UNIVERSITY OF KWAZULU-NATAL

MUNICIPAL COST RECOVERY: TAX EXEMPTION AS AN INCENTIVE FOR CONSUMER PAYMENT AT UGU DISTRICT MUNICIPALITY

BY

NOEL NYAWADE

STUDENT NUMBER: 214580183

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DR. PFANO MASHAU
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ABSTRACT

The aim of the study was to establish whether tax exemption would serve as an incentive for consumers to pay for municipal water services. The Ugu District Municipality, as water service provider, was selected for case study. Due to poor cost recovery for services rendered, the purpose of the study was to establish the whether such an incentive can improve recovery rate.

In order to fulfil the objective of the study, a quantitative approach to methodology was employed. In this view, a random sample of 381 consumers was selected to participate in the study. An online questionnaire was distributed through social networks Facebook and WhatsApp applications to reach the participants of the study.

The findings of the study revealed that consumers in the low-income bracket do not pay for water services because they cannot afford to do so, which often results in some of them resorting to illegal connections of the water services. It was also revealed that the consumers do not trust the billing system by the municipality, believing that they are being charged for excessive amounts of water volumes compared to their actual consumption. As a result of the perceived over-charging, the consumers end up not paying for the water services. The participants of the study also noted that tax exemption can serve as an incentive to allow them to pay for water services. The results also highlighted that the municipality does not consult the registered consumers with regards to tariff structures, which makes them feel not being recognized and involved in municipal affairs that affect them. This demoralizes them and encourage them not to pay for municipal services. Based on the findings of the study, it was recommended that the municipality should undergo organizational regeneration in order to gain acceptance as an efficient organization delivering the correct bills, and that it should increase consumer participation in tariff structure reviews. It was also recommended that the municipality lacks adequate capacity to deal with defaulters, to prevent further illegal connections. The study also indicated that the majority of the participants would be more willing to pay for municipal services if the money spent can be exempted from tax.

Key words: tax exemption; incentives; water services; cost recovery.

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CHAPTER ONE
INTRODUCTION

1 Introduction

This introduction will present the background information to the study, its motivation for the study, problem statement definition, the objectives of the study, limitations and assumptions made. Post 1994, the apartheid legacy presented South Africa with enormous challenges of inequality, poverty, and immense aspirations for greater access to basic public services. To address these challenges, the government enshrined the constitutional rights to service access (World Bank, 2011). By providing ample financial resources, the government developed ambitious delivery targets to overcome the backlog in services. Within the water and sanitation space, usually a municipal responsibility, the deficiency of services is mostly experienced in the former “homeland’’ areas, where municipalities were first established in 2000 (World Bank, 2011). According to this report, the implementation of backlog eradication approach has been state-centric, top-down, target driven, supply-led, generously funded and often fully subsidised.

The Department of Water Affairs and Forestry (DWAF) produced a White Paper in 1994, advocating for the use of user charges in recoveing at least the recurrent costs associated with operations and maintenance (DWAF, 1994). The achievement of this goal would free up scarce budgetary needs for the much-required capital expenditure to ensure systems expansion and thus, extended access to all. A review of literature pertaining to municipal cost recovery indicates that not much attention has been paid to the implementation of mechanisms that are used (Manda, 2013). According to this study, there has not been a great deal of improvement in municipal cost recovery, despite numerous attempts. The result has been jeopardy to the financial viability of these utilities, curtailing their ability to continue with the much-needed capital expansion programmes at the required rate of growth. The Ugu District Municipality, which supplies water to approximately three quarters of a million people, has been hard hit financially by this scenario.

The challenge of cost recovery has been investigated in several studies and three sets of important factors that have emerged as determinants for successful cost

recovery identified (Alence, 2002). These include the technical service infrastructure futures, the institutional and social context, and the billing and payment practices (Alence, 2002). The billing and payment practices comprise of tariff schedules, non-payment penalties and incentives for payments, none of which considered the use of a tax exemption of payment of water services as an incentive. It is with this in mind that this research investigated the affinity of consumers in being willing to pay for water in the event that the money can be recovered back as a tax exemption. A tax exemption basically refers to monetary exemption that provides relief from taxes, reduces the taxable amount or allows for taxation of only certain portions of that amount. The risk of implementation of such an incentive however, is that the need to reduce usage and conserve the scarce water resource may diminish, and result is water wastage.

1.1 Motivation for the Study

Water has become a major worldwide constraint for socio-economic development and its universal access has been included in the millennium development goals (WWAP, 2015). The provision of clean and affordable water to populations has an entity of cost covering initial capital outlay, operation and maintenance and utility management. Proper operation and maintenance are indispensable to ensure that capital investments on new infrastructure result in sustainable service provision (Van Zel, 2014) However, due to reduced government funding as a result of constrained national budgets, low tariff rates and poor cost-recovery strategies from consumers by the water utilities, the ability of these utilities to recover costs, are limited. Cost-recovery should be viewed as an essential component for sustained operations and service delivery.

According to a report by the Financial and Fiscal Commission of the Department of National Treasury, Republic of South Africa (2013), South African municipal consumer debt is a complex challenge that requires multi-faceted solutions to resolve. In this report, an analysis on consumer debt over the period 2004 to 2010 revealed that municipal consumer debt is generally declining and despite this progress however, the debt still remains a challenge due to its sheer size.

Cost-recovery through some mechanisms is therefore an essential part for long-term sustainability of the water services infrastructures, operation and maintenance, whether through user-pays principle or through government support. Where recovery and support is absent, the result in infrastructure, skill and services deterioration leading to complete system break downs. The payment of water services should therefore be continuously encouraged and emphasised and this can be achieved through some incentives. One such method would be to provide some form of tax relief to payers.

Income tax is a tax levied on all income and profit received by a taxpayer (SARS). It is the national government's main source of income and is imposed by the Income Tax Act (No. 58 of 1962). According to the Tax Laws of South Africa, a tax exemption is a monitory exemption which reduces taxable income. Several personal tax exemption categories in South Africa include exemptions on income for residents working outside the Republic for a period exceeding 183 days a year and exemptions on annuity contributions, just to mention but a few (National Treasury, 2017). The research proposes to add monies paid out for services rendered to individual households by municipalities to be added to this list. The justification will be that municipalities will have a regular cash injection for their daily operations and maintenance, as opposed to relying on segmented transfers from central government, usually done on a quarterly basis. The danger to this would be a reduced income base for the South African Revenue Service (SARS), which is currently on a deficit of 50 billion rand from tax collection target for the fiscal year (National Treasury, 2017). According to the 2017/18 medium term budget, the current deficit has widened to 4,3% of the gross domestic product (GDP) against the 2017 budget target of 3,1% of GDP.

1.2 Focus of the Study

Municipal service delivery capabilities are reducing due to continued dwindling financial resources from government coffers (National Treasury, 2016). To bridge this gap, new financing models need to be investigated to improve cost recovery for

services rendered. The rationale behind cost recovery is that consumers must pay the partial, if not full cost, of service rendered, with the intention of revenue generation for service upgrades, maintenance and expansion. Certain identifiable factors can therefore affect the appetite for payment of services, such as degree of service delivery perception by the consumer, prevailing free basic water policies, consumer income and the institution's ability to deal with defaulters, among others. In agreement to this statement, human behaviours have shown that a sense of ownership provides a more sustainable mode of supporting a cause, in this case, paying for water services rendered (DWAF, 2004).

The purpose of this study is to identify some the reasons impeding regular payment of municipal bills for service rendered (water supply) and to access the reaction towards the introduction of tax exemption on amounts paid, as an incentive that can improve regular payments.

1.3 Problem Statement

The sustainable supply of water, a scarce resource, is becoming more and more challenging as financial resources dwindle. The use of policies that advocate for free supply are not sustainable in the long-run, while new models of ensuring continuous financing of operations need to be investigated. The user-pays principle is purported to be the most sustainable, as it encourages the notion and sense of personal ownership to the resource, by directing public resources to the people who will most benefit (Montreal Economic Institute, 2003). However, the lack of payment for water services has become the norm in South Africa, especially within the lower income households. The Ugu District Municipality, as a water service provider, has been undergoing financial difficulties as a result of the high rates of regular non-payment of water accounts by registered consumers. To compound to this, perceived in-action from the utility against defaulters has encouraged cases of illegal connections into their system (water theft). It is the intention of this study to gauge whether incentives through tax exemption, can reverse these trends.

The problem statement can therefore be stated that "If water supplied is not paid

for, a water utility will find it increasingly difficult to sustain maintenance and operational activities, leading to the gradual deterioration of services and subsequent collapse of the system." In view of that, the study aims to fulfil the following objectives by investigating whether the use of some form of tax exemption against amounts paid can be an incentive for regular payment by registered consumers.

1.4 Objectives of the Study

The objectives of the study were:

1) To study the causes of irregular payment of water bills by registered consumers in Ugu District Municipality;
2) To establish confidence that residents in Ugu District Municipality have on the ability of the municipality to accurately and effectively deliver on its mandate;
3) To investigate the willingness to pay for water services regularly in the Municipality; and
4) To investigate whether tax exemption incentive can be used in Ugu District Municipality to motivate regular payment of service.

1.5 Research Question

The research questions to be answered by the study were:

- What are the causes of irregular payment of water bills by registered consumers in Ugu District Municipality?
- Do the residents of the Ugu District Municipality have confidence on the ability of the municipality to accurately and effectively deliver on its mandate?
- Are consumers willing to pay for water services regularly in the Municipality?
- Would the introduction of a tax exemption as an incentive be used in Ugu District Municipality to motivate regular payment of service?

1.6 Methodology

The research employed the quantitative approach to answer the research questions and the study was based within the Ugu District Municipality, in KwaZulu-Natal, by considering registered consumers as the framework of the research. The focus of the research was to gauge the effect of proposed tax exemptions as an incentive for payment for water services provided. The research method was conducted on a target population frame of forty thousand odd registered consumers. A total of 381 respondents were targeted with a 95% confidence level reflecting a significance level of 0.05. A random sampling method was used for data collection, by launching an online questionnaire research instrument. Pre-testing of the questionnaire and revisions were carried out before the actual roll-out online. Data were analysed through the SPSS 25.0 version programme.

1.7 Limitations of the study

Limitations of a study refers to aspects of the methodology that influences the interpretation of the results (McCusker et al., 2015). The following were identified as limitations to this study;

a. The use of a questionnaire as a tool of collecting data comes with its own limitations such as the respondent not being entirely truthful due to social image etc.
b. The administration of a questionnaire would require one to travel to the different corners of the district in order to gather representative data from a sample population. This however would require extensive travel costs. This was resolved by use of an on-line method of administration of the questionnaire.
c. By use of on-line data gathering technique there were limitations as to the category of respondents who could be accessed as it requires a respondent to have adequate resources of their own to complete it. It is common for one to utilise data on issues that directly benefit them.
d. It was impossible to know whether the respondents were registered account holders with the municipality or not since the questionnaire was distributed online via google forms

1.8 Structure of the Dissertation

This dissertation is divided into six chapters as briefly outlined.

Chapter One: Introduction

This chapter introduces the study. It explores the background for municipal consumer debt and cost recovery, reasons for choosing the area of study and in addition, outlines the objectives, research questions and a summary of the methodology.

Chapter Two: Literature Review

This chapter establishes the legislative and conceptual framework upon which cost recovery is based. It reviews the literature on what constitutes cost recovery, mechanisms for cost recovery and the rationale behind cost recovery.

Chapter Three: Research Methodology

This chapter explores the research design, defines the study area and establishes the population and sample size. It then defines the sampling and data analysis methods, while also accessing the reliability and validity of the data. It concludes by looking at the bias of the data and the ethical considerations.

Chapter Four: Research Analysis, Presentation and Interpretation

This chapter presents the analysis of the study and interprets the relationships between variables. The main purpose of this chapter is to analyze the data collected in order to come up with real facts to answer the research questions as outlined in chapter one.

Chapter Five: Discussion

In this chapter, the findings of the analysis are examined against the objectives of the study, as well as against the review of the literature.

Chapter Six: Conclusions and Recommendations

This chapter provides the general conclusions of the study by deducing on the discussion presented in chapter five. It also gives recommendations for future studies, moving forward.

1.9 Conclusion

With most municipalities experiencing difficulties in the collection of user payments, especially from the lower income status of the population, who conversely are also the main consumers of basic water services, in addition to reduced government support due to constraint budgets, the ability of these entities to continue operating sustainably is greatly compromised. Cost-recovery through some mechanisms is therefore an essential part for the long-term sustainability of the water services infrastructures, operation and maintenance.

It is with this in mind that this research proposes to investigate the affinity of consumers in being willing to pay for water in the event that the money can be recovered back as a tax exemption. The study will be based within the Ugu District Municipality, which is a Water Service Provider.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter establishes the legislative, conceptual and framework upon which cost recovery is based. It reviews literature on what constitutes cost recovery, as well as the mechanisms for cost recovery and the rationale behind cost recovery. It identifies reasons for reduced funding from central government, categorises municipalities, analyses water sector subsidy as well as factors that influence cost recovery. The purpose is to evaluate what the different strategies that can be employed may be affected through different constraining factors.

2.2 Legislative Framework

The history of South Africa is laced with inequitable distribution of water supply services that was skewed through policies that were historically discriminatory on a racial basis. Democracy's advent not only gave all South Africans the right to public affairs participation, but also entrenched constitutional rights to access to basic social and economic services. The main vehicle for driving these changes was the Reconstruction and Development Programme (RDP) whose aim, amongst other things, was to ensure the provision of a clean and safe water supply within a 200-meter radius of every household. The RDP document did recognise the limitations of its implementation due to financial constraints (Marah et al., 2003), noting its ability to redirect government expenditure, rather than increasing its Gross Domestic Product (GDP) proportion.

The then Department of Water Affairs and Forestry (DWAF) paid attention to financial dimensions associated with basic water supply expansions (Marah et al, 2003). The government faced the challenge of reconciling competing pressures in an effort to extend basic services to all South African residents. Drawing from international and conventional thinking, the then DWAF's approach was to recover the recurrent operational and maintenance costs through user charges, freeing up its resources for infrastructure expansions. Allowance was made for indigent

populations through the implementation of subsidised low tariffs to enable affordability of basic services (Marah et al, 2003). This responsibility was however transferred to municipal governments, which could choose to fund them through Treasury's equitable share grants (guided by the population of residents below the national poverty line) or through cross-subsidising via increased tariff structures for large consumers (Marah et al, 2003).

2.3 Effects of Fiscal Decentralisation

Fiscal decentralisation is normally emphasised by the devolutions of responsibilities on expenditure and revenue collection from a higher level to a lower level of government. The aim of this fiscal decentralisation is normally to improve governance, accountability, to increase responsiveness to citizen concerns and to ensure a higher level of service delivery, as localised governments would tailor make their goods and services to meet the needs of their individual constituents (Yemek, 2005).

The basic government policy therefore was that services should be self – financing at a local level. Sooner than later, the difficulties in cost recovery through user payments emerged as a major threat to operations and maintenance. According to Marah et al., (2003), there were several explanations to this predicament. Firstly, water services had been historically freely provided in many areas, especially in the rural districts. Secondly, South Africa's apartheid history had cultivated a culture of non-payment in opposition to the political system then. In addition, the administration for billing and revenue collection systems were weakened by institutional and administrative lack of capacity.

The results of fiscal decentralisation have not been all too positive, there has been recent growing service delivery dissatisfaction, leading to constant protests against the lack of adequate service delivery (Nara, 2014). Far too common, most municipalities experienced both service delivery and backlog challenges, as well as poor financial management. Other than these challenges, most are plagued by poor financial management, corruption and poor capacity due to scarce skills availability

(Nara, 2014). This has resulted in a loss of confidence by the local communities in these municipalities. Financial distress is therefore a major factor in crippling a municipality against its mandate to the population. It is therefore imperative that municipalities develop policies that are conducive for sustaining cash flows.

As much as there is recognition of the fact that governance is a key element in development strategies, an important aspect that must be remembered is that governance without finance can be challenging (Brian et al., 2009). While institutional advantages of local government allow them the ability to know local conditions better than national government, the full realisation of the promise of effective service delivery and backlog eradication lies squarely on strong fiscal positions of the municipalities, so that operations and policies are fiscally sustainable. Factors identified as relevant to increased fiscal health of local government include, but are not limited to the following (Brian et al., 2009);

a) The estimation of revenue should be as accurate as possible, in order to limit the deficit or surplus gaps
b) Fiscal discipline – this has been noted in successful municipalities within the country
c) Fiscal discipline is best supported by rules, greater control and oversight by central government, and by strong own revenue capacity and efficient administration of this revenue.

It is therefore imperative for local governments to have policies and means of revenue collection that is sustainable. Citizen buy-in is key to regular payment of municipal accounts.

2.4 Municipal Financing Model

With respect to the assignment of revenues, local governments are constitutionally granted their own revenue sources in order for decentralised functions to be readily carried out (Nara, 2014). The two main revenue sources are property rates and surcharges on services provided (water, waste water, solid waste and electricity managements). Overall, South African municipalities are largely self-financing through revenues raised through the above sources (Nara, 2014). A municipality that is unable to effectively implement cost recovery will fall into the unsustainability

trap. Additionally, the constitution guarantees the distribution of fiscal equitable share of national revenue to all municipalities, the formula of distribution, of which is determined annually by the Division Revenue Bill (Nara, 2014).

2.5 Municipalities as Water Service Providers

Metro Areas

The metropolitan within South Africa are generally populated by economically strong urban areas enabling them the capacity to cross subsidise poorer consumers. In addition, they also possess strong and well skilled administrative water supply departments (DWS, 2015). The existence of 'rural periphery' within the boundaries of these metros, the financial and skills capacity inherent easily deal with these.

District Municipalities

Most district municipalities that are Water Service Authorities (WSA), also chose to undertake the task of being a Water Service Provider (WPS). It is however typical that the district municipality contracts out the WSP activities to external providers such as local municipalities (especially positioned for urban water systems), water boards (well positioned for bulk water conveyance), private sector operators and community based organisations, who are more efficient in running small rudimentary schemes (DWAF, 2002).

Local Municipalities

Wherever the local municipality is the WSP, the same choices as those of the district municipalities also exist. However, the retention of the WSP functions are more preferred (DWAF, 2002). In most cases, the outside contracts will only cover the bulk conveyance side of the supply system, mostly contracted to the water boards and district municipalities.

2.6 Water Sector Subsidy: Cause, Effect and Remedial Measures

Since many governments have been the main drivers of universal access to water and sanitation, tariffs have been kept low in order to service the entire population spectrum. The result has been increased benefits to individual and public health. In order to maintain low tariffs, subsidies have been provided to the WSPs, rather than to the consumers themselves (Foster et al, 2000), leading to unsatisfactory results. The continued use of this mechanism is ineffective within areas of ineffective infrastructure (Burger, 2014). The fact that water is under-priced (due to subsidy) has tendered to only benefit the consumers with existing connections, whilst resulting in the detriment of those without, in addition to increase in inefficiency within the WSPs (DWAF, 2002). The large implicit subsidies have resulted in unsustainable water supply systems that are unable to roll out expansion programmes to the unconnected consumers.

Due to these concerns, there has been a diversion away from subsidised water supply systems and a concerted drive, both internationally and locally towards full cost recovery of water services. This has subsequently led to increased billing to households, increasing the household financial burden (Gomëz-Lobo & Contreras, 2000). This growing burden has resulted in the need for targeted subsidies that better guarantees poor households access to water. The main advantages of household targeted subsidies are that they are transparent and explicit, minimising distortions in the behaviour of both the service provider and the customer (DWAF, 2001). They also minimise the access to subsidy by the wealthier sectors of society. The high administrative costs are the main draw backs in designing a targeted household subsidy.

2.7 Free Basic Water Policy: A Critique

The provision of free basic water (FBW) policy was announced in the year 2000 by the government, instructing water service providers to allow access to 6000 litres per household per month, of free portable water (Karen et al., 2005). The operating costs were to be recovered through rising block tariffs, with the higher consumers subsidising the basic consumers. Although this policy guarantees access to water,

the reality is that it is limited severely in ensuring access to low-income households. As cited by Karen et al., (2005), the suggestion that while the allocation of the first 6000 litres is free, a sharp rise in tariffs thereafter often leads to low-income households paying more than what they used to pay before the free basic water policy introduction. The process of its implementation also differs from one municipality to another and as such, due to varying income and service level profiles, some municipalities find it easy, while others face severe constraints, in implementing the policy.

The only way that FBW can fully benefit the poor households is if there is sustained investment in expansion of water infrastructure (Burger et al., 2014) and this will require some form of cost recovery.

2.8 Cost-Recovery Rationale

Cost recovery is the act of charging out the full or near full costs of providing a good or a service to a customer (Boyle, 2012). The concept is based on a service provider being able to recover partial, if not all, of the costs associated with the provision of a good or service. For water supply services providing utilities that are publicly owned, the application may or may not include a surplus, over and above the basic production cost. Conversely within the private sector, a surplus, also referred to as profit, is included in the cost recovery strategy. In either case, the ability to recoup the full cost of production is vital to sustained operations of the entity (Boyle 2015).

There are two components associated with a water supply system; the initial capital costs of infrastructure lay-out, also referred to as the fixed costs, and the operational and maintenance costs, also referred to as the variable costs. The fixed costs with the South African water supply sector are generally sourced either from financial institutions or government grants (National Treasury, 2017). The variable costs, which include salaries, wages, administrative, operational and maintenance costs, are usually sourced through government equitable share distribution (National Treasury, 2017) and user-pays principle (Boyle 2012).

The World Health Organisation (1990) indicated that in many developing countries, cost-recovery and sustainability were largely ignored for lengthy periods of time. As a result, in addition to inadequate government subsidy, unrealistic tariffs were set to make up for the variable costs of utilities, leading to infrastructure deterioration and decline in services rendered.

The emphasis of water as a human right is embodied within the Republic of South Africa's Constitution (Mubangizi, 2004). The White Paper on Water Supply and Sanitation focused on community water supply and backlog eradication (Karen et al., 2005). It also introduced the subject of cost recovery in the water legislature, for the purpose of equitable provision of water services through payment of operational and maintenance costs by the consumers of the services. It argued that without these funds, there would be a drastic reduction in available finance for further development and roll-out of basic services. The need to improve the expansion of drinking water services in sub-Saharan countries is critically dependent on the availability of financial resources. Conversely, the cost recovery rates of most water supply utilities are low, while the demand for service delivery keeps increasing (Tarfasa, 2012).

Balancing of the books is the most important cost-recovery reason. Within the local government spheres, cost recovery can be argued that it is a good public fiscal practice that allows the central government to reduce the tax burden on the population due to the lower tier being self-sustaining. It can also be argued that cost recovery leads to sustained long-term service delivery as the state will have funds to enable its investments in the expansion infrastructure to cater for future demands. Without expansions, the poor would easily be left out of the service delivery equation (Marah et al., 2003).

2.9 Municipal Cost Recovery Models

There are several models used by water supply utilities around the world and within South Africa, in recouping investment, operational and maintenance costs from

consumers. The most prevalent of them is the use of conventional water meters, pre-paid water meters and the other the use of block tariff structure (Heymans et al., 2014). However, since the democratic dispensation in South Africa in 1994, there has been rampant wide-spread of non-payment of services charged for by local governments, mainly in the low-income sectors of the population, spread over townships to rural and semi-rural areas (Antina, 2008). The two models utilised within the Ugu District Municipality are the use of increasing block tariff and the use of prepaid water meters.

The efficient provision of water supply was traditionally achieved by the use of setting up volumetric rates equal to the marginal cost of supply (Hugh et al, 2013). There has been a significant departure towards Increasing Block Tariff, where higher rates are charged as consumers reach progress thresholds. Two arguments for the proponents of increasing block tariff usage is that firstly, it is assumed to provide the first tier of consumption to all consumers at lower costs, thus the fairness argument. It is the excessive users who are faced with higher payment rates. On the other hand, in developing countries' context, as cited by Hugh et al. (2013), increasing block tariffs allows utilities to cheaply supply water to the middle- and upper-income groups, while appearing to serve the poor through the provision of a single connection. This payment model has not been successful in ensuring regular repayments by consumers within Ugu District Municipality.

Following the failure of a campaign to encourage payment of services during the post-apartheid era, most water utilities have resulted in the use of pre-paid water meters, which 'self-disconnect' households in the event of non-payment (Antina, 2008). This has however resulted in protests, with the pre-paid meter being the bone of contention, let alone the rate of payment, ripping them from the ground and causing further losses to the municipalities (Antina 2008). The model has therefore not been economically viable in many municipalities.

2.10 Water Supply Cost Recovery Mechanism Infrastructure

There are several infrastructure mechanisms that are largely employed to facilitate cost recovery in South Africa. These include the following;

2.10.1 Conventional Metering Systems

This is the most commonly used infrastructure for cost recovery. It is normally classified as per consumer profile, namely:

- residential, which covers households in general;
- institutional, which covers government properties, schools, hospitals and other public amenities;
- Commercial, which covers small to medium size business premises; and
- industrial, which caters for large businesses.

Each meter is linked to an account and volumes past the meter are regularly calculated through meter readings. Bills are then generated and distributed to the account holders. The challenges to this method is that due to the large number of connections that may prevail within a system, it is impractical for the utility to read all meters regularly, say monthly. It is commonly accepted that each meter can be read quarterly (at least once in three months), while billing for the other months not read are estimated. This leads to a perception among account holders that they are being over-billed, causing reduced payment rates due to disputes. In certain instances, consumers are allowed to call in their meter readings in order to increase on accuracy of volumes billed. Other possible sources of error with this method other than estimates are that a wrong meter can be allocated to a wrong account, or a meter change-out being undertaken without updating the information in the billing system (Gezani, 2013). In this method, the account holder has the onus to facilitate the payment of the bill. This method has a distinct advantage in that most meters are mechanical in nature, thus, they are easy to maintain and are rigid. There exist electronic ones as well, which are mostly used by large volume consumers to improve on accuracy.

When implemented correctly, billing systems through conventional metering can improve revenue collection, and especially so through the implementation of a cost-effective and reliable metering infrastructure. This can be most effective when all consumers are connected and metered with robust working meters, resistant to

tampering and easy damage to the register. The billed invoices should also be purely based on metered consumption (Gezani, 2013).

2.10.2 Prepaid Systems

This is a system where a consumer buys unit in advance, whether water or electricity. The cost is recovered in advance of service rendered, over and above the free basic allocation. The meter is set to discharge amounts to prescribed units. In the case of water however, it is normally set to allow for the mandatory free basic water volume to be discharged before credit is utilised. The system relies on good recharge structures in place for ease of access for the consumers, as credits may run out at any time of the day or night. Within the water sector, the meters are however not very popular since they involve some level of electronics that have a tendency of software failures and high rate of functionality problems. They also have an added cost of the administration of pre-paid service vendors (Gezani, 2013).

When implemented correctly however, it can be a powerful cost recovery mechanism. The City of Johannesburg has elected to resolve the challenges of conventional meter-based billing by installing thousands of pre-paid meters through the launch of G*cin'amanz*i project (Gezani, 2013). The aim is not only to improve cost-recovery, but also to reduce water losses, post the consumer meter stage. It is assumed that pre-paid water will be treated more valuably by consumers, thus the need to resolve leaks that occur on the consumer side of the meter.

2.10.3 District Metering

This is the practice of allocating a bulk meter into a community, for the purpose of billing the relevant custodian – be it a government department, community committee etc. Water is distributed to different sections of a habitats/ villages and metered at the zone entry point. It ignores the consumption of individual households and consumption trends. The advantage is that losses within the reticulation downstream of the meter are also paid for, thus the onus is with the custodian of the

zone to limit leaks. Operational control is mostly community controlled and thus requires minimum investment.

2.10.4 Flat Rate

The application of a flat rate entails the imposition of rate that is paid in by every household on a regular basis. The system is mostly applicable in communities where the initial infrastructure investment was community driven and the subsequent running of the scheme is also community driven. The monies paid in are mostly for operational and maintenance purposes, administered by a selected committee. In some cases, however, the municipalities remain responsible for the daily operations and maintenance of the system.

2.11 Factors Affecting Cost Recovery

The rationale behind cost recovery is that consumers must pay the partial, if not full cost, of service rendered, with the intention of revenue generation for service upgrades, maintenance and expansion. Certain identifiable factors can therefore affect the appetite for payment of services.

2.11.1 Service Delivery Perception

The theory of consumer demand assumes that consumers derive satisfaction, not from the consumption of the good per se, but from the characteristics that surround the good (Tarfasa, 2012). The manner in which consumers perceive the manner in which a service is supplied dictates their appetite to meet their own obligations to pay. If the perception is positive, then consumers are more willing to pay, and vice versa.

2.11.2 Free Basic Water Policy

Although the implementation of free basic water is a commitment to ensure access to potable water, especially for low-income households, within the cost-recovery framework, it has become nothing but a stumbling block. In an analysis conducted by DWAF, a non-payment culture arose due to the belief that people have become

used to receiving free services in the post-apartheid era (Karen et al., 2005). There is a belief of entitlement, thus perpetuating the belief.

2.11.3 Consumer Income

As argued by Karen et al., (2005), household water arrears and debts reflect the inability of a household to afford the service. The theory suggests that limited household income results in non-payments, since they do not have the capacity to support increased financial burdens. For low-income households, the payment for services absorbs a significant and disproportionate amount of its income, thus concluding that the inability to pay is the primary cause of non-payments. If taken further, within the context of cost recovery implementation from water bills, most low-income households will survive on the free basic water allocation.

2.11.4 Dealing with Defaulters

As reported by Karen et al (2005), the Minister for the Department of Water and Forestry in 2003 decried that restriction of flow, rather than complete cut-off, is the limit that municipalities can do in order to deal with defaulters, with regards to paying for water services. This decree ensures restricted flow to the free basic water level that a municipality provides. Some consumers are able to adjust their draw-offs and usage to this restricted flow, thus, negating the need for them to update their accounts leading to revenue loss to the utility.

2.11.5 Illegal Connections

Illegal connections are a major source of revenue loss to utilities. These connections are usually neither authorised nor captured in the billing system, thus, no bills can be generated (Gupta, 2008). Poor enforcement of by-laws to deal with unauthorised connections has only but led to an increase in incidences occurring.

2.12 Impact of Incentives on Consumer Behaviour

In an increasing financially challenging world, keeping consumers engaged and responsive is becoming more and more difficult. Rewards and incentives are

constantly being included in marketing programmes, in order to stand them out from the rest. Gaining consumer loyalty and attention for cost recovery through payment has become paramount for sustainability.

A financial incentive is basically a monetary transfer of either kind or cash directed to an individual for purposes of inducing behavioural changes and even compliance. Financial incentives in particular, are the most commonly studied and implemented methods in enhancing adherence (Ciapponi et al, 2011) rooted in behavioural theories based on the benefits of rewarding good behaviour. Ideally, such incentives should motivate positive behaviour, based on understanding the underlying problem and the mechanisms for influencing change. affective commitment and loyalty programs that provide economic incentives positively affect both customer retention (Verhoef, 2003).

Customer Satisfaction can be defined as the emotional state of mind that results from a customer's interaction with a service provider over a period of time, and that a good level of satisfaction has a positive impact on customer loyalty (Verfoef, 2003). It is therefore important that service providers like municipalities to strive to improve on customer satisfaction by using incentive that have a direct financial impact on to consumers as it positively affects customer retention, which may result in increased compliance.

According to a white paper written by Virtual Incentives (2016) on the impact of incentives on consumer behaviour, the right incentives can enhance consumers to brand, product or service loyalty, by making them feel valuable. The study concluded that personalised rewards and incentives create an emotional connection between the product and the consumer.

2.13 Tax and Tax Exemption: Definition

Income tax is a tax levied on all income and profit received by a taxpayer (SARS). It is the national governments main source of income and is imposed by the Income Tax Act (No. 58 of 1962).

Tax exemptions are set out in *Sections 10, 10A, 10B, 10C and 12P of the Income Tax Act* (Haurpt, 2015). There are two categories of tax exemptions:

- *Income* which is either totally or partially exempt from tax, for example South African dividends, South African interests earned by non-residents, or foreign pensions for total exempts, and interests earned by natural persons which is exempt up to certain limits.
- *Entities* which can either be totally or partially exempt from paying tax. Pension provident funds, municipalities and government entities are totally exempt from paying tax, while certain entities such as public benefit organisations, sectional title body corporates, share block companies and recreational clubs, are partially exempt from paying tax.

2.14 Current South African Personal Tax Exemption Categories

The term tax exempt means free from taxation. It is a taxable expenditure, income or investment from which no tax is levied in order to serve a specific purpose for the encouragement of a certain activity. According to the South African Revenue Service (SARS), tax exemptions can apply to a portion of an individuals' income unless an individual has been outside of the republic for a period exceeding 183 days in a year, where income becomes fully exempt (National Treasury, 2017). Some current personal tax exemptions are discussed herewith.

2.14.1 Retirement Savings and Medical Aid Contributions

Tax is a certain and cannot be avoided. However, once individuals make retirement savings contributions, they are exempt from tax on these amounts, to some prescribed limits. Nevertheless, on drawing the savings upon retirement, income tax is imposed. Provident funds and retirement annuities are the main retirement vehicles. The main difference being that provident funds are employer driven packages whilst retirement annuities are individual driven, that can be accessed by self-employed individuals.

On the other hand, medical expenses have a rebate called Medical Scheme Fees Tax (MTC), that reduces an individual's normal tax. The MTC effectively replaced part of the tax deduction that was specifically allowed for medical scheme contributions, and applies to fees paid by a taxpayer to a registered medical scheme (or similar registered scheme outside South Africa) for that taxpayer and his or her "dependants" (as defined in the Medical Schemes Act).

2.14.2 Foreign Employment Income Exemption

Prior to 2001, the application of a source-based taxation system allowed all income sourced within the republic were taxable in the republic (National Treasury, 2017). This meant that income sourced out of South Africa or deemed not South African was subject to tax in South Africa. However, since March 2001, South Africa moved to a residence-based tax system, whereby South African residents are taxed on their worldwide income. Nevertheless, *Section 10 of the Tax Act* exempts the taxation of South African residents who, for purposes of rendering services for or on behalf of their employers outside of the republic, in aggregate, exceeding 183 days in a full calendar year during any period of 12 months commencing or ending in an assessment year. In addition, the service rendered outside the republic should have a continuous period of at least 60 full days.

2.14.3 Employer Provided Bursaries to Learners with Disabilities Tax Exemption

The current Act allows for tax exemption for all bursaries and scholarships by employers to employees or qualifying relatives, subject to certain limits and requirements (National Treasury, 2017). This exemption will apply only if the remuneration of the employee does not exceed R400 000 during the assessment year. The limit amounts of the bursary or scholarship exempted is R15 000 for studies of Grade 12 and under and R40 000 for NDF levels 5 to 10 qualifications.

2.14.4 Transfer of Retirement Fund Benefits on Reaching Normal Retirement Date Exemption

Since 2014, the Act allowed individuals freedom to retire to determine the date at which the lump sum benefit accrues. By postponing 'retirement', members of retirement funds were allowed to keep their benefits within their funds past the normal retirement age (National Treasury, 2017). From a policy point of view, it is favorable that a benefit be preserved for as long as possible, as long as the member is able to continue to work.

2.15 Advantages of Tax Exemption

As cited by Van Wyk (2010), the introduction of tax incentives into the Income Tax Act 58 of 1962, are now contained in section 37C. Although it might be argued that tax exemptions might have an effect on the tax revenue of the national fiscus, the opportunity it might present to incentivize compliance cannot be ignored. While investigating the National Treasury's potential loss to revenue due to tax incentives governing biodiversity conservation among land owners in the Western Cape in the 2009/2009 financial year, Van Wyk (2010) concluded that only a small percentage of the tax revenue was foregone. However, from this study, only a third of land owners indicated that tax incentives would encourage them to commit more land to conservation. Policy makers have long been interested in whether tax policies can be used to encourage entrepreneurial activity, and in a study by Gurley-Calvez et al., (2013) resulted in a finding that cuts in relative tax rates faced by entrepreneurs, either in the form of higher rates for wage workers or lower rates for entrepreneurs, increases entry thus growing business base.

2.16 Conclusion

This chapter established the legislative and conceptual and framework upon which cost recovery is based. It reviews literature on what constitutes cost recovery, mechanisms for cost recovery and the rationale behind cost recovery. It has discussed the need for municipal fiscal support from central government, as well as the need for self-cost recovery. The chapter highlighted the different cost recovery

techniques that have been utilised by municipalities, and proposed the use of additional incentive of tax exemption to improve regular payment by consumers.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This study employed the quantitative research method. The chapter describes the methods used to gather the research data and the analysis methods employed. A preliminary desktop research enabled the development of the research questions. In this regard, the chapter explains the research methodology and the rationale behind it. The research design, which includes strategy, area, target population, sample space and data collection tools, are explained. Lastly, the validity of the data, limitations and ethical considerations, are also considered.

3.2 Research Design

A research design is the type of inquiry utilised to provide direction for procedures to be followed. According to Creswell (2014), research design can either be qualitative, quantitative or be of a mixed method. Qualitative research is characterized by its aims, which relate to understanding some aspect of the subject, through the generation of words rather than numbers, as analysis data (McCusker et al., 2015). On the other hand, quantitative methods aim at the measure of something, such as percentages (McCusker et al., 2015). While qualitative methods aim to answer questions about the ‘what’, ‘how’ and ‘why’, the qualitative methods try to answer the ‘how many’ and ‘how much’ of a phenomenon. Mixed methods research is an approach that combines quantitative and qualitative research methods in the same research inquiry. Such work can help develop rich insights into various phenomena of interest that cannot be fully understood using only a quantitative or a qualitative method (Venkatesh et al., 2013).

Due to time and financial considerations, many researchers within the socio-economic environment prefer to utilise quantitative research over other methods. (McCusker et al., 2015). This is particularly so because accessing and quantifying information and data is simpler compared to qualitative research methods, reason

being the latter method wold require the researchers considerable time and effort on the field while covering and relatively small sample of participants.

The instrument to be used was quantitative in nature. The aim was to establish what new incentive methods can be used for consumers to take ownership of their bills and pay them up. Factors that affect cost recovery were investigated and new ones proposed. Municipal debt recovery mechanisms were analysed and measured against the actual recovery and the perception regarding penalisation established. The provisions of the Tax Act were taken into consideration and estimated loss of revenue collection due to new exemption based on water supply payments evaluated.

3.3 Research Strategy

Research strategy is defined as the general plan of how the researcher will go about answering the research questions (Wadewatta et al., 2011). It provides the research's overall direction, including the processes by which the research will be conducted. Different research strategies that are generally used in business management studies include experiments, surveys, case studies, action research, grounded theory, longitudinal studies, ethnography, participatory enquiry and cross-sectional studies (Wadewatta et al, 2011).

From the various strategies, this research sought to adopt the case study research strategy, which involves an up-close and in-depth detailed examination of a subject, as well as the related contextual conditions.

3.4 Study Area

In the process of conducting a research, the geographical location of the study is an important aspect that dictates the context of the participants' behaviour (Waruingi, 2010). It dictates that populations behave similarly if they reside in a similar context, and behave differently if they reside in a different context. This study was therefore restricted to the Ugu District Municipality.

The project area includes the entire area of supply for the Ugu District Municipality, located along the South Coast of KwaZulu-Natal and extending inland to Harding. The population of the Municipality is approximated at 722 484 people (StatsSA, Population Census, 2011). The Ugu District Municipality is a Water Service Authority (WSA) in terms of the Water Services Act. The local Municipalities that fall under the District Municipality are Vulamehlo, Umdoni, Umzumbe, Umuziwabantu and Roy Nkonyeni. There are three regional offices within the District; North, South and South West, each with a payment office.

The municipality has approximately 42 300 active registered water connections (Ugu District Municpality Technical Report, 2018).

3.5 Population and Sample

The study population, also known as the target population, is the totality of persons from which cases may legitimately be sampled (Robison, 2014). In addition, the delineation of the sample universe entails the inclusion or exclusion of a set of criteria, or a combination of both (Robison 2014). Inclusion criteria specifies an attribute that must be possessed for cases to qualify for the study. In this research, the inclusive criteria were that the population be the number of registered water consumers in the District.

The value of a survey is enhanced when it is not only reliable, but it also be a representative of the entire population being considered. This is achieved through sampling. Sampling is the process of selecting the sufficient number of correct elements from a population, in order to be able to generalise properties attained from the study of the sample to the entire population (Sekaran and Bougie, 2013). The steps involved in the sampling process are: defining the population; determination of the sampling frame; determination of the sample design; determination of the appropriate sample size and, the execution of the sample process. According to Waruingi (2010), populations are dynamic and always on the move, thus making it impossible to include all individuals within a target population. This necessitates the need to have a defined sample of a population in order to solve this problem.

The sampling population was defined as the registered water consumers within the Ugu District Municipality. The sampling frame consisted of the individuals with a legitimate chance of being selected. Within the municipality, the registered consumers formed the sampling frame.

3.5.1 Sampling Design

Two types of sampling designs were identified by Sekaran and Bougie (2013); probability and non-probability sampling.

In probability sampling, every individual within the population has an equal and non-zero chance of being chosen as a sample respondent (Sekaran and Bougie, 2013). There are several types of probability sampling, namely simple random sampling, stratified sampling, systematic sampling and cluster sampling (Wilson, 2010). According to Zikmund et al. (2013), there is a definite advantage in probability sampling in that the error within the sampling process can be accurately predicted. Struwig and Stead (2013) concluded that probability sampling may be seen as the most correct sampling method. However, this method is tedious and takes its toll on researchers who may have to spend a considerable amount of resources on the field in conducting studies based on probability sampling.

In non-probability sampling, the individuals within a target population do not have a foreseeable chance of selection into the sampling group as respondents (Sekaran and Bougie 2013). The different types of non-probability sampling include convenience sampling, quota sampling, snowball sampling and judgement sampling (Zikmund et al., 2013). It is mostly used when the respondents are selected based on the researchers' personal convenience. As much as this method of sampling is easy and convenient to launch, the disadvantage is that there are no known statistical techniques that can measure the sampling error (Zikmund et al., 2013).

The most suitable sampling procedure for this study is the simple random method. The researcher intended to sample the first 381 people to answer the questionnaire online. This is because an online data collection method was utilised, the researcher did not have control over the selection of respondents.

3.5.2 Sample Size

A sample is a selection of cases from which data are actually collected (Robinson, 2014). Respondents were chosen in such a way that they were a representative of the total population. The size of the sample depends on the degree of accuracy desired within the results. This is determined through the confidence interval and confidence level parameters. The confidence interval, also known as the margin of error, defines the range within which the outcomes are expected to be, on either side of the value. The confidence level describes the degree of certainty, with the results based on the normal distribution curve. Expressed as a percentage, usually between 95% and 99%, it represents how often the true percentage of the population would pick an answer that lies within the confidence level (Sekaran and Bougie, 2013).

In simplifying the process of determining a sample size for a finite population, Krejcie and Morgan (1970) developed a table using a 5% interval and 95% confidence level parameters, and was articulated for by Sekeran and Bougie (2013), as presented in Table 3.1.

Table 3.1: Table for determining a sample size from a finite population

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note: N is the Population Size and S is the Sample Size.

Source: Adapted from Sekaran and Bougie (2013)

According to the Ugu District Municipality's annual water balance, there are over 42300 registered connections. From Table 3.1, it was determined that a sample size of 381 respondents would be required to achieve a 5% confidence interval at 95% confidence level.

3.6 Data Collection

Data collection is the manner in which data are gathered for purposes of answering the research questions (Sekaran and Bougie, 2013). The various methods of collecting quantitative research data are observations, questionnaires, scales and

physiological measurements. There are two main sources from where data can be gathered: primary data, which refers to information obtained first hand by the researcher; as well as secondary data, which refers to information gathered from sources that already exist (Sekaran and Bougie, 2013). There is an obvious advantage in utilising secondary data, as it is cheaper and can be rapidly collated, with the ability to provide information that is not readily available to the researcher (Zikmund et al., 2013). This however may not necessarily meet a researcher's needs and as such, in order to improve on accuracy, the researcher must cross check different sources.

This study employed the use of survey study in order to gather primary data. The use of survey study can result in a purposeful generalisation of the findings from a sample to the population (Haur et al., 2016). The rational for the researcher to use survey study is to be able to generalize the finding across the entire district's population. In addition, in consideration of the limited time period for data collection and associated costs, it is reasonable to apply the survey method to this study (Sekaran and Bougie, 2014).

3.6.1 Purpose of the Instrument

A questionnaire generally consists of a series of predetermined questions upon which respondents can document their responses usually from a choice of defined alternatives (Sekaran and Bougie, 2013). According to Zikmund *et al.,* (2013), the self-administered can either be published on paper, posted online or sent via email to respondents. They further elaborated that paper questionnaires can either be posted, dropped off in person, faxed, attached to items e.g. newspapers, while electronic questionnaires can be emailed, launched on websites or sent through short messaging services (SMS) or social media (WhatsApp, Instagram etc). The advantage of electronic questionnaire is that it can reach a greater geographical area and that respondents can answer it at their own pace and convenience (Sekaran and Bougie, 2013). In addition, the administration of electronic questionnaire is almost effortless in comparison, to the advantage of the researcher and has low administrative costs (Zikmund *et al.,* 2013) with the ability to extend

globally. On the contrary, respondents have to be literate and able to utilise electronic interface in order to respond, in addition to incurring cost associated with data for accessing and resending the questionnaire. This might reduce the response rate as one must have both resources, time and desire to answer the questionnaire (Sekaran and Bougie, 2013).

Since this study comprised of a large representative sample (381), and with budget constraints, the researcher utilised electronic questionnaire data collection since it was deemed to be the most appropriate, to obtain data from primary sources. The questionnaire consisted of three parts: The first part, the “social characteristics” such as sex, age and education levels were examined, in addition to general information regarding location of residence and income levels. The second part, the “billing and cost recovery” information was examined while the third part gathered information on the “opinion” of the participants with regard to existing or proposed policies.

3.6.2 Construction of the Instrument

According to Sekaran and Bougie (2013), the design of a questionnaire should incorporate principles that focus on three areas; the wording; the categorisation of the variable; and the general appearance. The objectives of this research were the basis for the design of the questionnaire, and the link between the two is presented in *Table 3.2*.

Table 3.2: Linking the survey questions to the objectives

Number	Objective	Questions
1	To study the causes of irregular payment of water bills by registered consumers in Ugu District Municipality	Section A (5, 6); Section B (2, 4, 6 & 7); Section C (1)
2	To establish confidence that residents in Ugu District Municipality have on the ability of the municipality to accurately and effectively deliver on its mandate	Section B (1, 3 & 5)
3 and 4	To investigate the willingness to pay for water services regularly in the Municipality; and to investigate whether tax exemption incentive can be used in Ugu District Municipality to motivate regular payment of service	Section C (2, 3 & 4)

The questionnaire had a total of 23 questions, of which the majority (18) were closed-ended and only five (5) were open ended. Of the closed ended question, eleven (10) were nominal scale questions and eight (8) were Likert scale questions. According to Zikmund *et al.* (2013), closed ended questions restrict the respondent to specific alternatives with the alternative to select an answer closest to their view point. An open-ended question on the other hand allows the respondent to provide their view and comments beyond those covered in the close-ended questions (Sekaran and Bougie, 2013).

Three main categories of variables were identified, being personal and household data, billing and cost recovery data, as well as perception/ opinion data. The instrument was designed to possess factual questions (to gather demographic and socio-economic status), behavioural questions (to gather payment history of respondents) and attitudinal questions (to gather opinions, values and beliefs).

3.6.3 Pre-testing of the Questionnaire

The process of pre-testing a questionnaire amongst a small group of peers and participants before the full exposure to the target sample is an important step that enables the researcher to fine tune the questions (Sekaran and Bougie, 2013). The rationale behind a pre-test include:

- The researcher gains a deeper understanding of language use;
- Enables researcher ability to establish that the questions do not arouse emotional responses from the respondents;
- Enables researcher ensure that the questions are not leading the respondent to answer in a particular way; and
- Enables researcher to gauge the time it takes to complete the questionnaire.

For purposes of this study, a total of ten (10) questionnaires were printed out and distributed in two sets of five (5) each. One batch of five (5) was placed at the Ugu District Municipality's Park Rynie Cashiers' office. The researcher then withdrew

from the vicinity and allowed the cashier to issue the questionnaire to willing participants who had gone to pay for their accounts. The remaining batch was administered by distribution to residential houses within Umzinto area and collected on completion by the house hold heads on the next day. From the results, grammatical errors raised were rectified and it was established that the questionnaire took an average of 6 minutes to complete.

3.6.4 Distribution of the Questionnaire

The Collection of data from sample population commenced once the pilot pre-testing study had been completed and questionnaire fine-tuned. The questionnaire was digitalised and launched on google forms through the following link; bit.ly/UGUcostrecoverysurvey. The link was distributed through the Ugu District Municipality's political forums' pages on *Facebook* and WhatsApp social media platforms. Before the launch, the gate keepers' authority to conduct the research was first requested for and obtained from the Ugu District Municipality. The online link directed respondents to the online questionnaire, which had a consent statement within it for the respondents to consent to submit their answers. On submission, the completed form was re-directed to the researcher as an email and once the desired sample size was attained (381), the link was closed off by removal.

3.7 Data Analysis

Data analysis entails the use of statistics and probability to figure out trends in data sets. It also helps the researcher to sort out the real trends from the large pool of data (Andale, 2016). The Statistical Package for Social Science (SPSS version 25) was used to do the analysis of the data collected using the questionnaire. The software also made it possible for the presentation of data using graphs and charts.

As quoted by Brijbans (2015), Quinlan (2011) asserted that quantitative analysis investigates numerical data by adopting statistical methods. In this study, both descriptive and inferential statistics were incorporated. In order to reach conclusions regarding the entire population, the use of inferential statistics is used to analyse the

sample (Waruingi, 2010). The Chi-Square test and cross tabulations were the inferential statistics that the researcher used to make conclusions about the sample.

3.8 Reliability and Validity of the Data

Reliability refers to the extent to which a test is without bias, ensuring consistent measurements across both time and items within the instrument (Sekaran and Bougie, 2013). A test can be considered reliable if, under stable conditions, it can be used by a number of researchers with consistent and unvarying results. It reflects on the consistency by which the outcomes can be reliable over time. It is a measure of the degree to which the measured parameters are free of errors. The research had some high degree of reliability because of two major factors namely;

- The researcher had no control over the administration of the questionnaire, therefore no bias influence on the respondent could be exerted
- The respondents completed the questionnaire within their own time and space – there was no pressure to complete within a particular time.

The assessment of reliability is commonly determined by the use of the coefficient alpha estimate (Cronbach's alpha). It is most commonly used when one has multiple Likert questions in a questionnaire. For the quality of the research scale to be considered reliable, the coefficient of alpha must be at least 0.6 (Zikmund *et al.,* 2013). For purposes of this study, the assessment of reliability through determination of coefficient alpha was done by using the Statistical Package for Social Science (SPSS) software package (version 25).

Validity is a test of how well a developed instrument measures the concept it is intended to measure (Sekaran and Bougie, 2013). According to Borsboom, Mellenbergh and van Heerden (2004), a test is valid as an attribute measuring tool if (a) the attribute exists and (b) variations in the attribute casually produce variations in the outcomes. The factual factors produce variations on the behavioural and attitudinal outcomes. The validity test applicable to this study was undertaken through the pre-testing of the questionnaire. In addition, internal validity was also attained by ensuring that the respondents and the researcher had no interaction during the questionnaire completion process.

According to Leedy and Ormrod (2001), one way to ensure external validity is to ensure that the results can apply beyond the study itself. By definition, they list three strategies that ensure external reliability; real life setting, a representative sample, and replication in a different context. In real life setting scenario, the environment in which the research is conducted must ensure generalizability, and this is achieved by conducting the study within the population in a district municipality. The results can be generalized across other similarly characterised district municipalities. With regard to a representative sample, the aim was to attain responses from respondents who were registered consumers. It is impossible whoever to establish how accurate this was established, considering that the online link to the questionnaire was launched on a social media page, which can be accessed by anyone within the group.

3.9 Bias of the Data

The Ugu District Municipality is made up of four main household location categories; Urban – suburb, Urban – township, peri-urban and rural. By launching an online questionnaire, it can be argued that only consumers with access to not only infrastructure, but data, were able to be accessed. This use of purposive sampling methodology leaves out a large section of the population, especially in a majorly rural municipality like Ugu District Municipality.

3.10 Ethical Considerations

By virtue that respondents were customers of the municipality, it is important that the relationship between the two bodies be maintained cordial. Ethical issues to be considered included;

- Respecting respondents' confidentiality and privacy
- Following consent rules – consent was sought from the gate keeper (Ugu District Municipality) before the research was conducted, as well as from the individual respondents before the completed forms were submitted online.

- Result integrity – no effort was spared to ensure that factual accuracy is acquired, and no falsification, fabrication or misrepresentation of data due to pre-conceptions was tolerated.

3.11 Conclusion

In summary, this chapter gave an overview of how the research question was explored by the study. The aims and objectives of the study guided the critical aspects of this chapter. The validity and reliability of the methods employed were justified. The methodology used for data collection was the random sampling by use of non-probability methods. The questionnaire was electronically launched and was self-administered. The data were collected through an online questionnaire deployment and then analysed using SPSS statistical software. The results of the analysis are presented in the following chapter.

CHAPTER FOUR

RESEARCH PRESENTATION, ANALYSIS AND INTEPRETATION

4.1 Introduction

The main purpose of this chapter is to analyze the data collected in order to come up with real facts to answer the research questions, as outlined in Chapter One. The research methodology from the previous chapter indicated how data was collected from a sample of the target population. In the next chapter, the data will be interpreted in a discursive nature, and any relationships, disparities or patterns will be brought forth. The study having used a non-probability sampling technique dictates that the results cannot be generalized across to other institutions with similar challenges.

4.1.1 Treatment of the Data

The data automatically populated within google forms and an excel spreadsheet downloaded. This raw data was screened in order to minimise on any statistical errors. Where gender could not be established, the responses were set aside. In addition, all incomplete responses were also removed from the data set. The administration of the questionnaire had a set target of three hundred and eighty-one (381) respondents. Once the number was arrived at, the link that directs respondents to the questionnaire was removed from the webpage. However, forty-one (41) responses were found to be incomplete and thus were eliminated from the database to be analyzed. Only 340 responses were valid resulting in a 89% completion rate.

The purpose of treating data was to ensure and select relevant participants answered the questionnaire. Once cleaned, the computer software SPSS was utilised to analyse the data further and results presented through graphical and tabular representation, as well as through descriptive and inferential methods.

A common approach to reporting inferential statistics requires a statement of statistical significance, which refers to whether differences observed between respondents are real or by chance. A 95% confidence interval was utilised in the

analysis; hence the significance level is set at 0.05 (or 5%) significance level. The significance level will be determined and a p-value generated. A significant result is indicated by a value “p<0.05”.

4.1.2 Reliability of the Data

The Cronbach’s alpha coefficient is utilised to measure the reliability of a questionnaire, especially on a Likert scale data set. For reliability to be ascertained, the alpha coefficient has to be above 0.6, and the closer it gets to value 1.0 the more reliable the data set is (Zikmund *et al.,* 2013). Of the twenty-four (23) questions, eight (18) were off a nominal and Likert scale. These were coded and the use of SPSS statistical software utilised to calculate the value of alpha, results of which have been tabulated below in Table 4.1

Table 4.1: Reliability Statistics

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.393	0.295	18

The results generated a value of 0.393, which would be an indication that the test results are not reliable. It should be noted however that the questionnaire was cross-sectional in nature and that there were nominal and Likert scales incorporated as well. There was a total of eleven (10) nominal scale questions, eight (8) Likert scale questions and five (5) open-ended questions. The Cronbasch alpha estimate is best tested on purely Likert scale questions, thus since the questionnaire was of mixed scales, its reliability can be acceptable. Conversely on testing the reliability of only the eight Likert scale question, the rest results were 0,660, and indication of reliability.

4.1.3 Presentation of the Data

The data are hereby presented in three broad categories namely demographic data, billing and cost recovery information data and lastly, opinion information data, each with sub-sections. Although 381 questionnaires were obtained, sample space closed and analysed, not all respondents answered all the questions within the questionnaire.

4.2 Demographic Data

This section will present demographic data which include gender, age distribution, education, economic status and income levels of the respondents, as well as the location of the households.

4.3.1 Gender of Respondents

From the questionnaire used, questions were asked to each respondent, on their demographic profiles. The questions included gender, age, education level and so on. Table 4.2 provides the analysis of the demographic characteristics of the respondents, based on frequency analysis.

Table 4.2: Gender distribution of respondents

	Frequency	Percent	Cumulative Percent
Female	190	55.9	55.9
Male	150	44.1	100.0
Total	340	100.0	

Table 4.2 shows that of the total of 340 respondents, there was a fairly balanced percentage of respondents at 55,9% females and 44,1% males. This means that this study was not gender biased, but rather balanced in responses.

4.3.2 Age Distribution of Respondents

The respondents' age data results are presented in Table 4.3.

Table 4.3: Age distribution of the respondents

	Frequency	Percent	Cumulative Percent
18 -25	34	10.0	10.0
26 – 35	56	16.5	26.5
36 – 45	81	23.8	50.3
46 – 55	63	18.5	68.8
Over 55	106	31.2	100.0
Total	340	100.0	

Table 4.3 shows that 340 of the respondents did disclose their age group. Age group of over 55 years had the biggest percentage of respondents at 31,2%, followed by 36-45 years with 23,8%. Age group of 46-55 years has 18,5%, followed by 26-35, which had 16,5% and lastly 18-25% with 10,0%. The results provide a strong guarantee that a mojority of the resondents are household heads, and therefore the relevant sector of society for this study.

4.3.3 Education Level of Respondents

The respondents were asked about their level of education, as this was considered important for this research, the results of which are presented in Figure 4.1.

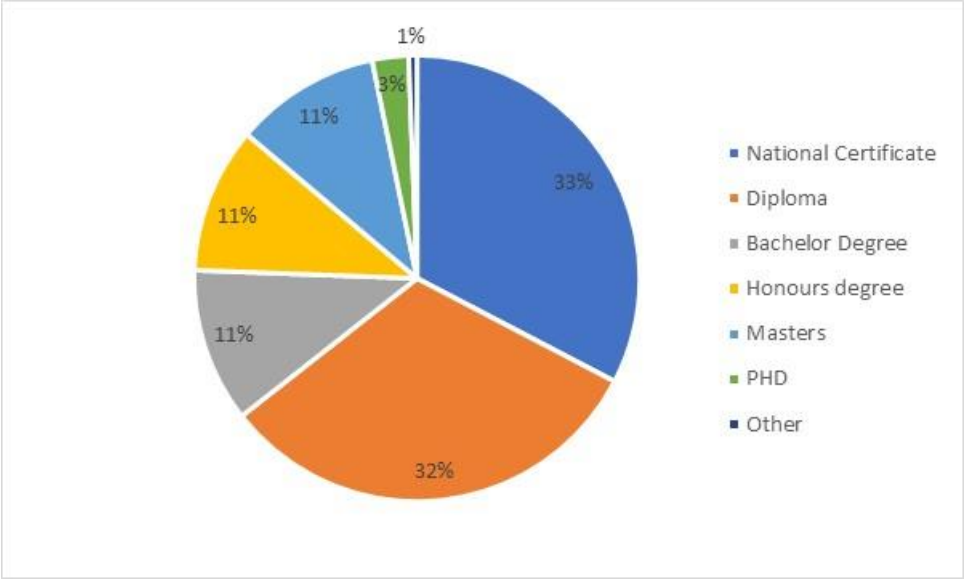

Figure 4.1: Distribution of the level of education of respondents

Figure 4.1 reflects the level of education for the respondents. The Diploma and National Certificate holders formed the majority of the respondents, with 33% and 32% respectively, followed by Bachelors, Honours and Masters degrees, each at 11%, as well as other and PHD levels, at 1% and 3% respectively. All in all, the degree of literacy from national certificate onwards is at least 99%, thus giving relevance to the responses that were received since it can be deduced that they were able to comprehend the details in the questionnaire. It can also be deduced that the 66% of the respondents with tertiary level education and above are economically active, thus relevant to this study.

4.3.4 Location of Respondents' Household

Households were categorised as either rural, peri-urban, urban (township) and urban (suburb). The participants were asked to indicate the location of their households, the results of which are presented in Table 4.4.

Table 4.4: Location of respondents' households

	Frequency	Percent	Cumulative Percent
Peri-urban	50	14.7	14.7
Rural	36	10.6	25.3
Urban Suburb	190	55.9	81.2
Urban township	64	18.8	100.0
Total	340	100.0	

Table 4.4 indicates that the majority of the respondents resided within the urban suburbs at 55,9%, followed by urban township at almost 18,8%, peri-urban at 14,7% and rural at 10,6%. This can be attributed to the use of online questionnaire to collect the data since the more affluent the area where the household is located, the more likely that the respondent has financial means to engage online. In a rural based municipality, it would therefore be more representative if questionnaires were distributed using other more engaging means like at community meetings and forums, door to door, just to mention but a few.

4.3.5 Economic Status of the Respondents

The participants were asked to comment on their social economic status. The following were their responses, as set out in Table 4.5.

Table 4.5: Economic status of the respondents

	Frequency	Percent	Cumulative Percent
Employed	158	46.8	46.8
Not employed	30	8.8	55.6
Pensioner	70	20.6	76.2
Self-employed	64	18.8	95.0
Student	17	5.0	100.0
Total	340	100.0	

Table 4.5 shows that of the 340 people who responded to this question, the majority were receiving some regular income, either through employment (46,8%), pension (20,6%) or self-employment (18,8%). Only 8,8% indicated that they were not employed. It is therefore expected that respondents have a capacity to pay for bills issued for volumes consumed. This however cannot be a true reflection of the district since most of the respondents (55,9%) were from the suburbs while the district is mainly a rural district.

4.3.6 Level of Monthly Income

Respondents were also asked to respond to a question about their level of income, as this was considered important since one of the research objectives was to analyse if the level of income affects the payment of bills issued. The results of the study are shown in Table 4.6.

Table 4.6: Level of monthly income distribution

	Frequency	Percent	Cumulative Percent
R10 000 and below	117	34.4	34.4
R11 000 to 20 000	95	27.9	62.4
R21 000 to 30 000	62	18.2	80.6
R31 000 to 40 000	44	12.9	93.5
R41 000 and above	22	6.5	100.0
Total	340	100.0	

Table 4.5 depicts an inverse relationship between the level and income and their frequency. The higher the level of income, the less the number of respondents. The highest income earners were only 6,5%, while the lowest income earners were the highest in numbers, at 34,4%. The results however do not tie up with the level of education that has 66% post tertiary qualifications within the respondents, and the 46% employment rate. However, it is worth noting that for a mainly rural based municipality, the levels of income are expected to be in the lower ranges, as compared to the more urban based municipalities and metros. As indicated earlier, this cannot be generalized to the entire district since only 25,3% of the respondents were either from peri-urban or rural homesteads.

4.3 Billing and Cost Recovery Information

On a scale of 1 – 5 (where 1 = strongly agree; 2 = agree; 3 = neutral; 4 = disagree; and 5 = strongly disagree), information was gathered from the respondents, regarding their perceptions of the billing and cost-recovery system of the municipality from resource capacity to generate, distribute and enforce the payment of bills, as well as if there are any incentives to motivate for their regular payments.

4.4.1 Sufficiency of Resources for Accurate Billing

The participants were asked if they have sufficient resources to produce accurate billing, the results of which are presented in Table 4.7.

Table 4.7: Respondents' perception on sufficiency of resources for accurate billing

	Frequency	Percent	Cumulative Percent
Strongly agree	72	21.2	21.2
Agree	51	15.0	36.2
Neutral	54	15.9	52.1
Disagree	97	28.5	80.6
Strongly disagree	66	19.4	100.0
Total	340	100.0	

From the above 340 cleaned and coded responses to this question, it can be noted that most of the respondents either disagreed or strongly disagreed that the municipality had adequate capacity to issue accurate bills, both adding up to 47,9%. There were 15.9% neutral respondents thus leaving only 36,2% who either agree or strongly agree that the municipality has sufficient resources to deliver accurate bills. Institutional incapacity might be one of the reasons for low cost recovery within the municipality.

4.4.2 Consumers are Billed on Actual Amounts Consumed

Participants were asked their opinions in relation to whether they were billed on the actual amount consumed. Table 4.8 summarises the received responses.

Table 4.8: Consumers are billed on actual amounts consumed

	Frequency	Percent	Cumulative Percent
Strongly agree	24	7.1	7.1
Agree	40	11.8	18.8
Neutral	64	18.8	37.6
Disagree	132	38.8	76.5
Strongly disagree	80	23.5	100.0
Total	340	100.0	

Majority of the respondents, 62,3% of the respondents had a perception that the municipality did not bill the consumers on the actual volumes consumed, with 38,8% disagreeing and 23,5% strongly disagreeing. This may have a negative impact on cost-recovery mechanisms. 18.8% of the respondents was neutral, while only 18.6% had a positive outlook, with 11,8% agreeing and 7,1% strongly agreeing.

4.4.3 Consumers are Billed on Estimated Volumes

Another perception analysed was whether consumers are billed on estimated volumes, the results of which are presented in Table 4.9.

Table 4.9: Consumers are billed on estimated volumes

	Frequency	Percent	Cumulative Percent
Strongly agree	71	20.9	20.9
Agree	98	28.8	49.7
Neutral	64	18.8	68.5
Disagree	73	21.5	90.0
Strongly disagree	34	10.0	100.0
Total	340	100.0	

The results in Table 4.9 slightly match the expectations from Table 4.8, in the sense that at 49,7%, the majority of the respondents either agreed or strongly agreed that bills were estimated, which might hamper cost recovery. Conversely, 31.5% did not agree with this statement. There is a shift of 12,6% from 62,3% to 49,7% of the respondents perceiving that they were not billed on the actual volumes consumed and the perception that bills were generated from estimated volumes.

4.4.4 Estimated Volumes Match Consumer's Average Consumption

The researcher asked the participants their opinions on whether the estimated volumes were in line with the consumer's average actual consumption. Their responses are given in Table 4.10.

Table 4.10: Estimated volumes match consumer's average consumption

	Frequency	Percent	Cumulative Percent
Strongly agree	33	9.7	9.7
Agree	43	12.6	22.4
Neutral	82	24.1	46.5
Disagree	123	36.2	82.6
Strongly disagree	59	17.4	100.0
Total	340	100.0	

This question aimed to establish whether the estimation of bills by the municipality had a close relation with actual volumes consumed by the respondents. The results from Table 4.10 indicate that from the 340 people who responded to this question, in total, 53,6% disagreed that their estimated volumes billed matched their average consumption when actual meter readings were taken, while 22,3% agreed in total. A quarter of the respondents were neutral. The disagreement with volumes billed may have a negative effect to efforts of cost recovery, brewing resistance to payment of bills.

4.4.5 Consumers are Consulted on Tariff Structure

The participants were asked for their views on whether they were consulted on tariff structure. Their responses are shown in Table 4.11.

Table 4.11: Consumers are consulted on tariff structure

	Frequency	Percent	Cumulative Percent
Strongly agree	38	11.2	11.2
Agree	34	10.0	21.2
Neutral	70	20.6	41.8
Disagree	102	30.0	71.8
Strongly disagree	96	28.2	100.0
Total	340	100.0	

Generally, from the above results, it shows that most of the respondents felt that they were not consulted when tariffs were gazetted. 30,0% of them disagreed, 28,2% strongly disagreed and 20,6% was neutral. Only 10,0% and 11,2% strongly agreed and agreed, respectively. A recent search on the municipality's website revealed that the tariffs are uploaded therein. It therefore denotes that this is but the final product, thus, consultation is not actively sought.

4.4.6 Affordability of the Tariff Structure

The participants were asked for their views on the tariff structure, if they were affordable by the residents of the municipality. Their responses are shown in Table 4.12.

Table 4.12: Affordability of tariff structure

	Frequency	Percent	Cumulative Percent
Strongly agree	41	12.1	12.1
Agree	46	13.5	25.6
Neutral	77	22.6	48.2
Disagree	117	34.4	82.6
Strongly disagree	59	17.4	100.0
Total	340	100.0	

Majority of respondents felt that the tariffs were not affordable, that is 34,4% and 17,4% who disagreed and strongly disagreed, respectively. 22,6% were neutral on this, while only 13,5% and 12,1% agreed and strongly agreed, respectively. The inability to afford the legislated tariffs will have a negative impact on cost-recovery mechanisms for the municipality.

4.4.7 Sufficiency of Mechanisms to Deal with Defaulters

The participants were asked for their views on whether there were sufficient support mechanisms to deal with defaulters accordingly. Their responses are shown in Table 4.13.

Table 4.13: Sufficiency of mechanisms to deal with defaulters

	Frequency	Percent	Cumulative Percent
Strongly agree	66	19.4	19.4
Agree	68	20.0	39.4
Neutral	65	19.1	58.5
Disagree	68	20.0	78.5
Strongly disagree	73	21.5	100.0
Total	340	100.0	

The results shown above show mixed reactions about this question. It shows results which are very similar. There are several ways through which defaulters are dealt with, depending on whether they are domestic, industrial, institutional or commercial consumers. Government policy allows for all domestic consumers access to some quantity of free basic water and therefore total disconnection for non-payment is prohibited. Contrary, commercial consumers can either be restricted or completely disconnected for non-payment.

4.4.8 Incentives for Regular Payments

The participants were asked for their views on whether they believed that there were incentives that may encourage defaulters to get back into the payment net on regular basis. Their responses are shown in Table 4.14 .

Table 4.14: Existence of incentives for regular payments

	Frequency	Percent	Cumulative Percent
Strongly agree	33	9.7	9.7
Agree	42	12.4	22.1
Neutral	104	30.6	52.6
Disagree	104	30.6	83.2
Strongly disagree	57	16.8	100.0
Total	340	100.0	

The results above show that 30,6% disagreed and 16,8% strongly disagreed that the municipality has an incentive programme for regular payment of accounts. 30,6% of the respondents were neutral while a total of 22,1% either agreed or strongly agreed.

4.4 Opinion Information

The researcher also probed the respondents on their opinions on matters which could help to provide conclusions on some issues raised on the problem area. In this regard, the four questions that follow were taken into consideration, in analysing this information.

4.5.1 Opinions on Water Accounts Payment in Relation with Levels of Income

The participants were asked to respond whether the level of income has an effect on the consumers ability to pay for water bills. Figure 4.2 shows the frequency numbers and percentages of the participants who ticked against a given option of Yes, No or Not sure.

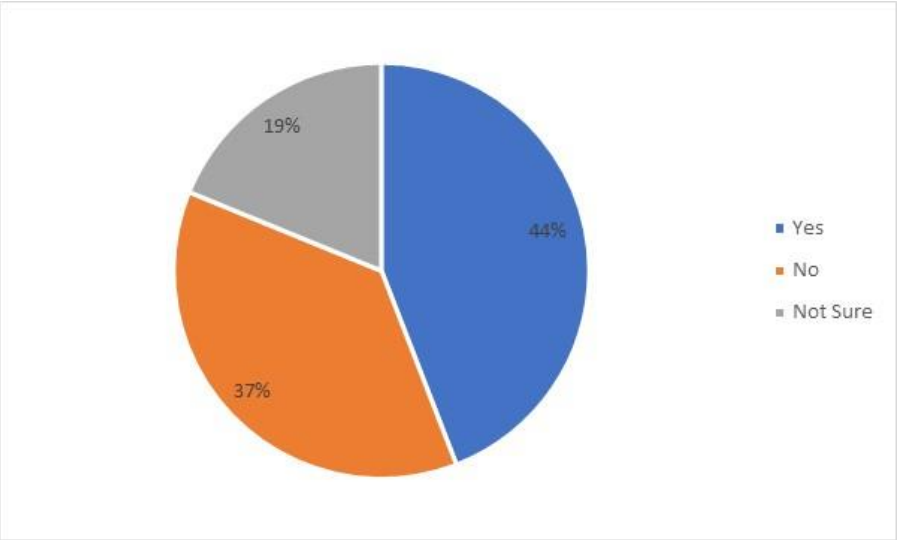

Figure 4.2: Effect of level of income on ability to pay municipal bills

As shown above, the general opinions were that ability to attend to water account payments has to do with the level of income, as reported by 44% of the respondents. Some respondents, 19% were not sure and 37% felt that the two aspects had nothing to do with each other.

4.5.2 Tax Exemption Incentive in Improving Cost-Recovery

The participants were asked that if the municipality introduced tax exemption incentive on water bill payment, whether that might encourage consumers to pay their water bills. Their responses are given in Figure 4.3.

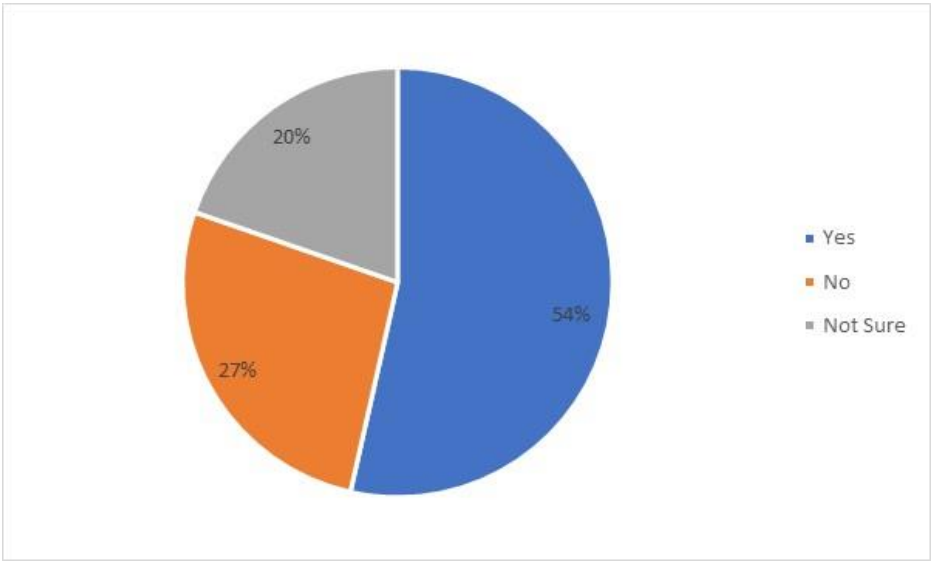

Figure 4.3: Tax exemption incentive in improving cost-recovery

The majority of the respondents (54%) were in support of this idea. 20% were not sure if this would work. Lastly, 27% were against this idea**.**

4.5.3 Reduction in Tariffs in Improving Cost-Recovery

The participants were asked if they thought that if water tariffs were reduced, it might encourage consumers to pay their accounts. Their responses are shown on Figure 4.4.

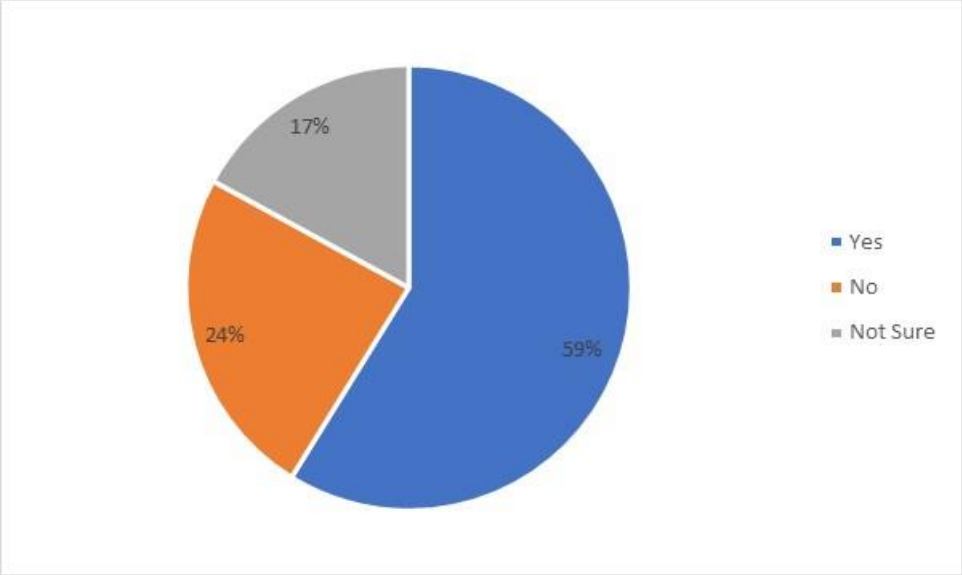

Figure 4.4: Reduction in tariffs in improving cost-recovery

The results show an overwhelming percentage of 59% in support of this idea. 17% of the participants were not sure whether this would help or not, while 24% were against the idea.

4.5.4 Municipal Efforts in Improvising Cost-Recovery Techniques

The participants were asked for their opinions on whether they thought that the municipality was making enough effort in implementing effective ways of revenue collection. Their responses are given in Figure 4.5.

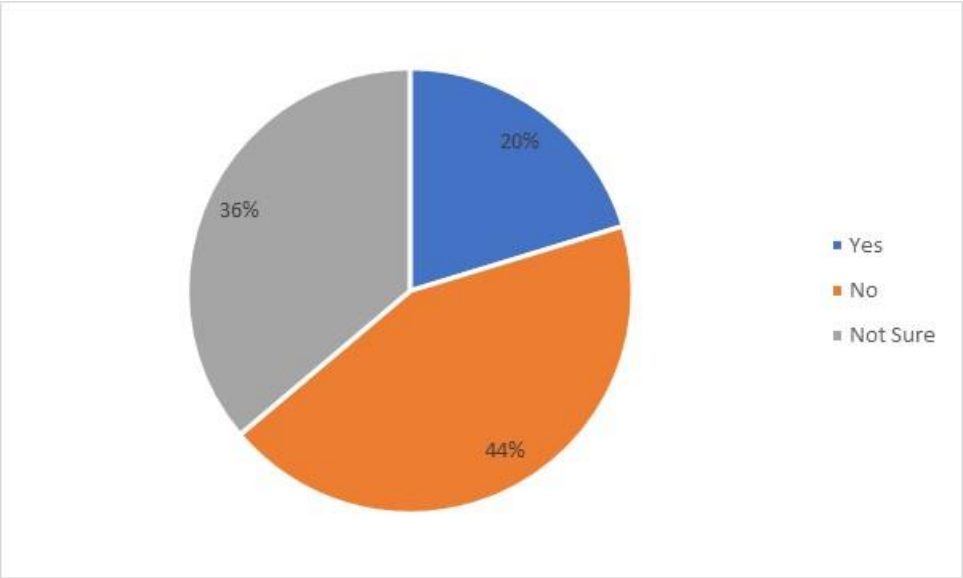

Figure 4.5: Municipal efforts in improving cost-recovery techniques

Most of the responses, 44% showed that the municipality was not making enough effort in implementing effective ways of revenue collection. 36% were not sure and 20% thought the municipality was making enough effort in finding ways to improve revenue collection.

4.5 Cross Tabulation and Inferential Statistics

Cross-tabulation of different sets of data was conducted in order to relate one variable against the other. Inferential data was also generated.

4.6.1 Cross tabulation between Monthly Income Level and Affordability

A comparison was made between the respondents' level of monthly income and their response regarding affordability of the tariff structure. The respondents strongly indicated that the tariff was unaffordable, whilst this might be due to lower levels of income. This correlation will identify whether the response was biased from the level of income point of view, as shown in Table 4.15.

Table 4.15: Cross tabulation between monthly income level and tariff affordability

			Affordability of Tariff					Total
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree	
Level of Monthly Income	R10 000 and below	Count	16	16	25	36	24	117
		% of Total	5%	5%	7%	11%	7%	34%
	R11 000 to 20 000	Count	7	12	29	36	11	95
		% of Total	2%	4%	9%	11%	3%	28%
	R21 000 to 30 000	Count	12	9	10	19	12	62
		% of Total	4%	3%	3%	6%	4%	18%
	R31 000 to 40 000	Count	5	6	10	16	7	44
		% of Total	1%	2%	3%	5%	2%	13%
	R41 000 and above	Count	1	3	3	10	5	22
		% of Total	0%	1%	1%	3%	1%	6%
Total		Count	41	46	77	117	59	340
		% of Total	12%	14%	23%	34%	17%	100%
n = 340			*Chi-square = 17.498*			*p = 0.354*		

The results above indicate a *P* value of 0.354 which indicates that the findings are due to chance. Since the probability is greater than 0.05, we cannot be 95% certain that there is a significant relationship between level of income and tariff affordability. This is an indication that there are other overriding factors that influence the view of affordability among the respondents. Thus, the null hypothesis that the two variables are independent is accepted in this scenario. The Chi-Square test however showed that 16% (less than 20%) had an expected value of less than 5.

A total of 18% of respondents with the lowest income levels disagreed that the tariff structure was affordable, followed by 14% on the second lowest tier. A total of 51% indicated that tariff was not affordable, 26% thought they were affordable and 23% were neutral. compared to 15% who agreed from the same income brackets. This is a significant finding in the sense that in reality the tariff might be affordable, but this cannot be viewed as such by people on the lower tiers of income. Since 58,2% of respondents indicated that there is no consultation between the municipality and members of the community, it can be deduced that the enhancement of consultation can reverse this trend and make customers to agree with tariff rates, which might result in regular payments.

Majority of the participants are earning above minimum wage, 65% of the participants indicated that they earn more than R10 000 per month. Since therefore most participants are tax payers (as per SARS Individual Income Tax tables, 2018), they are likely to support tax exemption. The tax exemption may give them some additional income to pay for water services.

4.6.2 Cross Tabulation between Consumers' Average Consumption and Estimated Volume Billed

A comparison was made between the average amount that consumers use against the amount of estimated bills produced by the municipality. The results are shown in Table 4.16 .

Table 4.16: Cross tabulation between consumer's average consumption and estimated volume billed

			Consumers are billed on estimated volumes					
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
Estimated volumes match consumers average consumption	Strongly agree	Count	8	6	4	13	2	33
		% of Total	2%	2%	1%	4%	1%	10%
	Agree	Count	5	10	13	8	7	43
		% of Total	1%	3%	4%	2%	2%	13%
	Neutral	Count	12	26	23	17	4	82
		% of Total	4%	8%	7%	5%	1%	24%
	Disagree	Count	27	41	20	21	14	123
		% of Total	8%	12%	6%	6%	4%	36%
	Strongly disagree	Count	19	15	4	14	7	59
		% of Total	6%	4%	1%	4%	2%	17%
Total		Count	71	98	64	73	34	340
		% of Total	21%	29%	19%	21%	10%	100%
n = 340			*Chi-square = 33.877*			*p = 0.006*		

The results above indicate a *P* value of 0.006 which indicates that the findings are due to chance. Since the probability is less than 0.05, we can be 95% certain that there is a significant relationship between the estimation of volumes for billing and the inaccuracy of volumes billed to consumers. The results indicate that there is a relation between inaccurate billing and estimation of consumption by the

municipality. The Chi-Square test however showed that 8% (less than 20%) had an expected value of less than 5.

A total of 30% of respondents believe that the estimation of billing volumes results in consumers receiving bills that are not in line with their average consumption figures. It can therefore be inferred that this may lead to resistance in payment of these bills. Contrary to this, only 7% of the respondents agreed that the estimated volumes match their average consumptions. The imbalance can therefore be the cause of irregular payment of water bills.

4.6.3 Cross Tabulation between Introduction of Tax Exception against Current Incentive Schemes

A comparison was made between the respondents' the results from introduction of a tax excempton as an incentive for regular payments againt existing incentive schemes. Their results are shown in Table 4.17 .

Table 4.17: Cross tabulation between introduction of tax exemption against current incentive schemes

			There are incentives encouraging regular payments					
			Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
Introduction of tax exemption as incentive will promote regular payment	Yes	Count	12	19	61	54	36	182
		% of Total	4%	5.60%	17.90%	15.90%	10.60%	54%
	No	Count	10	16	19	30	16	91
		% of Total	3%	4.70%	5.60%	8.80%	4.70%	27%
	Not Sure	Count	11	7	24	20	5	67
		% of Total	3%	2.10%	7.10%	5.90%	1.50%	20%
Total		Count	33	42	104	104	57	340
		% of Total	10%	12%	31%	31%	17%	100%
n = 340			*Chi-square = 16.458*			*p = 0.036*		

The results above indicate a *P* value of 0.036 which indicates that the findings are due to chance. Since the probability is less than 0.05, we can be 95% certain that there is a significant relationship between lack of current incentive schemes and the

need for an introduction of one. The Chi-Square test however showed that 0% (less than 20%) had an expected value of less than 5.

The results indicate that of the respondents who indicated that there were no incentives to promote regular payment of bills, 13,5% do not think that the introduction of a tax exemption as an incentive will result in regular payments. On the other hand, 26,5% of this group (double) indicated that they would be more willing to engage in regular payments if the incentive were to be introduced. Of the respondents, 48% disagree that the current incentives are motivational and 26,5% of the participants that disagree to the current incentives wish to receive tax exemption/they find tax exemption to be more benefitable. Although 22 % agrees that current incentives are working, 9,6% still think tax exemption with be a positive incentive to improve on payment rates.

4.6 Conclusion

This chapter presented the findings from the research study. The data analysed concludes that there are inferential conclusions that the level of monthly income has an effect on a consumers' perception on the affordability of the tariff charged, leading to a feeling of unaffordability. use of estimated volumes to produce bills has a negative effect on the consumers' willingness to regularly pay bills. In addition, it was also inferred that the introduction of a tax exemption as an incentive may lead to regular payment of bills. It also indicates that the reason for poor cost-recovery currently is due to lack of inhouse capability to deal with defaulters. In the next chapter, the research findings are discussed.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter is very important to the research, because it provides a discussion of the research findings from the previous chapter. It is important to note that the researcher discusses the results in two ways: firstly, by testing the findings of the research as presented in the previous chapter, with the aims and objectives of the study and secondly, based on analysing the research findings and compares them to both hypothesis and previous work that is in theories and empirical studies. Lastly, the results are discussed based on the available literature pointing to this study.

5.2 The Factors Impeding Cost Recovery with the Ugu District Municipality

One of the main aims of this study was to establish the causes of irregular payment of water bills by registered consumers. In order to investigate this, the researcher asked different questions to participants and received very interesting responses which were pointing to the obvious. From the demographic data collected, it is important to note that most of the respondents were employed or they were doing something which gave them some form of income, meaning that most of them could afford to pay something towards water bills. However, it is also important to note that although many of the respondents were earning below R10 000, more than 50% of them earned more than that amount, which means they could afford to contribute something on their water bills. To get deep into this subject, the researcher analysed the data presented for each research question asked.

5.2.1 Proposition 1

There are sufficient resources to produce accurate billing by the municipality to its registered rate payers

On this question, the data presented show that 47,9% of the respondents were not happy with the way the billing system was being processed. They had the perception

that there were no sufficient resources within the municipality to produce accurate billing to its consumers. This might be the reason why there are some irregular payments of water bills. This also means that residents felt that this irregular payment is caused by insufficient resources to provide them with accurate billing. Gezani (2013) suggested that when the billing system is implemented correctly, the systems, through conventional metering, can improve revenue collection, especially so through the implementation of a cost-effective and reliable metering infrastructure. This can be more effective when all consumers are connected and metered with robust working meters, resistant to tempering and easy damage to the meter register. The billed invoices should also be purely based on metered consumption (Gezani, 2013).

5.2.2 Proposition 2

Consumers are billed on the actual amount consumed

A total of 62,4% of the respondents felt that they were being charged on water which they did not consume. This causes dissatisfaction amongst the rate payers who might end up boycotting the payment of rates. This also leads to irregular payment of rates by residents. It is therefore important to note that this is in line with what Tarfasa (2012) said. His theory of consumer demand assumes that consumers derive satisfaction, not from the consumption of the good per se, but from the characteristics that surround the good. The manner in which consumers perceive the manner in which a service is supplied, also dictates their appetite to meet their own obligations to pay. If the perception is positive, then consumers are more willing to pay, and vice versa.

5.2.3 Proposition 3

Consumers are billed on estimated volumes and that the volumes do not match their average consumption

The residents had a perception that they were being charged on estimated volumes, not the actual amount consumed, 53,5% of respondents confirming this compared to 22,4% who agree that the estimates are in line with their average consumptions.

This also supports why there is a mismatch in rates payments. It shows that there is a low level of trust between residents and their municipality, therefore, this may be one reason why some are resisting to pay their rates consistently, because they feel that the estimates are not accurate. Moreover, the residents felt that these estimated volumes are not in line with the consumer's average actual consumption. As stated in the literature review chapter, dissatisfied customers generate negative word of mouth which works against support for a service (Patricia et al, 2001).

5.2.4 Proposition 4

Consumers are consulted on tariff structure

The findings brought to light the general sentiments among the residents, that they were not being consulted on tariff structure, with a total of 58,2% disagreeing that they are consulted. The negative effect is that the customers feel left out and therefore a sense of ownership is lost on them.

5.2.5 Proposition 5

The tariff structure is affordable by the residents of the municipality

Most of the respondents felt that the tariff structure is not affordable by the residents of the municipality, with a total of 51,8% disagreeing. This also shows why residents were not paying consistently because they felt that they were being overcharged hence, they could not afford paying the set tariffs. It is also important to note that this view is also in sync with what was argued by Karen et al., (2005), that household water arrears and debts reflect the inability of a household to afford the service. The theory conclusively suggests that limited household income results in non-payments, since they do not have the capacity to support increased financial burdens. For low-income households, the payment for services absorbs a significant and disproportionate amount of their income, thus concluding that the inability to pay is the primary cause of non-payment for water services. If taken further within the context of cost recovery implementation from water bills, most low-income households will survive on the free basic water allocation.

5.2.6 Proposition 6

There are sufficient support mechanisms to deal with defaulters accordingly

Regarding this matter, residents had mixed feelings, with 39,4% saying there were sufficient support mechanisms to deal with defaulters accordingly, while 41,5% saying there were no sufficient support mechanisms to deal with defaulters accordingly. Therefore, it is also important to check what other researchers found out about this issue.

According to Karen et al., (2005), the Minister of the Department of Water and Forestry in 2003, decried the that restriction of flow rather than complete cut-off, is the limit that municipalities can do in order to deal with defaulters, with regards to paying for water services. This decree ensures restricted flow to the free basic water level that a municipality provides. Some consumers are able to adjust their draw-offs and usage to this restricted flow, thus negating the need for them to update their accounts, leading to revenue loss to the utility.

Moreover, those who felt that there were no mechanisms to deal with defaulters might have been genuine, since municipalities sometimes tend to be mum on this issue, mainly because water is one of the basic needs and disconnecting it might be viewed as gross violation of human rights by civic groups. Furthermore, political reasons also play a major role regarding this issue. Karen et al., (2005) reported that a non-payment culture arose due to the belief that people have become used to receiving free services in the post-apartheid error. There is a belief of entitlement, thus perpetuating this belief.

5.2.7 Proposition 7

There are incentives that may encourage defaulters to get back into the payment net on a regular basis

The majority of the residents who participated in this research, 47,4%, pointed that there were no incentives that might encourage defaulters to get back into the payment net, on a regular basis. The lack of such programmes such as incentives might discourage consumers to pay in time or even not to pay at all. According to

Ciapponi et al (2011) a financial incentive is basically a monetary transfer of either kind or cash, directed to an individual for the purposes of inducing behavioural changes and even compliance. Financial incentives in particular, are the most commonly studied and implemented methods in enhancing adherence rooted in behavioural theories based on the benefits of rewarding good behaviour. Ideally, such incentives should motivate positive behaviour, based on understanding the underlying problem and the mechanisms for influencing change.

5.3 Conclusion

It can be concluded that the research was able to shed light on the research questions and comparison of the results were undertaken with the literature review. There were similarities between some results obtained against literature. The results also indicate that there are several causes for non-regular payment of municipal bills by consumers of services, inclusive of in sufficient resources on the municipality's part to prepare accurate bills, inaccurate estimation of consumption, unaffordable tariff structures and insufficient mechanism from the municipality to deal with defaulters. In addition, the analysis indicated that there is a 55% desirability for tax exemption to be implemented as an incentive for improved regular payment of municipal bills by the consumers.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The previous chapter presented a discussion of the results of the study. This dissertation set out to answer whether a tax exemption incentive can improve on cost recovery through regular payment of municipal accounts. The problem statement mentioned earlier stated that “If water supplied is not paid for, a water utility will find it increasingly difficult to sustain maintenance and operational activities, leading to the gradual deterioration of services and subsequent collapse of the system.” In view of that, the study aims to fulfil the related objectives by investigating whether the use of some form of tax exemption against amounts paid can be an incentive for regular payment by registered consumers.

This chapter provides a discussion of the summary of the study, implications, conclusion and recommendations, based on the findings of the research.

6.2 Summary of Findings

Several variables were identified as being the causes for irregular payment of water bills by registered consumers within the Ugu District Municipality, but can be broadly classified as being either perception causes or financial causes.

6.2.1 Ugu District Municipality as Perceived by Registered Consumers

There was a strong perception that the municipality lacked adequate capacity in undertaking the full billing process efficiently. According to most (49,7%) of the respondents, bills were generated from estimated volumes. It was also perceived that whenever estimated consumption figures were utilised, they were usually way above the consumers’ average monthly consumption. This caused resistance from the consumers, with regards to their willingness to pay for the service. Although the

implementation of free basic water is a commitment to ensure access to potable water, especially for low-income households, a non-payment culture arose due to the belief that people became used to receiving free services in the post-apartheid era. There is a belief of entitlement, thus perpetuating the belief. In combining these two scenarios, the resistance to payment of services rendered is multiplied.

6.2.2 Tariff Structure and Affordability

Due to the tariff structure not being affordable, according to most (51,8%) of the respondents, there was irregular payment of bills. In as much as the municipality informed the consumers about proposed new tariffs, either through local media or on its webpages, few of them seemed to acknowledge that this was done. The consumers thus concluded that the tariffs were arrived at without them being consulted. This study did not establish whether this was true or not, but by virtue that the tariffs were openly posted online, it could be assumed that consultation did take place. The aspect of non-payment is therefore more aligned towards household affordability, or lack thereof, rather than tariff structure. In trying to address affordability amongst low-income households, the government, through municipalities made allowance for indigent support, of which Ugu District Municipality is a beneficiary.

6.2.3 Tax Exemption as an Incentive for Regular Payments

There were no incentives within the municipality, that encouraged regular payment of bills. The analysis indicated a high degree of probability that consumers would be more willing to pay for services rendered, if a tax exemption incentive is provided to the payers. Financial incentives in particular, are the most commonly studied and implemented methods in enhancing adherence (Ciapponi et al, 2011) rooted in behavioural theories based on the benefits of rewarding good behaviour. Ideally, such incentives should motivate positive behaviour, based on understanding the underlying problem and the mechanisms for influencing change.

Financial incentives would therefore go a long way in lessening the burden to lower income category consumers. Ideally, such incentives should motivate positive behaviour, based on understanding the underlying problem and the mechanisms for influencing change. affective commitment and loyalty programs that provide economic incentives positively affect both customer retention (Verhoef, 2003). Customer Satisfaction defined as the emotional state of mind that results from a customer's interaction with a service provider over a period of time, and that a good level of satisfaction has a positive impact on customer loyalty (Verfoef, 2003). It is therefore important that service providers like municipalities to strive to improve on customer satisfaction by using incentive that have a direct financial impact on to consumers as it positively affects customer retention, which may result in increased compliance.

Although it might be argued that tax exemptions might have an effect on the tax revenue of the national fiscus, the opportunity it might present to incentivize compliance cannot be ignored. While investigating the National Treasury's potential loss to revenue due to tax incentives governing biodiversity conservation among land owners in the Western Cape in the 2009/2009 financial year, Van Wyk (2010) concluded that only a small percentage of the tax revenue was foregone. However, from this study, only a third of land owners indicated that tax incentives would encourage them to commit more land to conservation. It must therefore be acknowledged that not all targeted consumers would take advantage of this initiative and comply to regular payment of municipal accounts.

6.2.4 Lower Tier Monthly Income Respondents are in Need Tax Exemption Incentives

The residents with a lower level in monthly income are in need for the introduction of a tax exemption as an incentive for regular payment of municipal accounts. A total of 33% of the two lower income tiers are for the proposal as compared to 12% of respondents on the two upper income tiers. Since many governments have been the main drivers of universal access to water and sanitation, tariffs have been kept low in order to service the entire population spectrum. In order to maintain low tariffs,

subsidies have been provided to the WSPs, rather than to the consumers themselves (Foster *et al.,* 2000), leading to unsatisfactory results. The continued use of this mechanism is ineffective within areas of ineffective infrastructure (Burger, 2014). Nevertheless, large implicit subsidies have resulted in unsustainable water supply systems that are unable to roll out expansion programmes to the unconnected consumers. Due to these concerns, there has been a diversion away from subsidised water supply systems and a concerted drive, both internationally and locally towards full cost recovery of water services. This has subsequently led to increased billing to households, increasing the household financial burden (Gomëz-Lobo & Contreras, 2000).

6.3 Recommendations

The following recommendations can be deduced from the study.

6.3.1 Organisational Regeneration

The Ugu District Municipality needs to rejuvenate itself, especially in the eyes of the consumers. The one aspect that the municipality has control over, is to try and change peoples' perceptions on their ability to perform. An organisations' culture should demonstrate competence, be congruent with employee developmental needs and be adaptable to suit the diverse skills needs. For an organisation to be able to flourish, it needs to overcome its weaknesses and build on its strengths. Using a SWOT analysis can assist the municipality in establishing its strengths and weaknesses. In order to attend to staff weaknesses, enhanced training and development would ensure that the staff members have the knowledge and skills to perform jobs effectively, take on new responsibilities, and adapt to changing conditions (Jones & George, 2011). Whilst training focuses primarily on teaching employees how to do their current jobs, the municipality should also focus on development, which results in building knowledge and skills of employees to prepare them to take new responsibilities and challenges.

6.3.2 Increased Consumer Participation in Tariff Structure Reviews

The fact that some participants did not know about the tariff structure reviews, implies that the municipality is not doing enough in terms of engaging community members in issues that affect them. Despite the tariff structure being available on the municipality's website, it is possible to argue that the community members were not consulted regarding the finalisation of the structure. This means that the municipality is falling short on aspects of public participation. In this regard, the municipality should use a variety of platforms to communicate with the community members, regarding the issues that affect their lives. The use of ward committees, public participation forums, social media, as well as the traditional media, can all be harnessed to ensure effective communication between municipal officials and the people who they serve. If the public feels that the officials are engaging them in municipal affairs, they feel being part of the processes, but if they are not consulted, they feel that they are being side-lined, and their views and opinions are not being considered, hence, they get demoralised and stop paying for municipal services due to dissatisfaction.

6.3.3 Increase Capacity to Deal with Defaulters

The findings of the study showed that some consumers, upon failing to pay for water services, resolve to illegal connections since the municipality lacks capacity to actively deal with defaulters. This should be taken as a serious offence which should carry penalties, in order for consumers to refrain from such activities. In the same way, the municipality should consider installing pre-paid metres, just like the consumers pay for electricity. This would ensure that consumers do not waste water and also the fact that they will only utilise use what they paid for. This would also encourage consumers to preserve water, an already scarce resource.

6.3.4 Implementation of Tax Exemption as an Incentive

The findings of the study showed that some consumers, upon receiving an incentive, may regularly pay for municipal services, in this case water. Although not all may take advantage of such incentives, the few who might take up will contribute positively to cost recovery for the municipality. As reported by Gurley-Calvez *et al.*,

(2003), the reduced tax cuts may become a catalyst for increased entrepreneurship with the district.

6.4. Limitations of the Study

Limitations of a study refers to aspects of the methodology that influences the interpretation of the results (McCusker et al., 2015). The following were identified as limitations to this study;

a. The use of a questionnaire as a tool of collecting data comes with its own limitations such as the respondent not being entirely truthful due to social image etc.
b. The administration of a questionnaire would require one to travel to the different corners of the district in order to gather representative data from a sample population. This however would require extensive travel costs. This was resolved by use of an on-line method of administration of the questionnaire.
c. By use of on-line data gathering technique there were limitations as to the category of respondents who could be accessed as it requires a respondent to have adequate resources of their own to complete it. It is common for one to utilise data on issues that directly benefit them.
d. It was impossible to know whether the respondents were registered account holders with the municipality or not since the questionnaire was distributed online via google forms

6.5 Areas for Further Research

From cross tabulation between level of income and affordability was found to be greater than 0.05, it indicated that there are other factors that respondents considered more significant when looking at affordability. These were not explored in this study. Tax exemption might reduce the tax base of the national fiscus. A deeper study is required to quantify how much tax revenue will reduce by if municipal account payments are considered for tax exemption, especially on a national level. This study also assumed the perspectives of the consumers on municipal services. The findings of the study indicated that the consumers are not satisfied in terms of how water is billed, how the tariff structure is arrived at, because they are not being

consulted in this regard. On that note, further studies could research the same issue from the perspective of the municipal officials, the providers of the water services. It would be interesting to get their views as to what they think are the causes of non-payment for municipal services by the consumers. Still on that matter, further studies could adopt the qualitative approach, which provides the research participants the room to express their views and attitudes, as well as opinions regarding the non-payment of municipal services and in this regard, water. A qualitative approach to the study would provide more in-depth analyses into the causes of non-payment for services, as well as the billing system by the municipal officials. Again, further studies could focus on assessing the current tariff structures and engage all the relevant stakeholders, as to how the billing system is arrived at, because it has emerged from this study, that one of the causes of non-payment for water services is that fact that the consumers do not trust the billing systems, as they indicated that they are being charged for what they have not consumed.

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APPENDIX A: QUESTIONNAIRE

UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP

MBA Research Project
Researcher: Noel Nyawade (079 495 9986)
Supervisor: Dr Pfano Mashau (031-2607021)
Research Office: Ms P Ximba 031-2603587

CONSENT

I……(full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project. I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT DATE

……

This page is to be retained by researcher

TITLE

MUNICIPAL COST RECOVERY: TAX EXEMPTION AS AN INCENTIVE FOR CONSUMER PAYMENT AT UGU DISTRICT MUNICIPALITY

A PERSONAL & HOUSEHOLD INFORMATION

We are requesting the following personal and household information about you to help us in our analysis of the data we are collecting. No participant will be identified with any information provided. Please tick the appropriate box for your response.

1. Telephone number of respondent (optional)

……

2. Gender of respondent: ☐Female ☐Male

3. Age: ☐18-25 ☐26-35 ☐36-45 ☐46-55 ☐over 55

4. Highest education level**:** ☐National Certificate ☐Diploma ☐Masters ☐Bachelor Degree ☐ (Honours) Degree ☐Masters ☐PhD ☐Other (please specify)_____

5. What is the economic status of the head of the household?

☐ Employed ☐ Self-Employed ☐ Not Employed ☐Pensioner ☐ Student

6. What is your household income level per month? ☐R10 000 and below ☐11 000 - 20 000 ☐21 000 - 30 000 ☐31 000 - 40 000 ☐ 41 000 and Above

7. Where is your household's general location?

☐Urban - Suburb ☐Urban - Township ☐Peri-Urban ☐ Rural

B BILLING & COST RECOVERY INFORMATION

To what extent do you agree with the following statements? Using a scale of 1 – 5, Please circle the numeric value corresponding to your opinion for each statement

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagreed
There are sufficient resources to produce accurate billing by the municipality to its registered consumers.	1	2	3	4	5
Consumers are billed on actual amount consumed.	1	2	3	4	5
Consumers are billed on estimated volumes.	1	2	3	4	5
The estimated volumes are in line with the consumer's average actual consumption.	1	2	3	4	5
Consumers are consulted on tariff structure.	1	2	3	4	5
The Tariff structure is affordable by the residents of the municipality.	1	2	3	4	5
There are sufficient support mechanisms to deal with defaulters accordingly.	1	2	3	4	5
There are incentives that may encourage defaulters to get back into the payment net on a regular basis.	1	2	3	4	5

C OPINION INFORMATION

Please tick the appropriate box for your response.

1. Do you think water bills payment has to do with the level of Income?

a) Yes ☐

b) No ☐

c) No sure ☐

2. Do you think if the municipality introduces tax exemption incentive on water bill payment it might encourage consumers to pay their water bills?

a) Yes ☐

b) No ☐

c) Not sure ☐

2.1 If your answer from above is No, please explain why.

……

……

……

……

3. Do you think if water tariffs are reduced it might encourage consumers to pay their bills?

d) Yes ☐

e) No ☐

f) Not sure ☐

3.1 If your answer from above is No, please explain why.

……

……

……
……

4. Do you think the municipality is making enough efforts in implementing effective ways of revenue collection?

a) Yes ☐

b) No ☐

c) Not sure ☐

4.1 Please briefly explain your answer.

.....
.....
.....
.....

5. In your opinion what do you think might cause residents to default in paying water bills?

……
……
……
……
……
……

6. In your opinion what do you think might be an effective remedy for the above cause(s)?

……
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……
……
……
……

Online Version of Questionnaire

MUNICIPAL COST RECOVERY: TAX EXEMPTION AS AN INCENTIVE FOR CONSUMER PAYMENT AT UGU DISTRICT MUNICIPALITY (UGU)

UNIVERSITY OF KWAZULU-NATAL GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP MBA Research Project Researcher: Noel Nyawade (079 495 9986) Supervisor: Dr Pfano Mashau (031-2607021) Research Office: Ms P Ximba 031-2603587

A. PERSONAL & HOUSEHOLD INFORMATION

We are requesting the following personal and household information about you to help us in our analysis of the data we are collecting. No participant will be identified with any information provided. Please tick the appropriate box for your response.

Name

First Name Last Name

Phone Number (optional)

Area Code - Phone Number

Email

example@example.com

Gender

- Male
- Female

Age

- 18 -25
- 26 - 35
- 36 - 45
- 46 - 55
- Over 55

Highest Educational Level

- National Certificate
- Diploma
- Masters
- Honours
- Bachelor Degree
- PHD
- Please specify

What is your economic status

- Employed
- Self-employed
- Not employed
- Pensioner
- Student

What is your income level per month

- R10 000 and below
- R11 000 to 20 000
- R21 000 to 30 000
- R31 000 to 40 000
- R41 000 and above

What is your household's general location?

- Urban Suburb
- Urban township
- Peri-urban
- Rural

B. Billing and Cost Recovery Information

To what extent do you agree with the following statements? Using a scale of 1 – 5, Please circle the numeric value corresponding to your opinion for each statement

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
There are sufficient resources to produce accurate billing by the municipality to its registered consumers.					
Consumers are billed on actual amount consumed.					
Consumers are billed on estimated volumes.					
The estimated volumes are in line with the consumer's average actual consumption.					
Consumers are consulted on tariff structure.					
The Tariff structure is affordable by the residents of the municipality.					
There are sufficient support mechanisms to deal with defaulters accordingly.					
There are incentives that may encourage defaulters to get back into the payment net on a regular basis.					

C. Opinion Information

Please click the appropriate box for your reponse

1. Do you think water accounts payment has to do with the level of income

- Yes
- No
- Not sure

2. Do you think if the municipality introduces tax exemption incentive on water bill payment it might encourage consumers to pay their water bills?

- Yes
- No
- Not sure

2.1 If your answer from above is No, please explain why

3. Do you think that if water tariffs are reduced it might encourage consumers to pay their accounts?

- Yes
- No
- Not sure

3.1 If your answer from above is No. please explain why

4. Do you think that the Municipality is making enough effort in implementing effective ways of revenue collection?

- Yes
- No
- Not sure

4.1 Briefly explain your answer

6. In your opinion, what do you think might cause Residents to default from paying their Accounts?

8. In your opinion, what do you think might be an effective remedy for the above cause(s)?

CONSENT

I, hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project. I understand that I am at liberty to withdraw from the project at any time, should I so desire.

Submit | Clear Form | Print Form

APPENDIX B GATE KEEPER PERMISSION

PO Box 33, Port Shepstone 4240
Kwa Zulu-Natal
South Africa

28 Connor Street
Tel: (039) 688 5807
Fax: (039) 682 3350

Ugu Distrik Munisipaliteit *Ugu District Municipality* *Ugu Umasipala Wesifunda*

CORPORATE SERVICES DEPARTMENT

Enquires: Ms V Tsako
039 688 5758

29 May 2017

P.O.Box 40187
Shelly Beach
4265

Room 115
Innovation Centre
University of KwaZulu-Natal
Durban 4001

Attention: Mr Noel Nyawade

REQUEST TO CONDUCT A RESEARCH

It is a great pleasure to inform you that the request that was made for Mr Noel Nyawade, student number 214580183 to conduct a research for his MBA in Municipal Cost Recovery-Tax Exemption at Ugu District Municipality has been granted.

It is hoped that the outcome of the research will benefit the Ugu District Municipality.

Yours sincerely

[redacted]: Corporate Services

APPENDIX C ETHICAL CLEARANCE

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

08 June 2017

Mr Noel Nyawade (214580183)
Graduate School of Business & Leadership
Westville Campus

Dear Mr Nyawade,

Protocol reference number: HSS/0709/017M
Project title: Municipal Cost Recovery: Tax Exemption as an Incentive for Consumer Payment at Ugu District Municipality

Full Approval – Expedited Application

In response to your application received on 07 June 2017, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and FULL APPROVAL for the protocol has been granted.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of Issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

[redacted]
.....
Dr Shamila Naidoo (Deputy Chair)

/ms

Cc Supervisor: Dr Mbuyiseni Goodlife Ntuli
Cc Academic Leader Research: Dr Muhammad Hoque
Cc School Administrator: Ms Zarina Bullyraj'

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Telephone: +27 (0) 31 260 3587/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:** kmbap@ukzn.ac.za / snymanm@ukzn.ac.za / mohunp@ukzn.ac.za
Website: www.ukzn.ac.za

APPENDIX D TURNITIN REPORT

Turnitin Originality Report

MUNICIPAL COST RECOVERY: TAX EXEMPTION AS AN INCENTIVE FOR CONSUMER PAYMENT AT UGU DISTRICT MUNICIPALITY by NOEL NYAWADE

From Master's Dissertation (Master's Dissertations 2018)

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