCTION	46
3.2	IMPORTANCE OF INTEGRATING CRM AND RM	46
3.3	POSSIBLE CHALLENGES OF INTEGRATING CRM AND RM	47
3.4	INTEGRATION OF CRM AND RM IN SERVICE INDUSTRIES	48
3.5	SUMMARY	49

CHAPTER FOUR: RESEARCH DESIGN AND METHODOLOGY

4.1	INTRODUCTION	51
-----	--------------------	----

4.2	RESEARCH DESIGN AND METHODOLOGY	51
4.2.1	Research paradigms and approaches	52
4.2.2	Interpretivist research paradigm	55
4.3	RESEARCH AIM	56
4.4	OBJECTIVES OF THE RESEARCH	56
4.5	POPULATION AND SAMPLE	57
4.5.1	Population	57
4.5.2	Sample	57
4.5.2.1	Probability sampling techniques	58
4.5.2.2	Non-probability sampling techniques	58
4.5.2.3	Sample size	59
4.5.2.4	Sampling size and sampling method employed in this study	60
4.6	DATA COLLECTION PROCESS	60
4.6.1	Secondary data	61
4.6.2	Primary research	61
4.6.2.1	Primary data collection methods	62
4.6.3	Data collection instruments	64
4.6.3.1	Interview schedule	64
4.6.4	Data collection methods and measuring instruments chosen for this study	65
4.7	DATA ANALYSIS	67
4.7.1	Qualitative data analysis	67
4.7.2	Transcription	71
4.7.3	Data analysis chosen for this study	72
4.8	TRUSTWORTHINESS OF THE RESEARCH FINDINGS	75
4.8.1	Trustworthiness of the qualitative research findings	75
4.8.1.1	Credibility	75
4.8.1.2	Dependability	76
4.8.1.3	Confirmability	76
4.8.1.4	Transferability	77
4.9	ETHICAL CONSIDERATIONS	78
4.10	SUMMARY	79

CHAPTER FIVE: FINDINGS OF THE QUALITATIVE PARTICIPANTS INTERVIEWS

5.1	INTRODUCTION	80
5.2	BIOGRAPHICAL DATA OF PARTICIPANTS	80
5.3	THEME IDENTIFICATION	83
5.4	FINDINGS FROM THE INTERVIEWS WITH THE PARTICIPANTS FROM WATER BOARD X	85
5.4.1	Findings from the theme of service quality	85
5.4.1.1	Level of services	85
5.4.1.2	Infrastructure failure	87
5.4.1.3	Influence on RM	89
5.4.2	Findings from the theme of customer involvement	90
5.4.2.1	Customer interaction	90
5.4.2.2	Communication platforms	92
5.4.2.3	Effect of customer involvement on RM	94
5.4.3	Findings from the theme of value creation	95
5.4.3.1	Customer value	96
5.4.4	Findings from the theme of Information technology	97
5.4.4.1	Computerised information	97
5.4.4.2	Information technology systems	99

5.4.4.3	Improved efficiency	100
5.4.5	Findings from the theme of management commitment	102
5.4.5.1	Dedication from management	102
5.5	FINDINGS FROM THE INTERVIEWS WITH THE PARTICIPANTS FROM THE MUNICIPALITIES	103
5.5.1	Findings from the theme of service quality	105
5.5.1.1	Standard of services	105
5.5.1.2	Level of satisfaction	107
5.5.1.3	The influence of the standard of services on RM	109
5.5.2	Findings from the theme of customer involvement	111
5.5.2.1	Mutual engagement.....	111
5.5.2.2	Involvement levels	112
5.5.2.3	Impact of involvement on revenue	115
5.5.3	Findings from the theme of value creation	117
5.5.3.1	Customer value	117
5.5.3.2	Value satisfaction.....	118
5.5.4	Findings from the theme of information technology	120
5.5.4.1	Computer systems	120
5.5.4.2	Information systems adopted	123
5.5.4.3	Effect of information technology on RM	124
5.5.5	Findings from the theme of management commitment	125
5.5.5.1	Administrative responsibilities	125
5.5.5.2	Management’s influence on revenue	126
5.6	SUMMARY	127

CHAPTER SIX: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

6.1	INTRODUCTION	129
6.2	SUMMARY OF THE STUDY.....	129
6.3	OVERVIEW OF FINDINGS PERTAINING TO THE RESEARCH OBJECTIVES.....	131
6.3.1	Identify and describe relevant CRM factors that may possibly influence RM	131
6.3.2	Perceptions of participants from Water Board X and participants from Water Board X’s customers regarding factors identified from the existing literature.....	134
6.3.3	Recommendations to Water Board X	145
6.3.3.1	Recommendations for service quality.....	146
6.3.3.2	Recommendations for customer involvement	146
6.3.3.3	Recommendations for value creation.....	147
6.3.3.4	Recommendations for information technology	147
6.3.3.5	Recommendations for management commitment.....	147
6.3.3.6	Recommendations and conclusion on integrating CRM and RM	148
6.4	LIMITATIONS AND SIGNIFICANCE OF THE CURRENT RESEARCH.....	148
6.5	RECOMMENDATIONS FOR FUTURE RESEARCH.....	149

LIST OF REFERENCES	150
APPENDIX A: INTERVIEW GUIDE FOR THE MUNICIPALITIES	178
APPENDIX B: INTERVIEW GUIDE FOR WATER BOARD X	181
APPENDIX C: INFORMED CONSENT FORM.....	184
APPENDIX D: INVITATION LETTER	187
APPENDIX E: ETHICS APPROVAL LETTER	189
APPENDIX F: LETTER FROM THE LINGUIST.....	191

LIST OF TABLES

Table: 2.1	Some industries that meet the criteria for application of RM.....	37
Table: 4.1	Approaches within the two main paradigms	53
Table: 4.2	Assumptions underpinning positivism and interpretivism	54
Table: 4.3	Positivism and interpretivism features.....	55
Table: 4.4	Advantages and disadvantages of secondary data	61
Table: 5.1	Biographical data of participants	81
Table: 5.2	Main themes, sub-themes, and categories emerging from the Water Board X ...	84
	participants	84
Table: 5.3	Main themes, sub-themes, and categories emerging from the municipality's...	104
	participants	104
Table: 6.1	Summary of Water Board X and Water Board X's customers' perceptions of service quality	135
Table: 6.2	Summary of Water Board X and Water Board X's customers' perceptions of customer involvement.....	138
Table: 6.3	Value creation summary on Water Board X and WaterBoard X's customers' perceptions.....	140
Table: 6.4	Summary of Water Board X and Water Board X's customers' perceptions of information technology	142
Table: 6.5	Summary of Water Board X and Water Board X's customers' perceptions of management commitment	144

LIST OF FIGURES

Figure: 2.1	The CRM continuum	14
Figure: 4.1	Summary of the data collection process	66
Figure: 4.2	Illustration of data analysis, categories, sub-themes, and theme.	74
Figure: 6.1	Proposed framework developed from the existing literature	145

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.1 CONTEXT OF THE RESEARCH

South Africa is a water scarce country, and it is the 30th driest country in the world (Winter, 2018). Khan (2018) asserts that by 2030, South Africa would have run out of water unless it improves the way its resources are managed. At the time of the study, the metro cities of Cape Town and Johannesburg had water restrictions in place. In the Eastern Cape, a number of larger as well as some of the smaller municipalities have enforced water restrictions and irregular water supply has been the norm (Winter, 2018).

According to Statistics South Africa (2018), despite the fact that 86.6% of all South African households had access to piped water in 2017, only 74.2% in the Eastern Cape enjoyed such access. This is an improvement from 2002, when only 56.1% of households in Eastern Cape had access to piped water. Notwithstanding the fact that water access improved, 3.7% of households still had to fetch water from rivers, streams, wells, stagnant water pools, dams, and springs in 2017 (Statistics South Africa, 2018).

The Water Services Act 108 was promulgated in 1997 stating that every South African citizen has the right to basic water supply and sanitation. Amongst other matters, the Act mentions the appointment of water boards. South Africa has fifteen water boards that are registered under the Department of Water Affairs (South African Government, 2019). The primary function of a water board is to provide water services to other water service institutions within its service area (Water Services Act No. 108 of 1997.s.29. [50]). These services may include bulk water supply, water abstraction, and water purification to name a few. A water board can go beyond its mandate of bulk water supply and offer services, such as management services, training, and other support services to water service institutions, and supply untreated or non-portable water to end users who do not use the water for household purposes (Water Services Act No. 108 of 1997.s30.[10]).

1.2 PROBLEM STATEMENT

The selected water board, which hereafter will be referred to as Water Board X was established to be a service delivery partner to local and district municipalities in South Africa (Water Board X, 2018). The organisation is designated to act within the prescribed areas as proclaimed in Government Gazette No. 18409 of 14 November 1997 (Water Board X, 2018). The Minister of Water and Sanitation, as empowered by the Water Services Act No. 108.s.2, serves as the executing authority and performs an oversight role over the organisation (Department of Water and Sanitation, 2019). The water board's primary business is to provide bulk portable water supply, while its secondary business is the treatment of wastewater works (Water Institute of Southern Africa, 2019). The water board's primary business customers are located in Buffalo City Metropolitan Municipality, Amathole District Municipality, and Ndlambe Municipality, while its secondary business customers are located in O.R. Tambo District Municipality and Nelson Mandela Bay Municipality (Water Board X, 2018). The organisation can also engage in secondary business on behalf of its primary business customers. Moreover, the organisation sometimes engages in secondary businesses for municipalities that are not their customers, for example, the Makana Local Municipality (Water Board X, 2018).

Water Board X's financial performance for the year 2017/2018 was poor in comparison to the previous years (Water Board X, 2018). One of the reasons for Water Board X's poor performance can be attributed to a debt impairment of R120 million caused by the Makana Local Municipality and Amathole District Municipality (Water Board X, 2018). Debt impairment refers to the deterioration in the creditworthiness of an individual or organisation (Gox & Wagenhofer, 2009). This is usually due to lower credit scores issued by rating agencies or lenders. Another reason for the poor financial performance at Water Board X can be attributed to the organisation experiencing financial distress due to the Amathole District Municipality not paying creditors in a timely manner, which led to an overall decline in the financial position and performance of the organisation (Water Board X, 2018). Moreover, revenue generated by Water Board X in fact decreased by 5% during the 2017/18 financial year (Water Board X, 2018).

Water Board X had furthermore experienced a challenge with the collection of revenue (Water Board X, 2018). Revenue collection refers to money that an organisation or a government receives

from people or businesses after a service has been rendered. Water Board X's revenue comes from money collected from water sales, but this declined due to reduced water volumes sold to the customers. Water Board X's secondary business revenue came from various services, such as the Dam Management Programme for the Department of Water and Sanitation, and project implementation agent arrangements at the Nooitgedagt scheme (a scheme that treats water from the Gariep Dam that borders the Free State and Eastern Cape province) or the Nelson Mandela Bay Metro, (Water Board X, 2018), to name a few. Water Board X also experienced a challenge with collecting debt (Water Board X, 2018). Debt collection refers to the collection of outstanding amounts of revenue owing to Water Board X from debtors. This may have been caused by the organisation not having good customer relationships with some of its customers due to low customer involvement or no value being added to the services, or simply because some of its customers did not possess the financial means to honour their payments. Makana Local Municipality, for example, did not have the necessary funds to pay Water Board X due to a deficit experienced within the local Municipality of R40 million (Makana Local Municipality, 2018). Furthermore, this could have been due to the misappropriation of funds (Grocott's Mail Contributors, 2017). Water Board X had resolved to take action against these debtors (with immediate effect, as of the second half of 2018) by discontinuing or restricting their services, and by formulating a repayment plan that would be strictly monitored (Water Board X, 2018). Considering the above facts regarding the selected water board, the following research question was posed: which Customer Relationship Management (CRM) factors may possibly influence Revenue Management (RM) which could possibly assist Water Board X in the future to improve its revenue and debt collection?

1.3 CUSTOMER RELATIONSHIP MANAGEMENT AND REVENUE MANAGEMENT CONTEXTUALISATION

There is no exact definition of CRM (Triznova, et al., 2015; Rababah, Mohd & Ibrahim, 2011) but it is viewed as a method of understanding customer behaviour through intense communication with customers to improve organisational performance, increase loyalty and profitability (Soliman, 2012). CRM can also be defined as the implementation of an integrated series of customer-oriented technology solutions and a holistic strategic approach to manage customer relationships in order to create shareholder value (Payne, 2012). Regardless of its definition, CRM unites the potential of relationship marketing strategies and information technology, to create long-term relationships with customers and stakeholders (Peelen, et al., 2009). For the purpose of this study, CRM will refer to a combination of strategies and processes that organisations use to manage and engage with customers, with the goal of improving customer service relationships and to increase an organisation's profitability. Organisations are encouraged to adopt CRM in order to manage relationships with their customers more effectively (Debnath, Datta & Mukhopadhyaya, 2016). This is important as it allows organisations to have a better understanding and prediction of customer retention.

Revenue management (RM) refers to the maximisation of an organisation's profits and revenue by improving sales. Mikesell and Liu (2013) define RM as the application of multiple strategies by an organisation to predict customer behaviour through optimising product availability to improve the bottom line-line performance. Selmi and Chaney (2018) define RM as the range of techniques intended to optimise the profitability of services when capacity limits the availability of the offering. RM can also be viewed as an organisation's ability to anticipate what its customers want in order for the organisation to improve their profits (Nogqala, 2017, citing Jerath, Nesessine and Veerarghavan, 2010). For the purpose of this study, RM will refer to the organisation understanding its customer's needs in order to increase sales and maximise profits.

Integrating CRM and RM may have an influence on profit maximisation, even though CRM and RM operate in a different manner and have different outcomes. An organisation can maximise profits by maintaining a good relationship with its customers, and feedback from its customers is valuable, whether it is positive or negative. An organisation managing its relationships with its

customers, may lead to improved revenue management due to good relations being developed between the two. The association between CRM and RM is thus important (Mahmoud, 2016).

No appropriate theoretical framework could be found for the purpose of this study, however, the study combined different factors extracted from different models identified from the literature to develop a theoretical framework; as such, the research used a deductive approach. A deductive approach was considered appropriate for this study, because deductive reasoning means testing the theories extracted from the different models identified from the literature (Streefkerk, 2019). The following models on CRM were considered in the development of a theoretical framework for possible CRM factors that may possibly influence RM:

- the identifying, differentiating, interacting and customising model (IDIC model) (Meyliana & Eko, 2014);
- the CRM value chain model (Chetty & Thakur, 2019) citing Buttle, 2004);
- a conceptual framework on factors affecting CRM as developed by Hosseinipour and Bavarsad (2013); and
- a conceptual framework on the impact of CRM on customer satisfaction and customer loyalty by Long, et al., 2013.

Based on the models mentioned above, the following factors of the models were considered in the development of a theoretical framework.

- **Service quality** (Long, et al., 2013) – Service quality was selected as one of the factors from the conceptual framework developed by Long, et al., 2013. Based on the literature, quality of services has a positive effect on consumer satisfaction and has a significant relationship with customer loyalty, and influences the profitability of an organisation. The factor was considered appropriate for this study because it can assist Water Board X in understanding if its customers are satisfied with the services rendered by them. Rizka (2013) states that service quality focuses on meeting customers' needs and how well the delivered service meets customers' expectations. It is important for organisations to ensure that they have rendered high quality services to their customers, as this improves customer satisfaction.

- **Customer involvement** (Meyliana & Eko, 2014) – Customer involvement was selected from the IDIC model by Meyliana and Eko, 2014 because based on the literature, involvement helps organisations to understand their customers’ expectations. This factor was considered appropriate for the study because customer involvement can assist Water Board X to understand its customers and how best they can ensure that the customers are satisfied, by delivering services that meets their needs. Customer involvement is the extent to which an organisation engages with its customer(s) during service production (Zhang, Zhong & Makino, 2015). It is important for organisations to involve its customers in all that they do, as the value of a service or product is created by the customer and not the organisation (Lusch & Nambisan, 2015).
- **Customer value** (Meyliana & Eko, 2014) – Customer value was selected from the IDIC model by Meyliana and Eko, 2014 because based on the literature, services that are perceived to provide value have an influence on the customers decision to purchase a service or a product. This factor was considered appropriate for this study as it can assist Water Board X in understanding if the services that they deliver provide value to the customer. According to Strydom, Petzer and De Meyer (2015) customer value is the overall assessment of the benefit that a product would offer, versus what is sacrificed to obtain the product. Value is created by a customer and not an organisation, and therefore it is important for organisations to ensure that customers have received services worth the value of the price they pay for (Keranen & Jalkala, 2014).
- **Information technology** (Chetty & Thakur, 2019 citing Buttle, 2004) - Information technology was selected from the CRM value chain model by Buttle, 2004. Based on the literature, technology assists organisations to develop effective methods in customer relationship management such as, data management. This factor was considered appropriate for this study as the use of technology by Water Board X can assist improve communication effectiveness within the organisation and with the customers and the decision making. CRM is an information technology-driven strategy that organisations use to obtain and keep customer information (Huang & Rust, 2017). The principal objective of any organisation is to attract new customers and to retain the existing ones (Stiehl, et al., 2018). Information technology also allows the organisation to know their

key customers and segment the customers in order to understand them, as long-term relationships will be developed (Estrella-Ramon, et al., 2013).

- **Management commitment** (Hosseinipour & Bavarsad, 2013) - Management commitment was selected from the conceptual framework on factors affecting CRM as developed by Hosseinipour and Bavarsad 2013. Based on the literature, if top management effectively communicates and is fully involved in service deliveries, it can positively impact the services rendered to customers. This factor was considered appropriate for this study as it can assist Water Board X to identify if there is lack of commitment within their organisation which could be the reason behind the quality of services delivered to its customers. The commitment of management is necessary for successful CRM implementation. Management should become involved in activities that demonstrate commitment to the implementation of CRM as an important element of the organisation's strategy (Narver & Slater, 1990; Hosseinipour & Bavarsad, 2013). Organisations that have implemented CRM strategies successfully have improved relationships with their customers, which also ultimately lead to increased revenue (Awwad & Al-adaileh, 2012).

1.4 OBJECTIVES OF THE RESEARCH

The main aim of this study was to gauge the perceptions of Water Board X and Water Board X's customers on selected CRM factors namely, service quality, customer involvement, customer value, information technology and management commitment that may possibly influence RM. This can possibly assist the Water Board in the future to improve its revenue and debt collection. In order to achieve the aforementioned research aim, the following research objectives were formulated:

- To identify and describe relevant CRM factors that may possibly influence RM;
- To analyse the perceptions of the participants from Water Board X and Water Board X's customers regarding the factors identified in the framework developed from the existing literature; and
- To recommend to Water Board X how CRM might possibly influence RM based on the framework developed from the existing literature.

1.5 RESEARCH METHODOLOGY

A case methodology, (Yin, 2013) was appropriate for this qualitative study, within an interpretivist paradigm. Descriptive questions informed by the development of the theoretical framework were used to gain a clear understanding of the perceptions of Water Board X's customers. The questions were also directed at finding out why there was poor customer relationships, which could have led to poor financial performance within the selected water board.

The participants for this study were selected using judgmental sampling, a non-probability sampling technique (Ames, Glenton & Lewin, 2019). The population consisted of Water Board X and four municipalities that they provide services to. The sample selected from the municipalities consisted of three chief financial officers (CFOs) from the finance departments, a director and general manager in the water sanitation department. In addition, the sample comprised two directors in the engineering departments, two managers in the water services departments, and a deputy director of infrastructure in the infrastructure and development department. The sample selected from Water Board X consisted of a management accountant in the finance department, an operations manager in the operations and maintenance department, and the manager in the office of the chief executive officer. Data was collected by means of open-ended, semi-structured interviews from the thirteen participants. The Otter.ai software application (shows captions for live speakers, and generates written transcriptions of the speeches) assisted in collecting the data.

Data was analysed using thematic analysis. Thematic analysis is a method of identifying, analysing and reporting patterns (themes) within data (Boyatzis, 1998 cited in Kukora, et al., 2019). A deductive approach was used to answer the research questions. Due to the nature of the study, manual analysis was deemed an appropriate method of analysis (Basit, 2003).

The issue of validity and reliability is treated differently in qualitative and quantitative research (Drost, 2011). Qualitative research is concerned with the trustworthiness of the data and research findings. Trustworthiness refers to research that can be believed and depended upon (Elo, et al., 2014). Lincoln and Guba (1985), cited in Moser and Korstjens (2018) refined the concept of trustworthiness by introducing four criteria to reflect the assumptions of the qualitative paradigm.

These criteria are as follows:

- Credibility (the confidence that can be placed in the truth of the research findings);
- Dependability (the stability of findings over time);
- Confirmability (the degree to which the findings of an inquiry could be confirmed or corroborated by other researchers); and
- Transferability (the degree to which the findings of qualitative research can be transferred to other contexts with other respondents).

The necessary steps were taken to ensure the trustworthiness of the collected data for this study.

The researcher also adhered to ethical considerations such as voluntary participation, confidentiality, and non-disclosure with the option for participants to withdraw should they wished to do so. An ethics application form for human subjects was submitted using the Ethical Review Application System (ERAS) to the Rhodes University Ethical Standards Committee RUESC via the Departmental/Business School Ethics Representative.

1.6 STRUCTURE OF THIS THESIS

Chapter One presents the context of the research, briefly referring to water scarcity in South Africa. The chapter also highlights the roles of water boards and further discusses the challenges experienced by Water Board X, which became the problem statement. The main concepts of the research were identified, while the research aim and objectives, the research methodology, and the ethical considerations were also presented.

Chapter Two comprises a literature review on CRM. The origins of CRM, CRM in context, and the benefits and drawbacks of CRM are discussed. The literature formed the basis of the framework that was used to design the research question. The factors identified from the literature and discussed in the framework were service quality, customer involvement; customer value, information technology, and management commitment. The chapter also discusses RM, its origin, and the contextualisation of RM. The importance of RM in municipalities concludes the chapter.

Chapter Three discusses the possibilities of integrating CRM and RM. The chapter highlights the importance of integrating CRM and RM and the possible conflicts that may arise. The chapter concludes by discussing industries that integrated CRM and RM and how best other industries could adopt what they have done by tailoring it to their specific industry.

Chapter Four outlines the research design and methodology followed for the research. The chapter discusses the interpretivist paradigm and considers open-ended semi-structured interviews as the chosen data collection method. Thematic analysis was used as a qualitative data analysis method that allowed the researcher to establish the trustworthiness of the research.

Chapter Five presents the findings of the research. The findings are presented according to the categories, sub-themes, and themes. The themes identified were service quality, customer involvement, value creation, information technology, and management commitment.

Chapter Six provides a summary of the study and presents an overview of the findings pertaining to the research objectives. The limitations and significance of the current research are discussed, and the chapter concludes with the recommendations for future research to conclude the study.

CHAPTER TWO

REVIEW ON CUSTOMER RELATIONSHIP MANAGEMENT (CRM) AND REVENUE MANAGEMENT (RM)

2.1 INTRODUCTION

Chapter One provided an overview of the study and commenced with a background on the importance and role of water boards in South Africa to contextualise the research. Reference was also made to the primary aim and objectives of this study, as well as the research problem to be investigated. Based on the research aim of the study, the research objectives were formulated. Chapter One also clarified a number of concepts that are used in this study, after which a brief overview of the proposed research design and methodology was presented.

This chapter will commence with a review of CRM. The review will begin with some information on the origin of CRM. To understand the concept of CRM fully, issues relating to CRM will be contextualised, and a discussion on possible factors found in the literature that might influence CRM will follow. A discussion on RM follows where the origin of the concept is presented, followed by a discussion on issues relating to it. In order to understand revenue collection and spending within local municipalities in South Africa, a discussion on municipal revenue will ensue. The chapter will conclude with a discussion on the possible integration of CRM and RM.

2.2 CUSTOMER RELATIONSHIP MANAGEMENT

CRM helps organisations to implement strategies, practices, and technologies successfully with the focus on profitability and retention of customers (Ismaili, 2015). As alluded to in Chapter One, for the purpose of this study, CRM refers to a combination of strategies and processes that organisations use to manage and engage with customers, to improve customer service relationships and increase an organisation's profitability. Understanding the customer is a prime concern for all organisations, and all activities in sales and marketing benefit from knowing who the customers are (Camilleri, 2018). The discussion will commence with a brief overview of the origin of CRM.

2.2.1 Origin of CRM

CRM is a model used to manage a company's interaction with its current and future customers. Over the past decades, CRM matured from other business models, starting from database marketing to call centres and to today's social and mobile CRM software. Devaraja (2013) suggests that CRM dates back to the early 1960s when organisations started to shift from product-oriented concerns to those that were customer-oriented. This meant that customers' needs were being considered instead of the organisation just being concerned with selling its products. This view contrasts with that of other authors who believe that CRM started evolving in the 1980s (Vienna, 2016; Lyle, 2015; Kevin, 2014; Writer, 2013), and that it can be divided into three stages, namely the origin stage (1980s), the expansion stage (1990s) and the modern CRM stage (2000s). However, it is believed that there is also a 4th stage (Writer, 2013), as the present and future of CRM are looking promising. Cloud based and Software as a Service (SaaS) CRM solutions are gaining popularity and are becoming essential to businesses. CRM nowadays focuses on sales, marketing, and service.

Supporting the view by (Vienna, 2016; Lyle, 2015; Kevin, 2014; Writer, 2013), Kevin (2014) and Lyle, (2015) note that CRM originated in the mid-80s when direct marketing advanced into database marketing. Database marketing was used to collect and analyse customer information through statistical modelling. Data that was collected was used to help organisations communicate with their potential customers. Around the mid-80s, organisations began sending more personalised messages to their clients (Lyle, 2015).

The 1990s led to the expansion stages of CRM software (Saarijarvi, Karjaluo & Kuusela, 2013). This was assisted by the growth of personal computers. This also led to the birth of sales force automation (SFA), which permitted organisations to automate their database marketing while saving costs and time (Saarijarvi, Karjaluo & Kuusela, 2013). SFA was created to deal with pre-sales activities, telemarketing, and preparing sales orders. At the same time, a customer service support (CSS) was developed (Devaraja, 2013), which was developed to deal with post sale activities.

After the mid-90s, there was a huge change in the CRM industry (Kanungo, 2019). Enterprise resource planning (ERP) vendors who use software systems for business management, encompassing modules that support functional areas such as planning, manufacturing, sales, marketing, accounting, financial, human resource management, and e-business, entered the CRM market, with the hope of dominating the market due to their large size (Gaetano, 2018). This forced CRM vendors to improve on the services that they provided. Like any other software organisation, in the early 2000s, the CRM industry, with giants such as Oracle were affected by the failure of the dot com bubble also known as the Internet bubble that was a period when many investors invested their money into internet related startups organisations with the hopes of huge sums of returns (Kanungo, 2019, Vienna, 2016). However, this led to the birth of cloud base and mobile solutions.

In 2007, cloud-based CRM was introduced (Writer, 2013). Organisations found CRM cloud-based services cheaper compared to the systems that are on the premises. The cloud based systems introduced were software-as-a-service (SaaS). SaaS delivers applications over the internet as a service, which eliminates the process of installing and maintaining a software, as organisations simply access the service via the Internet. After 2010, social media marketing took the world by storm. It was being used to attract new customers and that led to the birth of social CRM, an application that focused more on interaction than transactions (Vienna, 2016).

As organisations look to grow in the future, the demand for strong CRM will increase with the world of technology growing. Moreover, the future of CRM will be linked closely with adapting to or integrating with new technologies as they are produced (Vienna, 2016).

2.2.2 CRM in context

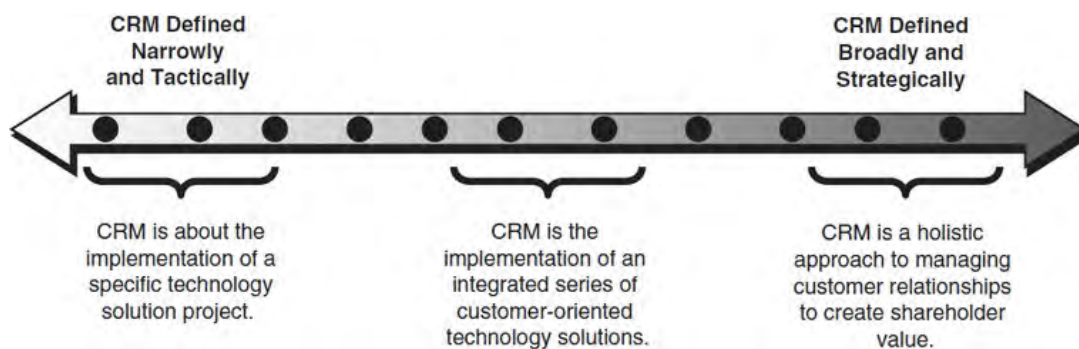
While CRM is defined in varying ways, it is often regarded as a way to merge sales, marketing, and services strategies for an organisation to have a long-term relationship with its customers (Alshourah, 2019). A similar view is held by Rahimi, et al., (2017), as the authors refer to CRM as a marketing strategy that assists organisations to increase their customer satisfaction, loyalty,

and retention to maintain long-term relationships. Law, Ennew, and Mitussis (2013) define CRM as an integrated strategy and technology that organisations use to manage their relationships with existing customers. CRM encompasses practices, strategies, and technologies that organisation can use to analyse and manage interactions with their customers throughout the customer lifecycle (Tait & Roberts-Lombard, 2014).

CRM is crucial for organisations, as it assists them in improving their profits through longer-term relationships with their customers (Kebede & Tegegne, 2018). The advent of the Internet has led to social media technologies changing the way businesses interact with their customer (Tait and Roberts-Lombard, 2014). This has seen a rise in the number of organisations that have been heavily investing in information technology, although few returns have been noticed from just using information technology alone, as organisations need to combine both information technology and humans to ensure better services (Coltman, Devinney & Midgley, 2011).

From the above discussion, it is evident that CRM does not only focus on technology, and a strategic and holistic approach to CRM is needed. Tremblay (2015) citing Payne and Frow (2005) mentioned three approaches to how organisations view CRM as presented in Figure 2.1.

Figure: 2.1 The CRM continuum



Source: Tremblay (2015).

On the left side of Figure 2.1, CRM is viewed more narrowly, and tactically as a mere technology solution. In the middle of Figure 2.1, organisations view CRM as multiple customer-related ICT solutions that work together to improve an organisation's performance and customer experience.

The right side of Figure 2.1 describes CRM as broad and strategic. It looks at how an organisation views CRM as a strategic approach that integrates processes. Organisations that have this perspective have a clear vision of the nature of customer value. All organisations should position themselves in this (Tremblay, 2015). For the purpose of this study, CRM should be approached broadly and strategically as the main aim is to manage relationships with customers in order to improve revenues. Tait and Roberts-Lombard (2014) express the importance of an organisation to build relationships with its customers.

The CRM continuum can be narrowed down to operational, analytical, and collaborative CRM (Tinnsten, 2013). Operational CRM consists of the business processes and technologies that help improve the efficiency of day-to-day running, such as sales and marketing (Alavi, Ahuja & Medury, 2012). Analytical CRM provides the analysis of customer data and behavioural patterns to help an organisation with its decision-making (Alavi, Ahuja & Medury, 2012). Collaborative CRM accounts for the processes that allow organisations to interact with their customers; this may be through face-to-face encounters, email, or conferencing (Alavi, Ahuja & Medury, 2012).

The strategic approach to CRM was already affirmed in 2004, (Zablah, Bellenger, and Johnston, 2013). The authors noted a broader, strategic focus and studied how CRM may affect an organisation's profitability, revenue, and general business growth. From their findings, it can be concluded that introducing CRM processes is associated with improved performance in relationship initiation and maintenance. Zablah, Bellenger, and Johnston (2013) also confirmed that there is an association between CRM-compatible organisational orientations and both relationship termination and initiation, suggesting that CRM processes might improve performance if organisations develop incentives to support a CRM compatible attitude.

In summary, when an organisation adopts CRM, it is not just an introduction of the new technology where the organisation presses the download button on the website and a new software is automatically installed. CRM is an adoption of a brand-new way of thinking for organisations that involves the customer being at the heart of the business. All the customer information is being kept in one centralised database. CRM is a strategic business approach that unites technology, internal

processes, employees, and data management across an entire organisation, to attract and keep customers.

CRM also helps organisations manage any type of debtor. It allows for full process management, which includes initial prospecting (first step of selling a service, identifying potential customers), and individual workflow processes of each new debtor through to final customer/debtor transactions. The introduction of cloud-based CRM, this has allowed organisations to provide a full workflow processing and intelligent task management against each debtor. This makes it easy for organisations to track the customers that owe them money while still trying to maintain a good relationship.

2.2.3 Benefits and challenges of adopting a CRM approach

The benefits of an organisation adopting a CRM approach greatly outweigh the drawbacks. However, there are pitfalls associated with following a CRM approach in an organisation. For a CRM approach to work, there needs to be a buy-in across the organisation and the processes in place to support it. The benefits and challenges organisations can experience when following a CRM approach will be discussed next.

2.2.3.1 Benefits of adopting a CRM approach

The benefits of adopting a CRM approach for an organisation go beyond just running a business and ensuring that customers are satisfied. A CRM approach allows for an organisation to improve the relationships it has with its existing customers while also trying to acquire new customers (Thomas, 2018). Below are some of the benefits of following a CRM approach in an organisation.

- Improves customer retention and revenue – by adopting a CRM approach strategy, an organisation will be able to improve its customer retention rates, which often result in increased revenue for the organisation. Rana (2019) citing Harvard Business Review, states that an organisation that has a 5% reduction in its customer defection rate, can increase its profits anywhere from 25% to 85%. Customer data that has been collected

can be used by an organisation to address any accounts deemed to be at risk as well as reach out to satisfied customers and encourage them to purchase more products or services (Taylor, 2014).

- Strengthens effective communication - Organisations that adopt a CRM approach have improved communication channels. Departments within the organisations can share customer data remotely, which allows for easy teamwork and this helps optimise the customer experience (Mothermode, 2019).
- Optimises the market – Adopting CRM allows an organisation to have a more targeted and cost efficient marketing programme. An organisation needs to understand its customer's needs and behavior, which will result in the organisation identifying the appropriate time to launch their new service. Adopting a CRM approach also allows organisations to segment their customers, which allows them to have knowledge on which customers are more profitable (Mohammadhossein & Zakaria, 2012).
- Increases customer satisfaction – A CRM approach can help an organisation improve its customer satisfaction by analysing customer feedback. The analysed feedback can be used to generate reports which the organisation can use to develop a service that meets the customers' expectations (Taylor, 2014).
- Improves efficiency of call centres – Adopting a CRM approach allows for an organisation's workforce to know how to deal with the different customers. CRM allows the workers to quickly access information about the customer from any point within the organisation with ease (Mothermode, 2019).

2.2.3.2 Challenges of adopting a CRM approach

There are several reasons why adopting a CRM approach might not work out for an organisation. Below are some of the challenges an organisation might experience when adopting a CRM approach.

- Loss of human element – CRM allows for automation within an organisation which can lead to a loss of human element. The loss of human element removes the opportunity of the organisation to create excellent business relationships with its customers (Infini,

2019). Organisations that lose that human touch, might notice a reduction in revenue as clients are starting to drift away.

- Training – When a new CRM system has been implemented, an organisation needs to train its employees (Thomas, 2018). This means the organisation has to appoint an expert, which can be costly for the organisation. Not only does the organisation incur training costs, but they also lose valuable time, which could have been used to produce goods and services (Thomas, 2018).
- Security problems – Although CRM software is secure, data are stored in a central location (SoftDoit, 2019). This can be a problem for an organisation in the event of a power cut if there is no back up on the cloud, or an angry employee decides to enter data that is not correct as means of retaliating (Infini, 2019).
- Technical support – Organisations can either hire their own technical support specialists or outsource the work to someone else (Infini, 2019). Most organisations that offer assistance with CRM solutions charge exorbitant prices. Therefore, an organisation needs to take into account the issue of technical support when they follow a CRM approach (Infini, 2019).

From the above, the importance for organisations to factor in all possible benefits and challenges when deciding to follow a CRM approach is noted. The next section will discuss possible critical success factors of CRM that were identified from the literature.

2.3 CRITICAL SUCCESS FACTORS OF CRM

Critical success factors are defined as factors that enable a positive outcome for an organisation (Reh, 2019). These factors also have an impact on how successful an organisation meets its goals and objectives. CRM critical success factors consist of three major aspects: the people (human), processes, and technology (Alireza, 2015). An organisation needs to identify its critical success factors as this provides it with an understanding of which tasks are truly important (Rouse, 2014). In this study, several possible factors that affect CRM have been explored in the literature and will be discussed.

2.3.1 Customer loyalty

Customer loyalty is defined as the act of choosing an organisation's products and services over its competitors, even when the organisation is underperforming and not providing services of high quality (Chambers, 2018). Amir, Yourserf and Asma (2014) view customer loyalty as a bias to behavioural response over a long period that indicates that the customer prefers a particular brand over other brands. Body and Limenyen (2017) believe that loyalty is establishing a relationship with a customer, which leads to the customer repeatedly purchasing products and services over a long period. Customers show their loyalty to an organisation in several ways. They stay committed to the organisation or increase the number of products that they buy, or do both (Zhang, et al., 2011).

Customer loyalty is important for organisations as it has an influence on profitability, given that loyal customers tend to purchase more (Saleh & El Saheli, 2018). It is cheaper for an organisation to retain an existing customer than it is to attract and recruit a new customer (Peelen & Beltman, 2013). Therefore, the more effort that an organisation puts in retaining its existing customers, the higher the profits rise, and the organisation has a greater market share. An organisation could use retention programmes such as sending out email newsletters and personalised offers, feedback, and follow up and rewards for the best customers (Zakaria, et al., 2014). For a customer to be loyal, they must believe that the organisation has the best product options. Implementing CRM with loyalty programmes will not only improve retention rates but spending also, hence it is important for an organisation to have meaningful relationships (Peelen & Beltman, 2013).

In addition, organisations need to know which gender is more loyal, as this affects buying behaviours (Radojka & Fillpovic, 2017). There are fundamental differences between men and women. One of the most common stereotypes is that women are more loyal than men (Stan, 2015). This stereotype mirrors the perspective brought forward by Cross and Madson that states that women view themselves as more interdependent than men (Melnyk, Osselaer & Bijmolt, 2009). This means that they aspire to be connected with the society around them. In this, they focus on maintaining relationships with people they meet in their day-to-day lives. For example, a female would choose to support the business of an individual that she may have gone to school with rather than a stranger's business. Men, on the other hand, are said to be independent (Melnyk, Osselaer & Bijmolt, 2009).

This means that they are more individualistic in nature. Thus, factors like maintaining relationships with people around them come secondary to their personal individualistic needs (The Telegraph, 2010). For example, if a male is to find a better deal with an organisation he has known for just two weeks, he would take that opportunity rather than stay with an organisation he has known for years. The personal relationship built over the years is of little value.

Melnyk, Osselaer and Bijmolt (2009) hold the view that both men and women are equally dependent. However, the degree of this dependence differs between the two genders. Women are said to focus more on establishing a closer, more intimate relationship with specific individuals, and this is referred to as relational interdependence (Melnyk, Osselaer & Bijmolt, 2009). Men are said to focus on establishing abstract relationships with a larger group of people and this is known as collective interdependence (The Telegraph, 2010). This perspective agrees with the work of Gabriel and Gardner who state that when asked to describe an emotional experience, women are likely to describe a relational experience such as, I was disappointed by the rude service provided by X organisation despite the fact that I have been a loyal client for ten years. However, men will describe a collective experience (Melnyk, Osselaer & Bijmolt, 2009) such as the merger between Daimler and Chrysler, as some individuals were looking forward to the benefits of such a merger.

Neither theories engage directly with the concept of customer loyalty. However, they act as guidelines on how to approach the different genders. For example, with women being interdependent, they are inevitably more likely to be more loyal than men are in the sense that they are bound to create and maintain close relationships with service personnel or the organisation they interact with, as it is in their nature. Men, on the other hand, are individualistic and they tend to move on to the next organisation whenever it suits their personal need to ensure that they are gaining the maximum benefits. It does not matter how long one has been working with the organisation or if it has provided very good service. If they find something better, they move on, thus showing that loyalty is not in their nature.

From the previous discussion, it is noted that gender can play a role when segmenting a market that an organisation wants to render products or services to. Following a CRM approach can assist in identifying which gender will most likely be more profitable for the organisation. A CRM approach

can also be used to tailor messages to a particular gender that an organisation could be targeting. To conclude, organisations can use a CRM approach as a guide to identifying which customers are loyal, and a CRM approach can also be used to create strategies that will attract different customers.

2.3.2 Customer satisfaction

Customer satisfaction is defined as an evaluation of whether an organisation has met its customers' needs or expectations (Nyadzayo & Khajehzadeh, 2016). Customer satisfaction refers to the wishes and expectations of the customers being met over a long period of time (Khadka & Maharjan, 2017).

Customer satisfaction is one of the most crucial elements in a business management strategy. Organisations in this competitive world must understand their customers and ensure that their needs are satisfied (Ryding, 2010). Satisfied customers are less likely to buy from the competitors, as they are loyal (Agarwal, 2012), and are also less price sensitive. Usman and Rehman (2017) suggest that satisfied customers are willing to pay a premium for a product or a service. Customer satisfaction is believed to be one of the most important factors for an organisation to remain competitive and to ensure that organisational profits increase. Loyal satisfied customers are more likely to refer the organisation to other people, and relationships between the organisation and the customers are likely to be strengthened (Krystallis & Chryssocha, 2014). From the existing literature, it can be surmised that improved customer satisfaction can lead to an organisation's financial performance improving (Khedkar, 2015; Radda, et al., 2015; Long, et al., 2013).

Ata and Toker (2012) state that a CRM approach may have a positive impact on customer satisfaction by organisations customising offerings and managing customer relationships better. Mohamad (2014) holds the view that because of increased customer satisfaction, a CRM approach might have a positive effect on an organisation's performance. Ata and Toker (2012) affirm that an effective CRM approach does not only have a positive effect on customer satisfaction, but it also increases revenue and quality as well as decreasing labour costs.

2.3.3 Service standards

Service standards are the services that an organisation aims to achieve and maintain, measured against the organisation's key performance indicators and targets (Browning & Sparks, 2013).

Managers should be accustomed to an organisation's customer service standards as a framework for developing and maintaining an acceptable level of customer service (Morrison & Crane, 2007). Managers should regularly review the customer service standards that have been set and then determine where enhancements could be made (Noe, et al., 2017). Customer service standards and procedures should be applied to all areas that have customers (Schultz, et al., 2015). Team members who work within public contact areas, and where applicable, internal service delivery areas should implement strategies that demonstrate the organisation's customer service standards and organisational protocols (Noe, et al., 2017). Overall, team members must be involved in the setting of the standards to be applied in their particular work area, thus ensuring that they discern what the standards are and how to apply it (Stiehl, et al., 2018).

Customer service standards are established by organisations to provide measures and guidelines for employees when dealing with customers. To provide excellent customer service, there is a need to understand customer needs and experiences. Customers must be provided with multiple ways to share their feedback (Morrison & Crane, 2007). Some efficient ways of providing feedback are through telephone surveys or a feedback form sent via email (Schultz, et al., 2015). In addition to surveys, feedback can be provided by the organisation through a complaint system, which will better enable the organisation's customers to raise their issues (Sekaran & Bougie, 2016). Such feedback gives intelligence on the good, the bad, and the ugly experiences of interacting with customers. Reviewing and analysing customer feedback allows an organisation to identify any developing problems that are negatively affecting the quality of its customer service. Through this, information is gathered about what the organisation is doing well and which areas require improvement. Connecting customers to gather feedback also has an additional significant benefit - it makes them feel that the organisation values them and that it is willing to resolve their issues (Havlicek, Breckova & Zampeta, 2013). This improves CRM, which also positively affects RM, as a happy customer is more likely to pay for a good service. This can help to establish trust and

may even prevent customers from publicly sharing their concerns or negative comments on social media (Sekaran & Bougie, 2016).

2.3.4 Customer retention

According to Tauni, et al., (2014) customer retention is defined as a marketing goal that averts customers from going to the competitor. Nwanko and Ajemuningbohun (2013) hold the view that customer retention is a way for an organisation to maintain long-term relationships with its customers.

Magatef and Tomalieh (2011) refer to customer retention as a method that an organisation uses to keep its customers by providing an excellent customer experience. The success of most organisations is based on customer retention, especially in a competitive environment. Customer retention is crucial for organisations because the cost of acquiring a new customer is far more expensive than the cost of maintaining and retaining an existing customer (Kim, 2017). This is supported by Tauni, et al., (2014) in line with the view that it is more economical to maintain relationships with existing customers. Moreover, Sabbbeh (2018) states that retaining existing customers is at least 5 to 20 times more cost effective than acquiring new customers.

Retention is the process of creating long-term relationships with customers (Viriri & Phiri, 2017). It is therefore important for organisations to introduce retention programmes. Retention programmes allow organisations to collect data about their customers. This data can then be used to understand, communicate, segment and target customers better. Retention programmes turn an irregular customer into a regular customer, and he/she is more likely to recommend the organisation to his/her friends and family (Magatef & Tomalieh, 2015). This subsequently helps increase organisational revenue through more customers buying the services or products offered by the organisation (Chirima & Chapoto, 2016). A similar view is held by Buttle and Maklan (2014) who maintains that customer retention can increase an organisation's performance through profits generated from existing customers. However, organisational managers need to execute the appropriate retention strategies to compete in this competitive environment (Gronroos, 2010).

Following a CRM approach is crucial in the quest to develop long-term relationships with customers. Tauni, et al., (2014) hold the view that CRM has an impact on customer retention. Moreover, in their study, more than 68% of the customers were retained with the help of following a CRM approach. Merging CRM and customer retention helps an organisation create value by offering better service quality products and services to customers, as the organisation would have sound knowledge of who their customers are and what their needs are (Das, Mishra & Mohanty, 2018). This subsequently improves the organisation's relationships with customers as they are satisfied, which may lead to an increase in profits and a good brand image (Gronroos, 2010).

To conclude, this section discussed critical success factors of CRM that are important in improving its customer relationships. Reference was made to customer loyalty and the importance of an organisation to create opportunities that attract loyal customers. A CRM approach can help foster customer loyalty by identifying profitable customers, and providing them with services that are different to strengthen its relationships. Another factor discussed was customer satisfaction. Customer satisfaction is important for an organisation as it ensures that customers are satisfied with the service delivered to them. Customer satisfaction has an effect on CRM in the sense that a customer that is not satisfied will drift away from the organisation and move to a competitor, hence the importance of customers to be satisfied so those customer relationships are maintained. An effective CRM approach will lead to customer satisfaction and if the customer is satisfied it drives towards positive word of mouth and loyalty. This helps in leveraging the business as well as generating more revenues and profits. It is furthermore important for an organisation to be to retain its existing customers. A CRM approach can be used to improve customer retention and increase customer acquisition at a low cost, without jeopardizing existing customer relations.

The factors discussed above are important for this study as it illustrates how these factors can be used by organisations to improve their relationships with their customers. The discussion is pertinent to this study as it differentiates between factors that improve customer relationships in general and those that additionally exert a major influence on RM. These factors have been briefly discussed in Chapter One, Section 1.3, and will be discussed in more detail in the following

section to meet one of the research goals that identifies and describes relevant CRM factors that may possibly influence RM.

2.4 CRM FACTORS IDENTIFIED FROM THE LITERATURE THAT MAY POSSIBLY INFLUENCE RM

An examination of the relevant literature showed several factors that may possibly influence RM. Although other CRM factors may exist, prominent CRM factors that were identified from the literature and were considered appropriate for the context of this study are discussed in the following section. The CRM factors that were identified from the literature and briefly discussed in Chapter One, Section 1.3 are as follows: service quality, customer involvement, customer value, information technology, and management commitment. The factors were extracted from the “identifying, differentiating, interacting and customising model (IDIC model) (Meyliana & Eko, 2014); the CRM value chain model (Chetty & Thakur, 2019) citing Buttle, 2004); a conceptual framework on factors affecting CRM as developed by Hosseinipour and Bavarsad (2013); and a conceptual framework on the impact of CRM on customer satisfaction and customer loyalty by Long, et al., 2013.

2.4.1 Service quality

Service quality is the extent to which a service meets a customer’s needs and expectations (Shahin, 2016; Long, et al., 2013). Pakurar, et al., (2019) perceive service quality as how an organisation exceeds a customer’s expectations. Service quality is defined as the outcome of the comparison that customers make between their expectations and perceptions of a service delivered to them. (Gronroos, 2007). Customer expectations are the basis for assessing service quality because high quality is obtained when performance exceeds expectations and low quality is obtained when performance does not meet expectations (Zelege, 2016).

Service quality should be defined from the customer’s perspective rather than the organisation’s perspective (Parasuraman, Zeithaml & Barry, 1985). Service quality is a form of attitude-related satisfaction that results from the comparison between expectations and performance (Parasuraman,

Zeithaml & Barry, 1988). In a study by Zeithaml, Bitner and Gremler (2008) the authors state that customers judge quality based on different factors but do not discern service quality in a unidimensional way. Shurair and Pokharel (2019) citing Parasuraman, Zeithaml and Barry (1985) then identified five determinants of service quality, which are tangibility, reliability, responsiveness, assurance, and empathy.

The first determinant is tangibility, which involves physical facilities, equipment, personnel, and communication materials (Vikas & Hundal, 2019). Tangibility shows the customers what the service would look like through images, as the customer would use these images to evaluate the quality. Reliability is the second determinant and it refers to the organisation consistently delivering the service that they have promised (Shieh, Huang & Wu, 2019). The third determinant, responsiveness, involves the organisation aiding its customers and providing them prompt service (Long, et al., 2013). The fourth is assurance, which involves the organisation's employees inspiring trust and confidence in the organisation through their knowledge and courtesy (Shurair & Pokharel, 2019). Lastly, there is empathy, which is the ability of a person to experience another person's feelings as their own (Shieh, Huang & Wu, 2019). The five determinants of service quality are used to measure the gap between the customers' expectations and their perceptions of the service that has been delivered to them. The service quality determinants can also help an organisation understand areas that need improvements. Besides the determinants of service quality, a CRM approach can also have affect service quality.

Employees that have been trained to follow a CRM approach, carry out their duties of handling customer's demands and complaints effectively and efficiently, which leads to increased profits (Wali, Wright & Reynolds, 2015). Implementing a CRM approach may positively influence customers' relationships and loyalty, as service expectations are met. In other words, implementing CRM principles will allow an organisation to deliver service that will specifically meet the customer's expectations. Clewes (2003) suggests that meeting service quality expectations are key for an organisation, as it has a positive impact on customer satisfaction and relationships, which subsequently improves revenue. Danaher and Rust (2018) affirm that improving service quality can increase an organisation's revenue. This can be done by retaining a higher percentage of existing customers, attracting more customers through positive word of mouth, and by increasing

the usage rates of existing customers. In conclusion, it is therefore important that organisations ensure that they deliver good quality services to improve customer relationships which in turn also improves its RM.

2.4.2 Customer involvement

According to Zhang, Zhong and Makino (2015), customer involvement is the extent to which a customer is involved in service production. Anning-Dorson, et al., (2018) define customer involvement as the extent to which an organisation can engage customers in the value creation and delivery process.

An organisation needs to involve its customers in every possible way (Meyliana & Eko, 2017). This is because value is not created by the organisation, it is created by the customer, (Lusch & Nambisan, 2015). To be able to meet the customer's needs, information about their needs must be obtained from the customers themselves (Storey & Larbig, 2017). Customers know what the problem is, while the service provider has the solution; hence, the need to involve customers is important for an organisation. An organisation involving its customers is therefore considered an important factor that may have an impact on the organisations' success (Svendsen, et al., 2011). Customer involvement is not tailored to any specific industry. However, the nature and role of customer involvement may differ between a manufacturing and a service industry because they require different processes and skills due to the nature of the business (Konu & Komppula, 2014). For example, in the service industry, the main purpose of customer involvement is to deliver customised services to the customers, while in the manufacturing industry, the main purpose has to do with developing a new product.

Customer involvement is nearly inseparable from CRM (Chaudhuri, 2016). Customer involvement is key to the success of an organisation. Decisions made by organisations in terms of increasing sales, come from successfully involving the customers (Walter, 2003). This allows the organisation to earn the required revenue. Having a CRM strategy with several touchpoints helps an

organisation involve its customers by showing them the service that they offer (Cheng & Shiu, 2018).

Utilising CRM to involve customers allows for organisations to not only streamline their sales but also to automate the sales process (Zabriskie, 2018). The advent of the Internet has seen the rise of social media platforms, such as Facebook, Twitter, YouTube, and Instagram. Organisations should not under-estimate how powerful these platforms can be as some customers use these to vent their frustrations with a service or to compliment the service (Malthouse, et al., 2013).

An organisation aims to earn revenue by selling its services to its potential and existing customers. This is possible if the organisation knows the needs of its customers (Zabriskie, 2018). For any organisation, communication about its services with its customers is necessary; however, for the customers to purchase a service, they need to know how it will be beneficial to them. Customer involvement is about inspiring customers to interact with an organisation's services (Fertik, 2019). If an organisation is successful in making its customers desire to want to have its service, the organisations' brand will grow which leads to customer loyalty, and in turn, drive up RM. A study by Constellation Research (2020) suggests that there is a direct relationship between customer involvement and RM. The study suggests that an organisation that improves its involvement with its customers, can improve its RM from twenty two-percent (22%) up to thirty-eight percent (38%).

2.4.3 Customer value

Strydom, Petzer and De Meyer (2015) define customer value as the interaction between a product and a customer. This interaction involves comparing the products and services while looking at the situation at hand, as this varies between people (Nsairi, 2012). Adeniyi (2007) defines customer value as a customer's perceived preference for and evaluation of product attributes, attribute performances, and consequences arising from the use that facilitates and achieves the customer's goals and purpose. Customer value is also defined as a trade-off between the benefits and costs involved in an exchange (Keranen & Jalkala, 2014). This definition can be applied in a business-to-business context. The benefits mentioned in the definition by Keranen and Jalkala are many and

can be monetary, for example, increased profits and cost savings, or non-monetary, such as decreased risk, trust, and comfort. The above definition indicates that customer value is subjective and defining it can be difficult. Just like service quality, customer value should be defined by the customer and not the organisation (Khalifa, 2004).

Customer value can be looked at from a customer's or an organisation's perspective (Aslund & Backstrom, 2017), which contradicts what Khalifa, (2004) mentioned. When focusing on a customer's perspective, most authors concentrate on the perceived value (Aslund & Backstrom, 2017), while from an organisation's perspective, they focus on value creation (Gronroos & Gummerus, 2014). Aslund and Backstrom (2017) define value creation as value-in-exchange, meaning that value is set in the service or product that the customer receives.

Value creation refers to the innovation that increases the customer's valuation of the benefits of consumption (Priem, 2007). When the value has been created, a customer will be willing to pay more for something they perceive is better, and this increases an organisation's revenue collections, which leads to improved revenue management.

Customer value is considered an important factor for any organisation's success and competitive advantage. Adeniyi, (2007), as well as Strydom, Petzer and De Meyer, (2015) maintain that customer value is important for retaining existing customers and attracting new customers. Landroquez, Castro and Cepeda-Carrion (2013) affirm that customer value assists in establishing a competitive advantage for an organisation. To have the "competitive advantage", organisations need to understand what customer value is, particularly within their industry (Nsairi, 2012).

An organisation's success depends on the value it gives to its customers, and quality alone is not enough to ensure that the organisation will remain afloat. An organisation needs to create and deliver value that is greater than that of its competitors. This can be achieved by the organisation by interacting over time with its customers, as they continuously learn from and adapt to each other (Keranen & Jalkala, 2014).

Customer value affects CRM due to technologies that assist organisations in evaluating their customer's portfolios, which leads to improving customer relations outputs (Swinnen & Van Hoof, 2014). The use of data and technology allows organisations to use customer value to find important customers and segment them to know more about them while developing long-term relationships and co-creating value. According to Estrella-Ramon and Sanchez-Perez (2013), CRM is claimed to underpin theories on customer value. Organisational managers need to know that CRM is a wide concept, and organisations need to look out for opportunities to increase customer value while reducing costs, as these two factors can create a competitive advantage plus long-term profits.

Organisations that provide high customer value benefit from customers bringing in more revenues to the organisation (Alex, 2019). Customers become more valuable, suggesting that organisations can afford to spend more time to acquire new customers while retaining the existing ones. To allow for the establishment of relationships with long-term profitable customers, customer value should be linked to RM. Customer value is a key figure of CRM and it represents the long-term value of a customer for a company (Gupta, et al., 2006). Von Martens and Hilbert (2009) suggest that organisations that improve their customer value, leads to the shareholder value of an organisation to increase.

2.4.4 Information technology

According to Deb (2014), information technology is used to store, manipulate, dispute, or create information. Onn and Sorooshian (2013) define information technology as computer software and hardware solutions that assist in organisational operations and strategies.

Technology enables organisations to communicate with their employees in numerous ways. Internally, organisations can use traditional forms of communications such as meetings and memos (Tait & Roberts-Lombard, 2014). Organisations can also use social media technologies such as the organisation's Facebook and Twitter through the organisations Intranet to communicate with their employees (Kwayu & Abubakre, 2018). These technologies make it possible for organisations to have closed groups, which allow for a limited number of people within the

organisation to receive the information, instead of the general public. CRM technologies are also used to communicate with customers. This is done through a two-way communication flow (Tait & Roberts-Lombard, 2014). An organisation may communicate with its customers via either email, telephone, or SMS, based on the customers preferred means of communication. A CRM approach enables organisations to cater to each customers' specific individual needs; hence, an organisation can communicate with its customers with one of the three methods mentioned (Kwayu & Abubakre, 2018). The employees that communicate with the customers need to be trained in handling the complaints of and comments by customers (Schwab, 2017; Avgerou & Walsham, 2017).

The principal objective of any organisation or corporation is to obtain and retain customers (Stiehl, et al., 2018). CRM is an information technology-driven strategy, which organisations use to capture information about customers (Huang & Rust, 2017). This technology allows an organisation not only to stay up to date with its customers but also to capture additional information after a transaction (Tait & Roberts-Lombard, 2014). Technology is universal, from a basic user- friendly interface to complex back-end database and knowledge management systems (Chung & Lo, 2018). Substantial databases with customer information serve as the core of any CRM system. Data are gathered from multiple sources ranging from data entry to customer service personnel to online data collection forms available to the customer via web browser interfaces (Chung & Lo, 2018). Sales executives or customer service personnel can access this data via the Internet, an extranet relationship with a corporate partner, or an internal corporate Intranet. Given the rise of smartphones, many organisations offer CRM mobile applications to sales executives in the field (Bata, et al., 2018).

Information technology has become an indispensable element of an organisation's capability and a source of sustainable competitive advantage (Chung & Lo, 2018) while also progressively playing an important role in almost all aspects of an organisation's operations and corporate strategies (Schwab, 2017). To achieve this goal, organisations need the right combination of innovative information technology, effective business processes, and better data management. Investment in information technology will lead to improvements in both the profits and productivity of an organisation (Schwab, 2017; Avgerou & Walsham, 2017). Further investment

has a positive association with cost reductions and greater profit margins since there is effective and swift interaction with customers (Avgerou & Walsham, 2017). Additionally, venturing into information technology for the success of the business leads to expanding organisation activity areas by creating closer relationships with customers, distributors, and partners (Zaefarian, et al., 2017). CRM stems from customer data, which is facilitated by the usage of information technology (Bahrami, Ghorbani & Arabzad, 2012).

Information technology advancements have transformed the different fields of marketing and business environments (Erevelles, Fukawa & Swayne, 2016). An example of modern CRM software that is related to the real value of an electronic business is Electronic Customer Relationship Management (E-CRM) (Rostami et al., 2016). It helps organisations improve the effectiveness of their interaction with customers while at the same time making the interaction intimate through individualisation. It also allows call centers to contact their customers more frequently to offer new services and improves the relationship between the organisations and their customers (Zaefarian, et al., 2017). Customer analysis in analytical E-CRM includes two main procedures: pre-processing data and building customer profiles from this and other data (Chung & Lo, 2018).

The use of information technology can be an effective way for an organisation to improve its RM. Whether the organisation is integrating its processes or improving its supply chain management, adopting the technology that suits the needs of the organisation can improve RM for the organisation. CRM technology improves RM as the organisation can anticipate its clients' needs based on historic trends and increased sales through better client relationships.

2.4.5 Management commitment

Management commitment is viewed as the support given for CRM implementations through creating an environment that accepts CRM as part of the organisation's strategy (Hosseini-pour & Bavarsad, 2013). McGonagle, et al., (2016) define management commitment as the participation by top management to ensure quality, security, and safety within the organisation.

According to WeiBo, Kaur and Jun (2010) citing Meyer and Allen (1997) commitment has two different meanings. The first involves efforts to explain that the nature of commitment, which defines the relationship between an individual and an object, can vary. The second involves attempts to distinguish among the objects to which an individual becomes committed. Commitment consists of three main elements: affective, continuance, and normative (Michael, et al, 2005). Khan, et al., (2018) define affective commitment as an individual's emotional attachment to, identification with, and involvement in an object such as an organisation. Strong affective commitment means that an individual wants to stay in an organisation, and she or he accepts its goals and values. Continuance commitment refers to the consciousness of the costs related to leaving an organisation (Khan, et al., 2018). Continuance commitment can develop as a result of any event that increases the costs of leaving, provided the individual notices that these costs have been experienced (Caki, Asfuroglu & Erbas, 2015). Lastly, normative commitment is how many employees feel they should stay at an organisation. Employees feel that if they leave the organisation, the organisation will suffer in terms of brain drain (Tosun & Peters, 2018).

According to Tait and Roberts-Lombard (2014), commitment is defined as a belief in delivering promises made and ensuring that effort has been put to keep those promises in order to keep the relationship with the customers intact and make it stronger. Commitment implies that both parties will be loyal and reliable enough for the relationship to be successful. Therefore, it is important for an organisation and its customers to maintain their relationships by being committed and truthful to their word. It can be said that commitment is linked to trust (Roberts-Lombards & du Plessis, 2012). Tait and Roberts-Lombard (2014) define trust as the “expression of confidence between parties in the exchange that they will not be harmed or put at risk by either party’s actions”. For an organisation and its customers to build a fruitful relationship, commitment and trust are essential (Roberts-Lombards & du Plessis, 2012). When a customer can trust an organisation to deliver a service, a customer will be willing to pay for the services rendered to them to maintain good relationships. Essentially this will also boost the organisation’s revenue flow as it becomes positive (Roberts-Lombard, Mpinganjira & Svensson, 2017).

Many service organisations adopt a particular approach towards quality and management issues based on their standards and undertakings (Bazrkar, Mirzaei & Nasab, 2018). Undoubtedly, attention to service quality is a practical and essential factor in each organisation, which is highly dependent on the management model of organisation (Noe, et al., 2017). Managers who worry about service quality, show their commitment to the organisation, and work with employees in developing solutions and delivering services (Ross, 2017). This in turn increases employee commitment to the organisation. The employee is assured of being recognised when he or she is going the extra mile and ensuring service excellence beyond the scope of his or her work. Businesses in this situation gain a competitive edge (Zaefarian, et al., 2017).

According to Roberts-Lombard and du Plessis (2012), commitment is key to the success of any relationship. High commitment levels are linked with perceptions of future rewards, relationship identification, a desire not to have an alternative product or service, and with the individuals' assumed responsibilities (Keskes, 2014). Hence, commitment is key to following a CRM approach. A customer will be committed to an organisation if the organisation reciprocates the same commitment, which may lead to the maintenance of an organisation's revenue generation due to retaining its customers (Nyadzayo & Roberts-Lombard, 2010). Customers who are satisfied by an organisation's level of commitment may inform potential customers through word of mouth about the organisation's commitment, and this may lead to more revenue generation for an organisation, as customers start to buy its service (Khadka & Maharjan, 2010).

Lack of management commitment negatively affects a successful quality management system and may negatively influence an organisations' revenue (Zondo, 2018). A lack of management commitment from top management may affect the implementation of a CRM approach. Cultural change is required in an organisation for CRM implementation to happen (Caroline, Harriet & Anne, 2016; Tait & Roberts-Lombard, 2014). Everyone in the organisation should be committed to viewing their operations from the customer's perspective otherwise customer dissatisfaction will be experienced and a resultant loss in revenue (Colwell & Joshi, 2013). Management thus needs to be committed and needs to communicate with other top management officials in the organisation when implementing CRM, which will result in revenue generation. Management must also have

good communication, leadership skills and must also be committed to delivering the promises they have made to their customers (Tait & Roberts-Lombard, 2014).

The previous section discussed five CRM factors that may possibly influence RM namely service quality, customer involvement, customer value, information technology and management commitment. It is important for organisations as they have to ensure that their customers receive services that are of high quality. Service quality positively influences an organisations RM, as customers would not want to pay for a service that they were not satisfied with, hence the importance for an organisation to deliver services that meet their quality expectations. A discussion on customer involvement followed, and it was noted that if organisations do not involve their customers, the organisation will not know what their customers' needs are and this may affect RM negatively, due to unsatisfied customers and costs wasted on services that did not meet the customers' needs. It is also of importance for an organisation to ensure that its customers receive value for the services delivered to them. The use of information technology is important and the benefits that arose from using technology within its organisation positively affect RM. The discussion concluded with the importance of management commitment and the importance of an organisation to have all its colleagues committed to ensuring that all organisational goals are met.

This section was important for this study as it identified the CRM factors that may possibly influence RM, which was one of the objectives of this study. Water Board X can adopt these CRM factors and use them to try to improve not only its relationship with its customers but RM too.

The next section of the study will focus on RM.

2.5 REVENUE MANAGEMENT (RM)

RM refers to when an organisation offers different prices based on customer segmentation and product availability to increase profits (Riasi, Schwartz & Chen, 2019). Vives, Jacob and Payeras (2018) view RM as the use of pricing to increase organisational profits generated from sales. According to Bell (2012, p. 23), "revenue management is the art and science of enhancing an

organisation's revenues while selling the same quantity of product." The emphasis of RM is to increase revenue/units sold. The next section will discuss the origins of RM.

2.5.1 Origin of Revenue Management (RM)

RM also known as yield management arose from the American airline industry following its deregulation in 1978. Airline deregulation meant that airlines could develop their marketing and pricing strategies without approval from the Civil Aviation Board. This led to the birth of RM, which was developed to save the airline industry from a declining market demand and increased competition from low cost airlines. The focus of the American airline moved away from a regulated market environment, where the emphasis was on an attempt to maximise their revenues by trying to fill as many seats as possible on each flight through applying price discrimination techniques and anticipating customer demand (Cross, 2016).

RM has been adopted by several industries such as hospitality, car rental agencies, cruise lines, and passenger railroad organisations. All these have developed, or are developing, RM systems. Other industries that are trying to implement RM include golf courses, freight transportation, spa resorts, advertising, telecommunications, ticketing, and restaurants. In order to properly adopt RM, industries must meet the four criteria for the implementation of RM. These criteria are the ability to segment markets, relatively fixed capacity, perishable, inventory and possibility of forecasting demand (Stuart-Hill, 2014). These criteria allow for an organisation to profit from the application of RM principles and systems. Table: 2.1 summarises the criteria and provides some examples of industries that have applied these criteria.

Table: 2.1 Some industries that meet the criteria for application of RM

Revenue management	Airline industry	Hotels	Car rental	Golf
Market segmentation	Market is segmented between economy and business class using discount fare restrictions	Market is segmented between the types of rooms, for example single and double room	Market is segmented between the group cars. For, example group A cars are cheaper than group E cars	Market is segmented between members vs guests and senior vs adult
Unit of fixed capacity	Flight	Hotel	Car fleet	Golf course
Unit of perishable inventory	Departing seat	Room night	Car day	Tee time
Low marginal costs for incremental sales	Passenger meals and processing	Ordering processing and room cleaning	Ordering processing and car cleaning	Ordering processing
Bookings taken in advance	Yes	Yes	Yes	Yes
Demand forecasting cycles: Seasonal Day of week Time of day	Yes Yes Yes	Yes Yes Not usually	Yes Yes Sometimes	Yes Yes Yes

Source: Researcher's own compilation.

Table: 2.1 presented a summary of the application of RM. The first criterion in a RM programme are to identify the various segments of the market. Once an organisation has achieved this, it can charge different prices to different market segments. The goal of this strategy is for an organisation to expand its market while increasing potential revenue by charging higher prices to those markets that are not responsive to price changes. Once an organisation has segmented its market, other RM elements can be introduced. Organisations next use the demand forecast criteria. In most service industries, demand varies by season, day of the week, and time of the day. Organisations can use this to estimate future demand in each segment. The objective of RM is to allocate inventory among price market segments to maximise total revenue in the face of uncertain levels. The

perishable inventory criteria simply suggest that once the time when the inventory was supposed to be used has passed and the customer did not use it, the inventory now has no value.

In the next section RM will be contextualised and reference will be made to what RM is and the RM levers organisations should take note of when adopting RM.

2.5.2 Revenue Management (RM) in context

Cetin, Demirciftci and Bilgihan, (2016) in their study define RM as a strategy that has been developed by service organisations with perishable inventories to maximise their revenue. RM can also be defined as an organisation applying multiple strategies to predict customer behaviour through optimising product availability to improve bottom-line income (Mikesell & Lui, 2013). This same definition is supported by Jerath, Nesessine and Veeraraghavan, (2010), as they mention how RM is the ability to predict customer demands to improve profits. Liberman (2015) states that RM is the talent and science of forecasting real-time customer demand at the micro-market level and maximising the price and availability of products. As seen from the above definitions of RM there is no universal definition that all organisations could use, despite the common factors such as consumer behaviour and profit maximisation. For the purpose of this study, RM was defined as the organisation understanding its customer's needs to increase sales and maximise profits.

RM can be viewed in the context of traditional and innovative revenue models (Bonnemier, Burianek & Reichwald, 2010). Bonnemier, Burianek and Reichwald (2010) claim that organisations usually have a list with a range of diverse customers. The study further states that organisations, where applicable, should practice both traditional and innovative revenue models to maximise profits. Irene (2010) examines the effect on future pricing and revenue models. The author believes the insertion of customers and other stakeholders for value creation has a fundamental impact on pricing. Channing (2014) supports this claim by stating that pricing, bundling and revenue opportunities are closely related to the way services and goods are rendered.

They are five levers of RM that organisations should take note of. RM levers allow an organisation to use a wide range of options to increase its revenue (Ivanov & Zhechev, 2012). An organisation can use any of these levers but only one or two may increase revenue in a given situation (Rousse, Maguire & Harrison, 2010).

The first lever is to segment the market (Torc'h, 2015). When an organisation wants to practice RM, the first step is to divide its customers into different categories, such as demographic, geographic, behavioural, and psychographic (Ivanov & Zhechev, 2012). This would assist the organisation in developing different marketing strategies and different pricing policies. The goal of segmentation in RM is for an organisation to adopt a strategy and tailor it to its customers (Lynn, 2011). For example, in the hospitality industry, segmentation allows a hotel to target low-cost customers or high-cost customers, based on the customers that stay at the hotel. A hotel can also decide to offer services such as a spa if customers are willing to pay.

The second lever is the price policy (Ivanov & Zhechev, 2012). An organisation that wants to practice RM must have control of its pricing policy (Torc'h, 2015). When an organisation has identified a segment, it is important to set prices for that particular segment. Prices must vary between segments, as some customers are price sensitive (Ivanov & Zhechev, 2012). An example is seen in the airline industry where prices for the economy and business class are different based on certain segment groups.

The third lever of RM is forecasting the demand (Torc'h, 2015). This means that an organisation can predict its future sales on various elements based on the previous year's results (Kilimci, et al., 2019).

The fourth lever is that organisations must not keep a lot of stock on hand (Torc'h, 2015). By doing so, organisations can avoid making a loss (Hellreigel, et al., 2012). Managing stock is only possible thanks to forecasting demand.

The fifth and final lever when using RM is booking and anticipated sales (Ivanov & Zhechev, 2012). The goal is to respond to customers' demands in terms of availability of services and to

negotiate sometimes with customers for another option (Torc'h, 2015). For example in the hotel industry, a customer might want to book a room, but it is no longer available. The hotel manager will try reason with the customer by offering a more expensive or less expensive room.

In conclusion, concerning to this study, water boards must take into consideration the RM levers that apply to them. From the levers discussed above, water boards can apply three levers. They can control their price policy as they can control the price of the services delivered to their customers; forecasting the demand, as they can predict, for example, the volumes of cubic liters of water to deliver to the municipalities and anticipated sales.

The next section will discuss RM tools and its importance for this study, for service industries to identify pricing tools that would be most effective in increasing revenues at an organisation. These are tools that even water boards could implement to try to improve their RM.

2.6 REVENUE MANAGEMENT TOOLS

RM tools are pricing strategies that organisations can use to seize the market share or increase profits (Nair, 2019). There are two RM tools: pricing revenue management tools and non-pricing revenue management tools (Nair, 2019).

2.6.1 Pricing revenue management tools

Pricing revenue management is divided into price discrimination pricing and dynamic pricing (Nair, 2019). These tools depend on the customer's willingness to pay for a product or a service (Torc'h, 2015). Customers pay attention to prices and if prices are too low, customers will perceive the product or service as being of low quality. Moreover, if prices are too high, they might not buy the product or service, as they believe they are not receiving value for their money. An organisation needs to link pricing tools with customers' willingness to pay (Ivanov & Zhechev, 2012).

Price discrimination is important for RM. Price discrimination is charging different prices to different customers for the same product or services (Grundey & Griesiene, 2011). There are three types of price discrimination; the first one involves identifying what the customers are willing to pay for a service and selling the service at that price, while the second price discrimination involves offering special deals and prices to customers who meet certain conditions or who are seeking certain special qualities, while the last price discrimination involves offering special discounts to customers of certain groups, such as students or senior citizens (Chulkov & Nizovtsev, 2016). Another RM pricing tool is dynamic pricing. Dynamic pricing refers to charging different amounts to customers for the same product or service at different times (Baker, 2018).

2.6.2 Non-pricing revenue management tools and the revenue management system

Non-pricing tools are not linked to a customer's willingness to pay, but depend on how the organisation's staff manages its inventory (Ivanov, 2014).

The first non-pricing tool is channel management (Ivanov, 2014). This tool allows organisations to sell their products and services on the Internet (Cai, 2017). This tool is crucial, as the number of Internet users has increased over the years. Organisations that use the channel management tool, increase their revenues by choosing networks that are most used by their customers, as these assists organisations in better identifying their customers depending on their segment (Gadde, 2016).

Another non-pricing management tool is overbooking (Ivanov, 2014). This tool is used a lot in the airline, hotel, and railway industries (Torc'h, 2015). Organisations that allow customers to pre-book sometimes have problems with customers who do not show up (Dong & Ling, 2015). Some industries like the hospitality industry allow for hotels to overbook in the event that customers do not show up; hence, the hotel does not make a loss. However, it becomes awkward for the hotel when all customers show up since they have overbooked and some customers cannot be allocated a room (Dong & Ling (2015). Customers are then moved to another hotel by the hotel, which can be costly if the other hotel is more expensive. Nowadays new practices have emerged, where

penalties, such as taking 50% of the hotel fees from customers who do not show up after pre-booking (Dong & Ling, 2015).

To have efficient RM, organisations should not only focus on pricing and non-pricing tools. Organisations should also make use of RM systems (Ivanov & Zhechev, 2012). A RM system is a software solution, which allows an organisation to carry out important RM tasks efficiently and effectively (Revfine, 2019). RM systems can be computerised to capture data in order for the data to be managed and analysed easily. The most common form of data analysis is through Microsoft Excel or a RM global system (Aziz, Saleh & Rasmy, 2011). Excel is the cheapest solution, as it is easy for an organisation to set up and start running. However, it has limited actions, unlike the RM global system, which is more precise with data and gives managers more information and a strategy to use based on the data collected (Aziz, Saleh & Rasmy, 2011). However, this system is pricey, and implementation takes a long time, roughly six months or more.

The following section will discuss municipal revenue management. It will provide an understanding of how municipalities generate their revenue by collecting taxes and how they spend those taxes. This discussion is important, as it will help Water Board X to understand how they can plan their finances, with regards to collecting revenues from the municipalities it delivers services to. It can also help water boards know which pricing methods to apply to effectively maximise their RM.

2.7 MUNICIPAL REVENUE MANAGEMENT

Schreiner and Hassan (2011) maintain that municipalities secure their finances from a wide variety of sources such as self-financing programmes and government grants.

Municipalities generate most of their funds internally, suggesting that the majority of the municipal resources came from their own revenue sources such as taxes and service charges (Treasury Government, 2008). An imbalance between the available revenue sources and expenditure needs requires that municipalities' own sources of revenue should be supplemented by intergovernmental transfers (Siddle & Koelble, 2012).

Kadiu (2014) explains that local government fiscal revenues are composed of income generated from intergovernmental transfers and own revenue sources of collection. Municipalities in South Africa have two sources of self-financing, namely property tax and service charges (Kleynhans & Coetzee, 2019). Property tax is the tax that owners of building properties within the jurisdiction of a municipal pay based on the value of their properties (Manyaka, 2014). According to Mikesell and Lui, (2013), some governments have considered property tax as a feasible revenue source due to its reliability; hence, it is an important source of revenue for municipalities. For an owner to know the amount of tax they must pay, the property needs to be assessed and given a value by the South African Revenue Services (SARS). Property tax is usually levied on immovable real properties that are mostly found in urban and semi-urban areas (Manyaka, 2014). This is because urban and semi-urban municipalities have an advantage over rural municipalities. The disadvantage of properties in rural municipalities is that they are not taxed. However, it should be noted that there has been some effort to tax these properties, and this is illustrated by the promulgation of the Property Rates Act 6, of 2004 (Mikesell & Lui, 2013).

Property tax alone will not match the demand and supply of public services; hence, there is a need for a complementary source of revenue. Service charge is also another source of own revenue for municipalities in South Africa (Kihato & Bickford, 2014). Service charge is defined as the amount paid for the services received (Holt, 2015). An example of such charges is gathered as a result of services, including but not limited to sewage and waste removal, electricity, and water (Holt, 2015). However, these three are the major sources of service charge revenue within a municipality. According to Manyaka (2014, pp. 132) citing Fjeldstad and Heggstad (2012, p. 20) “the main economic rationale for service charges is not to produce revenue but to encourage the economic use of resources.” It is worth noting that this principle is crucial for ensuring that municipalities are directly accountable to local communities for the functions they perform and the services they provide. In addition, it entrenches local democracy as it provides the platform that empowers residents to participate in issues relating to the services they prefer and are willing to pay for, and thus ensures that municipalities remain responsive to the needs of their residents (Manyaka, 2014).

The next source of finance for municipalities is intergovernmental transfers. An intergovernmental transfer involves revenue being raised by the nation (Chauke & Sebola, 2016). The revenue is

raised by the three spheres of government (national, provincial, and local), and all municipalities are entitled to a fair share. Merkaj, et al., (2015) maintains that these intergovernmental transfers are given to municipalities in the form of conditional or unconditional grants. Usually, these grants have stringent conditions and receiving one may result in a municipality incurring expenditures that it may need to finance with local revenue. Municipalities are given these grants to provide basic services and to be able to perform the basic functions allocated to it (Oosthuizen & Thornhill, 2017).

Despite the fact that municipalities receive help from the national government through intergovernmental transfers (grants), some continue to face financial problems that result in service delivery breakdowns and mounting debts. This leads to some municipalities depending on the government for more grants to survive (Treasury Government, 2018; Kahn, Madue & Kalema, 2011). Manyaka (2014) states that although it is generally accepted that most municipalities are financially weak, it is worth noting that over-dependence on revenue that is raised nationally has a serious impact on the autonomy of municipalities. In 2019, municipalities owed Eskom and water boards a combined total of R23.5 billion (Ensor, 2019).

One of the challenges faced when it comes to revenue collection from municipalities in South Africa, especially the rural ones, is the fact that their customers do not have enough money to pay the required service fees due to the high levels of unemployment in South Africa (Manyaka, 2014). As a result, there is limited economic activity and in such instances, it is inevitable that there will be poor infrastructure and lack of sector diversity, which results in a poor revenue base (Manyaka, 2014).

Municipalities lacking the required skills such as adequate administrative structures, experienced employees, and excellent budget planning, are more likely to face challenges in revenue collection (Manyaka & Madzivhandila, 2013). Thus, internal shortcomings should be the first problem to be addressed so that they can improve their revenue collection.

To conclude, this section discussed revenue collection within municipalities, the two sources of revenue collection being self-financing and intergovernmental transfers. It also discussed the

challenges faced by municipalities when it comes to collecting revenue. This section provided an understanding of ways that municipalities could collect taxes from their communities and use those taxes to pay water boards. The purpose of this section was to identify the source of income for municipalities. Water boards generate their own income primarily by providing water services to municipalities and other water service institutions. Additional revenue is sourced through secondary activities, like acting as implementing agents for project developments on behalf of the Department of Home Affairs.

2.8 SUMMARY

This chapter has reviewed and discussed CRM. CRM was defined as a combination of strategies and processes that organisations use to manage and engage with customers, to improve customer service relationships, and increase their profitability. Organisations are encouraged to adopt a CRM approach in order to manage relationships with their customers more effectively. This is important as it allows organisations to have a better understanding and prediction of customer retention. Before organisations adopt a CRM approach, they must note the benefits and challenges associated with following a CRM approach. The CRM section of the chapter concluded with a discussion on the identified CRM factors (service quality, customer involvement, customer value, information technology, and management commitment) that may possibly influence RM as identified in the theoretical framework in Chapter One.

The chapter also referred to RM. RM was defined as the organisation understanding its customer's needs in order to increase sales and maximise profits. Municipal revenue was also discussed and it was indicated that revenue within the municipalities is self-financed and how most of the finance comes from either property tax or service charges. Municipalities may also receive grants if they have run out of funds. This section was important for this study as it identified where municipalities get their revenues from which they use to pay water boards for delivering services.

An understanding of possible integration between CRM and RM is required, which will be discussed in the next chapter.

CHAPTER THREE

POSSIBLE INTEGRATION BETWEEN CUSTOMER RELATIONSHIP MANAGEMENT (CRM) AND REVENUE MANAGEMENT (RM)

3.1 INTRODUCTION

In the previous chapter, an overview of CRM and RM was provided. Reference was made to the origin of CRM, which was contextualised for the study. A discussion was provided on the benefits and challenges of adopting a CRM approach. A discussion on the identified CRM factors (service quality, customer involvement, customer value, information technology, and management commitment) that may possibly influence RM was provided followed by a discussion on RM. Reference was made to the origin of RM, which was contextualised for the study. A discussion on the RM tools was provided. The chapter concluded with a discussion about municipal revenue as well as how municipalities receive and spend their finances.

This chapter commences with a discussion on the importance of integrating CRM and RM. The possible challenges that may arise if the two strategies are merged as found in the literature are discussed. The chapter concludes with reference to some service industries that have integrated CRM and RM.

3.2 IMPORTANCE OF INTEGRATING CRM AND RM

Vaeztehrani, Modarres and Aref, (2015) propose that CRM and RM should be complementary strategies. For the purpose of this study, CRM was defined as a combination of strategies and processes that organisations use to manage and engage with customers, to improve customer service relationships and increase an organisation's profitability while RM was defined as the organisation understanding its customer's needs to increase sales and maximise profits. CRM and RM are two business strategies that researchers have shown interest in (Simmons, 2015). It is important to integrate CRM and RM (Iyengar & Suri, 2012; Milla & Shoemaker, 2008), as the benefits that arise are long-term (Wang, 2012).

According to Alshourah (2019) integrating CRM with RM will not only improve an organisation's financial performance, but the organisation may also acquire new customers while retaining existing ones and as a result, gain a competitive advantage. From a service industry's perspective, integrating CRM and RM will reduce any managerial conflicts that may arise due to miscommunication amongst managers from different departments, resulting in mutual understanding (Vaeztehrani, Modarres & Aref, 2015).

Information technology plays a pivotal role in supporting CRM and RM strategies (Gupta, 2010). If an information technology system is run properly, it can help with real-time inventory control as well as the collecting and dissemination of customer data (Chung & Lo, 2018). For example, technology-enabled data mining tools can help an organisation obtain useful information from its database that it will use for understanding its customers. Guillet and Shi (2019) suggest that having information technology per se is not enough for the integration of CRM and RM to take place, and there should be fundamental infrastructure available for an integrated system.

3.3 POSSIBLE CHALLENGES OF INTEGRATING CRM AND RM

Evidence from research has shown that if RM practices such as pricing and inventory control are not performed properly, it can have negative effects on customer relationships in terms of customer loyalty, commitment, and trust (Guillet & Shi, 2019; Wang, 2012; Mathies & Gudergan, 2007). In the context of Water Board X inventory control strategies could include restricting water supply to organisations that have not paid for services delivered to them while pricing strategies could involve charging a price that is considered fair for the service delivered to the customer. Wang and Bowie (2010) emphasise that if an organisation focuses only on the financial benefits to be gained from adopting RM, it may negatively influence relationships with its customers. The authors maintain that adopting RM might ignore potential conflicts with long-term customers, as the organisation is focusing more on short-term revenue than long-term revenue that depends on building a long-term relationship with its customers, thus losing future customers (Wang & Bowie, 2010).

Hendler and Hendler (2004) draw attention to three conditions that need to be met in some service industries before considering integrating CRM and RM, namely supporting the organisational culture, having the right technology and human intelligence (the ability for humans to learn from experience, and to adapt to new situations or environments). Wang (2012) holds the view that conflicts arise if organisations do not integrate CRM and RM properly. Conflicts also arise if the managers in the organisation are not in agreement or aware of what is going on in the organisation, and it is therefore important that managers within the organisation communicate to show unity within the leadership team of an organisation.

3.4 INTEGRATION OF CRM AND RM IN SERVICE INDUSTRIES

Several authors have advised service industries on the importance of integrating CRM and RM to benefit long-term relationships with customers and revenues (Iyengar & Suri, 2012; Noone, Kimes & Renaghan, 2003; Wang, 2012b). Researchers have also suggested methods for such integration using strategies, such as price elasticity and rewards programmes (Noone et al., 2003; Vaeztehrani, Modarres & Aref, 2015; Guillet & Mohammed). A non-traditional RM strategy the service industries could adopt is discounting products.

The move to integrate CRM and RM has been adopted in the gaming industry (Guillet & Shi, 2019 citing Noone, Kimes & Renaghan, 2003). The gaming industry has launched a total rewards programme that tracks customers' involvement (Guillet & Mohammed, 2015 citing Hendler & Hendler, 2004). For the programme to be effective, the gaming industry has captured all necessary customer information that allows them to monitor how often their customers use their services. This information has allowed the industry to calculate the potential lifetime value of each customer. Customers are then segmented based on their involvement, and this allowed the gaming industry to treat each customer differently.

The airline industry has also explored the integration of CRM and RM (Noone, Kimes & Renaghan, 2003; Wang, 2012; Guillet & Shi, 2019). An example is of airlines linking individual customer preferences and specific price elasticity and using the information about customers who do not show up to predict the number of seats available on a flight. Airlines are providing

customers with price trend information and alerts (Richer, 2015). This allows customers to know the dates of when there will be discounted prices for airfares. Customers tend to take full advantage of this and the airline maximises revenue by having a fully booked plane.

Sarmaniotis, Assimakopoulos and Papaioannou (2013) point out that those organisations that apply CRM can increase their revenues by understanding each customer's individual needs. The authors emphasise that CRM is important for the hotel industry as the focus should be on customers' needs and preferences. Noone, Kimes and Renaghan (2003) maintain that RM alone is a short-term goal of maximising revenue and this might result in customers of high value switching to another competitor due to lack of room availability on peak days. Although CRM is being practised in some hotel industries, there have been some reports of the implementation failing (Debomy, 2013). Ahearne, et al., (2012) believe that distrust has been created towards the benefit of CRM as well as how it may add value to an organisation. Madhovi and Dhliwayo (2017) suggest that merging CRM and RM is a substandard mix that hoteliers are using. However, Noone, Kimes and Renaghan (2003) argue that CRM is used to rate customers according to the revenue that they bring in. Customers are then segmented and put in different groups based on whom the hotel thinks is the most valuable customer.

To conclude, there seems to be limited research on integrating RM and CRM. It is evident from the literature findings that research has mainly been on the hospitality industry and only slightly on the airlines and gaming industry.

3.5 SUMMARY

This chapter has discussed the importance of integrating CRM and RM. Merging the two strategies not only improves an organisation's financial performance, but the organisation may also acquire new customers while retaining existing customers and as a result, gain a competitive advantage. A discussion on the possible challenges of integrating CRM with RM followed. It is possible that if organisations focus more on RM, they might lose their long-term customers as it can be perceived that they are focusing more on short-term profits. Within the hospitality industry, managerial conflicts arise when the managers of different departments do not understand each other in terms

of CRM implementation. The chapter concluded with a discussion on the integration of CRM and RM in service industries. It was that little research has been done on the integration of CRM and RM within the service industry.

The following chapter will provide a discussion on the research methodology followed in the study.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

Chapter Three provided an overview of the possible integration between CRM and RM. The importance of integrating CRM and RM was discussed. Reference was also made to the possible conflicts/challenges of integrating CRM and RM. The chapter concluded by discussing industries that have already integrated CRM and RM.

This chapter commences with a discussion regarding the research design and the main research paradigms available in modern day research. A discussion about the population, sample size, and sample selection is followed by that of the data collection methods where reference is made to the primary research that was undertaken. The measuring instrument that was used to collect the data is subsequently discussed. A discussion on how the trustworthiness of the collected data was ensured and the chapter concludes with the discussion of the ethical considerations.

4.2 RESEARCH DESIGN AND METHODOLOGY

A research design is a plan to answer the research questions. According to Bryman and Bell (2014), a research design provides structures that can be used to gather and analyse data. There are several features that a researcher should examine when planning a research project, such as data collection, the data source, and the purpose of the study (Collis & Hussy, 2014). The purpose of a research design is to ensure that the evidence obtained enables the researcher to answer the research questions as unambiguously as possible (Creswell & Poth, 2018). The purpose of this research was to gauge the perceptions of Water Board X and the perceptions of Water Board X's customers on selected CRM factors that may possibly influence RM.

A research methodology is a systematic way of solving research problems. Scientifically, it is a way of studying how the research will be performed (Collis & Hussey, 2014). It outlines the steps and procedures that a researcher will follow in executing the research study.

A researcher needs to develop a methodology for the problem chosen (Rajasekar, Philominathan & Chinnathambi, 2016). A researcher should note that even if the methods considered in two problems are the same, the methodology might be different. It is important for the researcher to know not only the research methods that are key for the research but also the methodology. A research methodology is concerned with explaining the following (Rajasekar, Philominathan & Chinnathambi, 2016):

- Why was a particular research study undertaken?
- How did one formulate the research problem?
- What types of data were collected?
- What particular method was used?
- Why was a particular technique of analysis of data used?

The starting point in the research design process is to select a research paradigm (Collis & Hussey, 2014). The following section will discuss the available research paradigms.

4.2.1 Research paradigms and approaches

Collis and Hussey (2014) define a research paradigm as a philosophical framework that guides how scientific research should be conducted. The word philosophy means using reason and argument to seek knowledge, the truth, and the reality of general principles. For centuries, there was only one research paradigm, the positivism paradigm, which originated from the natural sciences (Collis & Hussey, 2014). People's perspectives and knowledge over time changed and it is important for new paradigms to emerge due to the inadequacies of earlier paradigms (Saunders, Lewis & Thornhill, 2008). The emergence of social sciences led to a second paradigm, the interpretivism paradigm, to being developed (Collis & Hussey, 2014).

Positivism arose in the natural sciences and it assumes that social reality is singular and objective, and it is not affected by the act of investigating it. It applies a deductive approach to the research

process (Collis & Hussey, 2014). Positivist research measures consumer conduct, thoughts, and attitudes (Cooper & Schindler, 2008) and it allows the researcher to assess factors and to show a relationship between them while using statistics such as correlation (Antwi & Hamza, 2015). Interpretivism originated in response to the criticism of positivism. It assumes that social reality is in our minds, is subjective and multiple, therefore, social reality is affected by the act of investigating it (Creswell, 1994). It applies an inductive approach to the research process (Collis & Hussey, 2014). Furthermore, positivism can be seen as applying a quantitative approach, whereas interpretivism is seen as applying a qualitative approach (Creswell, 2014). Table: 4.1 shows some of the more common terms used to describe the approaches within the two paradigms.

Table: 4.1 Approaches within the two main paradigms

<u>Positivism</u>	<u>Interpretivism</u>
Quantitative	Qualitative
Objective	Subjective
Scientific	Humanist
Traditionalist	Phenomenological

Source: Collis and Hussey (2014)

Table: 4.2 presents the assumptions that underpin the two paradigms. It is important for a researcher to consider the assumptions mentioned below before designing a study. By understanding the assumptions, the researcher will know what paradigm to use.

Table: 4.2 Assumptions underpinning positivism and interpretivism

<u>Philosophical assumption</u>	<u>Positivism</u>	<u>Interpretivism</u>
Ontological assumption (the nature of reality)	Reality is objective and singular, unrelated to the research.	Reality is subjective and multiple, as seen by participants.
Epistemological assumption (what constitutes valid knowledge)	Researcher is independent of that being researched.	Researcher interacts with what is being researched.
Axiological assumption (the role of values)	Research is value-free and unbiased.	Researcher acknowledges that research is value-laden and biases are present.
Rhetorical assumption (the language of research)	Researcher writes in a formal style and uses the passive voice, accepted quantitative words and set definitions.	Researcher writes in an informal style and uses the personal voice, accepted qualitative terms and limited definitions.
Methodological assumption (the process of research)	Process is deductive. Study of cause and effect with a static design (categories are isolated beforehand). Research is context free. Generalisations lead to prediction, explanation, and understanding. Findings are accurate and reliable through validity and reliability.	Process is inductive. Study of mutual simultaneous shaping of factors with an emerging design (categories are identified during the process). Research is context bound. Patterns and/or theories are developed for understanding. Findings are accurate and reliable through verification.

Source: Collis and Hussey (2009; 2014)

According to Saunders, Lewis and Thornhill (2008), choosing an appropriate research paradigm for each research process depends on the research questions the researcher seeks to answer. Choosing the correct paradigm would be a matter of knowing the main features of the two paradigms, which are described in Table: 4.3, and selecting the right paradigm that fulfils the purpose of this study.

Table: 4.3 Positivism and interpretivism features

Positivism	Interpretivism
Uses large samples	Uses small samples
Has an artificial location	Has a natural location
Is concerned with hypothesis testing	Is concerned with generating theories
Produces precise, objective, quantitative data	Produces rich, subjective, qualitative data
Produces findings with high reliability but low validity	Produces findings with low reliability but high validity
Allows findings to be generalised from the sample to the population	Allows findings to be generalised from one setting to another similar setting

Source: Collis and Hussey (2014)

In order to achieve the purpose of this study, interpretivism was deemed to be the more appropriate paradigm. The appropriateness of interpretivism for this study based on Table: 4.1, 4.2 and 4.3 is discussed in the next section.

4.2.2 Interpretivist research paradigm

The specific paradigm embraced in the research was determined by the research assumptions and the nature of the research problem to be investigated (Collis & Hussey, 2014). This study used an interpretivist paradigm due to its qualitative nature as the qualitative focused on transcribing transcripts from the interviews. The paradigm is important for this study as it considers the perceptions of the participants.

Interpretivists believe that the best way to proceed is by understanding a phenomenon in its context (Krauss, 2005). This paradigm aims to understand the world of human experience (Cohen & Manion, 1994). Interpretivism usually relies on the participant's view of the circumstances being researched (Creswell, 2013; Bryman & Bell, 2014), whereas in positivism, the information is gained from observation through numerical measures (Creswell, 2013).

According to Bryman and Bell (2014), interpretivism is strengthened by the fact that reality generated from social interaction is not objective and is, in fact, highly subjective because it is formed by views and opinions. It focuses on analysing the complexity of social occurrences to improve interpretive understanding. Collis and Hussey (2014) maintain that interpretive research is any type of research where the findings are not obtained from the statistical examination of quantitative data. Instead, the findings branch from qualitative methods of analysis, which are based on the interpretation of qualitative research data.

The following sections will discuss the research aim and objectives of the study.

4.3 RESEARCH AIM

The research aim of this study was to gauge the perceptions of the participants from Water Board X and the perceptions of Water Board X's customers on selected CRM factors that may possibly influence RM.

4.4 OBJECTIVES OF THE RESEARCH

Research objectives are developed in order to provide a solution to the research problem identified. These objectives are statements that are tested by the researcher (Farrugia, et al., 2010). In order to achieve the aforementioned research aim, the following research objectives were formulated:

- To identify and describe relevant CRM factors that may possibly influence RM;
- To analyse the perceptions of the participants from Water Board X and Water Board X's customers regarding the factors identified in the framework developed from the existing literature; and
- To recommend to Water Board X how CRM might possibly influence RM based on the framework developed from the existing literature.

The population, sample, sampling method, measuring instrument, data collection, and data analysis implemented in this study will be described in the sections to follow.

4.5 POPULATION AND SAMPLE

The following is a discussion of the sampling procedure followed in this study.

4.5.1 Population

According to Babbie (2012), a study's population is a group of people from which the researcher expects to draw a conclusion. Collis and Hussey (2014) refer to a population as a body of people or objects investigated for statistical purposes. The population of this study consisted of four municipalities and one water board. The population was as follows: Municipality A, Municipality B, Municipality C, Municipality D, and Water Board X. The four municipalities were chosen because they were customers of Water Board X as the researcher wanted to gauge the perceptions of Water Board X's customers regarding CRM factors that may possibly influence RM. The researcher also wanted to gauge the perceptions of participants from Water Board X to investigate if there was differences in perceptions between the customers (municipalities) and the deliverer of services (Water Board X).

4.5.2 Sample

It is not feasible to make a complete census of a population because of time and budget constraints; hence, a sample of the population is used to make inferences about the whole population. There are two sampling categories, namely probability and non-probability sampling (Cooper & Schindler, 2006). The two sampling techniques are elaborated on in the following sections.

4.5.2.1 Probability sampling techniques

Probability sampling refers to the sampling method where all the members of the population have an equal chance to be part of the sample. Probability sampling is based on the randomisation principle, and it helps reduce any possibilities of bias (Uprichard, 2013).

The following are techniques of probability sampling.

- Simple random sampling – This is the purest form of probability sampling. Each member of the population has an equal chance of being included in the sample and each sample of a particular size has the same probability of being chosen (Bryman & Bell, 2014; Cooper & Schindler, 2006).
- Systematic sampling – This is a type of sampling that starts with a random number and then selects every nth number thereafter from the sampling frame (Bryman & Bell, 2014).
- Stratified sampling – This involves a random sample chosen by selecting an appropriate proportion from each strata of the population (Collis & Hussey, 2014). Cooper and Schindler (2006) describe stratified sampling as segregating populations into several mutual subpopulations or strata.
- Cluster sampling – the population is divided into internal heterogeneous subgroups. Some are randomly selected for further study (Cooper & Schindler, 2006).

All the methods of probability sampling outlined above are important for valid statistical analysis as they help to avoid bias when sampling occurs.

4.5.2.2 Non-probability sampling techniques

In non-probability sampling, members of the population are not given an equal opportunity to become part of the sample. This technique of selection relies on the subjective judgement of the researcher; therefore, the conclusions drawn by the sampler cannot be inferred from the sample to the whole population (Uprichard, 2013).

The following are techniques of non-probability sampling:

- Convenience sampling – This is an unrestricted sample. It is the least reliable design but the cheapest and easiest to conduct (Cooper & Schindler, 2006). Researchers can choose whomever they find.
- Purposive sampling – This is also known as judgmental sampling. Non-probability sampling may occur when the researcher relies on the participant's experience, ingenuity, and/or previous research findings (Bryman & Bell, 2014).
- Snowball sampling – an initial contact is made by the researcher with a small group of people deemed to be relevant to the research topic. These people are used to establish contacts with others (Bryman & Bell, 2014).
- Quota sampling – this sampling technique is used in commercial research, such as market and political polling. The purpose of this sampling technique is to produce a sample that reflects a population in terms of the relative proportions of people in different categories, such as gender, age groups, and ethnicity (Cooper & Schindler, 2006).

The non-probability sampling methods mentioned above are applied when a researcher is unconcerned about selecting a sample representative of the population, ultimately not making inferences or generalisations about the population.

4.5.2.3 Sample size

In qualitative, a sample size should be large enough to sufficiently describe the phenomenon of interest, and address the objectives. However, a large sample size risks having repetitive, data and the goal of the research is thus to attain data saturation. Data saturation refers to the point in the research process when no new information is discovered in data analysis, and this redundancy signals to researchers that data collection may cease (Collis & Hussey, 2014). Saturation means that a researcher can be reasonably assured that further data collection would yield similar findings and serve to confirm emerging themes and conclusions (Guttermann, 2015).

Malterud, Siersma and Guassora (2015) propose the concept of information power to guide adequate sample sizes for qualitative studies. Information power stipulates that the more information the sample holds that is relevant for the actual study, the lower the number of participants is needed. The authors suggest that the size of a sample with enough information power depends on the aim of the study, sample specificity, use of established theory, quality of dialogue, and analysis strategy (Malterud, Siersma & Guassora, 2015).

4.5.2.4 Sampling size and sampling method employed in this study

The sampling method for this study was judgmental (purposive) sampling, and thus non-probability sampling. Judgmental sampling means that research participants are selected because they meet certain criteria required by the researcher (Cooper & Schindler, 2006). The research participants were selected using judgmental sampling based on their knowledge of water-related services and the positions held at their respective municipalities and at Water Board X. For the purpose of this study, due to data saturation being reached, thirteen participants were selected. The sample selected from the municipalities consisted of three chief financial officers (CFOs) from the finance departments, a director, and a general manager in the water sanitation department. In addition, the sample comprised two directors in the engineering departments, two managers in the water services departments, and a deputy director of infrastructure in the infrastructure and development department. The sample selected from Water Board X consisted of a management accountant in the finance department, an operations manager in the operations and maintenance department, and the manager in the office of the chief financial officer.

4.6 DATA COLLECTION PROCESS

To address the objectives of this study, both primary and secondary research was undertaken which is discussed next.

4.6.1 Secondary data

Secondary data involves the researcher gathering existing relevant and up-to-date data that has been collected by another researcher (Bryman & Bell, 2014). This method can be used either in a qualitative or quantitative study. Secondary data is appropriate especially when data cannot be obtained using primary data collection (Collis & Hussey, 2014).

Table: 4.4 Advantages and disadvantages of secondary data

<u>Advantages</u>	<u>Disadvantages</u>
Cost and time savings	Data can be complex
Opportunity for cross cultural analysis	Data is collected by others
More time for data analysis	Inappropriateness of the data
High quality data	Cannot control data quality

Source: Clow and James (2014); Hair, et al., (2017)

Table: 4.4 summaries the advantages and disadvantages of secondary data. The advantages of secondary data as presented in Table: 4.4 include cost and time savings, since the researcher does not have to physically collect data, as the data is readily available. Another advantage presented is that there is more time to analyse data. This is possible because the researcher is spending less time traveling, conducting interviews, or observing the participants. The disadvantages of secondary data as presented in Table: 4.4 are that data can be complex, it is collected by other people, and that data might not properly solve the whole problem as it is not a hundred percent tailored for that specific study.

4.6.2 Primary research

According to Collis and Hussey (2014), primary research is the gathering of original data by the researcher, using his/her own experience, interviews, surveys, or focus groups. It usually costs more and often takes longer to conduct than secondary research; however, it produces conclusive findings.

4.6.2.1 Primary data collection methods

There are various ways of collecting primary data, namely focus groups, surveys, observations, case studies, action research, and interviews.

Focus Groups

This is a qualitative method that focuses on how participants express their views and perceptions of a matter as a group of people (Bryman & Bell, 2014). Focus groups use a combination of interviews and observations but allow for data collection through group interactions (Collis & Hussey, 2014). As the group typically sits in a circular format, the focus group setting aims to secure equal involvement from all participants. A group discussion yields rich data and insights that may not be made available without the collaboration of a group setting. According to Bryman and Bell (2014), focus groups can cause uneasiness especially when private lives are the subject of the interview.

Surveys

Collis and Hussey (2014) define a survey as a methodology that is used to collect either primary or secondary data. Surveys are suitable if the study is quantitative in nature and a large sample population is required. Survey data is often collected through questionnaires that are organised to provide numerical data that can be examined statistically, and the findings must be relevant to a larger population (Collis & Hussey, 2014). Survey questionnaires are used to obtain the following information, namely biographical particulars, typical behaviour, opinions, beliefs and convictions, and attitudes (Welman & Kruger, 2001). The structured questions in a survey reduce the variances in answers provided (Bryman & Bell, 2014). A researcher can also conduct an online survey, where the use of the Internet is needed and questionnaires are sent via emails or web surveys (Bryman & Bell, 2014).

Observations

Bryman and Bell (2014) refer to structured observation as a means of noting the behaviour of individuals according to their schedule of categories. Collis and Hussey (2014) describe

observation as a method of collecting data that is used in laboratories or natural settings to record people's actions and behaviour. Cooper and Schindler (2006) divided observation into two categories, namely behavioural and non-behavioural. Observation is qualitative in nature and makes use of a semi-structured or unstructured observation, and it takes place in a real-life setting. Trustworthiness is an issue, as there is no one to verify the perception of what transpired, which can lead to bias.

Case study

Merriam (2009) described case study research by its characteristics: particularistic, descriptive, and heuristic, highlighting the purpose and qualitative nature of case study research, the focus on a specific entity and, the motivation to understand and describe the findings. Astalin (2013) defines a case study as “analyses of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studied historically by one or more methods.” Case studies can be descriptive or exploratory and can be treated as a qualitative or quantitative study.

Yin (2009) states that case studies are useful in explaining links between factors for survey design. The author goes on to mention that theoretical ideas are important in a case study design and are usually developed just before data collection. These can be stories that relate to events or distinguish quality within the structural framework.

Action research

Collis and Hussey (2014) define action research as a methodology that is used to find an effective way of bringing about a change in a partly controlled environment. Action research is designed to address complex problems about which little is known (Cooper & Schindler, 2006). Action research can be used by managers to understand a situation before making a decision. This data collection method can be adopted by both quantitative and qualitative studies (Collis & Hussey, 2014).

Interviews

According to Babbie and Mouton (2006), interviews can be used as a form of primary data collection method for a qualitative study and are used in this study. Remenyi (2013) describes

interviews as a formal data collection that involves one on one interaction between two people, usually the interviewer/researcher and a participant. Interviews are divided into three categories, namely, structured, semi-structured, and unstructured interviews (Dejonckheere & Vaughn, 2018). Structured interviews have a set of standard questions about particular topics, and the participant selects the options available. Semi-structured interviews use a set of predetermined questions. Topic guides can be used for semi-structured interviews (Dejonckheere & Vaughn, 2018). Unstructured interviews have no guidelines, predetermined questions, or any options from which to choose. The interviewers/researchers ask the participants broad questions to try to engage with them informally, and they also probe with further questions (Dejonckheere & Vaughn, 2018).

Interviews can be done telephonically, or face-to-face. Face-to-face interviews can be conducted with the participants on the street, at the workplace, in their homes, or in any place that is convenient (Collis & Hussey, 2014). This method is very time consuming and expensive; however, it allows researchers to get clarity about what they do not understand by asking many questions. Telephonic interviews are cheaper as traveling costs are reduced. This method does not allow interviews to be as long as the face-to-face interviews. In addition, researchers need to be mindful of time zones if they are conducting interviews with people living in countries with different time zones.

4.6.3 Data collection instruments

According to Dawson (2009) the following are considered as data collection instruments: questionnaires, interviews, and observations. However, for the purpose of this study, interview schedules will be discussed as it is the chosen method of data collection.

4.6.3.1 Interview schedule

An interview schedule is a set of questions that are either structured or semi-structured. These questions aim to guide the researchers when conducting their interviews (Farooq, 2013). The questions asked are prepared beforehand. The schedule will be used by the researcher, who will

write down the answers or record the interview (Martin, 2016). The following are advantages of an interview schedule:

- It increases the likelihood of collecting accurate information;
- The response rate is higher;
- It facilitates the conducting of an interview; and
- It offers flexibility and high customisation.

The following are disadvantages of an interview schedule

- It is time consuming; and
- Interview findings may be biased.

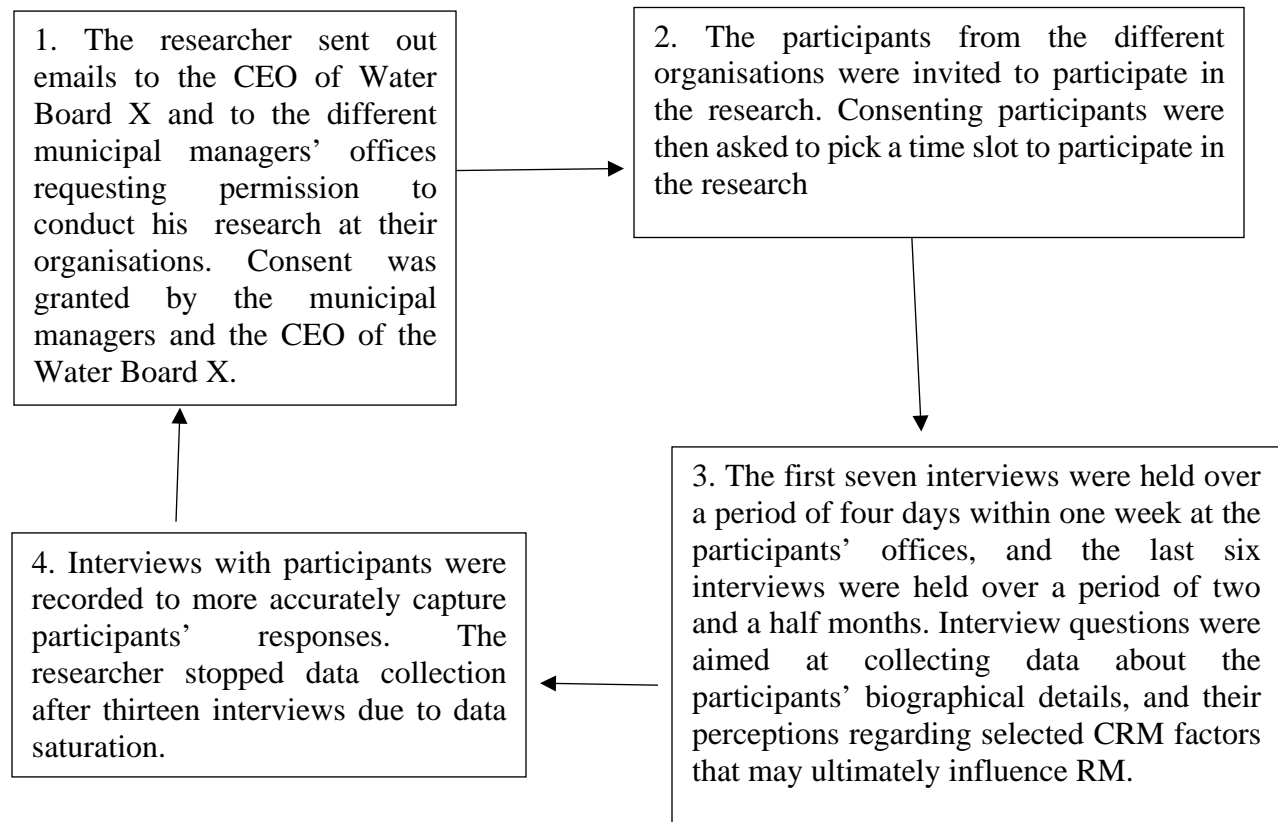
4.6.4 Data collection methods and measuring instruments chosen for this study

For the purpose of this study, both face-to-face and telephonic semi-structured interviews were used to collect data on the perceptions of the participants. Out of the thirteen interviews, twelve were face-to-face and one was telephonic. The telephonic interview took place because it was going to be expensive for the researcher to travel back to the location where he interviewed the other participants, just to interview one more participant. The researcher chose to use interviews to gain an in-depth understanding of the participants' perceptions of selected CRM factors that may possibly influence RM.

The researcher used an interview schedule (see Appendix A and B for a copy of the schedule) which was divided into two sections. Section "A" contained questions that involved biographical information and it included the following: name of organisation; position held within the organisation; and the number of years' service within the organisation and the level of education. The researcher was of the opinion that the name of organisation would assist in identifying the organisations during the analysis, with regards to knowing who said what; position held and the number of years within the organisation would allow the researcher to know how long the participant has been at the organisation to determine how much knowledge they have; and level of education may influence the way an individual perceives something. Section "B" contained

themed questions based on the CRM factors identified in Chapter One for the consideration of the development of the theoretical framework. The factors were service quality, customer involvement, customer value, information technology, and management commitment. Each set of themed questions began by asking the participants about their general understanding of the factor to identify if they will be able to answer the follow up questions. These follow up questions involved asking about their levels of satisfaction with regard to each factor, the challenges they encountered, and any recommendations. The last question asked whether the participant was of the opinion that that specific factor might influence on sales and surplus of Water Board X.

Figure: 4.1 Summary of the data collection process



Source: Researcher's own compilation.

Figure: 4.1 showed a summary of the data collection process. The researcher sent out emails to the participants requesting permission to conduct research at their organisations. Consent was granted

and the researcher interviewed thirteen participants in total and stopped when the researcher noticed that the responses were now repetitive (data saturation).

The following section reviews approaches to data analysis for qualitative and quantitative research.

4.7 DATA ANALYSIS

It is important to note that data analysis and data interpretation for quantitative and qualitative research methods differ. In qualitative research, data analysis is the process of systematically searching and arranging the interview transcripts, observation notes, or other non-textual materials that the researcher would have gathered to increase the understanding of the phenomenon (Wong, 2008). This study used qualitative data analysis, which will be discussed next.

4.7.1 Qualitative data analysis

The study adopted a qualitative research design. Qualitative research is empirical research where data is not in the form of numbers (Marshall & Rossman, 2015). It involves an interpretive, naturalistic approach to its subject matter (Maxwell, 2008). The purpose of qualitative data is to understand the social reality of individuals or groups, as they are studied in their natural settings. Qualitative research seeks to understand “how” and “why” a particular phenomenon behaves in that particular way.

Thematic analysis

Thematic analysis is a method for identifying, analyzing, and reporting themes within qualitative data. Rich data that has been collected can be organised and described with thematic analysis (Maguire & Delahunt, 2017). Thematic analysis can produce trustworthy findings (Braun & Clarke, 2006). Guides on conducting thematic analysis have focused on more inductive versus deductive coding compared to research within an applied focus (Nowell, Norris & White, 2017). Thematic analysis provides a flexible approach that can be tailored for any study, providing rich and detailed, yet complex data. It is easy to grasp for anyone that is not familiar with it. However,

while thematic analysis is flexible, the flexibility can lead to inconsistency and a lack of coherence when developing themes (Nowell, Norris & White, 2017).

Once a researcher has decided to use thematic analysis, there are different approaches to consider. One can choose between an inductive and a deductive approach (Caulfield, 2019). An inductive approach allows the data to determine the themes while a deductive approach involves coming to the data with preconceived themes that the researcher would expect to find, based on theory or existing knowledge (Caulfield, 2019). The question the researcher must ask himself or herself while using this type of approach is as follows: “Does my theoretical framework give me a strong idea of what kind of themes I expect to find in the data (deductive), or am I planning to develop my own framework based on what I find (inductive)?” (Caulfield, 2019).

Researchers should also consider if they are using a semantic or a latent approach. A semantic approach allows the researcher to analyse the explicit content of the data while a latent approach allows the researcher to read in the subtext and assume the underlying data (Caulfield, 2019). The question the researcher must ask himself or herself while using this type of approach is as follows: “Am I interested in people’s stated opinions (semantic) or in what their statements reveal about their assumptions and social context (latent)?” (Caulfield, 2019).

Thematic analysis has six phases that are used when conducting any kind of analysis (Braun & Clarke, 2006). The phases are:

- Become familiar with the data - the researcher needs to be engaged in the data by transcribing the interactions and noting everything down. It is very important that the researcher has familiarised him/herself with the data and has an understanding of the content.
- Generating initial codes - once the researcher is familiar with the data, he/she must identify codes, which are the features of the data that appear interesting and meaningful.
- Searching for themes - data is sorted according to overarching themes.
- Reviewing themes - the researcher needs to decide if they will combine, refine, separate or discard the initial themes. Data within themes should cohere together meaningfully, while there should be clear and identifiable distinctions between themes.

- Defining and naming themes - the researcher needs to define potential themes and subthemes within the data. Moreover, the researcher needs to provide theme names that will capture the essence of each theme. From this point, a story from the data can emerge from these themes.
- Producing the report - the researcher will need to transform the analysis into an interpretable piece of writing that relates to the themes (Caulfield, 2019).

Grounded theory

According to Collis and Hussey (2014), grounded theory is a joint collection, coding, and analysis of data using a systematic set of procedures to develop a theory. It is normally used in conjunction with interviews, but can also be used when data is collected from observations. Grounded theory is also defined as a theory that stems from data that has been gathered and analysed (Cooper & Schindler, 2006). The analysis of findings takes place simultaneously with the research gathering process (Henning, Van Rensburg & Smit, 2004). Grounded theory has widely been used when analysing qualitative data since it was discovered by Glaser and Strauss in 1967 (Bryman & Bell, 2014; Collis & Hussey, 2014).

Hutchinson, Johnston and Breckon (2010) formulated the following as characteristics of grounded theory:

- Iteration – grounded theory is an iterative process where data analysis begins as soon as the first bits of data have been collected, while a further collection of data builds on the first analysis.
- Coding – analysis is obtained by coding and classifying the codes relating to concepts and their attributes identified from observations.
- Theorising – “the choice of technique for advancing theory development throughout the process depends on the epistemological and theoretical stance of the researcher.”

Content analysis

Collis and Hussey (2014) explain that content analysis is a method used in qualitative research. Content analysis is centred on content, underlying themes, and the meaning of a text (Bryman &

Bell, 2014). Collis and Hussey (2014) maintain that content analysis is converted into numerical data for analysis. Content analysis follows a semantic process for coding and drawing conclusion from the texts (Cooper & Schindler, 2006). Two models have been widely used for content analysis, namely Creswell's 2014 model and Tesch's 1992 model.

Creswell's (2014) model consists of interrelated six steps that do not necessarily follow in the order they are given, namely

- Organise and prepare the data for analysis by transcribing interviews and sorting and arranging data if there are multiple sources of information used.
- Read all the data to have an overview of the information and possibly its overall meaning. The researcher must write down general ideas about the data.
- Code the data by organising it into themes of information and writing a word that represents a theme in the margin.
- Describe the setting, people, categories, or themes for analysis.
- Present the findings of the analysis in a narrative passage to deliver the findings of the analysis. This may include a chronology of events, a detailed discussion of several themes, or a discussion of interconnecting themes.
- Interpret the findings of the analysis.

Tesch (1992) provides detailed guidelines to develop an organising system for unstructured qualitative data:

- Read attentively through all the data to gain the necessary background information required. If something comes to mind about the data, write the idea down.
- Select one interview schedule, read it, and familiarise yourself with what this is about.
- Repeat the procedure for several interview schedules, and after completing that, make a list of all the themes, one column per interview schedule, placing all the columns on the same sheet. Compare all the themes and group similar themes together. Write these groups in columns, perhaps with headings that represent the major themes and the unique themes.

- Abbreviate these themes as codes. With this list of codes, go back to the data and write the codes next to the appropriate segments of the text. Check data for new, developing themes or codes.
- Identify the most descriptive words for the themes, which have begun to turn into categories. Try to reduce the themes by grouping together those that relate to each other. Try to look for subthemes.
- Finalise the abbreviation of each theme and alphabetise the codes to ensure that no duplication occurs.
- Put the data belonging to each theme together and perform a preliminary analysis, looking at all the material in one theme at a time. The focus is now on the content of each theme. During this process, keep the research question in mind in order to discard irrelevant data.
- If necessary, recode the existing data and refine the structure of the examined data.

Case study

A case study acts both as data analysis and a data collection method. It is used in business research when qualitative research is being undertaken. Case studies can add depth to an analysis (Cooper & Schindler, 2006). Case studies also focus on one occurrence to provide an account of the experiences, events, or processes taking place in that instance. Case studies are valuable to use when there is little information about a topic (Crotty, 1998).

4.7.2 Transcription

Before qualitative data is analysed, the first step, which is arguably the most crucial one, is that of audio data from the recordings being converted into written text, and this is known as transcribing (Bailey, 2008). Transcription is the activity of providing a written account of spoken words (Regmi, Naidoo & Pilkington, 2010). In qualitative research, either individual or group interviews are transcribed exactly word for word.

After completion of the interviews, the researcher listened to the recorded audios on the voice recorder and the Otter.ai software application and then began transcribing in Microsoft Word. Numbers were allocated to the participants' for identification. To add on to the numbers, either the letter "W" or "M" was used to distinguish between participants from Water Board X ("W") and participants from the municipalities ("M"). The participants were also allocated with another letter, either "F" or "W" to their number and the first letter, for example (12 M-F). The second letter was used to distinguish between the participants from the finance departments (F) and water departments (W).

4.7.3 Data analysis chosen for this study

For the purpose of this study, thematic analysis was chosen for data analysis. Thematic analysis analyses qualitative data in the form of texts from interview scripts. Thematic analysis allows the researcher to identify common themes, ideas, or patterns of meaning that came up repeatedly (Caulfield, 2019). Deductive analysis was considered appropriate for this study as the themes used by the researcher were generated from the existing literature (Caulfield, 2019).

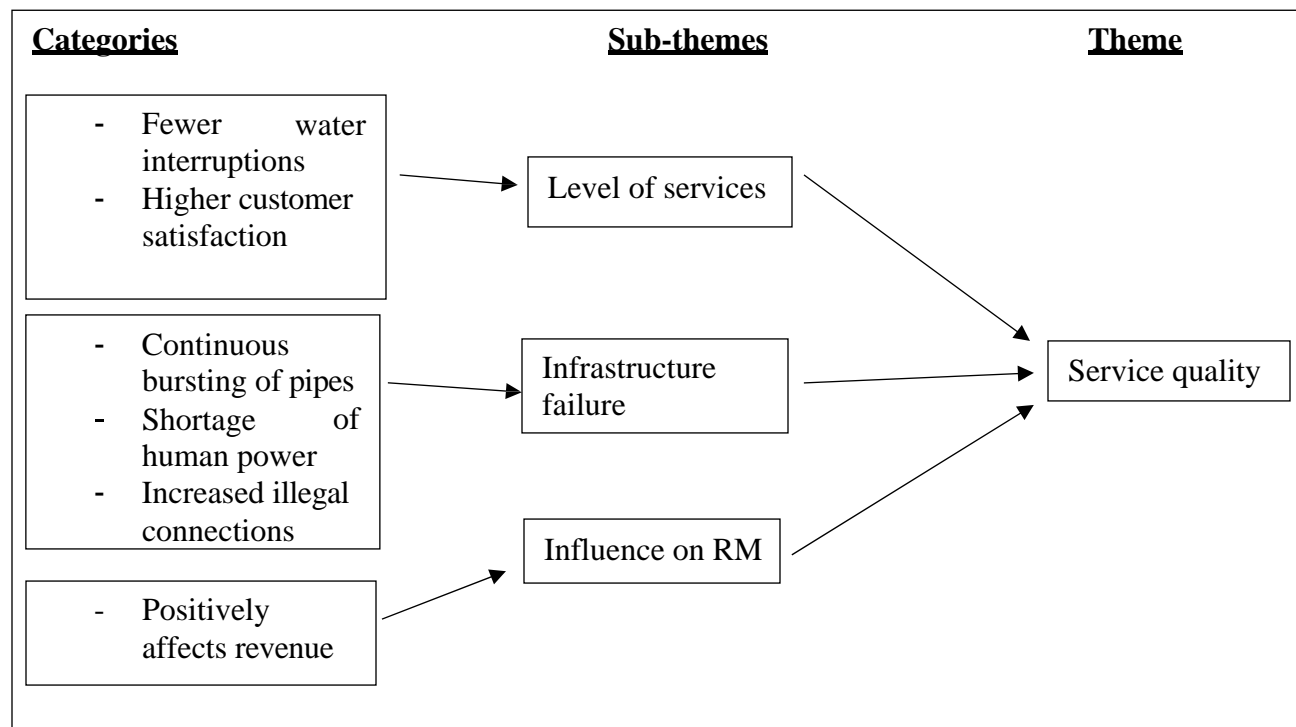
The researcher used the six phases of thematic analysis to conduct data analysis which is as follows:

- The first phase, which is familiarisation was for the researcher to know their data. This involved the researcher transcribing the audios from the voice recorder and the Otter.ai software application, and reading through the text while taking initial notes. This allowed the researcher to be familiar with the data.
- Coding – The second phase was to code the data. Coding means highlighting sections of the text, usually phrases to come up with shorthand labels or codes to describe the content. The researcher went through all the thirteen transcripts and highlighted everything that jumped out as relevant. The researcher also highlighted all the phrases and sentences that matched the codes identified. After thoroughly going through the transcripts, the researcher combined all the data into groups identified by the categories.

The categories were based on the common meanings that kept on recurring throughout the data.

- Generating themes – The third phase was for the researcher to look at the categories created. The researcher started to identify patterns among them, and combined the categories into sub-themes, and lastly combined the sub-themes to come up with themes.
- Reviewing themes – To make sure that the themes were useful and accurately represented the data, the researcher returned to the data set and compared the themes against it. This allowed the researcher to notice anything was missing or if the themes need to be changed to truly represent the data.
- Defining and naming themes – The fifth phase was for the researcher to name and define each theme, as a final list of themes had been obtained. The researcher came up with the names of themes that are easy to read and understand how they are related to the data.
- Writing up – The sixth and final phase involved the researcher writing up their analysis of the data. To establish the aims of the study, in the write-up, the researcher included a methodology section, describing how data was collected and explaining how thematic analysis was conducted. The findings chapter addressed each category, sub-theme, and theme in the term. The write up concluded with a conclusion explaining the main takeaways and how the analysis answered the research question.

Figure: 4.2 Illustration of data analysis, categories, sub-themes, and theme.



Source: Researcher's own construction.

The thematic analysis process depicted in Figure: 4.2 shows that the service quality theme was analysed according to the three sub-themes considered to be characteristics of service quality – level of services, infrastructure failure, and influence on RM. From the coding process, the related text that was highlighted during the analysis was grouped to represent distinct categories. In Figure: 4.2 the categories “fewer water interruption” and “higher customer satisfaction” were considered by the researcher to be related and were grouped under the sub-theme level of satisfaction. “Continuous bursting of pipes”, “shortage of human power” and “increased illegal connections” were considered by the researcher to be related and were grouped under the sub- theme infrastructure failure. “Positively affects revenue” was grouped under the sub-theme influence on RM. Figure 4.2 illustrates the general thematic analysis process that was followed in analysing each sub-theme of the main themes. The remaining categories, sub-themes, and themes are presented in Table: 5.2 and Table: 5.3. The research findings discussed in Chapter Six were thus organised according to the themes, sub-themes and emerging categories of data discussed in this section

The next section will discuss how the trustworthiness, validity, and reliability of the research findings were ensured.

4.8 TRUSTWORTHINESS OF THE RESEARCH FINDINGS

Qualitative researchers are concerned with the trustworthiness of the data and research findings whereas quantitative researchers are concerned with the reliability of research findings, therefore this study will discuss the trustworthiness of the data as this is a qualitative study (Quinlan, 2011).

4.8.1 Trustworthiness of the qualitative research findings

The trustworthiness of data refers to the degree of confidence in the data, the interpretation, and the methods used to ensure the quality of a study (Pilot & Beck, 2014). Qualitative research uses trustworthiness to ensure that research is of good quality, and it can be believed. Lincoln and Guba (1985), cited in Connelly (2016) refined the concept of trustworthiness by introducing four criteria to reflect the assumptions of the qualitative paradigm namely credibility, dependability, confirmability, and transferability. These criteria are discussed next.

4.8.1.1 Credibility

Credibility is known for establishing confidence in the findings and building trust with the research participants (Mayer, 2008). One question that comes into a reader's mind is “Was the study conducted using standard procedures typically used in the indicated qualitative approach or was an adequate justification provided for variations?” Techniques that are used to establish credibility include the following (Connelly, 2016):

- Triangulation of various data sources, or gaining different perceptions to verify the evidence obtained;
- Prolonged engagement with participants;
- Persistent observation if appropriate to the study;
- Peer-debriefing;

- Adequate documenting and recording of the findings; and
- Allowing members to check and appraise the data interpretation as well as suggesting changes.

In this study, the participants gave the researcher their perceptions based on the set of questions they were asked. The data obtained was rich in information. The information obtained was compared to other information obtained from the other participants from the different municipalities and Water Board X to aid accurate analysis. Discussions between the researcher and the supervisors were held to guide how to analyse the data. The credibility of the study was further ensured by keeping all audio records, notes, interview schedules, and transcripts.

4.8.1.2 Dependability

Dependability is evidence that if the study were repeated with the same participants in a similar context, the findings would be similar (Babbie & Mouton, 2006). It is similar to the idea of reliability in quantitative research (Babbie & Mouton, 2012), but with the understanding that the stability of conditions, depends on the nature of the study. Dependability can be achieved by including maintenance of the audit trail of process logs and peer-debriefings with a colleague (Connelly, 2016). Anney (2014) maintains that dependability is proven by using an audit trail and recommends a code-re-code strategy where the researcher codes the same data twice to see if the findings remain the same.

In this study, dependability was achieved by keeping an accurate and transparent trail of what happened during the research process.

4.8.1.3 Confirmability

Confirmability refers to the extent to which findings can be confirmed or corroborated by others (Lichtman, 2013). Confirmability can be linked to objectivity in quantitative research (Connelly, 2016). To achieve confirmability, the researcher must use a reflexive journal where he/she jots

down personal thoughts in relation to the study to provide evidence that the researcher did not find out what they set out to find, had an audit trail of analysis and kept methodological memos of the log (Connelly, 2016).

In this study, the researcher asked the supervisors to review the notes that he had made in order to confirm the findings. The reviewed notes prevented any form of bias from having only one person's perspective on the study. In addition, the researcher archived all collected data (voice recordings, transcriptions, written notes, themes that were developed, covering letters and interview schedules used) so that these could be made available should the findings be challenged.

4.8.1.4 Transferability

Transferability, also known as generalisability, can be likened to the external validity of quantitative research (Lichtman, 2013). Babbie and Mouton (2006) refer to transferability as the extent to which findings can be applied in other contexts with other participants. Babbie and Mouton (2012) maintain that transferability of a qualitative study can be guaranteed if the researcher gathers rich descriptive data, allowing for a comparison of the context to other possible contexts to which transfer might be contemplated, and produces an in-depth account of the context to make a judgement about it fitting in with other possible contexts.

Transferability can be assured by providing a detailed discussion of the research context (Babbie & Mouton, 2012). Anney (2014) recommends the use of judgemental sampling to help focus on participants who are educated about the issues under examination, as it provides greater in-depth findings than other sampling methods, which is in line with the qualitative paradigm. The researcher will be able to refer back to the original theoretical framework to show how data collection and analysis were guided by the previous research. By doing this the theoretical parameters of the research can be indicated.

In this study, the study's transferability was achieved through describing the research context which then allows for the data to be transferred to a different context where the data will be judged on how sensible the transfer was.

The following sections will discuss the ethical considerations of the study.

4.9 ETHICAL CONSIDERATIONS

According to Babbie and Mouton (2006), researchers must ensure that their research does not harm the participants and disclose any possible risks associated with the research. There are several principles that an ethical researcher must take into account (Lichtman, 2013), and these are informed consent, confidentiality, anonymity, and voluntary participation.

Researchers are required to provide the participants with information regarding the purpose of the research and any possible risks if there are any (Babbie & Mouton, 2006). If the participants agree to partake in the study, they will be fully informed of the nature of the study and the reason for participating. This is known as informed consent. Formal consent was sought from both the municipalities' workers and workers from Water Board X. Before each interview, the participants were informed that there would not be any form of payment for participating as this was merely an academic study that sought to gauge the perceptions of the participants from Water Board X and the perceptions of Water Board X's customers on selected CRM factors that may possibly influence RM. All participants that agreed to be interviewed signed the consent form indicating they had been made aware of information pertaining to the research.

The participants were also reassured that their identities and responses would be treated with the utmost confidence and that responses would be reported on an anonymous basis. In a study by Collis and Hussey (2009), the authors state that if participants are assured of confidentiality and anonymity, they are more likely to share their perceptions. In this consideration of confidence and anonymity, each participant was thus assigned an identifying number and letter which was subsequently used, in place of their names, from the data analysis stage onwards. The identities of the organisation and research participants have been kept confidential to protect participants from any harm that may arise as a result of the findings and discussion of the research.

All the participants were made aware that the interviewees are voluntary, and they could withdraw from the research at any point in time, should they wish to do so.

The researcher also adhered to the Rhodes University ethical requirements by submitting an ethics application form for human subjects to the Rhodes Ethical Standards Committee.

The following section will conclude the chapter with a summary.

4.10 SUMMARY

Chapter four presented a detailed discussion of the research design and methodology. The research paradigms were discussed, and an interpretivist paradigm was deemed to be the most suitable paradigm for this study, based on the objectives. The chapter also outlined the population, sample size, and sample selection, followed by the data collection methods where preference was made to the primary research that was undertaken. Non-probability sampling was employed to draw a sample purposefully based on judgemental sampling.

The chapter also discussed the types of data analysis methods. Thematic data analysis was deemed to be most suitable for this study. The researcher gave a detailed explanation of how the data was analysed, from identifying categories to finding emerging themes and up to the write up.

Qualitative is more concerned with the trustworthiness of data and research findings, whereas quantitative is concerned with validity and reliability. The qualitative trustworthiness of research findings can be established by using the following four qualitative suppositions, namely credibility, dependability, conformability, and transferability. Ethical considerations were also highlighted.

The following chapter will present the findings and discussion of this study.

CHAPTER FIVE

FINDINGS OF THE QUALITATIVE PARTICIPANT INTERVIEWS

5.1 INTRODUCTION

Chapter Four provided a discussion of the research design and methodology used in this study. The research paradigms were discussed together with the reason for choosing interpretivism as a paradigm for this study. The chapter also discussed data collection procedures with regard to primary data and the data analysis of this study. The trustworthiness of research findings was also discussed by introducing the four criteria to reflect the assumptions of the qualitative paradigm namely credibility, dependability, confirmability, and transferability. The chapter concluded with the ethical considerations taken by the researcher.

This chapter will commence with a summary of the biographical data of the participants. The findings from the interviews with the participants will be presented next, with the themes, sub themes, and categories that were identified when conducting thematic analysis. The chapter concludes with a summary of the chapter.

5.2 BIOGRAPHICAL DATA OF PARTICIPANTS

A summary of the biographical information of the participants is provided in Table: 5.1. The participants were grouped into two to distinguish between Water Board X and the municipalities with the first three participants being participants from Water Board X, while the last ten participants being participants from the municipalities. (For the purpose of feedback, participants from the engineering departments, water service departments, and the water and sanitation departments, will be referred to as participants from the water departments. The participants are identified in Table: 5.1 for example as, 1 W-W is participant 1 from Water Board X, from the water department, while 3 W-F is participant 3 from Water Board X, in the finance department. 4 M-W is participant 4, from the municipalities, from the water department). This was then combined with the work positions of the participants at their respective municipality's and Water Board X. With regards to the municipalities a total of ten participants were interviewed: three chief

financial officers (CFO's) in the finance department; a director and general manager in the water sanitation department; two directors in the engineering department; two managers in the water services departments; and a deputy director in the infrastructure development department. A total of three participants were interviewed from Water Board X: a manager in the office of the chief executive officer (CEO), a management accountant in the finance department, and an operations manager in the operations and maintenance department. The table also indicates the number of years' service of each participant within the organisation and the highest level of education of each participant.

Table: 5.1 Biographical data of participants

Participant	Position and Departments	Number of years' service within the organisation	Highest level of education	Water Board X	Municipality
1 W-W	Manager in the office of the chief executive officer	10	Post Graduate Diploma in Enterprise Management	√	
2 W-W	Operations manager in the operations and maintenance department	21	National Diploma in Civil Engineering	√	
3 W-F	Management accountant in the finance department	3.5	Master's in Business Administration	√	
4 M-W	Director in the water and sanitation department	2.5	Bachelor of Engineering with Honours		√
5 M-W	General manager in the water and sanitation department	3	Bachelor of Technology in Civil Engineering		√

6 M-W	Director in the engineering department	0.4	Bachelor of Technology in Civil Engineering		√
7 M-F	Chief financial officer in the finance department	1.4	Master's in Business Administration		√
8 M-W	Director in the engineering department	27	Bachelor of Technology in Civil Engineering		√
9 M-W	Manager in the water services department	5	Bachelor of Technology in Civil Engineering		√
10 M-W	Manager in the water services department	5	National Diploma in Civil Engineering		√
11 M-W	Deputy director of infrastructure in the infrastructure development department	1	National Diploma in Civil Engineering		√
12 M-F	Chief financial officer in the finance department	10	Bachelor of Commerce in Business Management		√
13 M-F	Chief financial officer in the finance department	7	Postgraduate Diploma in Taxation		√

Source: Researcher's own compilation

Table: 5.1 presented the biographical data of the participants. A total of thirteen participants were thus interviewed, with the research participants coming from different departments and job levels to give multiple perspectives on the researched phenomena (Cooper & Schindler, 2006). The level

of education was also included to identify how it may influence the way a participant perceives something.

5.3 THEME IDENTIFICATION

A thematic analysis identified five main themes emerging from the interviews with the participants regarding customers' perceptions of CRM factors identified that might ultimately influence RM, as summarised in Table: 5.2 and Table: 5.3 along with the corresponding subthemes and categories. The thematic analysis involved analysing data that were derived from the participants' responses from the semi-structured interviews. The themes were identified by using a six-step process of conducting thematic analysis (Caulfield, 2019). The process involved (i) data familiarisation, (ii) coding the data, (iii) generating themes, (iv) reviewing themes, (v) defining and naming themes, and (vi) writing up the analysis of the data.

Two tables (Table: 5.2 and Table: 5.3) were created because two interview guides, one for the participants of Water Board X and one for the participants of the municipalities were used during the interview process. Due to Water Board X only having three participants interviewed, Water Board X's findings will be reported as a whole as there is no need to report separately the findings of the participants into the finance and water department participants because of the small number. However, the findings of the participants from the municipalities, they will be reported according to participants from the finance departments and the findings from the participants from the water departments. This is to demonstrate the different perceptions of the two groups concerning the factors that might ultimately influence RM.

Table: 5.2 Main themes, sub-themes, and categories emerging from the Water Board X participants

Themes	Sub-themes	Categories
Service quality	Level of services	<ul style="list-style-type: none"> - Fewer water interruptions - High customer satisfaction
	Infrastructure failure	<ul style="list-style-type: none"> - Continuous bursting of pipes - Increased illegal connections - Shortage of human power
	Influence on RM	<ul style="list-style-type: none"> - Positively affects RM
Customer involvement	Customer interaction	<ul style="list-style-type: none"> - Decision making
	Communication platforms	<ul style="list-style-type: none"> - Sending email correspondence - Meetings with municipalities - Use of WhatsApp messenger
	Effect of customer involvement on RM	<ul style="list-style-type: none"> - Positively affects RM
Value creation	Customer value	<ul style="list-style-type: none"> - Meeting customer expectations
Information technology	Computerised information	<ul style="list-style-type: none"> - Data capturing system
	Information technology systems	<ul style="list-style-type: none"> - Baan system implemented - Installing a telemetry system
	Improved efficiency	<ul style="list-style-type: none"> - Reduced costs and time - Revenue increment
Management commitment	Dedication from management	<ul style="list-style-type: none"> - Show passion - Must have the drive

Source: Researchers own compilation.

As depicted in Table: 5.2, five main themes emerged after analysing the interview transcripts, namely service quality, customer involvement, value creation, information technology, and management commitment. The themes were obtained using the six-step process mentioned above.

The categories emerged by highlighting sections on the transcript (coding), usually phrases or sentences while coming up with shorthand descriptive “words” or categories to describe the content. The categories were then grouped to form sub-themes. The next step was to identify patterns among the sub-themes to identify the main themes. Once the main themes were identified, it was important to ensure that the themes were useful and were an accurate representation of the data.

5.4 FINDINGS FROM THE INTERVIEWS WITH THE PARTICIPANTS FROM WATER BOARD X

The next section will discuss the findings concerning the sub-themes revealed by the three participants from Water Board X.

5.4.1 Findings from the theme of service quality

Based on thematic analysis, service quality (first main theme), in terms of the subthemes, as depicted in Table: 5.2, is discussed in the subsequent sections.

5.4.1.1 Level of services

To understand what the participants at Water Board X perceived as service quality, the participants were asked for their understanding of the term “service quality”. The categories that emerged from the data showed that the participants felt that quality of services involved: fewer water interruptions (1 W-W, 2 W-W, and 3 W-F); and high customer satisfaction (1 W-W, 2 W-W, and 3 W-F).

Fewer water interruptions

All three participants (1 W-W, 2 W-W, and 3 W-F) from Water Board X mentioned that for Water Board X to deliver good quality service, water interruptions must be minimised as much as possible. One participant (1 W-W) used the phrase “response rate” to express how Water Board X

promptly attended to the interruptions that were caused by pipes that belong to Water Board X, that supplied water to the municipalities. With the recognition of Water Board X's rapid response time, participant (2 W-W, and 3 W-F) stated how water services rendered by Water Board X to the municipalities were delivered "on time", with fewer water interruptions and that the quality of the water is good (2 W-W).

High customer satisfaction

Two participants (2 W-W, and 3 W-F) mentioned that the level of service involved "high customer satisfaction" and felt that it was important for Water Board X to ensure that the municipalities were satisfied with the level of service they received. In this regard, one participant (2 W-W) stated that Water Board X is governed by all water and water board-related policy frameworks issued by the Department of Water Affairs (DWA) to ensure that the municipalities received good quality water, which led to their satisfaction. This was explained as follows:

Participant	Position and department
2 W-W	Operations manager in the operations and maintenance department

"We do different service quality, services to different municipalities, focusing on the implementation of projects, which has a different service of quality, and there is also the bulk side, where we provide water to the client and it has to be of good quality all the time and there are regulations that we need to abide by".

Service quality can be defined as the extent to which a service meets a customer's needs and expectations (Shahin, 2016). It can be noted that the participants have an understanding of the term service quality, as participant (2 W-W and 3 W-F) mentioned the word satisfaction in their definition implying that for them to be satisfied, their needs and expectations would have been met by the service provider. The literature also refers to service quality as to how an organisation exceeds a customer's expectations (Long et al., 2013; Pakurar, et al., 2019). According to Mahfooz, (2014) customer satisfaction is dependent on the quality of services that an organisation offers to its customers. This is an area where organisations can increase customer value, and where the customer value is high, satisfaction is also high. In a study by George and Kumar (2014) the authors state that service quality is an antecedent of customer satisfaction, while other authors such as Kitapci, et al., (2013) suggest that customer satisfaction is what causes service quality to evolve.

It can be concluded that the participants had an adequate understanding of service quality as well as how it is related to customer satisfaction.

The participants were of the opinion that the level of services delivered to the municipalities should have “fewer water interruptions” as stated by participant (1 W-W, 2 W-W, and 3 W-F). The participants felt that continuous water interruptions showed a lack of reliability on the part of Water Board X, and reliability according to the service quality model refers to an organisation consistently delivering the services it has promised to deliver to the customer (Shieh, Huang and Wu, 2019). It is thus important for Water Board X to ensure that whenever there are water interruptions, they are responsive, by ensuring that the problem is rectified as soon as possible

The second sub-theme of infrastructure failure will be discussed next.

5.4.1.2 Infrastructure failure

To explore infrastructure failure, the participants were asked to express their perceptions concerning the challenges they experienced concerning the quality of services that they render to the municipalities.

The findings pertaining to the infrastructure failure faced by Water Board X were namely, continuous bursting of pipes (1 W-W, 2 W-W, and 3 W-F) and shortage of human power (1 W-W, 2 W-W, and 3 W-F).

Continuous bursting of pipes

All three participants (1 W-W, 2 W-W, and 3 W-F) stated that a major challenge Water Board X has is the bursting of pipes that distribute water from Water Board X's dams to the municipalities. The increase in the number of burst pipes that delivered water from the dams to the municipalities could be attributed to the fact that some of Water Board X's infrastructure was old and needed to be maintained (3 W-F). According to participant (1 W-W), it took Water Board X less than 12 hours to attend to a burst pipe. A participant thus stated the following:

Participant	Position and department
3 W-F	Management accountant in the finance department

“Burst pipes are attended to with immediate effect unless there are other contributing factors to the delay like obstruction on sites or the compromised safety of the staff”.

Increased illegal connections

Only one participant (1 W-W) mentioned how illegal connections were damaging Water Board X’s infrastructure. Participant (1 W-W) stated how the illegal connections resulted in unnecessary water losses for Water Board X, and as a result, the municipalities are receiving low water pressure. Moreover, participant (1 W-W) also stated how people connected illegally to Water Board X’s infrastructure through the underground pipes. A participant thus stated the following:

Participant	Position and department
1 W-W	Manager in the office of the chief executive officer

“Our infrastructure runs kilometres in terms of pipeline distributions, sometimes there are issues of illegal connections, some people might break the pipe and there is a leak and people might water their garden and feed their livestock”

Shortage of human power

Another challenge raised by two participants was the issue of “shortage of human power” (1 W-W, and 2 W-W). The participants were of the opinion that Water Board X does not have enough human power to attend to all the burst pipes that would have occurred simultaneously, which sometimes leads to delays in attending to leakages. One participant mentioned the following concerning the shortage of human power to maintain the infrastructure:

Participant	Position and department
1 W-W	Manager in the office of the chief executive officer

“It’s an engineering kind of work and as you know in the country, there is a shortage of engineers, not just in the water sector, but everywhere. It’s a specialised environment, not everyone can just treat water, one has to be trained and have some knowledge”.

The third sub-theme, influence on RM will be discussed next.

5.4.1.3 Influence on RM

To determine whether service quality influences RM, the participants were asked to express their perceptions regarding whether the revenue of Water Board X would be affected by the quality of services. All three participants (1 W-W, 11 W-W, and 13 W-F) from Water Board X perceived that service quality did influence Water Board X's RM.

Positively affects RM

One of the participants (1 W-W) was of the opinion that if Water Board X was not providing high levels of service quality, municipalities might feel reluctant to pay for the services delivered to them. The participant further explained the point by mentioning the importance of fewer water interruptions and the need to provide clean water all the time. This will result in the customers being satisfied and they will be willing to pay for the services delivered to them. This subsequently increases Water Board X's revenue. Another participant (2 W-W) mentioned that it was important for Water Board X to respond quickly and repair or maintain the burst pipes that belonged to Water Board X, to minimise the amount of water lost, which would subsequently minimise the costs that would have been lost due to the water leakages. Moreover, another participant mentioned the following after being asked if service quality affected revenue.

Participant	Position and department
3 W-F	Management accountant in the finance department

“Absolutely, if the municipalities see tangible findings in supplying more water where they need more water it will directly increase revenue”.

Participants (1 W-W, 11 W-W, and 13 W-F) were of the opinion that the quality of service from Water Board X to the municipalities may have an influence on RM. This is supported by Akroush and Khatib, (2010) who mention that there is a positive relationship between service quality and organisational performance, which is evaluated based on the financial and non-financial indicators. Successfully providing high levels of service to customers plays a huge role in an organisation's revenue. If Water Board X delivers high levels of service quality, the benefits gained are reduced costs and increased productivity (Lewis, 2011).

Service quality has a direct impact on both short and long-term organisational performance measurements. There is a positive relationship between an organisations profitability and its quality of service (Lai and Cheng, 2005). Organisations that provide a high level of service quality have the advantage of securing medium and long-term benefits that lead to continuous improvements and better customer value, which leads to higher profits. Duncan and Elliot (2012) affirm that there is a positive correlation between service quality and the financial performance of an organisation.

The second main theme of customer involvement will be presented next.

5.4.2 Findings from the theme of customer involvement

Based on thematic analysis, customer involvement (second main theme) in terms of the sub-themes depicted in Table 5.2 is discussed in the subsequent sections.

5.4.2.1 Customer interaction

To understand how the three participants perceived customer involvement, the participants were asked what they understood by “customer involvement”. All three participants (1 W-W, 2 W-W, and 3 W-F) from Water Board X felt that customer involvement referred to engaging the municipalities in all “decision-making” (1 W-W, 2 W-W, and 3 W-F).

Decision-making

All the municipalities and other stakeholders are invited to attend meetings at the offices of Water Board X (1 W-W) before implementing any project that the stakeholder would be interested in the outcome. At these meetings, a discussion takes place where the municipalities and the stakeholders state their needs and requirements. This allows for Water Board X to know whether they have enough resources such as the funds to implement the project being planned (1 W-W). During these meetings, decisions on how the project should be implemented and the time frames are agreed on by the stakeholders. As thus stated by the following participant:

Participant	Position and department
1 W-W	Manager in the office of the chief executive officer

“My understanding of customer involvement is that if you are providing a service or developing a product, you should involve the customer because the service and product are going to be consumed by the customer, so at the planning of the product, the customer should be involved so that they know the features that are in this product. So, it’s more customer inclusive, rather than meeting the customer when the product has been developed and you do not know the needs of the customer.”

Involving the municipalities and stakeholders in the decision-making processes, before implementing any project, has saved Water Board X a considerable amount of “time and costs” that would have been wasted as a result of Water Board X delivering a service that would not have met the municipalities and the stakeholder’s requirements (2 W-W). This was noted by one participant:

Participant	Position and department
3 W-F	Management accountant in the finance department

“Considering involving the stakeholders at all stages of the project life cycle ensures that Water Board X is always on schedule and that it is not delivering a project that does not meet the requirements of the customer. This saves Water Board X from exceeding the proposed budget and time frame to deliver the project to the customer.”

According to Zhang, Zhong and Makino (2015), customer involvement is the extent to which a customer is involved in service production. The participants from Water Board X perceived customer involvement as “engaging” customers and ensuring that they are fully involved in all “decision making” processes. This is achieved by having meetings with all the stakeholders. Ahmad, Malik and Tariq (2014) mention that organisations need to involve its customers, as this has an impact on its success. Customer involvement lowers costs and time in delivering services, ideas are shared during the decision-making process and there is two-way communication. Two-way communication allowed for Water Board X to understand the municipalities’ requirements

before commissioning a project, and it ensured that the service requested by the municipality Water Board X was able to deliver it.

The second sub-theme of the communication platforms used to involve the municipalities will be discussed next.

5.4.2.2 Communication platforms

The participants from Water Board X were asked how they involve their customers. They mentioned that they communicate with their customers while using the following communication platforms: “Sending electronic mail (email) correspondence” (1 W-W, and 3 W-F), “Use of WhatsApp messenger” (2 W-W) and “meetings with municipalities” (3 W-F).

Sending email correspondence

Two of the three participants (1 W-W, and 3 W-F) mentioned that they use emails to communicate with the municipalities. The participants (1 W-W, and 3 W-F) mentioned that they use emails to send out invoices or notifications of any maintenance work in progress or a reminder of the day when maintenance work will take place. These e-mails are also used to send updates on any projects that are being implemented. The emails are sent to the municipalities and all the stakeholders interested in the outcome of the project by the public relations officer of Water Board X.

Meetings with municipalities

One participant (3 W-F) spoke on behalf of the finance department, and not Water Board X as a whole and mentioned that the finance department has general meetings at Water Board X or at the respective municipality’s office, where they discuss the financial logistics with the municipality. There is also an annual general meeting for Water Board X, with the board of directors and all the stakeholders where they discuss their annual reports and accounts. The annual general meeting take place in the board room at the offices of Water Board X.

Participant	Position and department
3 W-F	Management accountant in the finance department

“Finance is responsible for tariff consultations, where we engage with the municipalities on a regular basis according to Municipal Finance Management Act (MFMA) timelines”.

Use of WhatsApp messenger

One participant (2 W-W) mentioned that certain senior staff members at Water Board X communicated informally with other senior staff members at the different municipalities using their cellphones via WhatsApp messenger. The participant was of the opinion that this was an easy and quick method to communicate. Participant (2 W-W) also mentioned how there was a WhatsApp group chat for the technical engineers of both Water Board X and the different municipalities. Here reports are also made besides the formal report that would have been sent via email concerning the problem that would require immediate attention. This was stated by one participant:

Participant	Position and department
2 W-W	Operations manager in the operations and maintenance department

“What we do is, we normally keep our times updated in our operations department. We’ve got a WhatsApp group where we try to inform the customers in all stages if there is a breakdown or a leakage on the pipe”.

The findings suggested that WhatsApp messenger is a communication platform used frequently by the participants. WhatsApp messenger lets its users message safely and securely whomever they want directly within the WhatsApp messaging platform (Deshpande, 2019). WhatsApp messenger uses cellphone numbers, which allow the staff members at the respective municipalities to know whom they are chatting with (Kumar & Sharma, 2016). The use of WhatsApp messenger permits for Water Board X to have a significant impact on customer satisfaction and to increase conversations that foster relationships between both Water Board X and the municipalities (Mthethwa, 2019).

As mentioned by participants (1 W-W, and 3 W-F), Water Board X also uses emails to communicate with the municipalities. The participants mentioned that the public relations staff member is instructed by a colleague from Water Board X, for example, the manager in the office of the chief executive officer, to draft an email which they will send after it has been read and approved by a senior official. Emails are a fast, cheap, accessible, and easy way that businesses can communicate (Derks & Bakker, 2012). Water Board X using emails to communicate with the municipalities provides an efficient and effective way to transmit all kinds of electronic data. Emails are also permanent, in the sense that all records of the emails sent and received from the municipalities are kept, including details such as date and time (Asghar, 2014).

The third sub-theme, influence on RM will be discussed next.

5.4.2.3 Effect of customer involvement on RM

Positively affects RM

The participants were asked about their perceptions of whether involving the municipalities in the project life cycle or planning phase of a project to be implemented would have an influence on Water Board X's revenue. All three participants (1 W-W, 2 W-W, and 3 W-F) were of the opinion that involving the municipalities would influence Water Board X's RM. Water Board X would know the needs and requirements of the municipalities they would have identified if they are delivering the project as required by the customer, within the required time frame and if they are not going over their budget. When municipalities are satisfied with the services delivered to them, they will be willing to pay for the service which then increases Water Board X's RM as Water Board X generates its revenues from funds collected from its customers (2 W-W). One participant stated the following:

Participant	Position and department
3 W-F	Management accountant in the finance department

“Absolutely, if the municipalities see tangible findings from services delivered where they required the service, there will be a direct increase in revenue”

Another participant stated the following:

Participant	Position and department
1 W-W	Manager in the office of the chief executive officer

“Yes, I will tell you, in 2018, we had a debt impairment of 135 million rand. If our level of involvement with the customer, in this case, was in a different kind of situation, we could have avoided the situation of recognising that debt. The whole issue or whole thing has happened because we did not involve the customer in every solution, for a financial challenge that we had”.

Involving customers builds good relationships (2 W-W). Based on participant (1 W-W's) response on debt impairment, if Water Board X had communicated well with certain municipalities and they had developed a good relationship, both Water Board X and the respective municipalities would have avoided the accumulation of a large debt of 135 million rand. Due to Water Board X communicating more with its customers with regards to payment at a later stage, a payment plan was created that allowed Water Board X to receive some revenue, be it, small monthly installments, until the whole debt was cleared, instead of not receiving anything at all.

Based on the findings pertaining to an increase in revenue due to involving customers, all the participants agreed that Water Board X involving its customers improved its revenue. According to Tjepkema (2017), organisations that engage with their customers see a 9.5% increase in revenue year on year, as compared to 3.4% for the organisations that barely engage with their customers. It was thus important for Water Board X to ensure that they used all possible methods to engage with their customers.

The third main theme of value creation will be presented next.

5.4.3 Findings from the theme of value creation

Based on the thematic analysis, value creation (the third main theme), in terms of the sub-themes as depicted in Table: 5.2, is discussed in the subsequent sections.

5.4.3.1 Customer value

The participants from Water Board X (1 W-W, 2 W-W, and 3 W-F) were asked about their understanding of customer value, and only one category emerged from the data. All three participants (1 W-W, 2 W-W, and 3 W-F) were of the opinion that customer value involved “customer expectations” being met. The findings pertaining to the perception of customer value according to the category are presented below.

Meeting customer expectations

All three participants (1 W-W, 2 W-W, and 3 W-F) were of the opinion that customer value is associated with Water Board X meeting the expectations of its customers. In order to meet the customers’ expectations, Water Board X must engage with the municipalities in order to understand their needs (3 W-F). Water Board X must be transparent and honest by ensuring that its customers are informed all the time at the different stages of the project life cycle (2 W-W). Customers feel like they are valued and that their expectations are being met. The following was noted by one participant:

Participant	Position and department
3 W-F	Management accountant in the finance department

“The customer’s expectations are exceeded in terms of service quality, such that municipalities feel that the value for the amount of money they are paying for is appropriate to the service delivered.”

According to Strydom, Petzer and De Meyer, (2015) customer value is the overall assessment of the benefit that a product may offer versus what is sacrificed to obtain the product. Customer value can be viewed from the customer’s perspective (perceived value), which were the benefits the customer receives from consuming the water. The benefits are related to the cost of the water. Water Board X must ensure that the services such as bulk water supply, or implementation of projects, to the municipalities are of high quality, for example, is the water drinkable? This is a method that customers can maximise the value of the services delivered to them. It is also important for Water Board X to ensure that they do not take a considerable amount of time during

maintenance. For example, if there is a burst pipe, the faster it takes to repair the pipe, the more value the municipalities received by having no water interruptions.

The fourth main theme of information technology will be presented next.

5.4.4 Findings from the theme of Information technology

Based on thematic analysis, information technology (fourth main theme), in terms of the sub-themes, as depicted in Table 5.2, is discussed in the subsequent sections.

5.4.4.1 Computerised information

For the fourth sub-theme, the participants were asked what they understood by “information technology”. One category emerged, namely “data capturing system”.

Data capturing system

With regards to a data capturing system, one participant (1 W-W) perceived information technology as the relationship between “inputs” and “outputs”, due to the number of activities that take place inside a computer system. Information technology can be used to monitor the data that has been captured and stored inside a computer system (2 W-W). The following was noted by one participant:

Participant	Position and department
3 W-F	Management accountant in the finance department

“Information technology is a tool that can be used to ensure accurate, complete, and timeous billing of revenue and collection of revenue. Information technology can be utilized from identifying faulty meters timeously to the automation of billing WSAs and sending reminders to pay for water”.

Information technology makes data capturing easy for Water Board X (1 W-W). It would reduce human errors and travelling costs that Water Board X would have incurred while sending workers to the reservoirs to take water readings. All information is captured automatically by a computerised system and then displayed on Water Board X's server. The technology that is used to take these readings is called a telemetry system (2 W-W). However, in the future, this might lead to some workers being retrenched (2 W-W). In addition, one participant (1 W-W), mentioned that Water Board X must link its systems with the municipalities systems for the data from the reservoirs to be displayed on the systems that belong to both the municipalities and Water Board X.

According to Deb (2014) information technology is used to store, manipulate, dispute, or create information. Onn and Sorooshian (2013) define information technology as computer software and hardware solutions that assist in organisational operations and strategies.

Based on the findings, the participants perceived information technology as data capturing systems. Data can be captured using different methods, either through manual keying, where someone types the data into the computer (these could be the inputs mentioned by participant (1 W-W)), through barcode recognitions, or intelligent character recognition which captures information from a paper that has been filled out (Hamzah, et al., 2019). As noted by participant (3 W-F), information technology makes billings easy, it reduces the amount of paper usage and storage usage costs. The use of information technology can also reduce the stress levels of staff when manually billing the municipalities. Lastly, it saves a lot of time, for example, time for looking look for invoices, which are stored in the cloud but can easily be accessed from anywhere.

The second sub-theme of information technology systems used by the water board will be discussed next.

5.4.4.2 Information technology systems

Two categories emerged from the participants concerning the systems used by Water Board X. The first system mentioned was a Baan system (an enterprise resource planning system that can be used for record-keeping and administrative services) (1 W-W, 2 W-W, and 3 W-F), and the second system was a telemetry system (1 W-W, 3 W-F)

Baan system implemented

All three participants (1 W-W, 2 W-W, and 3 W-F) mentioned that Water Board X uses a Baan system because it includes the necessary features they are looking for, which is the ability to tailor services at a reasonable cost, without worrying about losing any information due to upgrades. One participant (2 W-W) also mentioned that the benefit of Water Board X using a Baan system is that it “tightened” all processes and no mistakes were made, as everyone that uses it is forced to follow its instructions. Integrating the Baan system into Water Board X is “seamless” which makes it easy for all the users (3 W-F). This was stated by a participant:

Participant	Position and department
3 W-F	Management accountant in the finance department

“The last one is a Baan system, which looks at the finance, to manage the water accounts, so customers can manage payments. In the Baan system, there is also supply chain management. All product requests and demands be it chemicals or stationary, the supplies are in the Baan system. All planned and unplanned maintenance are scheduled in the Baan to verify if they are meeting the 80/20 maintenance agreement.”

Installing a telemetry system

Two of the three participants (1 W-W, and 3 W-F) mentioned that Water Board X has installed telemetry systems in their reservoirs. Telemetry systems are used to read water levels in the reservoirs, without the need of a human to physically go to the site and take the readings.

Participant	Position and department
1 W-W	Manager in the office of the chief executive officer

“The telemetry is used to measure the water availability levels for our customers and it’s a live system and that system has a collection of data, could be reports thrown on the system, for example, between morning and afternoon, they can tell the level of demand of water.”

Participant (2 W-W) mentioned that they allow other municipalities to install their own telemetry systems in the reservoirs as a method of comparing the readings to ensure accuracy.

The third sub-theme of improved efficiency will be discussed next.

5.4.4.3 Improved efficiency

Participants (1 W-W, 2 W-W, and 3 W-F) were asked about their perception of information technology having an influence on Water Board X’s revenue and they were all of the opinions that the use of information technology positively affects RM. Two categories emerged namely; “reduced costs and time” and “revenue increment.”

Reduced costs and time

All three participants (1 W-W, 2 W-W, and 3 W-F) stated that the use of technology would influence on Water Board X’s revenue. For example, travelling costs would decrease, as there is no need for Water Board X to send its workers to the reservoirs to record the water readings manually. Participant (2 W-W) mentioned how Water Board X used to send workers every week to the reservoirs to take water readings and but due to the advent of the Internet and the use of information technology, the workers do not have to physically go to the reservoirs, which saves time and costs. It also improves the accuracy of the readings, while reducing human error (1 W-W).

Participant	Position and department
2 W-W	Operations manager in the operations and maintenance department

“Yes, if we did not have this technology in place, I can tell you it would have been very difficult with the extra costs of stuff with people driving around to the reservoirs to open up and check how much water is left, and one person will go the next and check and they see maybe there’s 70%.”

However, one participant stated the following, when asked if the use of information technology might affect the revenue of Water Board X:

Participant	Position and department
13 W-F	Management accountant in the finance department

“Absolutely, as long as the time saved in improving efficiencies outweighs the cost of the initial investment. For example, in-house customization should be a possibility with the ERP system in use.”

Revenue increment

All three participants (1 W-W, 2 W-W, and 3 W-F) agreed that Water Board X’s revenue would increase if Water Board X used information technology. Information technology could be used to detect any leakages in the pipes, which if detected early would mean that the burst pipes would be fixed, ultimately saving a lot of revenue that would have been lost from the leakages (1 W-W, 3 W-F). This subsequently improved the effectiveness and efficiency of the revenue collection of Water Board X (3 W-F).

Based on the findings, participants (1 W-W, 2 W-W, and 3 W-F) mentioned that if Water Board X uses information technology, its RM improves. The use of telemetry systems allow for remote monitoring and controlling of water applications (Young, 2015). Water Board X using telemetry systems saves them both time and money, as they do not have to send workers physically to read the water levels. Telemetry systems provide real-time data (De Gestao, 2017), and they also provide notifications if there is a problem at the reservoirs or of the water levels. As noted by participant (1 W-W, and 3 W-F), telemetry systems can be used to detect leakages also. When a leakage has been detected, O’Brien, et al., (2013) states that telemetry systems are designed to inform the relevant person via either text or an email. Notifications sent via text allows for workers to act swiftly and go and assess the situation before it’s too late, which findings in Water Board X saving a lot of revenue while eliminating unnecessary cost, for example, of a leakage.

The fifth main theme of management commitment will be presented next.

5.4.5 Findings from the theme of management commitment

Based on thematic analysis, management commitment (fifth main theme), in terms of the sub-themes as depicted in Table 5.2 is discussed in the subsequent sections.

5.4.5.1 Dedication from management

The three participants (1 W-W, 2 W-W, and 3 W-F) were asked what their understanding of management commitment was, and two categories emerged, which were “drive” by management to ensure all obligations are met and “passion” that it demonstrated towards its work.

Show passion

One participant mentioned that the management of any organisation must be passionate about their work (1 W-W). If they are not passionate, this may affect their subordinates in the sense that they will feel that they can display the same energy their supervisor/boss has towards their duties. Participant (3 W-F) mentioned that Water Board X’s management is passionate about their work, and they ensure that the quality of services delivered to the municipalities is of high standards.

Must have the drive

Management must have that drive within them to be able to motivate their staff members to work to the best of their abilities (2 W-W). One participant further explained that management must have that “drive” within them, to see out a project being completed. The following was stated by one of the participants:

Participant	Position and department
3 W-F	Management accountant in the finance department

“Management must have the passion and drive to ensure the quality of water delivered is of an impeccable standard.” (3 W-F).

McGonagle, et al., (2016) define management commitment as the participation by top management in ensuring quality, security, and safety within the organisation. The participants from Water Board

X perceived management commitment as the passion and drive that an organisation's top executive must display. The top management of any organisation is expected to show signs of commitment by implementing quality management systems while improving effectiveness. Effectiveness can be improved through continuous communication with the employees at Water Board X to ensure that they are aware of the importance of meeting the municipalities' needs and requirements while ensuring that quality is established when delivering the service. As noted also by participant (1 W-W), management reviews should be conducted to identify if there are any problems or not, and if so, how best to solve them. Lastly, the reviews should ensure the availability of water to all the municipalities. Management also needs to show commitment by ensuring that when there are burst pipes, the operations, and maintenance department is always ready to repair. As noted by participant (3 W-F), management must have the drive to motivate workers to work.

The following section will discuss the findings from the interviews with the participants from the municipalities.

5.5 FINDINGS FROM THE INTERVIEWS WITH THE PARTICIPANTS FROM THE MUNICIPALITIES

Table: 5.3 shows a summary of the themes, sub-themes, and categories identified while conducting thematic analysis concerning the CRM factors that might ultimately influence RM.

Table: 5.3 Main themes, sub-themes, and categories emerging from the municipality's participants

Themes	Sub-themes	Categories
Service quality	Standard of services	<ul style="list-style-type: none"> - Meeting customer expectations - Value for money
	Level of satisfaction	<ul style="list-style-type: none"> - Not satisfied <ul style="list-style-type: none"> + <i>Water shortages</i> + <i>Unfair billing</i> + <i>Delayed project completion</i> + <i>Old infrastructure</i> + <i>Low response rate</i> - Satisfied
	The influence of the standard of services on RM	<ul style="list-style-type: none"> - Positively influence RM
Customer involvement	Mutual engagement	<ul style="list-style-type: none"> - Co-operation - Continuous communication
	Involvement levels	<ul style="list-style-type: none"> - Satisfied - Not satisfied <ul style="list-style-type: none"> + <i>Late information</i> + <i>No information received from Water Board X</i> + <i>Selective information received</i>
	Impact of involvement on revenue	<ul style="list-style-type: none"> - Costs and time reduction
Value creation	Customer value	<ul style="list-style-type: none"> - Value for money
	Value satisfaction	<ul style="list-style-type: none"> - Satisfied <ul style="list-style-type: none"> + <i>Good quality infrastructure</i> + <i>fast response rate</i> - Not satisfied <ul style="list-style-type: none"> + <i>Unfair billing</i> + <i>Shortage of water supply</i>
Information technology	Computer systems	<ul style="list-style-type: none"> - Use of computers - Fourth Industrial Revolution
	Information systems adopted	<ul style="list-style-type: none"> - Paper based system
	Effect of information technology on RM	<ul style="list-style-type: none"> - Smart meters reduce costs
Management commitment	Administrative responsibilities	<ul style="list-style-type: none"> - Attitude from management
	Management's influence on revenue	<ul style="list-style-type: none"> - Commitment influences revenue

Source: Researcher's own compilation

5.5.1 Findings from the theme of service quality

Based on thematic analysis, service quality (first main theme), in terms of the sub-themes as depicted in Table 5.3, is discussed in the subsequent sections.

5.5.1.1 Standard of services

To explore whether the participants from the municipalities understood what standard of services referred to, the participants were asked for their understanding of the term “standard of services”. The participants perceived the standard of services as “meeting customer expectations” (7 M-F, 8 M-W, 10 M-W, 12 M-F, and 13 M-F) and “value for money” (4 M-W, 5 M-W, 6M-W, 9 M-W, and 11 M-W).

Meeting customer expectations

(Participants from the finance departments)

All three participants (7 M-F, 12 M-F, 13 M-F) from the finance departments, perceived the standard of services as meeting customer expectations. Customer expectations are met when an organisation delivers services that meet the customers’ needs and requirements (13 M-F). Water Board X meets its customer expectations when all operational issues have been addressed, and when the customer is satisfied with the services delivered to them, such as bulk potable water supply or the completion of a project (7 M-F). As thus stated by one participant:

Participant	Position and department
12 M-F	Chief financial officer in the finance department

“Standard of services is a service that satisfies one’s expectations because expectation is a belief that an organisation will deliver reasonable services that meet the requirements of the client.”

(Participants from the water departments)

Two out of the seven participants (8 M-W, 10 M-W) from the water departments, perceived the standards of services as an organisation being able to meet its customers’ expectations. Customers’

expectations are met when Water Board X provides high levels of water quality, with minimal water interruptions (10 M-W). A participant thus stated the following:

Participant	Position and department
8 M-W	Director in the engineering department

“I believe that service quality is 95% compliance, and in terms of water supply, service quality has to do with Water Board X being able to address any issues raised by our municipality within a short period, roughly less than 24 hours.”

Value for money

(Participants from the Water Departments)

Five participants (4 M-W, 5 M-W, 6 M-W, 9 M-W, and 11 M-W), which is half of the participants from the water departments, perceived the standards of service as value for money that a customer should receive for a service rendered to them. One participant defined standard of services as service quality and their response is as follows:

Participant	Position and department
4 M-W	Director in the water services department

“Service quality is a service that is value for money in terms of quality and time frame for when the service was purchased until the time to when it was rendered.”

Value for money is associated with the quality of the water delivered to a municipality (11 M-W). Municipalities expect to receive clean water from Water Board X that is safe for human consumption, which the municipalities will then distribute to the communities (6 M-W). Time is also associated with value for money as Water Board X must respond rapidly to any reports logged in. In the case of a burst pipe, rapid response reduces the hours without water that the end-users have. (9 M-W).

Based on the findings pertaining to standard of services, participants (4 M-W, 5 M-W, 4 M-W, 9 M-W, and 11 M-W), perceived standard of services as value for money. Perceived value for money is the value based on the amount of money paid for a service that a customer would have received. When a customer is deciding on a service, they first evaluate if

they will benefit from it (Aslund & Backstrom, 2017). In the case of Water Board X, municipalities first evaluate how they will benefit from the projects that would be implemented by Water Board X before they allow the water board to start the project. Rajaguru (2016) refers to emotional value, as the factors outside the value for money that can affect a customer's decision. These factors include the time that the service will be delivered, as mentioned by participant (9 M-W). Water Board X must ensure there is rapid response when problem such as a burst pipe has logged in the system.

Participants (7 M-F, 8 M-W, 10 M-W, 12 M-F, and 13 M-F) perceived standard of services as the satisfaction of the expectations that a customer has with regard to a service. Felix (2017) describes standard of services as a comparison of a customer's expectations against an organisation's performance. Municipalities expect Water Board X to deliver clean water and to implement projects of high quality, where the outcome is beneficial to them.

5.5.1.2 Level of satisfaction

The participants were asked if they were satisfied with the services delivered to them by Water Board X, and eight out of the ten participants felt that they were "not satisfied". The dissatisfied participants strongly expressed how Water Board X delayed in completing projects that were implemented, how the billing is unfair, how there are issues of water shortages, how some of the infrastructures is old, and how Water Board X has a low response rate to repair leakages on the burst pipes. Only two participants were "satisfied" with the services rendered to them by Water Board X.

Not satisfied

(Participants from the Finance Departments)

All three participants (7 M-F, 12 M-F, 13 M-F) were not satisfied with the quality of services delivered to their municipalities by Water Board X. Participant (13 M-F) was of the opinion that their municipality did not receive enough water and felt that Water Board X favoured other municipalities over theirs in the sense that other municipalities received more water supply even though they have a smaller geographical and population size. Another participant (7 M-F) was of

the opinion that Water Board X is not billing their municipality fairly for the water delivered to them. Participant (7 M-F), just like participant (13 M-F) felt that the water delivered to their municipalities was short and not the full quantity that they should receive. However, one participant (12 M-F), mentioned that Water Board X has not completed any of the projects that they started, and it has been over five years. This was noted by one participant:

Participant	Position and department
12 M-F	Chief financial officer in the finance department

“The services supplied by the water board are twofold. One is the water supply, the second one is the implementation of the water projects within our area. Generally, we are not happy with both. There is a water project that should have been implemented and up to now, that project has not provided the extended findings to increase the water supply in one of our areas within the municipal jurisdiction. Secondly, the plant as far as the running of the plant which supplies water in another area, at times the plant is unable to provide sufficient water to satisfy the water demand.”

(Participants from the water departments)

Six participants (5 M-W, 8M-W, 9 M-W, 10 M-W, and 11 M-W) from the water departments felt that they were not satisfied with the quality of service rendered to their municipality by Water Board X. Participant (11 M-W) mentioned that they are not satisfied because Water Board X has not completed a project that was implemented more than five years ago (2014). Participant (9 M-W) was of the opinion that Water Board X was not making an effort to repair or maintain its old infrastructure, which attributed to some of the burst pipes. The burst pipes are the reason why the municipality is not receiving enough water from Water Board X (5 M-W). When reports about burst pipes and leakages are reported to Water Board X, their response rate is appalling (10 M-W). This was stated by a participant:

Participant	Position and department
8 M-W	Director in the engineering department

“I am not satisfied. We reported a burst pipe 2 days ago and there has not been any action. We are nearly going into 72 hours and there is no action at all from the water board. There are no prompt services. The water board also does not tell us if they have any operational issues from their side.”

Satisfied

Two out of the seven participants (4 M-W, and 6 M-W) from the water departments felt that they were satisfied with the services delivered to their organisation by Water Board X. Participant (4 M-W) mentioned that Water Board X avails themselves quickly every time they contacted them when there is a problem. This was noted by one participant:

Participant	Position and department
4 M-W	Director in the water services department

“The quality of the services that we received is good. There is value for the money that we spent and they deliver within the agreed times that we require.”

There is a relationship between standards of services and the customer’s level of satisfaction (Mahfooz, 2014). The higher the standard service, the higher is the satisfaction level. Thus, organisations will have a competitive advantage if they are producing a high level of services. However, with regard to Water Board X, if they do not provide high levels of services, the municipalities might request the services of other water boards to implement projects on their behalf or ask the government to implement the projects themselves. It is therefore important that Water Board X bills the municipalities fairly maintain its infrastructure.

The third sub-theme of the influence of the standard of services on RM will be discussed next.

5.5.1.3 The influence of the standard of services on RM

Positively influence RM

The participants were asked about their opinions if the services delivered to their municipalities by Water Board X have a positive or negative impact on Water Board X’s revenue. Nine out of ten participants were of the opinion that the standard of services delivered by Water Board X might influence RM. Participant (5 M-W) stated that if the standard of services is not according to what the customers expected, customers will feel reluctant to pay for the service (4 M-F, 6 M-W, and 9 M-W). Not only will they feel reluctant to pay, an organisation’s brand image is tarnished.

Customers will not want to purchase any services from an organisation with a bad brand image due to low confidence that the services purchased will not meet their expectations. This subsequently findings in low revenue collections which lead to low RM. (5 M-W). As thus stated by a participant:

Participant	Position and department
9 M-W	Manager in the water services department

“A customer that is satisfied with the services that they get will be willing to pay for the service whilst a customer that is not satisfied, will not want to pay for the service because they feel as though they have not received value for their money.”

Participant (11 M-W) mentioned that revenues would be affected if Water Board X did not deliver services at optimum capacity, as this resulted in low revenue generation due to customers only wanting to pay for what they receive. Only one participant (8 M-W) thought that Water Board X’s revenue was not affected by the services it rendered to their municipality. This was noted by the participant:

Participant	Position and department
8 M-W	Director in the engineering department

“I do not think that their revenue will be affected by the quality of services they provide, especially to us. Water Board X charges us a fixed amount, meaning that if they are meant to deliver for example 1000 litres of water, but they deliver 700 litres, because they charge us a fixed amount, we still pay for that 1000 litres of water even though they robbed us off of 300 litres. That’s why I do not believe that their sales and surplus will be affected by the quality of services. They also respond late to fix most of the pipe bursts, but we still pay them for that.”

Based on the findings, the participants also were of the opinions that standard of services influences RM. As discussed in section 5.4.1.3, Water Board X needs to ensure that the level of services that they deliver are of high quality, as this affects revenue, due to municipalities not wanting to pay for services they are not satisfied with (Lewis, 2011 cited in Dehghan, Zenouzi and Albadvi, 2012). The second main theme of customer involvement will be presented next.

5.5.2 Findings from the theme of customer involvement

Based on thematic analysis, customer involvement (second main theme) in terms of the sub-themes as depicted in Table: 5.3 is discussed in the subsequent sections.

5.5.2.1 Mutual engagement

The participants were asked what they understand by customer involvement and they perceived it as “mutual engagement” between an organisation and its customers. From the participants’ responses, two categories emerged, which were “co-operation” and “continuous communication”.

Co-operation

(Participants from the Finance Departments)

Participants (7 M-F, 12 M-F, and 13 M-F) from the finance departments were of the opinion that engagement requires cooperation between both a customer and an organisation. Participant (7 M-F) further mentioned that cooperation permit for Water Board X and the municipality to work together to achieve a common goal, which is ensuring high quality levels of water delivered.

Continuous communication

(Participants from the water departments)

Five out of the seven participants (4 M-W, 5 M-W, 6 M-W, 10 M-W, and 11 M-W) from the water departments were of the opinion that involving customers is associated with continuous communication. One participant mentioned that continuous communication depends on an organisation informing its clients at all the stages of the project life cycle for them to be aware of the progress (11 M-W). Concerning informing customers, one participant explained as follows:

Participant	Position and department
10 M-W	Manager in the water services department

As a service provider, you should involve your customers in the services that you are offering, you must update them continuously. You must inform them of your challenges, you must inform them on how you are going to resolve the challenges.”

Participant (5 M-W) explained the importance of continuous communication for Water Board X. The participant also mentioned ways in which Water Board X should communicate with its customers to ensure that the customers are fully involved in every stage of the project. This is because, in the end, the end user is the customer, and Water Board X should ensure that the customer is satisfied. Another participant also perceived engagement as continuous communication and stated how Water Board X should have some knowledge about their customers to know how to communicate with them differently (P 6 M-W).

Based on the findings pertaining to mutual engagement, participants (4 M-W, 5 M-W, 6 M-W, 10 M-W, and 11 M-W) were of the opinion that customer engagement is defined as the communication that occurs between an organisation and its customers. Hussain, et al., (2017) maintains that customer engagement is the ongoing interaction between an organisation and its customers. McEachern (2019) defines customer engagement as a communication connection between a customer and an organisation through various channels. Having effective communication builds confidence in any organisation's image and it improves customer experience (Percival, 2019). Communication increased Water Board X's understanding of its customers as mentioned by participant (5 M-W).

The second sub-theme, involvement levels will be discussed next.

5.5.2.2 Involvement levels

The participants were asked if they were satisfied with the level of involvement between their respective municipalities and Water Board X. Five out of ten participants (5 M-W, 7M-F, 8 M-W, 9 M-W, and 10 M-W) from the municipalities were of the opinion that they were satisfied with the level of involvement between their municipality and Water Board X, while the rest of the participants were not satisfied. Issues that arose from the dissatisfied participants are "late information", "no communication at all" or "selective information".

Satisfied

(Participants from the finance departments)

Only one out of the three participants (7 M-F) from the finance departments mentioned that they were satisfied with the level of involvement from Water Board X. The participant mentioned that there is some form of communication between their municipality and Water Board X. Participant (7 M-F) mentioned how Water Board X involves them, only because the participant has a personal good relationship with the chief financial officer of Water Board X, which allow the participant to be informed about certain decisions before an official letter has been distributed to all stakeholders.

(Participants from the water departments)

Water Board X must involve municipalities in all the stages of the project life cycle and before taking any matter into their own hands because, for any project that Water Board X wants to implement, they need the municipality's approval. Moreover, for Water Board X to receive funding from the government, the municipalities must send a request to the government, and the government will then contract Water Board X to commission the project (5 M-W). The following was stated by one participant:

Participant	Position and department
6 M-W	Director in the engineering department

“We are involved, nothing for us without us, even if the funding comes from the national treasury, it all begins with us, the district municipality.”

Not satisfied

(Participants from the finance departments)

Two out of three participants (12 M-F, and 13 M-F) from the finance departments were not satisfied with the level of involvement between their respective municipalities and Water Board X. The participants were of the opinion that Water Board X barely communicates any information with them anymore. As thus stated by a participant:

Participant	Position and department
12 M-F	Chief financial officer in the finance department

“No, we are not satisfied in the sense that, like for instance, when the service board is starting or commissioning new projects, in the past we used to be involved as part of the tender committee, but all of a sudden they stopped involving us, not that we wanted to rule them in terms of the appointment that they do, but that would have shed... involving us would be showing us that it’s an agreement that we must work together to achieve the objective, in terms of satisfying the customer’s needs, as well as advising the service provider itself.”

(Participants from the water departments)

Two participants (9 M-W, and 11 M-W) were of the opinion that Water Board X sends out their emails later than the date stamp on the day they would have received the email. Participant (9 M-W) mentioned how they received an email (today) with a date stamp from days ago. This sometimes leaves the municipality with little time to prepare or to notify other stakeholders that need to be noted of the contents in the email they would have received from Water Board X. Participant (4 M-W) noticed how Water Board X sends selective information via email to their municipality, as they have a close personal relationship with a staff member of Water Board X who sometimes confirms if they received the information. The following was noted by one participant who was asked if he/she felt involved:

Participant	Position and department
9 M-W	Manager in the water services department

“Sometimes one of my colleagues in this building is always complaining that sometimes we get information very late after they [Water Board X] have done whatever they did, but what I have noticed, that they do involve us, and I am generally satisfied with the involvement we have. I think it might because I have a good relationship with one of the senior officials at the water board, unlike my other colleague, there are people he does not even want to see because they always fight, about something to do with the pipes. So maybe they then just avoid him.”

Based on the findings pertaining to levels of involvement, the participants who were dissatisfied mentioned problems, such as late communication and no communication at all. The following section will discuss the importance of sharing information through communication for Water Board X. There are many ways that Water Board X could communicate with the municipalities.

One of the mediums of communication is direct interaction with the municipalities, which may include face-to-face meetings, via a text message/WhatsApp messenger, or over a phone call (Deshpande, 2019). Water Board X could also use social media platforms such as Facebook to post information they believe is important for the customers.

Water Board X engaging with its customers through some of the mediums mentioned above permit them to know what their customers' needs and requirements are. Involving customers also builds trust between the municipalities and Water Board X and it improves customer loyalty (Thakur, 2016). Moreover, the municipalities will feel as if they are valued as they are informed all the time and it also improves the relationship with the municipalities. Thus, in the event of a setback, because a good relationship has been formed, this makes negotiations easy and both Water Board X and the municipalities can easily come to an agreement.

The third sub-theme of impact of involvement on revenue will be discussed next.

5.5.2.3 Impact of involvement on revenue

All the participants from the municipalities were of the opinion that an organisation involving its customers might have an impact on its RM.

Costs and time reduction

Participant (9 M-W) mentioned that involving customers saves Water Board X a lot of time and money that would have been spent on delivering services that would not have met the customer's needs and expectations. The following was noted by one participant:

Participant	Position and department
12 M-F	Chief financial officer in the finance department

“If we were to be allowed, and the views or the advice that we give, were to be taken seriously, it would have an impact on their profits. For instance, there should have constructed a plant, which is a reserve osmosis plant and we advised them on what to do and how best to construct it but they

never listened, but now they have started the plant and it has been completed but the plant is not operational and they are now considering the advice that we were given initially.”

Involving customer’s permits for Water Board X to receive feedback from the customers (9 M-W). This feedback allows Water Board X to understand its customers’ needs and requirements. Participant (4 M-W) mentioned that because customers are paying for a service, understanding their needs is important, or else they would not pay for a service that they believe is not of high quality. However, participant (7 M-F) was of the opinion that Water Board X should not even be involved at all with regards to implementing projects for them. The participant believes that their municipality can perform all the duties performed by Water Board X. The participant further explained that Water Board X received large sums of money, but the findings of the project implemented by them are not satisfactory and they are of the opinion that part of the money was channeled away towards personal use.

Participant	Position and department
7 M-F	Chief financial officer in the finance department

“It could. I think that, well between me and you, well not between me and you because you are doing your research, I think that the future of water boards is questionable. Municipalities should do... all there is, is that you have a CEO, a board, and additional management, but on top of that you have people that are engineers, so if you can take those people there and put them here, you can still perform the same things. There don’t even have plants, they are using our own plants.”

According to Gallup (2019), customers that are fully engaged can increase an organisation’s revenue by up to 23% more than un-engaged customers. If an organisation does not have a customer engagement strategy, the organisation could miss opportunities to engage and be involved with its customers while building strong relationships (Sashi, 2012).

The third main theme of value creation will be presented next.

5.5.3 Findings from the theme of value creation

Based on thematic analysis, value creation (the third main theme), in terms of the sub-themes, as depicted in Table: 5.3, is discussed in the subsequent sections.

5.5.3.1 Customer value

To ascertain whether the participants understood what customer value is, the participants were asked what they understood by the term, and one category emerged, namely “value for money”.

Value for money

(Participants from the finance departments)

Participant (13 M-F) perceived customer value as the satisfaction that individuals receive when they pay for a service and is of the opinion that they have received value for their money. Another participant (7 M-F) understood customer value as the benefits that a customer receives from a service purchased. The participant further explained benefits such as fewer water wastages, meaning that the municipality would be receiving the value for the money that was paid to Water Board X for water supply. One participant viewed customer value as a transaction and his/her response was as follows:

Participant	Position and department
12 M-F	Chief financial officer in the finance department

“Customer value is an exchange, if one is to relate to a cash transaction, you part with your money and you must get something which satisfies the need that you have for that you had which led to entering into that transaction.”

(Participants from the water departments)

Five participants (5 M-W, 6 M-W, 8 M-W, 9 M-W, and 11 M-W) perceived customer value as the value for money that a customer receives for a service delivered to them. Participant (11 M-W) mentioned that service providers can add value by the way they interact with the customers to ensure their needs and requirements have been understood. Valuing customers allows for any organisation to become sustainable in the end, as valued customers will become loyal and will not

consider requesting the services of a competitor (6 M-W). As mentioned by participant (4 M-W), value is created by the customer and not the organisation, which means it is important for Water Board X to ensure that their customers feel valued and that the services they are receiving are worth the amount they are paying. The following was noted by a participant:

Participant	Position and department
8 M-W	Director in the engineering department

“I think with customer value, what a customer pays for, is what they should get.”

Participant	Position and department
9 M-W	Manager in the water services department

“Customer value is a value that one gets for a particular service or product that they would have purchased.”

5.5.3.2 Value satisfaction

Four participants (4 M-W, 6 M-W, 9 M-W, and 8 M-W) are of the opinions that they are satisfied with the value that they receive from Water Board X, while five participants (5 M-W, 7 M-F, 9 M-W, 11 M-W, 12 M-F) are not satisfied.

Not satisfied

(Participants from the finance departments)

Of the five participants that are not satisfied with the value received from Water Board X, two (7 M-F, and 12 M-F) are from the finance department. Participant (12 M-F) felt that there was no value at all being received and that they could do the work that Water Board X was doing. This was stated by the participant:

Participant	Position and department
12 M-F	Chief financial officer in the finance department

“There is no value at all even to an extent that we were requesting the Minister in the Department of Water Affairs to release them of their duties and the funds, the grant sums of money be paid to us so that we can do what we believe needs to be done.”

Another participant was of the opinion that there was no value at all because of the unfair billing (7 M-F). The participant further explained how they felt that Water Board X recorded air pressure that is entering the pipes during a burst pipe, and officials from Water Board X assume that it was the actual water pressure they are recording (7 M-F). The following was noted by one participant:

Participant	Position and department
7 M-F	Chief financial officer in the finance department

“I don’t believe that the rate per litre that we are paying is reasonable. As a result what we are being billed per kilo litre even though they are billing us at a flat rate, but it is higher than what we are charging our customers in the area that we are supplying, in a way we are subsidising those customers against their high unit costs.”

(Participants from the water departments)

Water Board X is not providing enough water to the municipality, compared to the money that it is receiving (11 M-W). Participant (9 M-W) suggests that Water Board X should deduct charges based on their failures. This way the water board would experience a low income and will be forced to improve on the services that they deliver to the municipalities (9 M-W).

Satisfied

(Participants from the finance departments)

None of the participants (7 M-F, 12 M-F, and 13 M-F) from the finance departments were satisfied with the value received from Water Board X.

(Participants from the water departments)

Of the participants that are satisfied, participant (4 M-W) mentioned that Water Board X implemented projects that met their municipality’s requirements, which was contradictory to what most participants said. Participant (6 M-W) also mentioned how they are satisfied with the value received from Water Board X because every time there is a problem, Water Board X’s responses

quickly to attend to the problem, even during the weekends. Once again, this was contradictory to what other participants mentioned.

Based on the findings, the customers that felt that they were not satisfied with the value received from Water Board X. The value of water is defined by customers, as it involves the benefits that they receive from consuming the water (Aslund & Backstrom, 2017). The value is usually defined according to the social benefits that the customers receive (Prevos, 2020). The value of the services that Water Board X rendered was usually defined by how the municipalities used the services in their lives.

As noted by participant (7 M-F), they are not satisfied with the value received from Water Board X because of the unfair billings. Prevos (2020) mentions that water benefits must be compared to the costs of water. The economic view of the cost of water is limited to its price and the monetary costs (Prim, 2007). Water Board X also needs to ensure that they provide water to the municipalities that is safe to consume and with fewer water interruptions for the municipalities to maximise the value that they receive from the service.

The fourth main theme of information technology will be presented next.

5.5.4 Findings from the theme of information technology

Based on thematic analysis, information technology (the fourth main theme), in terms of the sub-themes, as depicted in Table: 5.3, is discussed in the subsequent sections.

5.5.4.1 Computer systems

To obtain an understanding of what information technology is according to the participants' perception, they were asked what they understand by "information technology". The findings pointed to the following two categories: use of computers (4 M-W, 5 M-W, 6 M-W, 8 M-W, 10 M-W, and 12 M-F); and the Fourth Industrial Revolution (7 M-F, and 11 M-W).

Use of computers

(Participants from the finance departments)

Only one participant (12 M-F) out of the three participants from the finance departments perceived information technology as the use of computers. The participant elaborated by saying that the use of computer systems makes jobs easier, for example, bills can be paid online. These computer systems can be used for communication purposes or for storing data (12 M-F). The participant also mentioned how computers can be advantageous for reading water levels. The following was noted by the participant:

Participant	Position and department
12 M-F	Chief financial officer in the finance department

“It’s the use of computerised systems to enable the provisions of services, like for instances, us dealing with water, we’ve got reservoirs, then one would be in a position to install telemetry’s inside the reservoirs in order to see what the water levels are, but while you’re sitting in the office you can link with your reservoir through the Internet to enable you to access the water levels.”.

(Participants from the water departments)

Information technology involves using computers or any electronic gadget (10 M-W). These computers can be used to collect and gather data that can be used for statistical analysis (6 M-W, 8 M-W). Once the data has been gathered, it can be stored in the cloud where it is kept safe and can be easily accessed from any computer as long as there is an Internet connection (9 M-W). Moreover, participant (5 M-W) perceived information technology as tools and platforms that can be used to transmit and create information. The following was stated by a participant, while defining the term information technology:

Participant	Position and department
9 M-W	Manager in the water services department

“...the use of databases to store and capture information. One can use computers, and this information is stored on the cloud.”

Fourth Industrial Revolution

Two participants (7 M-F, and 11 M-W) defined information technology as the Fourth Industrial Revolution. The participants' responses are as follows:

(Participants from the finance departments)

Participant	Position and department
7 M-F	Chief financial officer in the finance department

“Well its information technology, it’s supposed to assist us, in this day and age because of your fourth industrial revolution, some say we still on the third, I don’t know. So that is an abler.”

(Participants from the water departments)

Participant	Position and department
11 M-W	Deputy director in the infrastructure development department

“It’s a fourth industrial revolution that is utilised in the modern days for performing duties so that they can enhance the way of living and doing things.”

Based on the responses of participants (4 M-W, 5 M-W, 6 M-W, 8 M-W, 10 M-W, and 12 M-F), information technology is the use of computers. The participants' understanding can be backed by literature from Rouse (2015) who defines information technology as the use of computers, storage, and other physical devices to create, exchange and store all forms of electronic data. Rendulic (2011) also maintains that information technology is the use of computers to gather and transfer data. As noted by participant (12 M-F), information technology is used to make communication easy. Mehrotra (2012) supports this by stating that information technology is any form of communication that provides understandable and useful knowledge for the person receiving it.

As noted by participants (7 M-F, and 11 M-W), information technology is associated with the Fourth Industrial Revolution. The Fourth Industrial Revolution and information technology are being used to improve and control the global water crisis while using blockchain systems (Getsmarter, 2019). The Fourth Industrial Revolution can use blockchain systems (blockchain is a system of recording information in a way that makes it difficult or impossible to change, hack, or

cheat the system) to record transactions between municipalities and Water Board X (Kwayu and Abubakre, 2018). These systems allow both Water Board X and the municipalities to keep a note of the water quality and quantity. Moreover, artificial intelligence and other technologies (Getsmarter, 2019) can be used to transform the supply of water from Water Board X, by ensuring that the municipalities are receiving high level of water quality daily.

The second sub-theme of information system adopted will be discussed next.

5.5.4.2 Information systems adopted

Regarding the technology used by the municipalities to keep track of their revenue records, all the participants mentioned that they use a paper-based system, where they manually record all transactions and store them in a file.

Paper-based system.

(Participants from the finance departments)

Participants (7 M-F, and 12 M-F) mentioned that Water Board X sends them invoices via email which they print, record manually, and put in a file that is stored in a cupboard. Participant (12 M-F) mentioned how they wished there could be a system that links Water Board X's system with theirs to ensure accuracy of the billings, by comparing readings they would have received from the telemetry.

(Participants from the water departments)

The participants (4 M-W, 5 M-W, 6 M-W, 8 M-W, 9 M-W, 10 M-W, and 11 M-W) mentioned that they use a paper-based system. Participant (6 M-W) mentioned how their municipality is working on improving how they recorded their invoices to move to an online system. An online system is faster when trying to retrieve data, and it is environmentally friendly (6 M-W). Another participant (9 M-W) mentioned that their municipality use a paper-based system, but they back up all their invoices onto the cloud, by scanning the invoices.

Based on the findings with the participants, all the municipalities are currently using a paper-based system to keep a record of their billing. This suggests that the files are stored and organised traditionally, within folders and filing cabinets.

Traditional filing is easy to use for untrained people, as they can easily access and manipulate the data in the files. Anyone can look up and find a file that has been organised in alphabetical order. However, traditional files also have their disadvantages; for example, paper files can be lost in fires and floods (Bowers, 2017). Accessing files manually can also be time wasting for the municipalities, and editing a traditional file is not as easy as it would be with an electronic file. Lastly, traditional files data can easily get out of order, if the file has been put in the wrong place (Hamel, 2018).

The third sub-theme of the effect of information technology on RM will be discussed next.

5.5.4.3 Effect of information technology on RM

The participants were asked about their perceptions regarding whether using information technology affects the revenues of Water Board X. They were of the opinion that the use of information technology affects Water Board X's RM. One category emerged, which was the use of "smart meters".

Smart meters reduce costs

(Participants from the finance departments)

The use of smart meters permits water readings to be easy, fast, and efficient (12 M-F). Participant (7 M-F) states how smart meters detect leaks within pipes and thus these leaks are attended to quickly, which reduces the revenue loss due to rapid responses to maintain the pipes. Moreover, these smart meters can be used as prepaid meters also (12 M-F). However, having smart meters requires Water Board X to train its workers to use the equipment, and this might be costly (7 M-F).

(Participants from the water departments)

Two participants mentioned that the use of smart meters facilitates the reading of water levels. Smart meters save Water Board X a lot of money (5 M-W) as workers do not have to physically go to the reservoirs to take the water readings. Smart meters also reduce human errors (8 M-W). Another participant mentioned how people should not always rely on smart meters but once in a while also perform manual checks to make sure the readings are the same, as smart meters might estimate data that may lead to Water Board X either losing or gaining money due to a technical error (11 M-W). A participant mentioned the following about smart meters:

Participant	Position and department
4 M-W	Director in the water services department

“You can early detect where there are leakages in your revenue and you can come up with a plan to fix it before it’s too late.”

The fifth main theme of management commitment will be presented next.

5.5.5 Findings from the theme of management commitment

Based on thematic analysis, management commitment (the fifth main theme), in terms of the sub-themes, as depicted in Table 5.3, is discussed in the subsequent sections.

5.5.5.1 Administrative responsibilities

The participants were asked what they understand by “management commitment”, and they all perceived it as a commitment that management makes.

Attitude from management

(Participants from the finance departments)

Participant (12 M-F) perceived management commitment as an attitude on the part of an organisation’s management that ensures that all business related issues are done correctly. The

participant further explained that management is responsible for rectifying all deviations so that business goals can be met. Another participant (7 M-F) perceived management commitment as the participation in critical aspects of an organisation by top-level managers or executives.

(Participants from the water departments)

It is believed that management commitment starts at the top of the hierarchy (10 M-W). Once the chairperson of an organisation shows signs of commitment, the other workers will also be motivated. An organisation's management must be committed to ensuring that organisational goals are met, and this means that management must communicate with its members and be on the same page (9 M-W). By doing so, customer expectations are met (9 M-W). When customer expectations have been met, customers are satisfied, which shows that management is committed to delivering its services (8 M-W). The following was noted by a participant:

Participant	Position and department
11 M-W	Deputy director of infrastructure in the infrastructure development department

“As part of management of an organisation, it is important that one committed to ensuring that services of high quality are delivered to the customers.”

The second sub-theme will be discussed next.

5.5.5.2 Management's influence on revenue

The participants were asked if Water Board X's level of commitment on the part of its management might have an influence on the revenues of Water Board X. The participants were of the opinion that if Water Board X's management is not committed, it might negatively affect its revenues.

Commitment influences revenue

The decisions made by management may influence revenue in the sense that a bad decision, for example, misappropriation of funds or not properly allocating funds to various projects, could influence Water Board X's revenue as they will not be enough resource to complete a project or for maintenance work (10 M-W). Moreover, participant (6 M-W) mentioned how Water Board X

has internal issues that must be resolved. The participant further explained how, if these issues are not resolved, they would have a negative impact on the revenue of Water Board X, as it would not be one hundred percent operational due to managerial conflicts. One participant mentioned the importance of commitment by management and stated the following:

Participant	Position and department
12 M-F	Chief financial officer in the finance department

“...because the commitment will drive you to find solutions to the problems and when you resolve problems, you minimise your expenses or you are creating your opportunities to earn more revenue.”

Overall Conclusion of Sections 5.4 and 5.5

Overall, all participants from Water Board X and the municipalities had a good understanding of the terms they were asked to explain. The majority of the participants were of the opinion that the CRM factors have an influence on the RM of Water Board X. Based on the findings from Water Board X, it is noted that the participants from Water Board X felt that value creation and management commitment did not have an influence on RM, hence it was not discussed in the chapter. The participants from Water Board X and the participants from the municipalities highlighted challenges such as burst pipes that are caused by the infrastructure being old or not being maintained properly. This leads to burst pipes and water interruptions. The participants from Water Board X mentioned that their response time to repair burst pipes is usually less than 12 hours, while the participants from the municipalities mentioned that Water Board X takes more than 24 hours and up to 48 hours to repair a burst pipe. The participants from the municipalities mentioned that they all used paper-based systems.

The next section will present the summary of the chapter.

5.6 SUMMARY

In this chapter, the findings of the qualitative interviews that were conducted with thirteen participants were presented regarding the themes, sub-themes, and categories that were identified when conducting thematic analysis. The chapter commenced with a table depicting the

biographical data of the participants. Five main themes with sub-themes and categories transpired from the participant interviews with ensuing issues pertaining to each sub-theme. The five main themes identified were service quality, customers' involvement, value creation, information technology, and management commitment.

The next chapter concludes the research by providing a summary of the first five chapters of the research, followed by recommendations for the water board based on the findings of the research that were discussed in this chapter. The limitations and recommendations for future research will also be explained and discussed.

CHAPTER SIX

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

6.1 INTRODUCTION

The purpose of this chapter is to provide a summary of the study and to present an overview of the findings pertaining to the research objectives. Thereafter, the limitations and significance of the current research are discussed, and the chapter concludes with the recommendations for future research.

As was declared in Chapter One, the primary research aim was to gauge the perceptions of the participants from Water Board X and the perceptions of Water Board X's customers of selected CRM factors that may possibly influence RM. In order to achieve the aforementioned primary research aim, the following research objectives were formulated:

- To identify and describe relevant CRM factors that may possibly influence RM;
- To analyse the perceptions of the participants from Water Board X and Water Board X's customers regarding the factors identified in the framework developed from the existing literature; and
- To recommend to Water Board X how CRM might possibly influence RM based on the framework developed from the existing literature.

6.2 SUMMARY OF THE STUDY

This study comprised the following six chapters.

Chapter One provided the research context of the study, first discussing the water scarcity challenges in South Africa and the roles that water boards play in South Africa while funnelling down to the main problem statement. The purpose of the study was stated together with a brief discussion on CRM contextualisation. Thereafter, the primary research aim of the study was stated and to achieve the primary research aim, the research objectives were formulated. The research design was provided, which explained that an interpretivist paradigm was selected for this study,

with the participants selected using judgemental sampling. The population consisted of Water Board X and four municipalities (Water Board X's customers), while the sample size consisted of thirteen participants. Data was analysed using thematic analysis, and manual analysis was deemed an appropriate method of analysis. The ethical considerations were also discussed and thereafter the structure of the thesis was presented.

Chapter Two presented a review of CRM. The chapter discussed the origins of CRM and the issues relating to CRM were contextualised. The chapter also discussed the benefits and challenges of adopting a CRM approach. The CRM factors that influence RM were discussed next as they concluded the section on CRM. The section concerning RM followed. A review of RM was presented together with the origin of RM. RM was further discussed in context together with the RM tools that organisations may apply. The chapter concluded with a discussion about municipal revenue in order to have an understanding of how municipalities collect and allocate their revenues.

Chapter Three presented a review of the importance of integrating CRM and RM in an organisation and the benefits that arise that are long term. A discussion on the possible conflicts that may arise if CRM and RM are merged followed. The chapter concluded with a discussion of industries such as the airline industry, the gaming industry, and the hotel industry that have integrated CRM and RM. This was followed by a discussion about how other industries can adopt what these industries have done and tailored the integration to their specific needs.

Chapter Four presented the research design and methodology followed in the study. The research paradigm for this study was identified, and an interpretivist paradigm was deemed appropriate. The population (four municipalities and Water Board X), sample size (thirteen), and sampling technique (judgemental sampling) were discussed. A discussion followed about the data that were collected by means of open-ended, semi-structured interviews, and analysed using thematic analysis and the deductive approach. The quality of the research was explored, and the ethical considerations were considered.

Chapter Five presented the participant's responses. Thirteen participants were interviewed. The participants were divided into two groups to understand the perceptions of the participants from Water Board X and the perceptions of the participants from Water Board X's customers and to identify if Water Board X and the customers have similar perceptions. The first group had three participants from Water Board X and the second group had ten participants from the different customers of Water Board X. The perceptions of the three participants from Water Board X were presented as a whole. However, the perceptions of the participants from Water Board X's customers were divided into two subgroups: one subgroup involved the perceptions of the participants from the finance departments (three CFO's) while the other subgroup involved the perceptions of the participants from the water departments (seven participants). From these perceptions, categories, sub-themes, and themes emerged when conducting thematic analysis. The five main themes identified from the framework developed from the existing literature were service quality, customer involvement, value creation, information technology, and management commitment.

Chapter Six is the current chapter that will present the summary, an overview of the findings pertaining to the research objectives, limitations, and significance and concludes with recommendations for future research.

How the objectives of the study were met is discussed in the following section.

6.3 OVERVIEW OF FINDINGS PERTAINING TO THE RESEARCH OBJECTIVES

The main research findings pertaining to the objectives are summarised in the following sections.

6.3.1 Identify and describe relevant CRM factors that may possibly influence RM

The first research objective of the study aimed "to identify and describe relevant CRM factors that may possibly influence RM." An examination of relevant literature showed a number of factors that may ultimately influence RM. Other CRM factors, such as customer loyalty

(Long, et al., 2013), customer satisfaction (Long, et al., 2013), service standards, customer retention (Tauni, et al., 2014) and customer equity (Richards & Jones, 2008) may exist. However, a summary of the prominent factors that were recognised in the literature and were deemed appropriate for the context of this study are discussed as follows:

The first factor identified was service quality. Service quality was defined as the extent to which a service meets a customer's needs and expectations (Shahin, 2016; Long, et al., 2013). In another study by Rizka (2013), the author states that service quality focuses on meeting customers' needs, and it is important for an organisation to ensure that they have rendered services that meet their customers' expectations. Customer expectations are usually used by organisations to assess the quality of services rendered to the customers, and high quality of services is obtained when performance exceeds the expectations while a low quality of service is obtained when performance does not exceed the expectations. According to Parasuraman, Zeithaml and Barry (1985), service quality should be defined from the customers' perspective rather than the organisation's perspective. Customers judge the quality of service rendered to them by an organisation and if they are not satisfied, some customers may feel reluctant to pay for the service. This shows how important it is for an organisation to ensure that they have delivered good quality services to its customers in order for the organisation's revenues to increase. Customers that are also satisfied with the services rendered to them by an organisation will become loyal, and loyal customers may also inform potential customers of the good services rendered to them by the organisation, which leads to more revenues for the organisation because of the new customers.

The second factor identified was customer involvement. Customer involvement is the extent to which an organisation engages with its customers during service production (Zhang, Zhong & Makino, 2015). Organisations need to involve their customers in everything that they do, as the value of a service or product is created by the customer and not the organisation (Lusch & Nambisan, 2015). Organisations that involve customers can meet customers' expectations. Involving customers allows organisations to gain knowledge on who their customers are, what each customer's needs are, and what the organisation will be able to tailor each service to each customer. If organisations did not engage with their customers, they might render services that the customers might reject, as the customers will not be able to use the service. This will lead to loss

of revenue by the organisation. It is therefore important that organisations involve their customers to lower costs while increasing revenues, and to increase the possibility of customer expectations being met.

The third factor identified was customer value. According to Strydom, Petzer and De Meyer, (2015) customer value is the overall assessment of the benefit that a product would offer versus what is sacrificed to obtain the product. Customer value is considered an important factor for any organisation to remain competitive in the market. Organisations that value their customers will retain them easily as the customers feel valued, unlike organisations that do not (Landroquez, Castro & Cepeda-Carrion, 2013). Valuing customers can also be an advantage for an organisation as this can attract new customers. When an organisation has new customers, most likely its revenues will increase. An organisation that retains its current and existing customers, will notice an increase in its revenue as the customers will remain loyal to the organisation. It is therefore important for all organisations to ensure that they show value to their customers, by ensuring that the price of the services rendered is worth the service.

The fourth factor identified was information technology. Information technology can be defined as computer software and hardware solutions that assist organisations with their operations and strategies (Onn & Sorooshian, 2013). Organisations use information technology to gain a competitive advantage over their competitors. Information technology allows organisations to be able to communicate with their customers. Organisations can use social media platforms such as Facebook, Twitter, WhatsApp or Instagram to communicate with their customers. Information technology allows organisations to use machines such as computers that make the capturing of customer data easy and fast to retrieve. Information technology plays an important role in almost all aspects of an organisation's operations and organisations that invest in it are most likely to improve both revenue and productivity (Schwab 2017).

The last factor identified was management commitment. McGonagle, et al., (2016) define management commitment as the participation by top management to ensure quality, security and safety within the organisation. According to Tait and Roberts-Lombard (2014), commitment is the belief in delivering a promise made and ensuring that effort has been made to keep that promise.

When management keeps its promise of delivering services, it improves relationships between the organisation and the customers. Roberts-Lombard and du Plessis (2012) mention that commitment is key to the success of any relationship. High commitment levels are linked with perceptions of future rewards, relationship identification, a desire not to have an alternative product or service, and the individuals' assumed responsibilities (Keskes, 2014).

Conclusion

Integrating the CRM factors and RM may have an influence on profit maximisation, even though CRM and RM operate differently and have different outcomes. An organisation can maximise profits by maintaining a good relationship with its customers, and feedback from its customers is valuable, whether it is positive or negative. An organisation managing its relationships with its customers may lead to improved RM due to good relationships being developed between the two. It can thus be surmised that the association between CRM and RM is important as affirmed by Mahmoud (2016).

The second research objective will be discussed next.

6.3.2 Perceptions of participants from Water Board X and participants from Water Board X's customers regarding factors identified from the existing literature

The second objective was "to analyse the perceptions of the participants from Water Board X and Water Board X's customers regarding the factors identified in the framework developed from the existing literature."

Table: 6.1 to Table: 6.5 shows a summary of the perceptions of the participants from Water Board X and Water Board X's customers. The information in the tables is interpreted in detail underneath each table for it to be meaningful. The first row of each table shows five columns. The columns are "Theme, Category, Water Board X, Water Board X's customers, and literature." Underneath the theme column, the table shows the five themes identified from the existing literature, while the category column has phrases of the questions from the interview guide that the participants were

asked during the interviews to know their perceptions. Column three, which is called “Water Board X”, shows the perceptions of the participants from Water Board X, while the next column shows the perceptions of Water Board X’s customers, based on the phrases in the category column. The last column compares the participants’ perceptions with the literature. Underneath the Water Board X’s customers’ column, there are two columns, namely Finance and Water. These two columns show how participants from the finance departments and the participants from the water departments perceived the services rendered to them by Water Board X. Some of the participants’ perceptions were similar, which will be noted, while some were different.

Table: 6.1 Summary of Water Board X and Water Board X’s customers’ perceptions of service quality

Theme	Category	Water Board X	Water Board X’s customers		Literature
			Finance	Water	
Service quality	Perception of service quality	Rendering services with fewer water interruptions and high customer satisfaction	Rendering services that meet customers’ expectations	Receiving value for money from a service rendered and meeting customers’ expectations	Services that meet customers’ needs and expectations (Shahin, 2016; Long, et al., 2013)
	Level of satisfaction with regards to services	Satisfied with services rendered to the customers	Dissatisfied because of unfair billings with regards to quantity of water received	Dissatisfied because of low infrastructure maintenance and implemented projects not being completed	
	Perception if service quality has an influence on revenue	Poor services rendered to customers results in low revenue collections due to dissatisfied customers	Bad services might lead to customers feeling reluctant to pay	Customers satisfied with services rendered are likely to pay for services	Satisfied customers are loyal and loyal customers pay for services rendered (Pakurar, et al., 2019; Wali, Wright & Reynolds, 2015)

Source: Researcher’s own compilation

Based on the findings pertaining to service quality, the three participants from Water Board X perceived service quality as an organisation that renders services with fewer water interruptions

compared to not rendering the service at all that has been paid for by the customer. The participants also perceived service quality as the satisfaction that customers experience after a service has been rendered to them. Half of the participants from Water Board X's customers from the finance and water departments perceived service quality as the ability of an organisation to meet its customers' expectations, while other participants from the Water Departments perceived service quality as the value for money that a customer should receive for a service rendered to them. However, based on the literature, Shahin (2016) and Long, et al., (2013) perceive service quality as a service rendered by an organisation that should meet the customers' needs and expectations. George and Kumar (2014) state that service quality evolved from customer satisfaction which suggests that for customers to be satisfied with a service rendered to them, the quality of service must have been satisfactory. After analysing the different perceptions, it can be noted that the perceptions of the participants from Water Board X towards service quality were based on how they felt how the quality of services rendered by Water Board X to its customers should be like. They made reference to fewer water interruptions in order for the customers to be satisfied while the participants from the Water Board X's customers perceived service quality from a general point of view. It can be noted that the participants from Water Board X's customers' perception of service quality is similar to what the literature says about service quality and it can be concluded that all participants had an adequate understanding of the term. Moreover, there is no gap in the literature concerning how service quality is understood.

Concerning the participants being satisfied with the services rendered to them by Water Board X, the participants from the finance departments were not satisfied with the billing invoices they received from Water Board X, as they felt that they were not an accurate representation of the quantity of water they received. The participants felt that Water Board X recorded air pressure in their pipes during the times when there were water interruptions and there was no water flowing in the pipes, which led to incorrect billing. The participants from the Water Departments were not satisfied because of the lack of maintenance on the infrastructure owned by Water Board X, which was the cause for most of the burst pipes that led to water interruptions for the customers. However, the participants from Water Board X stated that they were satisfied with the services they rendered to their customers, but they mentioned the challenge of not being able to maintain their entire infrastructure. The reason behind the differences in the perceptions of the level of satisfaction is

mainly attributed to a lack of communication, and the literature has stressed the importance of communication between an organisation and its customer as discussed in Chapter Two, Section 2.4.2.

Lastly, all the participants from Water Board X and Water Board X's customers perceived that if Water Board X did not render good quality services to its customers, their revenues would be low as customers would feel reluctant and would not want to pay for services that did not meet their expectations. Based on the literature, Pakurar, et al., (2019); Wali, Wright and Reynolds, (2015) affirm that satisfied customers will pay for the services that are rendered to them, and they are more likely to be loyal to the organisation, as loyal customers would want to pay for all services rendered to maintain good relationships. It can be noted that there is no difference between the literature and the participants' perceptions concerning how the quality of services might influence the revenues of Water Board X. Moreover, Water Board X needs to ensure that it renders a good quality service with few interruptions for improved revenues.

Table: 6.2 Summary of Water Board X and Water Board X's customers' perceptions of customer involvement

Theme	Category	Water Board X	Water Board X's customers		Literature
			Finance	Water	
Customer involvement	Perception of customer involvement	Engaging all municipalities in the decision makings	The cooperation between Water Board X and the municipalities	The continuous communication between Water Board X and the municipalities	The ongoing interaction between an organisation and its customers (Hussain, et al., 2017; McEachem, 2019)
	Level of satisfaction with regards to customer involvement	Partially satisfied with services rendered, the only challenge is of infrastructure that needs maintenance	All the participants were not satisfied because of a lack of communication from Water Board X with regards to water interruptions	Three participants were not satisfied because they received information late, while four were satisfied with how Water Board X informs them of all decisions that affect them	
	Perception if customer involvement has an influence on revenues	Involving customers fosters good relationships which allow for payment plans to emerge	Organisations have knowledge of customers' needs, which leads to an increase in revenues due to customer expectations being met	Involving customers saves organisations time and money from rendering services that do not meet customer expectation	Involved customers can increase an organisation's revenue by up to 23% more than un-engaged customers (Gallup, 2019)

Source: Researcher's own compilation.

Based on the findings pertaining to customer involvement, all three participants from Water Board X perceived customer involvement as engaging all the customers in decisions that may affect them, for example, a municipality is involved in the planning phase before a project has been implemented. However, Water Board X's customers had different perceptions. Participants from

the finance departments perceived customer involvement as the cooperation between their organisation and Water Board X, while the participants from the water departments perceived customer involvement as the continuous communication between Water Board X and their organisation. However, the literature states that customer involvement is the interaction between an organisation and its customers (Hussain, et al., 2017; McEachem, 2019). Based on the perceptions of the participants and what the literature states concerning customer involvement, it can be noted that there is a difference in the way the participants perceive the term. The participants' perception is more in terms of customers being truly interested in a service, while the literature meaning of "interaction" has more to do with conversations taking place between an organisation and a customer. To conclude, it can be noted that there is a small gap in the literature concerning how customer involvement is defined and the participants' perceptions could be added to the literature to cover the gap.

The participants had mixed feelings about being involved by Water Board X. The participants from the finance departments were satisfied with how Water Board X involved them with regards to matters relating to the financial side of the business, in terms of receiving invoices on time and having meetings to discuss budgets. They went on to state how they have good relationships with the CFO of Water Board X. Some participants from the Water Departments were also happy with the level of involvement between their municipality and Water Board X, as they felt that Water Board X always consulted them before they made any decision that may have affected the municipality. However, other participants from the Water Departments were not happy with the level of involvement, as they believed that Water Board X took decisions, such as maintaining burst pipes on its own, and did not communicate with them. In contrast to the participants that were not happy, all the participants from Water Board X strongly emphasised that it involved all their customers in everything that it did and that communication was always sent out by its public relations staff member.

Lastly, all the participants from Water Board X and Water Board X's customers perceived that if Water Board X involved its customers in all its daily operations, it may affect them and would improve its revenues. Water Board X participants mentioned that involving the customers fosters good relationships, which leads to customers wanting to maintain those relationships by paying

for services rendered. However, participants from the finance departments mentioned that by involving its customers, Water Board X would have knowledge of their customers' needs and it would meet their expectations which saved Water Board X time and money from being wasted by rendering services that were not required. This subsequently increased revenues from services being paid for, as was noted by the participants from the Water Department. The literature also states that involving customers increases an organisations revenue (Gallup, 2019), and it can be noted that there is no difference between the participants' perceptions and the literature concerning organisations involving their customers to increase revenue. This reveals that currently there is no gap in the literature.

Table: 6.3 Value creation summary on Water Board X and WaterBoard X's customers' perceptions

Theme	Category	Water Board X	Water Board X's customers		Literature
			Finance	Water	
Value creation	Perception of value creation	It involves meeting customer expectations	It's the value for money for a service rendered	Value for money for a service rendered	The trade-off between the benefits and costs involved in an exchange of service (Keranen & Jalkala, 2014)
	Level of satisfaction with regards to the value received	Satisfied with the value rendered to the customers	Not satisfied because no value was being received from services rendered	Some participants were satisfied the with value received while some were not satisfied due to receiving less water supply than expected.	

Source: Researcher's own compilation.

Based on the findings pertaining to value creation, the participants from Water Board X perceived value creation as an organisation meeting their customers' expectations. Water Board X's customers from the finance and water departments perceived value creation as the value for money that a customer should receive for the service rendered to them. According to the literature, value

creation is the benefits that a customer should receive after they have purchased a service (Keranen & Jalkala, 2014). Based on the perceptions of the participants and the literature, it can be noted that there is no difference between the perceptions of the Water Board X's customers and the literature concerning what value creation is as "value for money" stood out as the common interpretation. However, concerning the participants from Water Board X, their perception of value creation is different from what is in the literature, and this indicates a gap in the literature that could be closed by doing more research. It can be concluded that the majority of the participants had an adequate understanding of what value creation is.

Concerning the value received from Water Board X, the participants from Water Board X, strongly felt that it added value to the services that it rendered to its customers and they were satisfied. The participants mentioned how the Board added value by fixing all the burst pipes that delivered water to the customers that belong to them within less than 12 hours for them not to have long periods of water interruptions. However, the participants from Water Board X's customers from the finance department were not happy with the value received, as they felt that they were not receiving sufficient water for the amount of money that was paid to Water Board X. Some participants from the water departments were happy with the value rendered to their municipality, as they felt that Water Board X usually went the extra mile to ensure that they had water all the time, even when they called its workers at odd hours and during the weekends. The participants from the water departments who were not happy with the value received expressed their disappointment with the quantity of water that they received from Water Board X. Based on the participants' perceptions of the value that they received, it is noted that there were mixed feelings and that not all of Water Board X's customers were happy with the value that they received, which Water Board X should try to improve.

Table: 6.4 Summary of Water Board X and Water Board X's customers' perceptions of information technology

Theme	Category	Water Board X	Water Board X's Participants		Literature
			Finance	Water	
Information technology	Perception of information technology	Computer systems used to capture data	The use of computers and involving the Fourth Industrial Revolution to improve and control the global water crisis while using blockchain systems	The use of computers for day to day business operations	Computer software that assists organisational operations and strategies (Deb, 2014; Onn & Soroshian, 2013)
	Information systems used	The use of a Baan system and a telemetry system	Paper-based system used	Paper-based system used	The use of telemetry systems
	Perception of the use of information technology and its influence on revenues	Improved efficiency with reduced costs and time by using telemetry systems	Use of smart meters at reservoirs to save travelling costs and reduce human error	Use of smart meters at reservoirs to save travelling costs and reduce human error	Improves production and the use of smart meters and telemetry systems to record water levels (Schwab 2017)

Source: Researcher's own compilation.

The participants from Water Board X perceived information technology as the use of computers to capture data, while the participants from Water Board X's customers from the finance departments perceived it as the use of the Fourth Industrial Revolution to improve and control the global water crisis while using blockchain systems. Participants from the water departments also perceived information technology as the use of computers by an organisation in their daily business operations. Based on the literature, information technology is the use of computers to help organisations with their daily operations (Deb, 2014; Onn & Soroshian, 2013). Based on the participants' perceptions, it can be noted that the participants from Water Board X and the participants from the water departments' understanding of information technology was similar to

the one found in the literature. Moreover, only the participants from the finance departments understood the term differently, as they defined it as the use of the Fourth Industrial Revolution.

The participants from Water Board X mentioned that they used a Baan system, because it had all the features that they required, such as the ability to tailor services at a reasonable cost, without worrying about losing any information due to upgrades. However, the participants from Water Board X's customers mentioned that they had a paper-based system where they kept all financial records. It can be concluded that Water Board X and its customers have different systems, and that the customers should consider not using paper-based systems that should be replaced by technological systems.

Lastly, based on the findings concerning whether information technology has an influence on revenues, the participants from Water Board X, perceived that the use of information technology would have an influence on Water Board X's revenue. The participants mentioned the use of telemetry systems that eliminate the use of humans from having to go physically to the reservoirs to read the water levels, as that is sent to the screen of a computer in real-time, which subsequently saves travelling costs. The participants from Water Board X's customers also mentioned the use of smart meters to improve efficiency and to reduce human error while reading the water levels. It can be affirmed by Schwab (2017) that for water utilities to improve their revenues, the use of technologies such as smart meters is important. To conclude, it can be noted that what the participants mentioned is found in the literature and there is no literature gap concerning the use of technology to improve revenues.

Table: 6.5 Summary of Water Board X and Water Board X's customers' perceptions of management commitment

Theme	Category	Water Board X	Water Board X's customers		Literature
			Finance	Water	
Management commitment	Perception of management commitment	Management must be driven to ensure the organisation is successful	The responsibilities of an organisation's management to ensure that business operations are run smoothly	The responsibilities of an organisation's management to ensure business operations run smoothly	The participation by top management to ensure quality, security, and safety within the organisation (McGonagle, et al., 2016)
	Does management's commitment influences revenues	Commitment from management to ensure a service is rendered increases revenues from the money received	Committed management affect revenues positively with their actions in the workplace	Customers that are satisfied by an organisation's level of commitment will want the organisation to render more services	Management that displays high commitment levels, reaps positive rewards for the organisation (Keskes, 2014)

Source: Researcher's own compilation.

Based on the findings pertaining to management commitment, the participants from Water Board X perceived management commitment as the drive that Water Board X's management should have to ensure that all organisational goals are met. The participants from Water Board X's customers perceived management commitment as the responsibilities that an organisations management should assume to ensure that all business operations are running smoothly. However, McGonagle, et al., (2016) maintain that management commitment is the participation by top management to ensure quality, security, and safety within the organisation. Based on the participants' perceptions, it can be noted that there is a difference between what the participants perceive management commitment to be and what is found in the literature. To conclude, therefore, it noted that there is a gap in the literature concerning how the term management commitment is understood, and more research could be conducted.

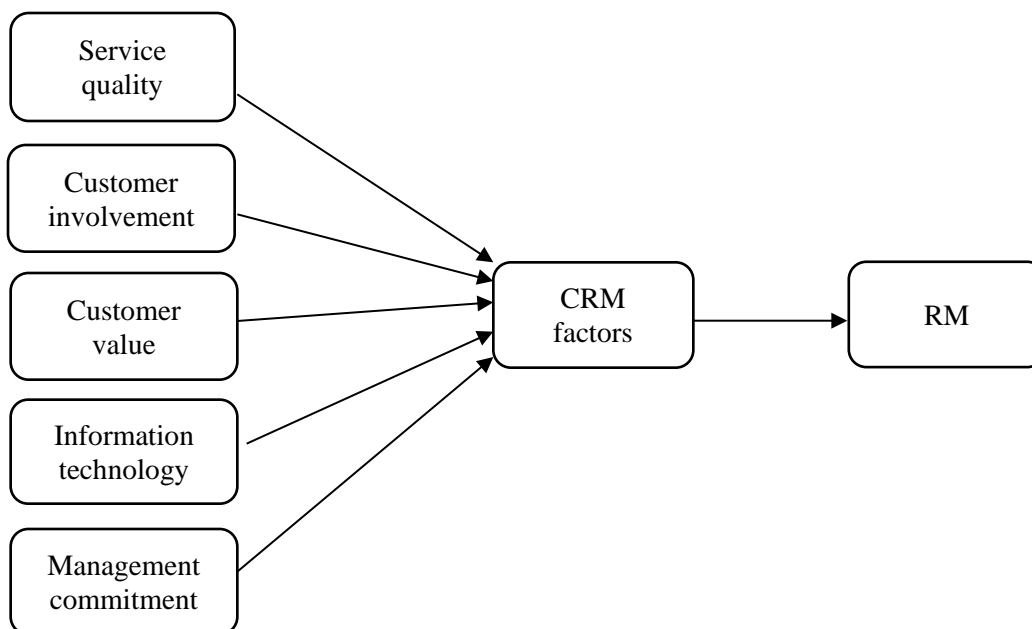
Concerning whether the commitment of Water Board X's management may have an influence on its revenues, all the participants mentioned that it may influence its revenues based on its actions

at the Water Board in terms of ensuring that services are rendered and that all measures are in place to ensure effective daily operations. Based on the literature, management commitment may also have an influence on an organisation's revenues, as high commitment reaps high rewards. Although the participants' perceptions of how management's commitment may influence revenues are different, both the literature and the participants maintain that revenues are influenced by management's behaviour. It can be concluded that it is important for Water Board X's management to be committed for revenues to increase.

6.3.3 Recommendations to Water Board X

The third research objective was "to recommend to Water Board X how CRM might possibly influence RM based on the framework developed from the existing literature." Recommendations will be based on the five themes identified from the existing literature. The five themes were service quality, customer involvement, value creation, information technology, and management commitment.

Figure: 6.1 Proposed framework developed from the existing literature



Source: Researcher's own compilation

Figure 6.1 illustrates the proposed framework developed from the existing literature. The framework illustrates five factors that were identified and deemed appropriate for this study, namely, service quality, customer involvement, customer value, information technology, and management commitment. These factors have been discussed in section 6.3.1.

The next section will discuss recommendations based on service quality.

6.3.3.1 Recommendations for service quality

The primary activity of a water board is to provide bulk potable water. Moreover, concerning the challenges of the quality of services delivered to the municipalities by Water Board X, it is recommended that Water Board X should put in place key performance indicators (KPI) to measure how effective they are with regards to achieving their objectives. A shortage of water supply is relatively easy to detect, but solutions may require interventions that are technical and financial. Recommendations for Water Board X could be to invest in technology that will be installed in the reservoirs that they own to reduce costs lost from water leakages. The technology would ensure the easy detection of burst pipes.

Recommendations concerning customer involvement will be discussed next.

6.3.3.2 Recommendations for customer involvement

Water Board X needs to address the perceptions of its customers who were not satisfied with the level of involvement between them and the Water Board. The participants from Water Board X's customers mentioned issues relating to receiving information late that would have warned them of possible water interruptions and not being involved in any decision-making where the municipality is affected. As explained by Lusch and Nambisan (2015) the value of the services rendered to the municipalities is created by the municipalities themselves and not Water Board X, and therefore, it is recommended that it is important for Water Board X to ensure that all their customers are fully involved in all decisions that may affect them. Water Board X needs to engage with its customers more frequently, as this improves relationships between Water Board X and the customer. According to Svendsen, et al., (2011) organisations that involve their customers are more likely to succeed.

Recommendations concerning value creation will be discussed next.

6.3.3.3 Recommendations for value creation

It was noted by the participants from the finance departments that there was no value being received from the services rendered to their municipalities by Water Board X. It is recommended that Water Board X adopt coherent and sustainable revenue strategies through the use of appropriate tariff structures that are simple, equitable, affordable, financially sustainable and transparent for all.

Recommendations concerning information technology will be discussed next.

6.3.3.4 Recommendations for information technology

Finding solutions to improve water management capabilities that allow for Water Board X to provide municipalities with better basic services should be a priority for Water Board X. It is recommended that Water Board X adopt technologies that are on the market as these technologies can detect leakages, manage payments, control water flow and transmit data. One major benefit of these technologies is that it minimises water disruptions and losses while maximising management and revenue collection. It is therefore recommended that Water Board X considers adopting this technology and run it parallel with the technologies that they already have that do not have functions like controlling the flow of water.

Recommendations concerning management commitment will be discussed next.

6.3.3.5 Recommendations for management commitment

It is recommended that Water Board X's management should show commitment by prioritising water loss management and by properly auditing water supplies and water treatment revenue while increasing efficiency in supply and revenue recovery. This will allow them to better serve their customers, improve their financial standing, and allocate funding for water infrastructure upgrades.

Recommendations concerning integrating CRM and RM will be discussed next.

6.3.3.6 Recommendations and conclusion on integrating CRM and RM

Based on Chapter Three, section 3.1.2, it is acknowledged that CRM and RM are two different business practices that have never been integrated within the water sector and by water boards. If CRM and RM are not integrated properly, possible conflicts may arise, such as focusing too much on short term revenues and ignoring long-term revenues and the relationships with customers that are affected, which leads to poor customer loyalty. The findings of the study suggest that improving service quality will have an influence on revenues, while continuous involvement and interactions between an organisation and its customers also improve revenues. The findings also suggest that adding value to all services rendered to the customers and using information technology to improve efficiency and effectiveness improves an organisation's revenues. Lastly, the findings suggest that organisations' management should be committed to ensuring that all organisational goals and objectives are met and that daily business operations are running smoothly. Based on these findings, it is recommended that Water Board X uses the CRM factors identified, as these will improve the RM of the organisation. As affirmed in the literature discussed in Chapter Three, integrating CRM and RM will improve an organisation's financial performance and will improve the long term finances of Water Board X.

6.4 LIMITATIONS AND SIGNIFICANCE OF THE CURRENT RESEARCH

The present study has attempted to make a significant contribution to the body of knowledge on how CRM factors may influence RM at a selected water board in South Africa. However, a few limitations should be considered when making interpretations and conclusions relating to the findings of this study. These limitations are as follows:

- The study did not include the managers of the municipalities. The researcher thus acknowledges that the presence of the managers of the municipalities might have presented interesting findings and facilitated a comparison of the findings relating to South African employees.
- Generalisations from the research findings cannot be done with absolute confidence due to the small sample and the study only focusing on one water board in South Africa.

Despite these limitations, the findings of this study contribute to the body of knowledge of integrating CRM and RM to improve RM not only at the selected water board but also at other water boards in South Africa. Research concerning CRM and RM is an under-researched field, not just in South Africa but globally. For this reason, promising future research possibilities exist as indicated in the following section.

6.5 RECOMMENDATIONS FOR FUTURE RESEARCH

Based on the outcomes of this research, the following specific recommendations are made for future research:

- Conduct a similar study using a quantitative approach with a larger sample in order to generate findings that can be more generalised.
- Consider research on other CRM factors found in the literature in order to create a greater diversity in the body of knowledge already contributed.
- Focus on other stakeholders of Water Board X, for example, political figures, community members and non-governmental organizations (NGO) in order to understand their perceptions if CRM factors may influence RM, as this may add interesting knowledge to the findings that have been obtained. For example, NGO's might be of the opinion that there is no relationship between them to work together to provide safe and clean water to the communities.

LIST OF REFERENCES

- Adeniyi, A. O., 2007. Impacts of key dimensions of customer value on customer relationship management (CRM) performance: Evidence from Nigeria's telecommunication industry. *African Journal of Business and Economic Research*, 2 (1), pp. 80 – 91.
- Agarwal, A., 2012. Importance of CRM for customer satisfaction. *Project Guru*, [online] Available at: <<https://www.projectguru.in/publications/importance-crm-customer-satisfaction/>> [Accessed 4 November 2019].
- Ahearne, M., Rapp, A., Mariadoss, B. J. and Ganesan, S., 2012. Challenges of CRM implementation in business-to-business markets: A contingency perspective. *Journal of Personal Selling and Sales Management*, 32 (1), pp. 117 – 129.
- Ahmad, N., Malik, M. S. and Tariq, M. S., 2014. Importance of customer involvement in service innovation and the role of total quality management. *Singaporean Journal of Business Economics and Management Studies*, 3 (2), pp. 103 – 114.
- Akroush, M. N. and Khatib, F. S., 2010. The impact of service quality dimensions on performance: An empirical investigation of Jordan's commercial banks. *Journal of Accounting – Business and Management*, 16 (1), pp. 22 – 44.
- Alavi, S., Ahuja, V. and Medury, Y., 2012. Metcalfe's law and operational, analytical and collaborative CRM- using online business communities for co-creation. *Journal of Targeting, Measurement and Analysis for Marketing*, 20 (1), pp. 35 – 45.
- Alex, A., 2019. 12 proven tactics to increase your customer lifetime value. *Retently*, [online] Available at: <<https://www.retently.com/blog/increase-customer-lifetime-value/>> [Accessed 21 October 2020].
- Ali, F., Hussain, K., Konar, R. and Jeon, H., 2016. The effect of technical and functional quality on guests perceived hotel service quality and satisfaction: A SEM-PLS analysis. *Journal of Quality Assurance in Hospitality and Tourism*, 18 (3), pp. 354 – 378.
- Alireza, S., 2015. Critical success factors of CRM: Antecedents to successful implementation. *Management Innovator*, 8 (1), pp. 105 – 131.
- Alshourah, Z., 2019. Assessing the influence integration of customer relationship management (CRM) on financial performance: An empirical study on commercial banks in Amman. *Journal of Resource Development and Management*, 60, pp. 45 – 54.

- Ames, H., Glenton, C. and Lewin, S., 2019. Purposive sampling in a qualitative evidence synthesis's worked example from a synthesis on parental perception of vaccination communication, *BioMed Central Medical Research Methodology*, [online] Available at: <<https://bmcmmedresmethodol.biomedcentral.com/articles/10.1186/s12874-019-0665-4>> [Accessed 14 May 2019].
- Amir, M., Yousof, H. and Asma, E., 2014. The effect of using customer relationship management system on customer loyalty case study: Ansar bank's branches in east Azarbaijan. *Indian Journal of Science Research*, 8 (1), pp. 98 – 106.
- Anney, V. N., 2014. Ensuring the quality of the findings of qualitative research; looking at trustworthiness criteria. *Journal of Emerging Trends in Educational Research and Policy Studies*, 5 (2), pp. 272 – 281.
- Anning-Dorson, T., Hinson, R. E., Amidu, M. and Nyamekye, M. B., 2018. Enhancing service firm performance through customer involvement capability and innovativeness. *Journal of Service Marketing*, 32 (1), pp. 83 – 94.
- Antwi, S. K. and Hamza, K., 2015. Qualitative and quantitative research paradigms in business research: A philosophical reflection. *European Journal of Business and Management*, 7 (3), pp. 217 – 221.
- Aslund, A. and Backstrom, I., 2017. Management processes and management's role in customer value creation. *International Journal of Quality and Service Sciences*, [e-journal] 9 (2), pp. 148 – 164. <https://doi.org/10.1108/IJQSS-11-2015-0074>.
- Astalin, P. K., 2013. Qualitative research designs: a conceptual framework. *International Journal of Social Science and Interdisciplinary Research*, 2 (1), pp. 118 – 124.
- Ata, U. Z. and Toker, A., 2012. The effect of customer relationship management adoption in business-to-business markets. *Journal of Business and Industrial Marketing*, 27 (6), pp. 497 – 507.
- Avgerou, C. and Walsham, G., 2017. *Information technology in context: Studies from the perspective of developing countries*. London: Routledge.

- Awwad, M. S. and Al-adaileh, R. M., 2012. Factors determining customer relationship management practices: The context of Jordanian Commercial Banks. *Jordan Journal of Business Administration*, 8 (1), pp. 208 – 212.
- Aziz, H. A., Saleh, M. and Rasmy, M. H., 2011. Dynamic room pricing model for hotel revenue management. *Egyptian Informatics Journal*, 12, pp. 177 – 183.
- Babbie, E. and Mouton, J. 2012. *The practice of social research, South African edition*. Cape Town: Oxford University Press Southern Africa.
- Babbie, E. and Mouton, J., 2006. *The practice of social research*. Cape Town: Oxford University Press Southern Africa.
- Babbie, E., 2012. *The practice of social research*. 13th ed. California: Wadsworth Publishing.
- Bahrami, M., Ghorbani, M. and Arabzad, S. M., 2012. Information technology (IT) as an improvement tool for customer relationship management (CRM). *Procedia-Social and Behavioural Sciences*, 41, pp. 59 – 64.
- Bailey J., 2008. First steps in qualitative data analysis: transcribing. *Family Practice*, 25, pp. 127 – 131.
- Baker, T., 2018. Defining revenue management and dynamic pricing – the difference is important. *Baker Richards*, [online] Available at: < <https://www.baker-richards.com/> > [Accessed 24 November 2019].
- Basit, T. N., 2003. Manual or electronic? The role of coding in qualitative data analysis. *Educational Research*, 45 (2), pp. 143 – 154.
- Bata, H., Pentina, I., Tarafdar, M. and Pullins, E. B., 2018. Mobile social networking and salesperson maladaptive dependence behaviours. *Computers in Human Behaviour*, 81, pp. 235 – 249.
- Bazrkar, A., Mirzaei, S. and Nasab, S. A., 2018. The relationship between management commitments to service quality role of effective participation of employees in banking service. *International Journal for Quality Research*, 12 (3), pp. 625 – 638.
- Bell, P. C., 2012. The concepts of revenue management: a tutorial. *International Transactions in Operational Research*, [e-journal] 19 (1 – 2), pp. 23 – 37. DOI: 10.1111/j.1475-3995.2010.00787.x.

- Body, A. L. and Limayem, M., 2017. The impact of customer relationship management on customer loyalty: the moderating role of web site characteristics. *Journal of Computer-Mediated Communication*, 9 (4), pp. 1 – 9.
- Bonnemier, S., Burianek, F. and Reichwald, R., 2010. Revenue models for integrated customer solutions: Concept and organisational implementation. *Journal of Revenue and Pricing Management*, 9 (3), pp. 228 – 238.
- Bowers, K., 2017. Disadvantage of manual document filing processes. *Hybrid Document Systems*, [online] Available at: <<https://blog.mesltd.ca/the-disadvantages-of-manual-document-filing-processes>> [Accessed 29 January 2021].
- Braun, V. and Clarke, V., 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, pp. 77 – 101.
- Browning, K. K. F. and Sparks, B., 2013. The influence of online reviews on consumers' attributions of service quality and control for service standards in hotels. *Journal of Travel and Tourism Marketing*, 30 (1 – 2), pp. 23 – 40.
- Bryman, A. and Bell, E., 2014. *Research methodology. Business and management contexts*. Cape Town: Oxford University Press.
- Buttle, F. A. and Maklan, S., 2014. Customer relationship management: concepts and technologies. *Research Gate*, [online] Available at: <file:///C:/Users/PHINTE~1/AppData/Local/Temp/ButtleMaklan3e_chapter1.pdf> [Accessed 27 July 2019].
- Cai, W., 2017. Channel management and product design with consumers' probabilistic choices. *International Journal of Production Research*, 55 (3), pp. 904 – 923.
- Caki, N., Asfuroglu, L. and Erbas, O., 2015. The relationship between the level of attachment in romantic relations, affective commitment and continuance commitment towards organisation: A field research. *Procedia Economics and Finance*, 26, pp. 1007 – 1013.
- Camilleri, M. A., 2018. *Understanding Customer Needs and Wants. In Travel Marketing, Tourism Economics and the Airline Product*. Basel: Springer Nature.
- Caroline, N., Harriet, K. and Anne, N., 2016. Top management commitment for successful small and medium-enterprises (SMEs): A hoax or a reality? *European Scientific Journal*, 12 (4), pp. 259 – 267.
- Caulfield, J., 2019. *How to do thematic analysis*. [online] Available at: <<https://mail.google.com/mail/u/0?ui=2&ik=6621642465&attid=0.1&permmsgid=msg->

- <f:1650635083185819955&th=16e83bdcdb169133&view=att&disp=safe>> [Accessed 29 November 2019].
- Cetin, G., Demirciftci, T. and Bilgihan, A., 2016. Meeting revenue management challenges: Knowledge, skills and abilities. *International Journal of Hospitality Management*, 57, pp. 132 – 142.
- Chambers, S., 2018. The importance of customer loyalty. *Nice Reply*, [online] Available at: <<https://www.nicereply.com/blog/the-importance-of-customer-loyalty/>> [Accessed 2 November 2019].
- Channing, J., 2014. A new vision for revenue generation in municipalities: future. *Official Journal of the Institute of Municipal Finance Officers*, 15, pp. 25 – 26.
- Chaudhuri, M., 2016. CRM and customer engagement have become (nearly) inseparable. Do you know why? *Customer Think*, [online] Available at: <<http://customerthink.com/crm-and-customer-engagement-have-become-nearly-inseparable-do-you-know-why/>> [Accessed 17 November 2019].
- Chauke, K. R. and Sebola, M. P., 2016. Revenue collection in South Africa. A comparative analysis of South African Revenue Services and the South African municipalities. *Journal of Public Administration*, 51, pp. 423 – 435.
- Cheng, C. J. and Shiu, E. C., 2018. How to enhance SMEs customer involvement using social media: The role of social CRM. *International Small Business Journal*, 37 (1), pp. 3 – 21.
- Chetty, P. and Thakur, S., 2019. Understanding the importance of Buttle’s CRM value chain model. *Project Guru*, [online] Available at: <<https://www.projectguru.in/buttles-crm-value-chain-model/>> [Accessed 21 March 2019].
- Chirima, D. T. and Chapoto, E., 2016. The impact of customer retention strategies on customer loyalty and satisfaction in Zimbabwean commercial banks (2014 – 2015). *Case Studies Journal*, 5 (11), pp. 5 – 12.
- Chulkov, D. and Nizovtsev, D., 2016. Exploring price discrimination in an e-commerce environment instructor’s notes. *Journal of the International Academy for Case Studies*, 22 (4), pp. 134 – 145.
- Chung, F. I. and Lo, C. L., 2018. Service-Oriented architecture application in long-term care institution: A case study on an information system project based on the whole person concept in Taiwan. *International Journal of Computing Sciences Research*, 1 (3), pp. 17 – 37.

- Clewes, D., 2003. A student-centred conceptual model of service quality in higher education. *Quality in Higher Education*, 9 (1), pp. 69 – 85.
- Clow, K. E. and James, K., 2014. *Essentials of marketing research: Putting research into practice*. London: Sage Publications.
- Cohen, L. and Manion, L. 1994. *Research methods in education*. London: Routledge.
- Collis, J. and Hussey, R., 2009. *Brave macmillan business research: A practical guide for undergraduate and postgraduate students*. 3rd ed. Basingstoke: Palgrave Mc Millan.
- Collis, J. and Hussey, R., 2014. *Business research: A practical guide for undergraduate and postgraduate students*. 4th ed. Basingstoke: Palgrave Mac Millan.
- Coltman, T., Devinney, T. M. and Midgley, D. F., 2011. Customer relationship management and firm performance. *Journal of Information Technology*, 26 (3), pp. 205 – 219.
- Colwell, S. R. and Joshi, A. W., 2013. Corporate ecological responsiveness: Antecedent effects of institutional pressure and top management commitment and their impact on organisational performance. *Business Strategy and the Environment*, 22 (2), pp. 73 – 91.
- Connelly, L. M., 2016. Trustworthiness in qualitative research. *Medsurg-Nursing*, 25 (6), pp. 435 – 436.
- Cooper, D. R. and Schindler, P. S., 2006. *Business research methods*. 9th ed. New York: McGraw Hill.
- Cooper, D. R. and Schindler, P. S., 2008. *Business research methods*. 10th ed. New York: McGraw Hill.
- Creswell, J. W. and Poth, C. N., 2018. *Qualitative inquiry and research design choosing among five approaches*. 4th ed. Thousand Oaks: Sage Publications, Inc.
- Creswell, J. W., 1994. *Research Design: Qualitative and quantitative approaches*. Thousand Oaks: Sage.
- Creswell, J. W., 2013. *Qualitative inquiry and research design*. 3rd ed. London: Sage Publication Ltd.
- Creswell, J. W., 2014. *Research design: qualitative, quantitative and mixed methods approaches*. 4th ed. Los Angeles: Sage.
- Cross, D., 2016. A history of revenue management and the advent of next generation RM. *Journal of Revenue and Pricing Management*, 15 (3), pp. 293 – 298.

- Crotty, M. 1998. *The foundations of social research: Meaning and perspective in the research process*. Thousand Oaks: Sage Publishing.
- Danaher, P. J. and Rust, T. R., 2018. Indirect financial benefits from service quality. *Quality Management Journal*, 3 (2), pp. 63 – 75.
- Das, S., Mishra, M. and Mohanty, P., 2018. The impact of customer relationship management (CRM) practices on customer retention and the mediating effect of customer satisfaction. *International Journal of Management Studies*, 5 (1), pp. 95 – 103.
- Dawson, C., 2009. *Introduction to research methods. A practical guide for anyone undertaking a research project*. 4th ed. Begbroke: How To Books Ltd.
- Deb, S., 2014. Information technology, its impact on society and its future. *Advances in computing*, 4 (1), pp. 25 – 29.
- Debnath, R., Datta, B. and Mukhopadhyaya, S., 2016. Customer relationship management theory and research in the new millennium: Direction for future research. *Journal of Relationship Marketing*, 15 (4), pp. 299 – 325.
- Debomy, A., 2013. *Hotel revenue management impacts on customer relationships management: the influence of organisational culture*. MPhil. Karlstad University. Available at: <<https://agathedebopro.files.wordpress.com/2013/04/hotel-revenue-management-impacts-on-customer-relationships-management.pdf>> [Accessed 12 August 2019].
- Dehghan, A., Zenouzi, B. Albadvi, A., 2012. An investigation on the relationship between service quality and customer satisfaction: In the case of CCG CO. *International Business Research*, 5 (1), pp. 3 – 8.
- De Gestao, S., 2017. Real-time telemetry and information systems for a more efficient management. *Multipeers*, [online] Available at: <<https://multipeers.itpeers.com/en/2017/04/19/sistemas-de-telemetria-tempo-real/>> [Accessed 30 January 2021].
- DeJonckheere, M. and Vaughn, L. M., 2018. Semi structured interviewing in primary care research: a balance of relationship and rigour. *British Medical Journals*, 7 (2), pp. 1 – 8.
- Department of Water and Sanitation, 2019. *Water Board X Details*, [online] Available at: <http://www.dwa.gov.za/Dir_WS/TKC/Organisations/Details/55> [Accessed 27 March 2019].
- Derks, D. and Bakker, A. B., 2012. The impact of e-mail communication on organisational life.

- Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 4 (1), pp. 11 – 24.
- Devaraja, T. S., 2013. An evaluation of customer relationship management at information technology industry in India. *Semantic Scholarships*, [online] Available at: <<https://pdfs.semanticscholar.org/9322/ca449b8fcdcef0b7665ed8b9cc149a365d20.pdf>> [Accessed 12 May 2019].
- Deshpande, P., 2019. Five reasons to use the WhatsApp business API. *Twilio*, [online] Available at: <<https://www.twilio.com/learn/messaging/five-reasons-to-use-whatsapp-business-api#:~:text=Simply%20put%2C%20WhatsApp%20Business%20allows,within%20the%20WhatsApp%20messaging%20platform.&text=This%20allows%20consumers%20to%20immediately,with%20or%20receiving%20messages%20from>> [Accessed 20 January 2020].
- Dong, Y. and Ling, L., 2015. Hotel overbooking and cooperation with third party websites. *Sustainability*, 7 (1), pp. 11696 – 11712.
- Drost, E. A., 2011. Validity and reliability in social science research. *Education Research and Perspectives*, 38 (1), pp. 105 – 124.
- Duncan, E. and Elliot, G., 2012. Efficiency, customer service and financial performance among Australian financial institutions. *International Journal of Bank Marketing*, 22 (5), pp. 319 – 342.
- Elo, S., Kaariainen, M., Kanste, O., Polkki, T., Utriaine, K. and Kyngas, H., 2014. Qualitative content analysis: A focus on trustworthiness. *Sage Open*, 1, pp. 1 – 10.
- Ensor, L., 2019. Municipal debt is more than municipalities' debt to Eskom. *BusinessDay*. [online]. 29 October. Available at: <<https://www.businesslive.co.za/bd/national/2019-10-29-municipal-debt-is-more-than-municipalities-debt-to-eskom/>> [Accessed 24 November 2019].
- Erevelles, S., Fukawa, N. and Swayne, L., 2016. Big Data consumer analytics and the transformation of marketing. *Journal of Business Research*, 69 (2), pp. 897 – 904.
- Estrella-Roman, A. M., Sanchez-Perez, M., Swinnen, G. and VanHoof, K., 2013. A marketing view of the customer value: Customer lifetime value and customer equity. *Business Management Journal*, 44 (4), pp. 47 – 64.
- Farooq, U., 2013. What is interview schedule, definition and types. *Study Lecture Notes*, [online] Available at: <<http://www.studylecturenotes.com/social-research-methodology/what-is-interview-schedule-definition-types>> [Accessed 22 August 2019].
- Farrugia, P., Petrisor, B. A., Forough, F. and Bhandari, M., 2010. Research questions, hypotheses

- and objectives. *Canadian Journal of Surgery*, 53 (4), pp. 278 – 281.
- Felix, R., 2017. Service quality and customer satisfaction in selected banks in Rwanda. *Journal of Business and Financial Affairs*, 6 (1), pp. 1 – 11.
- Fertik, M., 2019. Why customer engagement should be every business's top priority in 2020. *Small Business Strategy*, [online] Available at: <<https://www.forbes.com/sites/michaelfertik/2019/12/16/why-customer-engagement-should-be-every-businesss-top-priority-in-2020/#7755a3746214>> [Accessed 27 August 2020].
- Gadde, L. E., 2016. The rise and fall of channel management. *Industrial Marketing and Purchasing Journal*, 10 (1), pp. 129 – 152.
- Gaetano, A., 2018. The evolution of CRM (and where it's going) in the future. *Sales Hacker*, [online] Available at: <<https://www.saleshacker.com/evolution-of-customer-relationship-management/>> [Accessed 4 June 2020].
- Gallup, 2019. Nothing predicts organic growth like having loyal customers. *Gallup*, [online] Available at: <<https://www.gallup.com/analytics/214259/customer-analytics.aspx>> [Accessed 28 January 2020].
- George, A. and Kumar, G. G., 2014. Impact of service quality dimensions in internet banking on customer satisfaction. *Decision*, 41 (1), pp. 73 – 85.
- Getsmarter, 2019. The 4th industrial revolution: will South Africa be ready for the jobs of the future? *Getsmarter*, [online] Available at: <<https://www.getsmarter.com/blog/career-advice/the-4th-industrial-revolution-will-south-africa-be-ready-for-the-jobs-of-the-future/>> [Accessed 2 February 2020].
- Gox, R. F. and Wagenhofer, A., 2009. Optimal impairment rules. *Journal of Accounting and Economics*, [e-journal] 48 (1) pp. 2 – 16, doi.org/10-1016/j.jacceco.2009.04.004.
- Grocott's Mail Contributors, 2017. Administration for Makana – it's urgent. *Grocott's Mail*, [online] 19 July. Available at: <<https://www.grocotts.co.za/2017/07/19/administration-for-makana-its-urgent/>> [Accessed 28 May 2019].
- Gronroos, C. A. 2010. Service Model and its Marketing Implications. *European Journal of Marketing*, 18 (4), pp. 36 – 44.
- Gronroos, C. and Gummerus, J., 2014. The service revolution and its marketing implications: service logic vs service-dominant logic. *Managing Service Quality*, 24 (3), pp. 206 – 229.
- Gronroos, C., 2007. A service quality model and its marketing implications, *European Journal of*

- Marketing*, 18, pp. 35 – 44
- Grundey, D. and Griesiene, I., 2011. Price discrimination: A comparative study of business universities in Lithuania. *Recent Issues in Sociological Research*, 4 (1), pp. 64 – 77.
- Guillet, B. D. and Mohammed, I., 2015. Revenue management research in hospitality and tourism. A critical review of current literature and suggestions for future research. *International Journal of Contemporary Hospitality Management*, 27 (4), pp. 526 – 560.
- Guillet, B. D. and Shi, X., 2019. Can revenue management be integrated with customer relationship management? *International Journal of Contemporary Hospitality Management*, 31 (2), pp. 978 – 997.
- Gupta, R., 2010. Integrating RM and CRM in a mutually beneficial relationship. *Eye For Travel*, [online] Available at: <<https://www.eyefortravel.com/revenue-and-data-management/integrating-rm-and-crm-mutually-beneficial-relationship>> [Accessed 11 November 2019].
- Gupta, S., Hanssens, D., Hardie, B., Kahn, W., Kumar, V., Lin, N., Ravishanker, N. and Sriram, S., 2006. Modeling customer lifetime value. *Journal of Service Research*, 9, pp. 139 – 155.
- Gutterman, T. C., 2015. Descriptions of sampling practices within five approaches to qualitative research in education and the health sciences. *Forum: Qualitative Social Research*, [online] Available at: <<http://www.qualitative-research.net/index.php/fqs/article/view/2290/3825>> [Accessed 28 July 2019].
- Hair, J. F., Celsi, M. W., Money, A. H., Samouel, P. and Page, M. J., 2017. *Essentials of business research methods*. 2nd ed. London: Sharpe.
- Hamzah, A. A., Yatin, S. F. M., Ismail, N. A. and Ghazali, S. F., 2018. Data capturing: methods, issues and concerns. *International Journal of Academic Research in Business and Social Sciences*, 8 (9), pp. 617 – 629.
- Hamel, G., 2018. Advantages and disadvantages of traditional file organization. *Small Business Chron*, [online] Available at: <<https://smallbusiness.chron.com/advantages-disadvantages-traditional-file-organization-41400.html>> [Accessed 23 May 2020].
- Havlicek, K., Breckova, P. and Zampeta, V., 2013. Quality Management as a Part of CRM. *European Research Studies*, 16, pp. 15 – 28.
- Hellreigel, D., Slocum, J. W., Jackson, S. E., Amos, T., Klopper, H. B., Louw, L., Louw, M., Oosthuizen, T., Perks, S., Staude, G. and Zindiwe, S., 2012. *Management*. 4th ed. Cape

- Town: Oxford University Press.
- Hendler, R. and Hendler, F., 2004. Revenue management in fabulous Las Vegas: combining customer relationship management and revenue management to maximise profitability. *Journal of Revenue and Pricing Management*, 3 (1), pp. 73 – 79.
- Henning, E., Van Rensburg, W. and Smit, B., 2004. *Finding your way in qualitative research*. South Africa. Pretoria: Van Schaik.
- Holt, A., 2015. Commercial service charge accounting and audit: A review. *Browse Journals and books*, 33 (7 - 8), pp. 502 – 527.
- Hosseini-pour, G. and Bavarsad, B., 2013. Studying factors affecting the customer relationship management (CRM) in Marun Petrochemical Company. *Interdisciplinary Journal of Contemporary Research in Business*, 4 (11), pp. 845 – 857.
- Huang, M. H. and Rust, R. T., 2017. Technology-driven service strategy. *Journal of the Academy of Marketing Science*, 45 (6), pp. 906 – 924.
- Hussain, S., Ahmed, W., Jafar, R. M. S., Rabnawaz A. and Jianzhou Y., 2017. eWOM source credibility, perceived risk and food product customer's information adoption. *Computer in Human Behavior Journal*. 66, pp. 96 – 102.
- Hutchinson, A. J., Johnston, L. H. and Breckon, J. D., 2010. Using QSR-NVivo to facilitate the development of a grounded theory project: an account of a worked example. *International Journal of Social Research Methodology*, 13 (4) pp. 283 – 302.
- Infini, G., 2019. 8 advantages and disadvantages of using customer relationship management software. *Infinigeek*, [online] Available at: <<https://infinigeek.com/8-advantages-disadvantages-using-customer-relationship-management-software/>> [Accessed 17 November 2019].
- Irene, C. L., 2010. The future of pricing and revenue models. *Journal of Revenue and Pricing Management*, 9 (3), pp. 276 – 281.
- Ismaili, R., 2015. Customer relationship management, customer satisfaction and loyalty. *Academic Journal of Interdisciplinary Studies*, 4 (3), pp. 594 – 599.
- Ivanov, S. and Zhechev, V., 2012. Hotel revenue management – a critical literature review. *Tourism Review*, 60 (2), pp. 175 – 197.
- Ivanov, S., 2014. *Hotel revenue management, from theory to practice*. Varna: Zangador.
- Iyengar, A. and Suri, K., 2012. Customer profitability analysis - an avant-garde approach to revenue optimisation in hotels. *International Journal of Revenue Management*, 6 (2), pp.

127 - 143.

- Jerath, K., Nesessine, S. and Veeraraghavan, S.K., 2010. Revenue management with strategic customers: Last-Minute selling and opaque selling. *Management Science*, 56 (3), pp. 430 - 448.
- Kadiu, F., 2014. Instability of Finance in Local Government Case of Albania. *Romanian Journal for Multidimensional Education*, 7 (8), pp. 97 – 109.
- Kahn, S., Madue, S. M. and Kalema, R., 2011. *Intergovernmental relations in South Africa*. Pretoria: Van Schaik publishers.
- Kanungo, S., 2019. The evolution of CRM's – keeping up with the latest trends. *Cygrp*, [online] Available at: <<https://www.cygrp.com/blog/customer-experience/the-evolution-of-crms-what-does-a-modern-crm-look-like/>> [Accessed 8 November 2019].
- Kebede, A. M. and Tegegne, Z. L., 2018. The effect of customer relationship management on bank performance: In context of commercial banks in Amhara Region, Ethiopia. *Cogent Business and Management*, 5, pp. 1 – 9.
- Keranen, J. and Jalkala, A., 2014. Three strategies for customer value assessment in business markets. *Management Decision*, 52 (1), pp. 79 – 100.
- Keskes, L., 2014. Relationship between leadership styles and dimensions of employee commitment: A critical review and discussion of future directions. *Intangible Capital*, 10 (1), pp. 26 – 51. <http://dx.doi.org/10.3926/ic.476>.
- Kevin, A., 2014. A quick history of customer relationship management – part 1. *Avidian*, [online] Available at: <<https://www.avidian.com/management/a-quick-history-of-customer-relationship-management-part-1/>> [Accessed 9 November 2019].
- Khadka, K. and Maharjan. S., 2017. *Customer satisfaction and customer loyalty*. MBA. Centria University of Applied Sciences Pietarsaari. Available at: <<https://core.ac.uk/download/pdf/161421179.pdf>> [Accessed 25 June 2019].
- Khalifa, A. S., 2004. Customer value: a review of recent literature and an integrative configuration. *Management Decision*, 42 (5), pp. 645 – 666.
- Khan, S., Jehan, N., Shaheen, S. and Ali, G., 2018. Effect of burnout on organisational citizenship behaviours: mediating role of affective and continuance commitment. *Abasyn Journal of Social Sciences*, 18, pp. 1 – 14.
- Khan, T., 2018. SA faces a water crisis, MPs warned. *TimesLive*, [online] 30 August 2018. Available at: <<https://www.timeslive.co.za/news/south-africa/2018-08-30-sa-faces-a->

[water-crisis-mps-warned/](#)> [Accessed 21 May 2019].

- Khedkar, E. B., 2015. Effect of customer relationship management on customer satisfaction and loyalty. *International Journal of Management*, 6 (5), pp. 1 – 7.
- Kihato, M. and Bickford, G., 2014. Rapid increase in costs of municipalities services. *Official Journal of the Institute of Municipal Finance Officers*, 14 (4), pp. 28 – 30.
- Kilimci, Z. H., Akyuz, A. O., Uysal, M., Akyokus, S., Uysal, M. O., Bulbul, B. A. and Ekmis, M. A., 2019. An improved demanding forecasting model using deep learning approach and proposed decision integration strategy for supply chain. *Complexity*, 1, pp. 1 – 15.
- Kim, J., 2017. The impact of different price promotions on customer retention. *Journal of Retailing and Consumer Services*, 46 (1), pp. 95 – 102.
- Kitapic, O., Dortyol, I. T., Yaman, Z. and Gulmez, M., 2013. The paths from service quality dimensions to customer loyalty: An application on suppliermarket customers. *Management Research Review*, 36 (3), pp. 239 – 255.
- Kleynhans, E. P. and Coetzee, C., 2019. Assessment of Financial conditions of South African Municipalities: A unique model for KwaZulu-Natal. *Southern African Business Review*, 23, pp. 1 – 23.
- Konu, H. and Komppula, R., 2014. Customer involvement in a new service development process: the case of “Feelgood in Lapland”. *An International Journal of Tourism and Hospitality Research*, 27 (4), pp. 421 – 432.
- Krauss, S. E., 2005. Research paradigms and meaning-making: A primer. *The Qualitative Report*, 10 (4), pp. 758 – 770.
- Krystallis, A. and Chrysochou, P., 2014. The effects of service brand dimensions on brand loyalty. *Journal of Retail, Consumer and Services*, 21 (2), pp. 139 – 147.
- Kukora, S., Keefer, P., Pituch, K. and Firn, J., 2019. Thematic analysis of interprofessional provider perceptions of pediatric death. *Journal of Pediatric Nursing*, 47, pp. 92 – 99.
- Kumar, N. and Sharma, S., 2016. Surve analysis on the usage and impact of Whatsapp messenger. *Global Journal of Enterprise Information System*, 8 (3), pp. 52 – 57.
- Kwayu, S. and Abubakre, M., 2018. Enhancing organisational competitiveness via social media – a strategy as practice perspective. *Information Systems Frontier*, 20 (1), pp. 439 – 456.
- Lai, K. H. and Cheng, T. C. E., 2005. Effects of quality management and marketing on organizational performance. *Journal of Business Research*, 58 (4), pp. 446 – 456.

- Landrogez, M., Castro, C. B. and Cepeda-Carrion, G., 2013. Developing an integrated vision of customer value. *Journal of Services Marketing*, 27 (3), pp. 234 – 244.
- Law, A. K. Y., Ennew, C.T. and Mitussis, D., 2013. Adoption of customer relationship management in the service sector and its importance on performance. *Journal of Relationship Marketing*, 12 (4), pp. 301 - 330.
- Lichtman, M., 2013. *Qualitative research for the social sciences*. London: Sage Publications.
- Lieberman, W., 2015. Expanding the frontier of revenue management and dynamic pricing modelling: multiple signal modelling and value pricing. *International Multiple Sclerosis Journal*, 42 (1), pp. 28 – 32.
- Long, C. S., Khalafinezhad, R., Ismail, W. K. W. and Rasid, S. Z. A., 2013. Impact of CRM factors on customer satisfaction and loyalty. *Canadian Centre of Science and Education*, 9 (10), pp. 247 – 253.
- Lusch, R. F. and Nambisan, S., 2015. Service innovation: a service-dominant logic perspective, *Management Information Systems Quarterly*, 39 (1), pp.155 – 175.
- Lyle, B., 2015. A brief history of customer relationship management. *Business 2 Community*, [online] Available at: <<https://www.business2community.com/business-innovation/brief-history-customer-relationship-management-01245936>> [Accessed 8 November 2019].
- Lynn, M., 2011. Segmenting and targeting your market: strategies and limitations. *The Cornell School of Hotel Administration on Hospitality*, 243, pp. 353 – 369.
- Madhovi, P. G. and Dhliwayo, S., 2017. The relationship between customer relationship management and performance in the hotel industry. *African Journal of Hospitality, Tourism and Leisure*, 6 (1), pp. 1 – 13.
- Magatef, S. G. and Tomalieh, E. F., 2015. The impact of customer loyalty programs on customer retention. *International Journal of Business and Social Science*, 6 (8), pp. 78 – 93.
- Maguire, M. and Delahunt, B., 2017. Doing a thematic analysis: A practical, step by step guide for learning and teaching scholars. *Open Journal Systems*, 9 (3), pp. 33510 – 33514.
- Mahfooz, Y., 2014. Relationship between service quality and customer satisfaction in hypermarkets in Saudi Arabia. *International Journal of Marketing Studies*, 6 (4), pp. 10 – 22.
- Mahmoud, A., 2016. Resolving the conflict between revenue management and CRM. *Revenue Your Hotel*, [online] Available at: <<https://www.hospitalitynet.org/opinion/4074045.html>> [Accessed 20 March 2020].

- Makana Local Municipality, 2018. Water Crisis, *Makana Municipality*, [online] Available: <<http://www.makana.gov.za/water-crisis/>> [Accessed 29 March 2019].
- Malterud, K., Siersma, V. D. and Guassora, A. D., 2015. Sample size in qualitative interview. Guides by information power. *Qualitative Health Research*, 1, pp. 1 – 8.
- Malthouse, E. C., Haenlein, M., Skiera, B., Wege, E. and Zhang, M., 2013. Managing customer relationships in the social media era: Introducing the social CRM house. *Journal of Interactive Marketing*, 27 (4), pp. 270 – 280.
- Manyaka, R. K., 2014. Collection of municipal own revenue in South Africa: Challenges and prospects. *Journal of Public Administration*, 49 (1), pp. 127 – 139.
- Manyaka, R. K. and Madzivhandila, T. S., 2013. Implementation of Integrated development plan for service delivery purpose: Are we there yet? *Journal: Conference Proceedings published by the South African Association of Public Administration and Management (SAAPAM)*, pp. 174 – 185.
- Marshall, C. and Rossman, G. B., 2015. *Designing qualitative research*. 6th ed. California: Sage Publications.
- Martin, L., 2016. Interview schedule: Definition, types, templates and tips. *Cleverism*, [online] Available at: <<https://www.cleverism.com/interview-schedule-definition-types-templates-tips/>> [Accessed 3 August 2019].
- Mathies, C. and Gudergan, S., 2007. Revenue management and customer centric marketing how do they influence travellers' choices? *Journal of Revenue and Pricing Management*, 6(4), pp. 25 – 34.
- Maxwell, J. A., 2008. Designing a qualitative study. *Corwin*, [online] Available at: <https://us.corwin.com/sites/default/files/upm-binaries/23772_Ch7.pdf> [Accessed 5 July 2019].
- Mayer, C., 2008. *Managing conflict across cultures, values and identities. A case study in the South African automotive industry*. Marburg: Tectum Verlag.
- McEachern, A., 2019. What is customer engagement, and why is it important? *Blog.Smile*, [online] Available at: <<https://blog.smile.io/what-is-customer-engagement-and-why-is-it-important/>> [Accessed 10 June 2020].
- McGonagle, A. K., Essenmacher, L., Hamblin, L., Luborsky, M., Upfal, M. and Arnetz, J., 2016. Management commitment to safety, teamwork, and hospitality worker injuries. *Journal of Hospitality Admin*, 5 (6), pp. 46 – 52.

- Mehrotra, D., 2012. Basic concepts of information technology. *Computer Science Expertise*, [online] Available at: <http://e-school.kmutt.ac.th/elibrary/Upload/EBook/DSIL_Lib_E1312881659.pdf> [Accessed 24 March 2020].
- Melnyk, V., Osseler, S. M. J. and Bijmolt, T. H. A., 2009. Are women more loyal customers than men? Gender differences in loyalty to firms and individual service providers. *American Marketing Association*, 73 (4), pp. 82 – 96.
- Merkaj, E., Zhllima, E., Imami, D. and Fiorillo, F., 2015. A comprehensive approach to intergovernmental grants tactical allocation. Theory and estimation guidelines. *Siecon*, [online] Available at: <https://siecon3-607788.c.cdn77.org/sites/siecon.org/files/media_wysiwyg/77-fiorillo.pdf> [Accessed 1 October 2020].
- Merriam, S. B., 2009. *Qualitative research: A guide to design and implementation*. California: Jossey-Bass.
- Meyer, J. P. and Allen, N. J., 1997. *Commitment in the Workplace. Theory, Research, and Application*. Thousand Oaks: Sage Publications.
- Meyliana, B. and Eko, K., 2014. The comparison of CRM Model: A baseline to create enterprise architecture for social CRM. *Proceedings of the First International Conference on Advanced Data and Information Engineering*, 285, pp. 479 – 480.
- Michael, J. H., Evans, D. D., Jansen, K. J. and Haight, J. M., 2005. Management commitment to safety as organisational support: Relationships with non-safety outcomes in wood manufacturing employees. *Journal of Safety Research*, 36, pp. 171 – 179.
- Mikesell, L.J. and Liu, C., 2013. Property Tax Stability: A tax system model of base and revenue dynamics through the great recession and beyond. *Public Finance and Management*, 13 (4), pp. 310 -334.
- Milla, S. and Shoemaker, S., 2008. Three decades of revenue management: what's next? *Journal of Revenue and Pricing Management*, 7 (1), pp. 110 – 114.
- Mohamad, S. H., 2014. The Impact of Customer Relationship Management on Small and Medium Enterprises Performance. *Journal of Technology Management and Technopreneurship*, 2, (2), pp. 11 – 26.
- Mohammadhossein, N. and Zakaria, N. H., 2012. CRM benefits for customers. *International Journal of Engineering Research and Applications (IJERA)*, 2 (6), pp. 1578 – 1586.

- Morrison, S. and Crane, F. G., 2007. Building the service brand by creating and managing an emotional brand experience. *Journal of Brand Management*, 14 (5), pp. 410 - 421.
- Moser, A. and Korstjens, I., 2018. Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24 (1), pp. 120 – 124.
- Mothermode, 2019. 7 benefits of adopting CRM that you will notice in the first 90 days. *Mothermode*, [online] Available at: <<https://www.mothermode.com/7-reasons-small-midsized-companies-adopt-crm-technology/>> [Accessed 25 August 2020].
- Mthethwa, T., 2019. A city at work EtheKwinin launches Whatsapp reporting line. *Durban Government*, [online] Available at: <http://www.durban.gov.za/Resource_Centre/Press_Releases/Pages/A-City-at-Work-EThekwini-Launches-Whatsapp-Water-Reporting-Line.aspx> [Accessed 3 February 2020].
- Nair, G. K., 2019. Dynamics of pricing and non-pricing strategies, revenue management performance and competitive advantage in hotel industry. *International Journal of Hospitality Management*, 82, pp. 287 – 297.
- Narver, J. C. and Slater, S., 1990. The Effect of a Market Orientation on Business Profitability. *Journal of Marketing*, 1, pp. 20 – 35.
- Noe, R. A., Hollenbeck, J. R., Gerhart, B. and Wright, P. M., 2017. *Human resource management: Gaining a competitive advantage*. New York: McGraw-Hill Education.
- Nogqala, M., 2017. *Improving revenue management at the Nelson Mandela Bay Municipality through Customer Relationship Management*. MBA. Nelson Mandela University. Available at: <<http://vital.seals.ac.za:8080/vital/access/manager/Repository/vital:29155>> [Accessed 20 February 2019].
- Noone, B. M., Kimes, S. E. and Renaghan. L. M., 2003. Integrating customer relationship management and revenue management: A hotel perspective. *Journal of Revenue and Pricing Management*, 2 (1), pp. 7 – 21.
- Nowell, L. S., Norris, J. M. and White, D. E., 2017. Thematic analysis: Striving to meet the trustworthiness Criteria. *International Journal of Qualitative Methods*, 16, pp. 1 – 13.

- Nsairi, Z. B., 2012. Managing browsing experience in retail stores through perceived value: implications for retailers. *International Journal of Retail and Distribution Management*, 40 (9), pp. 676 – 698.
- Nwanko, S. and Ajemunigbohun, S., 2013. Customer relationship management and customer retention: Empirical assessment from Nigeria's insurance industry. *Business and Economics Journal*, 4 (2), pp. 1 – 6.
- Nyadzayo, M. W. and Khajehzadeh, S., 2016. The antecedents of customer loyalty: A moderated mediation model of customer relationship management quality and brand image. *Journal of Retailing and Consumer Services*, 30, pp. 262 – 270.
- Nyadzayo, M. W. and Roberts-Lombard, M., 2010. A theoretical analysis of the mediating role of customer relationship management performance on customer retention in SA motor dealership. *Journal of Contemporary Management*, 7, pp. 167 – 190.
- O'Brien, G., Jacobs, F., Burnette, M., Kruger, P., Botha, I. and Cordier, J. A., 2013. Remote and manual radio telemetry methods to monitor and use fish behaviour in South Africa's inland waters. *Water Research Commission*, [online] Available at: <<http://www.wrc.org.za/wp-content/uploads/mdocs/2111.pdf>> [Accessed 30 January 2021].
- Onn, W. C. and Sorooshians, S., 2013. Mini literature analysis on information technology definition. *Information and Knowledge Management*, 3 (2), pp. 139 – 140.
- Oosthuizen, M. and Thornhill, C., 2017. The grant system of financing the South African local government sphere: Can sustainable local government be promoted? *Repository*, [online] Available at: <https://repository.up.ac.za/bitstream/handle/2263/62147/Oosthuizen_Grant_2017.pdf?sequence=1> [Accessed 24 November 2019].
- Pakurar, M., Haddad, H., Nagy, J., Popp, J. and Olah, J., 2019. The service quality dimensions that affect customer satisfaction in the Jordanian banking sector. *Journal of Sustainability*, 11, pp. 1 – 24.
- Parasuraman, A., Zeithaml, V. A. and Berry, L. L., 1985. Conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49 (4), pp. 41 – 50.
- Parasuraman, A., Zeithaml, V. A. and Berry, L. L., 1988. SERVQUAL: A Multiple-Item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64 (1), pp. 12 – 40.

- Payne, A. and Frow, P., 2005. A strategic framework for customer relationship management. *Journal of Marketing*, 69 (4), pp. 167 – 176.
- Payne, A., 2012. *Handbook of CRM. Achieving excellence in customer management*. [e-book] Oxford: Elsevier. Available through: Google Scholar <<https://content.taylorfrancis.com/books/download?dac=C2011-0-09151-8&isbn=9781136400186&format=googlePreviewPdf>> [Accessed 14 April 2019].
- Peelen, E. and Beltman, R., 2013. *Customer relationship management*. London: Pearson.
- Peelen, E., Montfort, K., Beltman, R. and Klerkx, A., 2009. An empirical study into the foundation of CRM success. *Journal of Strategic Marketing*, [e-journal], 17 (6), pp. 453 – 471. <https://doi.org/10.1080/0965250903371695>.
- Percival, C., 2019. How internal communication effects customer engagement. *ICTThrive*, [online] Available at: <<https://ictthrive.com/blog/internal-communication-customer-engagement>> [Accessed 10 February 2020].
- Pilot, D. F. and Beck, C. T., 2014. *Essentials of nursing research: Appraising evidence for nursing practice*. 8th ed. Philadelphia: Williams and Wilkins Publications.
- Prevos, P., 2018. Crafting value propositions for water utilities. *The International Water Association*, [online] Available at: <<https://www.iwapublishing.com/news/crafting-value-propositions-water-utilities>> [Accessed 26 March 2020].
- Priem, R. L., 2007. A consumer perspective on value creation. *The Academy of Management Review*. 32 (1), pp. 219 – 235.
- Rababah, K., Mohd, H. and Ibrahim, H., 2011. A unified definition of CRM towards the successful adoption and implementation. *Academic Research International*, 1 (1), pp. 220 -228.
- Radda, A. A., Uzodinma, I., Akanno, S. N., Isa, M. S., Abdulkadir, A. A., Abba, S. and Abdulmajid, A., 2015. Customer relationship management and organisational performance – The case of Barclays Bank Plc. *International Journal of Management and Organisational Studies*, 4 (4), pp. 163 – 173.
- Radojka, K. and Filipovic, Z., 2017. Gender differences and consumer behavior of millennials. *Econ Papers*, 3 (1), pp. 5 – 13.
- Rahimi, R., Koseoglu, M. A., Ersoy, A. B. and Okumus, F., 2017. Customer relationship management research in tourism and hospitality: a state-of-the-art. *Tourism Review*, 72 (2), pp. 209 – 220.

- Rajaguru, R., 2016. Role of value for money and service quality on behavioral intention: A study of full service and low cost airlines. *Journal of Air Transport Management*, 53, pp. 114 – 122.
- Rajasekar, S., Philominathan, P. and Chinnathambi, V., 2016. *Research methodology*, [online] Available at: <<https://arxiv.org/pdf/physics/0601009.pdf>> [Accessed 30 June 2019].
- Rana, T., 2019. What are the benefits of using CRM for your business? *Perfect Mind*, [online] Available at: <<https://blog.perfectmind.com/benefits-of-using-crm-for-your-business>> [Accessed 27 August 2020].
- Rather, R, A., Tehseen, S. and Parrey, S. H., 2018. Promoting customer brand engagement and brand loyalty through customer brand identification and value congruity. *Spanish Journal of Markerting*, 22 (3), pp. 321 – 339.
- Regmi, K., Naidoo, J. and Pilkington, P., 2010. Understanding the processes of translation and transliteration in qualitative research. *International Journal of Qualitative Methods*, 9 (1), pp. 16 – 26.
- Reh, J. F., 2019. Understanding critical success factors and indicators in business. *The Balance Careers*, [online] Available at: <<https://www.thebalancecareers.com/critical-success-factors-in-business-2275171>> [Accessed 29 August 2019].
- Remenyi, D., 2013. *Field methods for academic research - Interviews, focus groups and questionnaires in business and management studies*. 3rd ed. Oxfordshire: Academic conferences and publishing international.
- Rendulic, D. I., 2011. *Basic concepts of information and communication technology*. Zagreb: Open Society for Idea Exchange.
- Revfine, 2019. Revenue management systems: what are the advantages? *Revfine*, [online] Available at: <<https://www.revfine.com/revenue-management-system/>> [Accessed 23 September 2019].
- Riasi, A., Schwartz, Z. and Chen, C., 2019. A paradigm shift in revenue management? The new landscape of hotel cancellation policies. *Journal of Revenue and Pricing Management*, 18 (6), pp. 434 – 440.
- Richards, K. A. and Jones, E., 2008. Customer relationship management: Finding value drivers. *Industrial Marketing Management*, 37, pp. 120 – 130.

- Richer, P., 2015. *RM vs CRM*, [online] Available at: <<https://news.wtm.com/rm-vs-crm/>> [Accessed 8 November 2019].
- Rizka, M., 2013. Customer loyalty the effects of service quality and the mediating role of customer relationship marketing Telkom speedy in Jember area. *Review of Integrative Business and Economics Research*, 2 (1), pp. 491 – 502.
- Roberts-Lombard, M. and du Plessis, L., 2012. The influence of trust and commitment on customer loyalty: a case study of Liberty Life. *Acta Academia*, 44 (4), pp. 58 – 80.
- Roberts-Lombard, M., Mpinganjira, M. and Svensson, G., 2017. Antecedents and outcomes of satisfaction in buyer – supplier relationships in South Africa: A replication study. *South African Journal of Economics and Management Sciences*, 20 (1), pp. 1 – 14.
- Ross, J. E., 2017. *Total quality management: Text, cases, and readings*. 3rd ed. Oxford: Routledge.
- Rostami, M., Izadbin, A., Zakipour, M. and Rostami, S., 2016. Assessing electronic customer relationship management (E-CRM) and its impact on banking quality of service. *International Journal of Humanities and Cultural Studie*, 2 (4), pp. 1207 – 1225.
- Rouse, M., 2014. Critical success factors. *Search CIO*, [online] Available at: <<https://searchcio.techtarget.com/definition/critical-success-factors>> [Accessed 29 August 2019].
- Rousse, P., Maguire, W. and Harrison, J., 2010. *Revenue management in service Organization*. New York: Business Expert Express.
- Ryding, D., 2010. The impact of new technologies on customer satisfaction and business to business customer relationships: Evidence from the soft drinks industry. *Journal of Retailing and Consumer Services*, 17 (3), pp. 224 – 228.
- Saarijarvi, H., Karjalauto, H. and Kuusela, H., 2013. Customer relationship management: The evolving role of customer data. *Marketing Intelligence and Planning*, 31 (6), pp. 1 – 34.
- Sabbeh, S. F., 2018. Machine-Learning techniques for customer retention: A comparative study. *International Journal of Advanced Computer Science and Applications*, 9 (2), pp. 273 - 281.
- Saleh, L. and El Saheli, L., 2018. The impact of CRM strategy on customer loyalty in SMEs. *International Business Research*, 11 (11), pp. 37 - 45.

- Sarmaniotis, C., Assimakopoulos, C. and Papaioannou, E., 2013. Successful implementation of CRM in luxury hotels: determinants and measurements. *EuroMed Journal of Business*. 8, pp. 134 – 153.
- Sashi, C. M., 2012. Customer engagement, buyer-seller relationships, and social media. *Management Decision*, 50 (2), pp. 253 – 272.
- Saunders, M. N. K., Lewis, P. and Thornhill, A., 2008. *Research Methods for Business Students*. 5th ed. Milan: Rotolito Lombarda.
- Schreiner, B. and Hassan, R., 2011. *Global issue in Water Policy: Transforming Water Management in South Africa: Designing and implementing a New Policy*. Pretoria: Springer Publisher.
- Schultz, P. W., Estrada, M., Schmitt, J., Sokoloski, R. and Silva-Send, N., 2015. Using in-home displays to provide smart meter feedback about household electricity consumption: A randomized control trial comparing kilowatts, cost, and social norms. *Energy*, 90 (1), pp. 351 - 358.
- Schwab, K., 2017. The fourth industrial revolution. *We Forum*, [online] Available at: <<https://www.weforum.org/about/the-fourth-industrial-revolution-by-klaus-schwab>> [Accessed 10 May 2019].
- Sekaran, U. and Bougie, R., 2016. *Research methods for business: A skill building approach*. 7th ed. West Sussex: John Wiley and Sons.
- Selmi, N. and Chaney, D., 2018. A measure of revenue management orientation and its mediating role in the relationship between market orientation and performance. *Journal of Business Research*, 89 (3), pp. 99 – 109.
- Shahin, A., 2016. SERVQUAL and model of service quality gaps: A framework for determining and prioritising critical factors in delivering quality services. *Research Gate*, 5, pp. 117 – 131.
- Shieh, J. I., Huang, K. K. and Wu. H. H., 2019. Service quality evaluation of geriatric long-term care: A combination of SERVQUAL model and importance-performance analysis. *Journal of Statistics and Management Systems*, 22 (5), pp. 829 – 843.
- Shurair, A. S. A. and Pokherel, S., 2019. Stakeholder's perception of service quality: a case in Qatar. *Quality Assurance in Education*, 27 (4), pp. 493 – 510.
- Siddle, A. and Koelble, T. A., 2012. *Fiscal Dimension*. In: *The failure of decentralisation in South African Local Government*. Cape Town: UCT Press.

- Simmons, R. L., 2015. *The relationship between customer relationship management usage, customer satisfaction, and revenue*. Ph. D. Walden University. Available at: <<https://pdfs.semanticscholar.org/c3f5/bb47b74751cd0ac091716c86a0d87cfcc62e.pdf>> [Accessed 10 July 2019].
- SoftDoit, 2019. 11 Advantages and disadvantages of CRM. *Softwaredoit*, [online] Available at: <<https://www.softwaredoit.com/gb/crm-software-recommendation/advantages-of-crm.html>> [Accessed 17 November 2019].
- Soliman, H., 2012. Customer relationship management and its relationship to the marketing performance. *International Journal of Business and Social Science*, 2 (10), pp. 166 – 182.
- South African Government, 2019. Water and Sanitation. *South African Government*, [online] Available at: <<https://www.gov.za/about-sa/water-affairs>> [Accessed 29 April 2019].
- Stan, V., 2015. Does consumer gender influence the relationship between consumer loyalty and its antecedents? *The Journal of Applied Business Research*, 31 (4), pp. 1593 – 1604.
- Statistics South Africa, 2018. *An update to municipal spending and revenue (June 2018)*. [online] Available at: <<http://www.statssa.gov.za/?p=11600>> Accessed 20 May 2019.
- Statistics South Africa, 2018. *The latest household statistics and more*. [online] Available at: <<http://www.statssa.gov.za/?p=11241>> [Accessed 7 May 2019].
- Streefkerk, R., 2019. Inductive vs deductive reasoning. *Scribbr*, [online] Available at: <<https://www.scribbr.com/methodology/inductive-deductive-reasoning/>> [Accessed 7 September 2020].
- Stiehl, E., Ernst-Kosseck, E., Leana, C. and Keller, Q., 2018. A multilevel model of care flow: Examining the generation and spread of care in organisations. *Organisational Psychology Review*, 8 (1), pp. 31 - 69.
- Storey, C. and Larbig, C., 2017. Absorbing customer knowledge: how customer involvement enables service design success. *Journal of Service Research*, 21 (1), pp. 101 – 118.
- Strydom, E., Petzer, D. J. and De Meyer, C. F., 2015. A multidimensional customer value model for the high fashion retail industry. *The Retail and Marketing Review*, 11 (2), pp. 111 – 131.
- Stuart-Hill, T., 2016. The revenue management business process, designed to produce results. *Hospitality*, [online] Available at: <<https://www.hospitalitynet.org/opinion/4066560.html>> [Accessed 18 September 2019].

- Suryadi, N., Suryana, Y., Komaladewi, R. Sari, D., 2018. Consumer, customer and perceived value: past and present. *Academy of Strategic Management Journal*, 17 (4), pp. 1 – 9.
- Svendsen, M. F., Haugland, S. A., Gronhaug, K. and Hammervoll, T., 2011. Marketing strategy and customer involvement in product development. *European Journal of Marketing*, [e-journal] 45 (4), pp. 513 - 530. DOI.10.1108/03090561111111316.
- Swinnen, G. and VanHoof, K., 2014. Customer lifetime value and customer equity. *Journal of Business Management*, 44 (4), pp. 47 – 64.
- Tait, M. and Roberts-Lombard, M., 2014. *Relationship marketing and CRM*. 4th ed. Cape Town: Juta and Company Ltd.
- Tauni, S., Khan, R. I., Durrani, M. K. and Aslam, S., 2014. Impact of customer relationship management on customer retention in the telecom industry of Pakistan. *Industrial Engineering Letters*, 4 (10), pp. 54 – 59.
- Taylor, M., 2014. Advantages of customer relationship management. *CRM Wlak Me*, [online] Available at: <<https://crm.walkme.com/advantages-customer-relationship-management/>> [Accessed 26 August 2020].
- Tjepkema, L., 2017. Why omnichannel is every marketer's future. *Emarsys*, [online] Available at: <<https://emarsys.com/learn/blog/omnichannel-future-marketing/>> [Accessed 31 January 2021].
- Tesch, R., 1992. *Qualitative research: Analysis types and software tools*. New York: Falmer.
- Thakur, R., 2016. Understanding customer engagement and loyalty: a case of mobile devices for shopping. *Journal of Retailing and Consumer Services*, 32, pp. 151 – 163.
- The Telegraph., 2010. Men make more loyal customers than women, researchers claim. *The Telegraph*, [online] 30 July 2010. Available at: <<https://www.telegraph.co.uk/finance/newsbysector/retailandconsumer/7869155/Men-make-more-loyal-customers-than-women-researchers-claim.html>> [Accessed 12 November 2019].
- Thomas, G., 2018. Advantages and disadvantages of CRM. *Lore Central*, [online] Available at: <https://www.lorecentral.org/2018/09/advantages-and-disadvantages-of-crm.html> [Accessed 17 November 2019].
- Tinnsten, C., 2013. *Implementing a system of Customer Relationship Management*. MCOM. Umae University. Available at: <<https://www.diva-portal.org/smash/get/diva2:691757/fulltext01.pdf>> [Accessed 3 June 2019].

- Torc'h, M., 2015. *Revenue management and its impacts on its actors in the hospitality industry*. BA. Metropolia University of Applied Science. Available at: <<https://pdfs.semanticscholar.org/1663/31fbd3e98e84eda5c25602dc1d76184ca936.pdf>> [Accessed 2 August 2019].
- Tosun, J. and Peters, G., 2018. Intergovernmental organisations normative commitments to policy integration: The dominance of environmental goals. *Environmental Science and Policy*, 82, pp. 90 – 99.
- Treasury Government, 2008. Revenue and expenditure trends in local government. *Treasury*, [online] Available at: <<http://www.treasury.gov.za/publications/igfr/2008/lg/Chapter%203%20-%20Revenue%20and%20expenditure%20trends.pdf>> [Accessed 12 May 2019].
- Treasury Government, 2018. Budget Review 2018. *Treasury*, [online] Available at: <<http://www.treasury.gov.za/documents/National%20Budget/2018/review/FullBR.pdf>> [Accessed 10 May 2019].
- Tremblay, A., 2015. The adoption and implementation of SaaS CRM: An empirical case study. *Research Gate*, 10, pp. 1 – 72.
- Triznova, M., Mat'ova, H., Dvoracek, J. and Sadek., 2015. Customer Relationship Management based on employees and corporate culture. *Procedia Economics and Finance*, 26, pp. 953 – 959.
- Uprichard, E., 2013. Sampling: bridging probability and non-probability designs. *International Journal of Social Research Methodology*, 16 (1), pp. 1 – 11.
- Usman, M. and Rehman, Z. U., 2017. The impact of customer satisfaction on price sensitivity in courier services sector. *Journal of Humanities and Social Science*, 22 (3), pp. 13 – 26.
- Vaeztehrani, A., Modarres, M. and Aref, S., 2015. Developing an integrated revenue management and customer relationship management in the hotel industry. *Journal of Revenue and Pricing Management*, 14 (2), pp. 97 – 119.
- Vienna, 2016. History and evolution of CRM software. *Vienna Advantage*, [online] Available at: <<https://viennaadvantage.com/blog/technologies/history-of-crm-software/>> [Accessed 9 November 2019].
- Vikas, K. and Hundal, S., 2019. Evaluating the service quality of solar product companies using servqual model. *International Journal of Energy Sector Management*, 13 (3), pp. 670 – 693.

- Viriri, P. and Phiri, M., 2017. Customer retention strategies applicable to Zimbabwe Telecommunication industry (A customer relationship management perspective). *Journal of Economics*, 8 (1), pp. 50 – 53.
- Vives, A., Jacob, M. and Payeras, M., 2018. Revenue management and price optimisation techniques in the hotels sector: A critical literature review. *Tourism Economics*, 24 (6), pp. 720 – 752.
- Von Martens, T. and Hilbert, A., 2009. Incorporation of customer value into revenue management. *Operations Research Proceedings*, 1, pp. 383 – 388.
- Wali, A. F., Wright, L. T. and Reynolds, P., 2015. Customer relationship management and service quality performance: A qualitative study. *Research Gate*, [online] Available at: <https://www.researchgate.net/publication/279057485_Customer_Relationship_Management_and_Service_Quality_a_qualitative_study> [Accessed 15 June 2019].
- Walter, A., 2003. Relationship-specific factors influencing supplier involvement in customer new product development. *Journal of Business Research*, 56, pp. 721 – 733.
- Wang, X. L. and Bowie, D., 2010. Revenue management: The impact on business to business relationships. *Journal of Service Marketing*, 23 (1), pp. 31 – 41.
- Wang, X. L., 2012. Relationship or revenue: potential management conflicts between customer relationship management and hotel revenue management. *International Journal of Hospitality Management*, 31, pp. 864 – 874.
- Wang, R., 2020. Why live engagement marketing supercharges event marketing. *Constellation*, [online] Available at: <<https://www.constellationr.com/blog-news/research-summary-why-live-engagement-marketing-supercharges-event-marketing>> [Accessed 26 August 2020].
- Water Board X, 2018. *Integrated Annual Report, 2017/18*. [online] Available at: <<http://www.waterboardx.co.za/files/documents/Water Board X AR 2018 Dec 2019 february 4.pdf>> [Accessed 14 March 2019].
- Water Institute of Southern Africa, 2019. *Water Board X*. [online] Available at: <[http://wisa.org.za/patron/water-board x/](http://wisa.org.za/patron/water-board-x/)> [Accessed 27 March 2019].
- Water Services Act No. 108 of 1997*. (c.6). Cape Town: Government Gazette.
- WeiBo, Z., Kaur, S. and Jun, W., 2010. New development of organisational commitment: A critical review. *African Journal of Business Management*, 4 (1), pp. 12 – 20.

- Welman, J. C. and Kruger, S. J., 2001. *Research methodology*. 2nd ed. Cape Town: Oxford University Press.
- Winter, K., 2018. Crisis proofing South Africa's water security. *News24*. [online] (Last updated 10:24 AM on 21 May 2019). Available at: <<https://www.news24.com/Analysis/crisis-proofing-south-africas-water-security-20181111>> [Accessed on 21 May 2019].
- Wong, L. P., 2008. Data analysis in qualitative research: a brief guide to using Nvivo. *Malays Fam Physician*, 3 (1), pp. 14 – 20.
- Writer, S., 2013. A brief history of customer relationship management. *CRM Switch*, [online] Available at: <<https://crmswitch.com/crm-industry/crm-industry-history/>> [Accessed 14 June 2019].
- Yin, R. K., 2009. *Case study research: Design and methods*. 4th ed. Thousand Oaks: Sage Publications.
- Yin, R. K., 2013. *Case study research: Design and methods*. 5th ed. Thousand Oaks: Sage.
- Young, A., 2015. Telemetry for water networks. *South African Instrumentation Control*, [online] Available at: <<https://www.instrumentation.co.za/52643n>> [Accessed 11 February 2020].
- Zablah, A., Bellenger, D. and Johnston, W., 2013. Customer relationship management (CRM) implementation gaps. *Journal of Personal Selling and Sales Management*, 24 (4), pp. 279 – 295.
- Zabriskie, K., 2018. CRM strategy for strengthening customer engagement. *Medium*, [online] Available at: <<https://medium.com/@SalesmateIO/crm-strategy-for-strengthening-customer-engagement-1afd9ca3a34f>> [Accessed 10 July 2019].
- Zaefarian, G., Forkmann, S., Mitreğa, M. and Henneberg, S. C., 2017. A capability perspective on relationship ending and its impact on product innovation success and firm performance. *Long Range Planning*, 50 (2), 184 – 199.
- Zakaria, I., Rahman, B. A., Othman, A. K., Yunus, N. A. M., Dzulkipli. M. R. and Osman, M. A. F., 2014. The relationship between loyalty program, customer satisfaction and customer loyalty in retail industry: A case study. *Social and Behavioural Science*, 129, pp. 23 – 30.
- Zeithaml, V. A., Bitner, M. J. and Gremler, D. D., 2013. *Service Marketing*. 4th ed. Texas: McGraw-Hill Learning Solutions.
- Zelege, A., 2007. *The effect of service quality on customer satisfaction; A case study of Abay Bank Share Company*. MBA. St. Mary's University. Available at:

<http://repository.smuc.edu.et/bitstream/123456789/3062/1/The%20Effect%20of%20Service%20Quality%20on%20Customer%20Satisfaction.pdf>> [Accessed 24 July 2019].

- Zhang, P., Li, M., Jiao, X. and Zhou, R., 2011. Customer loyalty and customer relationship management. *Henan Institute of Science and Technology*, 144, pp. 432 – 436.
- Zhang, X., Zhong, W. and Makino, S., 2015. Customer involvement and service firm internationalisation performance: An integrated framework. *Journal of International Business Studies*, 46 (3), pp. 355 - 380.
- Zondo, R. W. D., 2018. Assessing the financial implications of quality management system accreditation on small training providers in KwaZulu-Natal. *South African Journal of Economic and Management Sciences*, 21 (1), pp. 1 – 8.

APPENDIX A

INTERVIEW GUIDE FOR THE MUNICIPALITIES

SECTION A: BIOGRAPHICAL INFORMATION

1. Name of organisation: _____
2. Position held within the organisation: _____
3. Number of years' service within the organisation: _____
4. Level of education: _____

SECTION B: THEMED QUESTIONS

This section canvasses information from the interviewee with regard to the factors that were identified in the theoretical framework of customer relationship management.

SERVICE QUALITY

1. What is your understanding of service quality?
2. Is your organisation in general satisfied with the quality of services provided by the water board? *Probe and ask why?*
3. What in your opinion are the challenges that your organisation face regarding the quality of the services that the water board provides to your organisation?

(For primary business)

Probe with regard to water interruptions, distribution and quality.

Do you perceive action taken by the water board as fair? Probe and ask why.

(For secondary business)

Probe with regard to maintenance.

Probe with regard to the reliability of the water board and its responsiveness to problems experienced.

4. What in your opinion can the water board do to ensure that there is effective service quality to your organisation?
5. Do you believe that the water board's service quality has an influence on its sales and profits?
Probe and ask why?

CUSTOMER INVOLVEMENT

1. What is your understanding of customer involvement?
2. Is your organisation in general satisfied with the level of involvement of the water board with your organisation? *Probe and ask why?*
3. What in your opinion are the challenges that your organisation face regarding the level of customer involvement experienced from the water board?
Probe with regard to how the water board engages with the organisation.
Probe with regard to communication, does the water board communicate well in time?
Probe with regard to the type of relationship between the water board and the organisation.
4. What can the water board do to improve customer involvement with your organisation?
5. Do you believe that customer involvement has an influence on the sales and profits of the water board? *Probe and ask why?*

CUSTOMER VALUE

1. What is your understanding of customer value?
2. Is your organisation in general satisfied with the value of the services provided by the water board to our organisation? *Probe and ask why?*
3. Are there any challenges regarding the value of the services provided by the water board?
Probe with regard to fair billing; experience.
4. What can the water board do to improve the value of its services provided to your organisation?
5. Will the improvement of value of services provided by the water board to your organisation influence the sales and profits of the water board? *Probe and ask why?*

INFORMATION TECHNOLOGY

1. What is your understanding of information technology?
2. Is your organisation in general satisfied with the information technology employed by the water board?
Probe with regard to database management system, how data is managed, updated and accessed from their perspective.
Probe how the water board uses social media to communicate with its customers.
Probe with regard to level of IT skills of the water board.

3. How does your organisation keep track of the services rendered by the water board and monies owed to the water board for the delivery of water related services?
4. What strategies does your organisation have in place to ensure that they do not fall into arrears with water services related payment to the water board?
5. Are you of the opinion that the effective use of information technology by the water board positively affects sales and profits of the water board? *Probe and ask why?*

MANAGEMENT COMMITMENT

1. What do you understand by the water boards' management commitment to deliver water related services to your organisation?
2. Do you believe that the management of the water board is committed in their water related operations from your organisation's perspective? *Probe and ask why?*
3. How do you believe the water boards' management commitment will affect its sales of water related services? *Probe.*

APPENDIX B

INTERVIEW GUIDE FOR WATER BOARD X

SECTION A: BIOGRAPHICAL INFORMATION

1. Position held within the water board: _____
2. Number of years' service within the water board: _____
3. Level of education: _____

SECTION B: THEMED QUESTIONS

This section canvasses information from the interviewee with regard to the factors that were identified in the theoretical framework of customer relationship management.

SERVICE QUALITY

1. What is your understanding of service quality?
2. Which processes are in place to ensure that there is effective service quality to the organisations you provide water services to?

(For primary business)

Probe with regard to water distribution and its quality.

Do you perceive action taken by the water board as fair? Probe and ask why?

(For secondary business)

Probe with regard to maintenance.

Probe with regard to how responsible and reliable the water board perceives itself to be.

3. What are the challenges regarding service quality that the water board face? *Probe.*
4. What do you think the water board could do to improve the quality of its services?
5. Do you believe that the quality of services provided by the water board has an influence on its sales and profits? *Probe and ask why?*

CUSTOMER INVOLVEMENT

1. What do you understand by customer involvement?
2. Which processes are in place to ensure that there is involvement with the organisations you provide services to?

Probe with regard to how the water board engages with the organisations it provides services to.

Probe with regard to communication, does the water board communicate well in time with the organisations?

Probe with regard to the type of relationship between the water board and the organisations it provides services to.

3. What are the challenges experienced by the water board regarding getting involved with the organisations you provide water related services to? *Probe.*
4. What do you think can be done to improve the involvement between the water board and the organisations it provides water related services to?
5. Do you believe that customer involvement has an influence on the sales and profits of the water board? *Probe and ask why?*

CUSTOMER VALUE

1. What do you understand by customer value?
2. Which processes are in place to ensure that the water board provides value to the organisations it serves? *Probe.*
3. What are the challenges that the water board experience regarding the delivering of customer value to the organisations it serves?
4. What do you think can be done by the water board to add more value to the services they provide to the organisations?
5. Will the improvement of value of services provided by the water board to the organisations influence the sales and profits of the water board? *Probe and ask why?*

INFORMATION TECHNOLOGY

1. What do you understand by information technology?
2. Which aspects of information technology are in place at the water board to ensure efficient operations with the organisations it provides water related services to?

Probe with regard to their database management system and how information is managed, updated and accessed.

Probe regarding the use of social media, which sites the water board uses

Probe with regard to the level of IT skills of the water board.

3. What are the challenges that the water board experience regarding the information technology and systems employed?

Probe whether systems are up-to to date and flexible?

4. What do you think can be done by the water board to improve its information technology?
5. Are you of the opinion that the effective use of information technology by the water board positively affects sales and profits of the water board? *Probe and ask why?*

MANAGEMENT COMMITMENT

1. What do you understand by management commitment to deliver water related services to the organisations?
2. Is the water board in general satisfied with the level of commitment displayed by its management to the organisations it renders water related services to?
3. Are there any suggestions you think the water board could implement to improve their management commitment?
4. How will the water board's management commitment affect its water related services sales to the organisations it delivers water related services to?

APPENDIX C



DEPARTMENT OF MANAGEMENT - Tel: (046) 603 8246, Email: Principal Researcher (Supervisor) m.louw@ru.ac.za, Collaborator (Co-Supervisor): n.oosthuizen@ru.ac.za, Student: manyonganisejoshua@gmail.com, Ethics Coordinator: (046) 603 7727, s.manqe@ru.ac.za

INFORMED CONSENT FORM

Department of Management

Research Project Title:	CUSTOMER PERCEPTIONS ON CUSTOMER RELATIONSHIP MANAGEMENT (CRM) AND ITS POSSIBLE INFLUENCE ON REVENUE MANAGEMENT (RM) AT A SELECTED WATER BOARD IN SOUTH AFRICA
Principal Investigator:	Mr. Mattheus Louw and Professor Nadine Oosthuizen
Student:	Joshua Manyonganise

Dear Participant,

You are invited to participate in a research study entitled ‘**Customer perceptions on Customer Relationship Management (CRM) and its influence on Revenue Management (RM) at a selected water board in South Africa.**’ Face-to-face interviews will be used to collect qualitative data on the perceptions of the water board’s customers on selected CRM and RM factors. I am thus seeking your permission to record a face-to-face interview in order to collect qualitative data on the perceptions of the water board’s customers on selected CRM factors and how they influence RM. Should you not feel comfortable with audio recording, I am requesting your permission to take notes during the interview.

Participation Information

- I understand the purpose of the research study and my involvement in it
- I understand the risks of participating in this research study
- I understand the benefits of participating in this research study
- I understand that I may withdraw from the research study at any stage without any penalty
- I understand that participation in this study is done on a voluntary basis
- I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential
- I understand that I will receive no payment for participating in this study
- I understand that the interview will be recorded
- I give consent that the interview will be recorded
- I understand that should I not feel comfortable with recording any part of the interview, the researcher may make notes of the interview.

Information Explanation

The above information was explained to me by: _____

The above information was explained to me in: ☐ English

and I am in command of this language

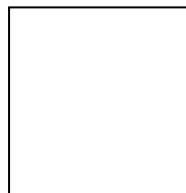
OR, it was comprehensibly translated to me by: _____

Voluntary Consent

I hereby voluntarily consent to participate in the above-mentioned research.

Signature:

OR, right hand thumb print



Witness signature:

Date: / /

Investigator Declaration	
I, _____, declare that I have explained all the participant information to the participant and have truthfully answered all questions asked by the participant.	
Signature:	Date: / /

APPENDIX D

INVITATION LETTER



RHODES UNIVERSITY

Grahamstown • 6140 • South Africa

DEPARTMENT OF MANAGEMENT ☐ Tel: (046) 603 8246, Email: Principal Researcher (Supervisor): m.louw@ru.ac.za, Collaborator details (Co-Supervisor): n.oosthuizen@ru.ac.za, Student: manyonganisejoshua@gmail.com, Ethics Coordinator: (046) 603 7727, s.mangele@ru.ac.za

CUSTOMER PERCEPTIONS ON CUSTOMER RELATIONSHIP MANAGEMENT (CRM) AND ITS POSSIBLE INFLUENCE ON REVENUE MANAGEMENT (RM) AT A SELECTED WATER BOARD IN SOUTH AFRICA

I am a masters' student at Rhodes University, and currently conducting research on customer perceptions on Customer Relationship Management (CRM) and its possible influence on Revenue Management (RM) at a selected water board in South Africa.

I am collecting information via interviews with a selected water board and five municipalities regarding CRM factors and its possible influence on RM. The interviews will be recorded. Information will be canvassed on the perceptions of customers on identified CRM factors and its possible influence on RM. Based on the findings of the study, recommendations will be made to the water board on how it can improve its revenue and debt collection in the future. The interviews should take no longer than 30 minutes. This research has been approved by the Rhodes University Ethical Standards Committee (RUESC). Please note that all information will be treated in the strictest confidence and findings will be reported anonymously as Participant 1 W-W, 4 M-W, 10 M-F, etc.

The interview schedule comprises of two sections:

Section A: Biographical information.

Section B: Explores the factors of customer involvement, customer value, information technology, management commitment and service quality.

Your cooperation is appreciated.

Joshua Manyonganise	Mr. Mattheus Louw	Prof Nadine Oosthuizen	Siyanda Manqele
<i>Research Student</i>	<i>Supervisor</i>	<i>Co-Supervisor</i>	<i>Ethics Coordinator</i>
076 1700263	046 6038687	046 6038246	046 6037727

APPENDIX E

ETHICS APPROVAL LETTER



Human Ethics subcommittee
Rhodes University Ethical Standards Committee
PO Box 94, Grahamstown, 6140, South Africa
t: +27 (0) 46 603 8055
f: +27 (0) 46 603 8822
e: ethics-committee@ru.ac.za

www.ru.ac.za/research/research/ethics
NHREC Registration no. REC-241114-045

04 November 2019

Mr. Joshua Manyongainse

Review Reference: 2019-0674-930

Email: g15m3144@campus.ru.ac.za

Dear Mr. Joshua Manyonganise

Re: CRM and RM at a selected Water Board in S.A

Principal Investigator: Mr. Mattheus Louw

Collaborators: Mr. Joshua Manyonganise

This letter confirms that the above research proposal has been reviewed and the first part of this research has been **APPROVED** by the Rhodes University Ethical Standards Committee (RUESC) – Human Ethics (HE) sub-committee. Data collection can commence in the following organization where gatekeepers letter have been granted a) Amatola Water, b) Nelson Mandela Bay Municipality, and c) O.R Tambo Municipality d) Amathole District Municipality e) Buffalo City Metropolitan and Ndlambe Municipality ONLY.

Approval has been granted for 1 year. An annual progress report will be required in order to renew approval for an additional period. You will receive an email notifying when the annual report is due.

Please ensure that the ethical standards committee is notified should any substantive change(s) be made, for whatever reason, during the research process. This includes changes in investigators. Please also ensure that a brief report is submitted to the ethics committee on the completion of the research. The purpose of this report is to indicate whether the research was conducted successfully, if any aspects could not be completed, or if any problems arose that the ethical standards committee should be aware of. If a thesis or dissertation arising from this research is submitted to the library's electronic theses and dissertations (ETD) repository, please notify the committee of the date of submission and/or any reference or cataloging number allocated.

Sincerely

A handwritten signature in black ink, appearing to read 'J Dames', with a stylized flourish at the end.

Prof Joanna Dames

Chair: Human Ethics sub-committee, RUEHC- HE

APPENDIX F

LETTER FROM THE LINGUIST



One Stop Solution
24 Firenze Gardens
Warbler Road
Cotswold Ext
Port Elizabeth
6045
www.onestopsolution.co.za

TO WHOM IT MAY CONCERN

I, Maureen Klos, declare that I have done the language editing for the proposal of:

Joshua Manyonganise (g15m3144)

entitled:

**CUSTOMER PERCEPTIONS ON CUSTOMER RELATIONSHIP MANAGEMENT AND
ITS POSSIBLE INFLUENCE ON REVENUE MANAGEMENT AT A SELECTED
WATER BOARD IN SOUTH AFRICA**

Submitted in partial fulfilment of the requirements for the degree of Master of Commerce at
Rhodes University

I cannot guarantee that the changes that I have suggested have been implemented nor do
I take responsibility for any other changes or additions that may have been made
subsequently.

Any other queries related to the language editing of this proposal may be directed to me at
078 481 8341.

Dated at Port Elizabeth on 27 July 2020

A handwritten signature in black ink, appearing to read "M.L. Klos", written over a horizontal line.

Dr. M.L. Klos