




# Evaluating the implementation of a municipal credit management policy



## Authors:

Abba W. Masungini<sup>1</sup> Gauda J. Maseko<sup>1</sup> Natasha Robbette<sup>1</sup> 

## Affiliations:

<sup>1</sup>Department of Accountancy,  
Faculty of Management  
Science, Vaal University of  
Technology, Vanderbijlpark,  
South Africa

## Corresponding author:

Abba Masungini,  
walkermasu@gmail.com

## Dates:

Received: 22 Aug. 2022

Accepted: 05 June 2023

Published: 31 July 2023

## How to cite this article:

Masungini, A.W., Maseko,  
G.J. & Robbette, N., 2023,  
'Evaluating the  
implementation of a  
municipal credit  
management policy',  
*Journal of Local  
Government Research and  
Innovation* 4(0), a101.  
[https://doi.org/10.4102/  
jolgr.v4i0.101](https://doi.org/10.4102/jolgr.v4i0.101)

## Copyright:

© 2023. The Authors.  
Licensee: AOSIS. This work  
is licensed under the  
Creative Commons  
Attribution License.

## Read online:



Scan this QR  
code with your  
smart phone or  
mobile device  
to read online.

**Background:** In South Africa, the growth in the amount owed to municipalities for municipal services rendered, is at an all-time high. The culture of non-payment of rates and taxes for the municipal services is not a new phenomenon. This study is undertaken to determine whether a selected municipality applies its credit management policy to manage the phenomenon of non-payment.

**Aim:** The study investigated the effectiveness of a municipal credit management policy, from the residents' perspective, within a municipality in the Sedibeng district.

**Methods:** Quantitative analysis was applied through a descriptive research design. Primary data were collected from residents through a self-administered questionnaire. The Statistical Package for the Social Sciences (SPSS) (version 28) was applied to perform a descriptive analysis and exploratory factor analysis.

**Results:** The sampled municipality failed to enforce its credit management policy and was also unable to fulfill its service delivery responsibilities, according to residents' responses.

**Conclusion:** This article recommends that a municipality must enforce its credit management policy to generate responsiveness from residents. This can be done through introduction of debt recovery policies and offering discounts for timeous payment. In addition, the municipality needs to improve its service delivery.

**Contribution:** This article proposes that residents' responsiveness to the municipal credit management policy is affected by negative attitudes towards the municipality due to poor service delivery as well as challenges with affordability of municipal services.

**Keywords:** credit management policy; municipality; service delivery; Sedibeng; resident responsiveness.

## Introduction

The local sphere of government involved in the development of communities is considered as the government that is closest to its citizens. Consequently, there should be effective operations within intergovernmental spheres and a well-planned administration (Mphasane 2012:2). The White Paper on Local Government (1998) acknowledges, regarding credit management, that the long-term economic viability of a municipality relies on the municipality to collect income from its debtors (Du Plessis 2016:24). Therefore, effective credit management mechanism needs to be established to enhance the financial sustainability of local municipalities. The White Paper on Local Government touches on the fundamentals of income management, which is additionally referred to as the 'price chain' (Du Plessis 2016:24).

The obligation load and specifically the expansion in sums owed to municipalities for services rendered (e.g., water, power and rates and taxes) is reaching unprecedented levels in South Africa. The culture of non-payment for services rendered by municipalities is not a new development and has, in fact, developed since the 1980s (Lubbe & Rossouw 2005:784). The challenge is the continuous non-payment of municipal services and responsiveness to the credit management implementation on residents' accounts, which are long overdue and consequent legal measures to enforce the fulfilment of their obligations. For any municipality to grow, create infrastructure and, in the long run, render quality administration, it needs its workforce to be outfitted with aptitudes that assist in running the public office, supported by paying residents (Molaoa 2011:2).

The Sedibeng District Municipality is a Category C municipality in terms of the *Municipal Structures Act*. The affiliated Local Municipalities are Emfuleni, Midvaal, and Lesedi local

municipality. Near the Vaal River, which serves as the boundary between the provinces of Gauteng and the Free State, the Sedibeng District is located at the southernmost point of Gauteng. The municipality is responsible for the region that was formerly known as the Vaal Triangle: the only region in the province to be located on the banks of both the Vaal River and the Vaal Dam. The Sedibeng District municipality also includes the historic townships of Evaton, Sebokeng, Boipatong, Bophelong, Sharpeville, and Ratanda (Municipalities of South Africa 2021).

In this article, two different research questions are answered:

- Do residents understand and respond to the credit management policy of a Sedibeng District Municipality?
- Which factors affect the responsiveness of residents to the credit management policy of a Sedibeng District Municipality?

## Literature review

### Credit management policy

According to Fujo and Ali (2016:448), a company's credit management policy refers to various methods for collecting debts after they become due. Setting up formal, legal policies and procedures for credit management will ensure that credit is given to the proper authorities, the proper person, for productivity or to technically and economically viable businesses; that credit is granted for the proper size, that credit is recoverable, and that there is an adequate management flow for credit management (Asafo-Adjei 2015). Given that most major companies invest in major accounts, credit management policy decisions and practices have a significant impact on corporate value (Khan 2019:16). The objective of a management policy is therefore to promote efficient practices in fiscal management and proper control over accounts receivable in the organisation (Enwereji & Uwizeyimana 2020:333–334). To gain the insight of municipal credit management, it is essential to discuss the credit management cycle.

An ideal credit management cycle indicates that credit standards are effective. The credit management cycle is a representation of average collection time. These guidelines assist organisations including municipalities in evaluating the success of their credit management strategies (Kumaraswamy 2016). According to Osinowo (2018:90), the accounts receivable cycle is the average number of days it takes a business to receive payments from clients. The wider credit management cycle starts when the municipality has rendered the service and ends when the payment is received. Sending invoices in the right format and on time is the first step in the credit management process. For both municipalities and rate payers, an invoice outlines the terms and conditions of the credit transaction that occurs. An invoice also specifies the amount and due date for payment to the clients. Sending invoices as soon as possible will ensure that any outstanding accounts are paid right away (Edwin 2019:12). It is also essential to evaluate the effectiveness of the credit management policy in the interest of all the stakeholders.

According to Nkabane (2016:32), the most crucial policy considerations for municipalities to consider when developing tariff policies are payment in proportion to the amount consumed, payment for service costs in full, affordability, payment capability, fairness and transparency, local setting of tariff levels, consistent enforcement of tariffs, and preserving local economies' competitiveness. According to Mazibuko and Fourie (2013:131), local government rates and taxes – which are viewed as fees paid for municipal water and sanitation as well as other services – are the source of municipal revenue. The local government must review these principles in order to develop a sound model of revenue management, but local government authorities have not given this much thought (Matovu 2018:17).

### Municipal credit management

The *Municipal System Act 32* (Republic of South Africa [RSA] 2000) dealing with Credit Control and Debt Collection, in South African municipalities, mandates that municipalities collect all money owed to them. As a result, municipalities are required to adopt, maintain, and carry out a credit control and obligation accumulation strategy (RSA 2000:65–66). In accordance with the *Municipal Systems Amendment Act* (MSA) (RSA 2003) in Section 95, a municipality is given the authority to use the Act to levy and improve fees, prices, or tariffs in relation to any feature or service provided by the municipality as well as to recover costs on any exceptional amount subject to the *National Credit Act's* provisions (RSA 2000). The *MSA Act of 2003*, also specifies the requirements for municipal cash management and debt collection practices (RSA 2003). Systems for collecting debt are essential to a municipal's success. In the current global economic downturn, unfortunately, unpaid invoices and unpaid credits are becoming more prevalent (Onar, Oztaysi & Kahraman 2018:1845). The income is more stable when accounting and pricing are performed correctly (Wichman 2017:17). Municipalities are not permitted to lose money by failing to put in place a reliable billing system, a robust tariff structure, or by failing to collect money from the water produced and sold, claim Namaliya (2017:6) and Wichman (2017). According to Namaliya (2017:6), accurate revenue measurement, billing, and collection could increase the revenue generation of public water utilities. It is explained how the structures of tax, billing, metering, and illegal links affect this subcomponent's revenue in the following sections.

As the accounting officer, the municipal manager must see to it that the municipality adopts a credit control and debt collection policy (RSA 2003). The municipal manager is also accountable for managing the municipality's revenue as an accounting officer and for taking action to ensure that the municipality has income series systems in compliance with Section 95 of the *Municipal Systems Act* and the municipality's credit control and debt collection policy (RSA 2003). In addition, unless the council has granted exemptions in accordance with its budget-related policies, the municipality should charge interest on late payments (RSA 2003).

## Municipal revenue

According to Brown, Ofosuhenne and Akenten (2019:2), municipal revenue is money collected by the municipality from service rendered and can also include intergovernmental grants; for example, taxes (property, income, sales, and excise taxes), user fees, and intergovernmental transfers are all sources of revenue for local governments. One of the key elements that the government heavily depends on to improve the development of its social services is revenue collection because it determines how much money is available for spending (Mbufu 2013:24). For the purposes of development and service provision, local governments have the power to generate their own revenues. Each council must look for business opportunities to increase its revenue in addition to providing official incomes. Among the most significant sources of income for local governments are local taxes, the development levy, property taxes, house rent for council buildings, fines, fees, licences, and grants from the federal government (Edwin 2019:12).

In essence, revenue from various taxes, fees, grants from the government (both conditional and unconditional), donor funds, equalisation funds, fees, fines, and penalties – all have a big impact on how well services are provided in District Local Government (Mbufu 2013:24). Revenue collection, however, is not always as accurate as it seems. It is possible that a municipality's method of collecting taxes is ineffective (Imuezerua 2014:133). According to Bruwer and Rossouw (2019:51), the inability to collect unpaid debt, a lack of financial management expertise, and the inability to pay creditors are all potential contributing factors to South African municipalities' financial issues. As part of their responsibility to promote local development within their respective jurisdictions, local government bodies are expected to generate enough revenue to provide infrastructure and public services. Local governments receive funding from a variety of sources, including property, income, sales, and excise taxes, user fees, intergovernmental transfers, operating revenues from borrowing, fees assessed to developers, and public-private partnerships (PPP) (Brown et al. 2019:2).

## Property rates

Municipal property rates are calculated in Rand (ZAR) and are based on the market value of immovable property, such as land and buildings (Department of Corporate Governance and Traditional Affairs 2016; Tivavone 2018:31). Rates must be paid by all owners of immovable property. As a result, all property owners – commercial, residential (homes), agricultural, governmental, among others – are included in the definition of property. Property also includes rights of permission to occupy (PTO), which are frequently found in public spaces. Municipalities must make sure that unit owners in sectional title schemes are registered with them because they can no longer rate the body corporate (RSA 2004).

## Levies and service charge

According to Mazibuko (2014:133), levies and service fees are directly influenced by the municipal billing system as they

relate to metering data input into the system, and the data should be error-free, accurate, and correct so that when bills for services rendered are issued to the customer, there are no complaints or protests against such bills (Sedibeng District Municipality 2017). User fees accounts make up a sizeable chunk of municipal revenues, especially in developed economies, according to Schreiner and Hassan (2011:39). Despite their widespread use, their return in developing nations has typically lagged behind the operating and amortisation costs of infrastructure systems because many governments have set rates below their economic level to aid the underprivileged (Pieters 2015:21).

## Conditional grant

Direct conditional subsidies, according to the Department of National Treasury (2011:55–56) and Ziervogel (2019:503), are transfers that municipalities may use only for the purposes specified in the conditional subsidy framework. Collectively, these grants are almost as valuable as fair share transfers. The municipal infrastructure grant (MIG), which funds municipal infrastructure primarily to increase the number of low-income households with access to water and sanitation, is the primary conditional grant.

## Unconditional grant

The Department of National Treasury (2011:43) and Cameron (2022:128) state that the vertical division of national collected revenues has established a pool of money that will be given to the local government as unconditional subsidies. This transfer aims to equalise the disparate distribution of the fiscal capacity of the federal government and local governments.

## Municipal borrowing

In South Africa, municipalities are mandated by the Constitution to oversee the provision of services, such as electricity, water and sanitation, roads and waste management, that are essential for both social equity and economic growth (Department of National Treasury 2017) and (Makhathini, Mlambo & Mpanza 2020). In addition, they are in charge of managing neighbourhood facilities (such as sports facilities) and, to a lesser extent, social services (such as health clinics) (Department of National Treasury 2017) and (Krige 2019). To finance other projects, more money might therefore be required. In order to pay for a portion of the economic infrastructure in their capital, municipalities can, according to Pieters (2015:23), borrow money from the financial market.

## Municipal services

Residents must feel satisfied in order for service-oriented public sector organisations, like municipalities, to deliver high-quality services that meet or exceed citizens' expectations. The main focus of a municipality is on offering municipal goods and services. Creating a better future for communities through the support of local socio-economic



development projects and programmes is what Madumo (2015:159) refers to as developmental local governance, or local governance for development. Municipalities are therefore required to use the resources at their disposal to provide high-quality services (Sibonde & Dassah 2021:1). Mamokhere (2021:81) claims that the major objective of South African municipalities is to provide residents with access to a wide range of municipal goods and services, improving their capacity to contribute economically, socially, politically, and culturally.

Recently, the South African government commemorated 27 years of its democratic regime. South Africa is dealing with a rapid rise in violent and destructive service delivery protests that have a negative impact on socioeconomic development, despite recently celebrating its democratic dispensation (Mamokhere 2021:82). According to Masiya, Davids and Mangai (2021:99), more service delivery protests take place in areas where there are severe shortages of one or more basic services, such as water, electricity, sewerage, sanitation, and refuse collection. They also claim that protests are linked to inadequate municipal provision of basic services. In addition, research indicates that the overall transition from apartheid to democracy was brief (Chilenga-Butao 2020). The majority of those who had previously been disadvantaged did not receive concrete transition benefits, which led to a resurgence of poor people's resistance in the form of service delivery protests. Furthermore, Mphahlele and Zandamela (2021:157) assert that protests are often the result of dysfunctional municipalities.

### Revenue collection and non-responsiveness to the credit management policy

Although the Constitution of the Republic of South Africa (1996) makes clear provisions for the structure operation, and growth of local municipalities, it seems that these organisations fall short of expectations when it comes to securing payments from residents who use these services (Enwereji & Potgieter 2018:227). The delivery of consumer services as required by the Constitution of the Republic of South Africa (1996) is significantly impacted by municipal consumer debt, which also negatively impacts the municipal fiscal position. According to Enwereji and Uwizeyimana (2020:333), the level of municipal consumer debt in South African municipalities is quite alarming.

Despite the judicial precedents that serve as a guide for municipal revenue collection, Enwereji (2019) affirms that municipalities find it difficult to raise the funds necessary to carry out their obligations. Municipal role-players still have the responsibility of obtaining sufficient funding to manage the municipality's affairs. According to Section 64(1) of the *Municipal Finance Management Act 56 of 2003* (RSA 2003), the management of municipal revenues is the responsibility of the municipal financial accountant. Furthermore, Section 64.4(2) of the same Act outlines the following obligations for municipal accountants:

- The collection of municipal revenue in accordance with other municipal debt collection policies and Section 95 of the *Municipal System Act 32 of 2000* (RSA 2000).
- Compiling and submitting monthly reports on municipal revenue.
- Unless the municipality indicates an exemption, ensure that surcharges and interest are applied to municipal payment arrears or debts.
- Ensure that a weekly reconciliation of the money collected by the municipality and/or other money collectors is carried out.
- Make sure that the municipality's revenue is calculated and presented each month.
- Ensure that the money collected from each section of the revenue target is deposited into the working account of the municipality.
- Ensure that the accounting and information systems for the municipality are kept up to date, and that revenue is recognised as it is earned, received, and owed.
- Despite a culture of non-compliance among residents, it is the municipality's sole duty to collect payment for the services it provides to the residents.

### The role of the South African Local Government Association and the National Treasury on municipal debt or credit management

South Africa's local government oversight is carried out by the South African Local Government Association (SALGA), which is a constitutionally required body. Within the political system, SALGA fulfils two crucial strategic roles: one as a protector, zealously upholding the rights of local governments; and the other as a constructive disruptor, obstructing those aspects of the current framework that prevent local governments from carrying out their mandate (SALGA 2020). Effective management of revenues and expenses is another aspect of its function in local government. In addition, it helps to enhance the financial administration of local governments. Last but not least, it supports municipalities with the demands of the auditor general, billing, updating the municipal fiscal model, and debtor reduction (SALGA 2011:2).

When it comes to local government, the National Treasury supports and strengthens municipal capacity, monitors and supports local government, and regulates municipal performance in accordance with the duties outlined in Schedules 4 and 5 of the constitution. It also assists municipalities with the development of legislation and legislative compliance (Department of National Treasury 2017:746). Local government generates roughly 70% of its own revenue, according to the Department of National Treasury (2019:62), but could generate more if municipalities improved revenue collection. In 2017–2018, less than 80% of the billed revenue was received by nearly half of all municipalities.

### Research methodology

The study applied a descriptive research approach and collected primary data by means of a self-administered

questionnaire. The questionnaire consisted of four different sections. Section A collected data regarding demographical information of participants. Section B collected data around the effectiveness of the municipal credit management policy, while Section C intended to measure the residents' responsiveness to the credit management policy. The final section, Section D, collected data to explore the relationship between credit management policy responsiveness and service delivery. For Section B through to Section D, questions were based on a four-point Likert scale (strongly disagree through to strongly agree). A total of 510 responses were collected from residents who stay within the bounds of the Sedibeng municipal district. A description of the population estimation, sampling method and data analysis approach, follows in paragraphs hereafter.

## Estimation of the population

The target population of the study is made up of residents residing within the Sedibeng District, as illustrated in Table 1.

From Table 1, it should be noticed that population data more recent than 2016 has not been made available by the selected municipality. Thus, 2016 data were used to estimate the population. As residents who live within formal dwellings are obliged to pay municipal fees, the population was estimated to be equal to  $(253\,488 \times 87\%)$  220 535 households.

## Sampling method and data analysis

Knowledge or judgement of the researcher is applied to select the sampled objects or participants (Bell 2015). To select the sample, the researchers considered that:

- participants should be sampled from different areas within the Sedibeng District and that the sample selection could not be limited to a single area. This ensured that participants were recruited from diverse socio-economic environments
- participants had to be home owners or business owners, who are expected to engage with the municipality, through paying municipal accounts.

**TABLE 1:** Population size and housing dynamics.

Description	2011	2016
<b>Population</b>	721 663	733 445
<b>Age structure</b>		
Population under 15 (%)	25.6	25.7
Population between 15 and 64 (%)	69.5	68.2
Population above 65 (%)	4.9	6.0
<b>Household dynamics</b>		
Households	220 135	253 488
Average household size	3.1	2.9
Female-headed households (%)	36.3	37.8
Formal dwellings (%)	85.3	87.0
Housing owned (%)	48.8	65.7

Source: Municipalities Of South Africa, 2021, *Sedibeng District Municipality (DC42)*, viewed 01 July 2021, from <https://municipalities.co.za/overview/114/sedibeng-district-municipality>.

The sample size was determined by using the Sloven's formula ( $n = N/1 + Ne^2$ ) based on the following:

- a population size of 220 535 (refer to Table 1)
- confidence interval is at 0.05
- proportion of 0.5
- sample size is determined to be 510.

The data collected were analysed using the Statistical Package for the Social Sciences (SPSS) version 28. Descriptive analysis requires several statistical techniques. These include frequency distribution, location measures (mean, median, and mode), and measures of dispersion (standard deviation, range and variance, skewness, and kurtosis). Descriptive analysis was performed on the measuring instruments where means and standard deviations are interpreted. Exploratory factor analysis is used to investigate and model correlative relationships between manifest variables using one or more latent variables. Only items from Sections B to D were used in the factor analysis, as Section A contained items about demographic information. Eigenvalues (latent root criterion) greater than one are statistically significant (Goretzko, Pham & Bühner 2021). Therefore, to determine the number of factors within each section, eigenvalues equal to or greater than one, was applied.

The questionnaires contained a number of questions of which not all can be analysed. Therefore, in this case, exploratory factor analysis (EFA) was used to reduce the number of variables to a smaller number of dimensions called 'factors'. Factors explain commonalities between sets of variables. Specifically, Bartlett's sphericity test was used, as it tests the probability that significant correlations exist among at least some of the variables in the data set. The Kaiser–Meyer–Olkin (KMO) test was performed, as it determines whether the data were suitable for factor analysis (Shrestha 2021:6).

The test computes the probability that the correlation matrix has significant correlations among at least some of the variables in a data set.

## Research results

The research results were obtained through the execution of two different statistical phases. The first phase entailed descriptive analysis (Table 2), while the second phase entailed the Bartlett test result (Table 3) and factor analysis (Table 4 to Table 6). Table 2 illustrates the descriptive analysis results for the measuring instrument.

Table 2 reports that the effectiveness of municipal credit management overall scale (Section B) had the highest mean score of 2.702, followed by the responsiveness to credit management policy overall scale (Section C), which had a mean rating of 2.525. The relationship between credit management policy and customer service scale (Section D) had the lowest mean rating of 2.101.

The standard deviation is frequently associated with the mean because it is a measure designed to resolve the average

**TABLE 2:** Descriptive analysis results for the measuring instrument (Section B, C and D).

Description	N	Mean	Minimum	Maximum	Standard deviation
Section B: Effectiveness of municipal credit management	510	2.702	1.0	4.0	0.5579
Section C: Responsiveness to credit management policy	510	2.525	1.0	4.0	0.5079
Section D: The relationship between credit management policy and customer service	510	2.101	1.0	4.0	0.5936
Valid N (listwise)	510	-	-	-	-

**TABLE 3:** The Kaiser–Meyer–Olkin measure and the Bartlett test results.

Constructs	KMO measure	BARTLETT'S test		
		Appropriate Chi-square	Degrees of freedom	Significance level
Effectiveness of municipal credit management	0.804	2929.259	45	0.000
Responsiveness to credit management policy	0.845	3590.939	91	0.000
Relationship between credit management policy and customer service	0.938	9551.740	153	0.000

KMO, Kaiser-Meyer-Olkin.

distance of interpretations from the measurement of the arithmetic mean interpretation. The relationship between credit management policy and customer service scale had the highest standard deviation (0.5936), followed by the effectiveness of municipal credit management scale (0.5579), and responsiveness to credit management policy had a standard deviation of (0.5079). As a result, there was a greater degree of variation in responsiveness and service delivery.

The questionnaires contain a number of questions of which not all can be analysed. Therefore, in this case, EFA was used to reduce the number of variables to a smaller number of dimensions called factors, which explain what the original set of variables have in common. Specifically, Bartlett's sphericity tests were used. To determine whether the data were suitable for factor analysis, the Kaiser-Meyer-Olkin (KMO) test was performed. The KMO test is a tool for determining whether or not data are suitable for factor analysis (Shrestha 2021:6). Table 3 was constructed to illustrate such test results.

The results of the KMO measure and the Bartlett test are summarised in Table 3. The effectiveness of municipal credit management was addressed in Section B, responsiveness to credit management policy addressed in Section C, and the relationship between credit management policy and customer service was addressed in Section D. The sampling adequacy of the municipal credit management processes, credit management policy and credit management policy and customer services measures were 0.804, 0.845 and 0.938, respectively, according to the KMO test. All of these KMO indicators were greater than 0.6, indicating that the data collected for this study are suitable for other EFA procedures.

Table 3 indicates that the Bartlett's test of sphericity results for the various scales revealed significant chi-squares of 2929.259 ( $df = 45$ ) for effectiveness of municipal

**TABLE 4:** Factor analysis of the effectiveness of municipal credit management.

Description	Factor 1	Factor 2
<b>Section B: Understanding of the effectiveness of municipal credit management</b>		
Understanding municipal credit management:		
B7: I am well informed on how to pay my municipal bills.	0.693	-
B8: I know how to submit my complaints to the municipal council.	0.813	-
B9: I am well informed on what standard of service I can expect from the municipal council.	0.917	-
B10: I am well informed on how well the municipality is performing financially.	0.817	-
Implementation of municipal credit management:		
B3: In my opinion, the current credit management policy of my municipality has failed to deal with municipal debt collection.	-	0.890
B4: In my view, there is limited commitment from municipal councillors to implement the credit management policy effectively.	-	0.879
B5: The municipality does not have the managerial and administrative capacity to implement the credit management policy.	-	0.854
B6: Existing legislations (Acts, Ordinances, By-laws) need to be amended to ensure effective and efficient implementation of debt collection measures.	-	0.715
Eigenvalue	4.660	1.875
% of variance explained	46.600	18.747
Cumulative variance explained	46.600	65.346

credit management, 3590.939 ( $df = 91$ ) for responsiveness to credit management policy, and 9551.740 ( $df = 153$ ) for relationship between credit management policy and customer service. All of these values were statistically significant at  $p = 0.000$ ; 0.05, implying that factor analysis is appropriate for the data set. Table 4 displays the factor analysis of the effectiveness of municipal credit management.

Table 4 displays statistical findings relating to two different factors. In order to understand municipal credit management (factor 1), it is posited that this factor consisted of four items with an eigenvalue of (4.660) and a percentage of variance explained by factor 1 is 46.600%. These items covered by this factor can assist in determining whether residents understand the municipal billing and the credit management in the municipality. Questions B7, B8, B9 and B10 best reflected the potential to measure the understanding of credit management. From these findings, it can be suggested that the participants have an understanding of municipal credit management.

With regard to the second factor (implementation of municipal credit management policy), this factor consisted of four items with an eigenvalue of (1.875) and a percentage of variance explained of 18.747%. The items contained in this factor assist the researcher to determine the implementation of municipal credit management policy. Because questions B3, B4, B5, and B6 best reflected the potential to measure the implementation of municipal credit management, the study focuses on the results of the four selected questions. From these findings, it can be concluded that there is poor implementation of credit management in the municipality. Table 5 displays the factor analysis for the responsiveness to credit management policy.

Table 5 displays data relating to three different factors. The first factor (reaction to credit management policy) consisted of four items with an eigenvalue of 5.558 and a percentage of variance explained of 39.701%. The residents can be unresponsive to the credit policy because of several factors; one of these can be the enforcement of the policy, service delivery, accuracy of billing, affordability, the stigma of entitlement because of their historic experience and so forth. Questions C1, C2, C3, and C13 best reflected the potential to measure reaction to credit management policy, and therefore the study concentrates on the results of the four selected questions. The findings indicate that the participants were reactive to the credit management policy of the municipalities in the level of its implementation by the municipality.

The second factor (attitude towards credit management) consisted of four items with an eigenvalue of (2.115) and a percentage of variance explained of 15.106%. This factor focuses on the outcomes of the four selected questions, C4, C5, C10, and C12, because they best indicated the capacity to gauge attitude to credit management policy. The finding suggests that the participants had an uncooperative attitude towards the municipality's credit management policy. As indicated by the first factor tested, the reason for such uncooperativeness could be the lack of enforcement of the policy, poor service delivery, inaccuracy of billing, unaffordability, the stigma of entitlement because of their historic experience.

The third factor (residents' affordability) consisted of four items with an eigenvalue of (1.342) and a percentage of variance explained of 9.583%. This section focuses on the results of the four selected questions, C6, C8, C9, and C11, because they best reflected the potential to measure residents' affordability. The findings propose that affordability can have a bearing on responsiveness to credit management. How the residents perceived unaffordability emanates from the effects of socio-economic factors such as poverty and

unemployment. This was confirmed by Fjeldstad (2004) that the prevailing view is that non-payment results from poverty and the presence of an entitlement culture. Also, Worku (2018) found that employment status, level of formal education and race group are the factors that affect reluctance to pay for municipal services.

Unaffordability can also be exacerbated by relatively low-income households or individuals who are unable to manage their personal finances and live beyond the affordability rates. The neighbourhood where a home is located can influence its perceived affordability (Gibbons 2021). The most direct indicator of unaffordability is the cost of housing such as rates and taxes. There can be a gap between perceived housing unaffordability and actual costs that is informed by neighbourhood context (Gibbons 2021). The research was conducted in the township where it is perceived to be a relatively poor neighbourhood and majority of residents consider rates and taxes as unaffordable.

Table 6 displays the factor analysis for the relationship between credit management policy and customer service.

Table 6 displays statistical findings relating to three different factors. The first factor (customer satisfaction) consisted of four items with an eigenvalue of (11.248) and a percentage of variance explained of 62.489%. This section focuses on the results of questions, D10, D11, D12, and D14, because they best reflected the potential to measure customer satisfaction. The results propose that the participants were not satisfied with the quality of municipal services.

The second factor (implementation of service delivery) consisted of four items with an eigenvalue of (1.458) and a percentage of variance explained of 8.099%. This section examines the answers to questions D1, D2, D5, and D6, because they best reflect the potential to measure

**TABLE 5:** Factor analysis for the responsiveness to credit management policy.

Description	Factor 1	Factor 2	Factor 3
<b>Section C: Responsiveness to credit management policy</b>			
Reaction to credit management policy:			
C1: Do you often pay your municipal service fees?	0.792	-	-
C2: To pay municipality service fees is a correct thing to do.	0.826	-	-
C3: Do you feel obliged to pay your municipality services fees?	0.817	-	-
C13: Would you encourage other residents to pay their municipal service fees?	0.690	-	-
C14: There's a need for service fees to be paid.	0.829	-	-
Attitude towards credit management:			
C4: Do you feel that you pay for quality service delivery?	-	0.892	-
C5: In the current state of affair of your municipality do you feel obligated in paying for service delivery?	-	0.731	-
C10: Failure to pay your municipal service fees, an action is taken by the municipality to enforce payments.	-	0.754	-
C12: The billing systems are fair for residents to comply or pay their municipal debts.	-	0.680	-
Residents' affordability:			
C6: In my opinion the current billing system is appropriate.	-	-	0.653
C8: Does your personal income have an impact on your payment of municipal service fees?	-	-	0.675
C9: In my opinion it's easy to pay municipality service fees.	-	-	0.791
C11: Municipality failure to act on non-payment has an influence on your payment of service fees.	-	-	0.765
Eigenvalue	5.558	2.115	1.342
% of variance explained	39.701	15.106	9.583
Cumulative variance explained	39.701	54.807	64.391



**TABLE 6:** Factor analysis for the relationship between credit management policy and customer service.

Description	Factor 1	Factor 2	Factor 3
<b>Section D: The relationship between credit management policy and customer service</b>			
Customer satisfaction:			
D7: The local municipality is working to ensure improved service delivery to residents.	0.701	-	-
D8: The local municipality has upgraded the civic centres and community halls in our area.	0.656	-	-
D9: The local municipality is progressive.	0.625	-	-
D10: In your last contact with the municipality, were you satisfied with finding the right person to assist you?	0.766	-	-
D11: In your last contact with the municipality, were you satisfied with the amount of time taken to deal with your matter?	0.765	-	-
D12: In your last contact with the municipality, were you satisfied with the final outcome of your matter?	0.825	-	-
D13: Were you satisfied with the service you received the last time you contacted the municipality?	0.784	-	-
D14: In your last contact with the municipality, were you satisfied with the competency of the municipal staff members?	0.798	-	-
D15: In your last contact with the municipality, were you satisfied with the helpfulness of the municipal staff members?	0.889	-	-
D16: I am satisfied with the opportunities for participation in local decision making provided by your municipality.	0.682	-	-
Implementation of service delivery:			
D1: The municipalities respond to customer queries and the rectification of account errors timeously.	-	0.793	-
D2: The municipality is customer service orientated.	-	0.698	-
D3: Municipal customers have confidence in the municipal billing system.	-	0.823	-
D4: The municipalities have a strategic plan to deal with municipal services debt.	-	0.794	-
D5: The municipality keeps residents well informed about the services and benefits it provides.	-	0.630	-
D6: In recent time, the municipality has made adequate provisions for you to express your views on the municipal services and financial issues that affect you?	-	0.623	-
D9: The local municipality is progressive.	-	0.603	-
Resource deployment:			
D17: Employees at lower levels know the mission, vision and goals of the municipality, in order to support effective customer service.	-	-	0.819
D18: Existing municipal officials should undergo regular orientation training.	-	-	0.902
Eigenvalue	11.248	1.458	1.014
% of variance explained	62.489	8.099	5.635
Cumulative variance explained	62.489	70.588	76.223

implementation of service delivery. The findings propose that there is poor implementation of service delivery in the municipality. Poor service delivery includes late billing for services, not collecting refuse, poor sewerage maintenance and a lack of electrical substation maintenance.

The third factor (resource deployment) consisted of four items with an eigenvalue of (1.014) and a percentage of variance explained of 5.635%. The focus is on the answers to questions D17 and D18, as they represent the most potential to measure resource deployment. There is poor resource deployment in terms of human capital to implement the credit policy management and service delivery.

## Conclusion

The purpose of this article was to answer the research questions: Do residents understand and respond to the credit management policy of a Sedibeng District Municipality? And which factors affect the responsiveness of residents to the credit management policy of the Sedibeng District Municipality? The study has shown that there is understanding of credit management policy by residents; however, the municipality has failed to enforce it. Non-enforcement may include late billing for services, not billing for services and not following-up on non-payment. The residents respond to credit management policies to the extent that the municipality enforces it. Unfortunately, the municipality has not met its responsibility regarding credit management enforcement.

Factors that influence responsiveness included: negative attitudes because of poor service delivery and challenge with affordability of municipal services. Thus, residents either refuse to pay municipal fees, as the services they pay for are not delivered by the municipality, or they cannot afford to pay the fees charged by the municipality. When non-payment by residents occurs, poor quality services by the municipality follows. In South Africa, communities have been constantly frustrated by the poor service delivery by the local authorities. For the municipality to be financially sustainable and be able to offer quality services, the rate payers must pay for services. Fjeldstad (2004) established that the major financial problem in many municipalities in South Africa is the ineffective collection of service charges because of widespread non-payment. As a result of financial constraints, caused by non-payment of municipal rates and taxes, municipalities are not able to afford operational obligations of delivering quality services. Inadequate service delivery also encourages non-payment of municipal rates and taxes and vice versa.

The municipality needs to urgently implement debt recovery policies and give residents rebates and discounts, in order to stimulate payment. In addition, the municipality should improve on the quality of services in terms of billing, refuse removal, electrical substation maintenance and sewage maintenance, to ensure the residents' willingness to pay for such services. Lastly, employee training and development



programmes can be introduced, while community awareness programmes to engage with residents regarding the credit management policy, can also be helpful. It should be noticed that this research did not include any responses from the sampled municipality's management corps. Thus, it remains unclear why the municipality is not enforcing its credit management policy. It is suggested that further research is undertaken to determine the internal reasons for municipal non-enforcement of a credit management policy.

## Acknowledgements

The authors would like to thank the anonymous reviewers and all the editors involved in the process of manuscript revision.

## Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

## Authors' contributions

A.W.M. contributed through data and literature collection. G.J.M. contributed through handling administrative tasks and reviewing literature. N.R. contributed through reviewing of statistics and recruiting a language editor.

## Ethical considerations

Ethical clearance to conduct this study was obtained from the Vaal University of Technology Faculty Research Ethics Committee (FREC) (NO. FRECMS- 17062020-039).

## Funding information

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

## Data availability

The data that support the findings of this study are available from the corresponding author, A.M., upon reasonable request.

## Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

## References

- Asafo-Adjei, M.A., 2015, 'Regulation of executive directors remuneration in South Africa: The road to achieving good corporate governance', Master's thesis, University of Cape Town, Cape Town.
- Bell, J., 2015, *Doing your research project*, 7th edn., Open University Press, Berkshire.
- Brown, E.O.A., Ofosuhen, S. & Akenten, W.N., 2019, 'Constraints of revenue mobilization: Local government perspective', *Journal of Economics* 23(3), 33–47.
- Bruwer, J.P. & Rossouw, J.P., 2019, 'The influence of perceived human resource risk factors on financial problems faced by Overberg District Municipalities', *Journal of Economics and Behavioral Studies* 11(1), 48–54. [https://doi.org/10.22610/jeb.v11i1\(j\).2747](https://doi.org/10.22610/jeb.v11i1(j).2747)
- Cameron, R., 2002, 'Central-local financial relations in South Africa', *Local Government Studies* 28(3), 113–134. <https://doi.org/10.1080/714004154>
- Chilenga-Butao, T., 2020, 'Decentralisation and recentralisation in South Africa's local government, case studies of two municipalities in Limpopo', *Transformation: Critical Perspectives on Southern Africa* 103(1), 12–35. <https://doi.org/10.1353/trn.2020.0011>
- Department of Corporate Governance and Traditional Affairs (DCOGTA), 2016, *Government of the Republic of South Africa, Annual report*, Government Printer, Pretoria.
- Department of National Treasury (DNT), 2011, *Local Government Budgets and Expenditure Review: Annual report*, Government Printer, Pretoria.
- Department of National Treasury (DNT), 2017, *Policy framework for municipal borrowing*, Government Printer, Pretoria.
- Department of National Treasury, 2019, *Annexure A: report of the minister of finance to parliament*, Government Printer, Pretoria.
- Du Plessis, P., 2016, 'Revenue management in local government', *IMFO: Official Journal of the Institute of Municipal Finance Officers* 16(4), 24–25.
- Edwin, U., 2019, 'The impact of revenue collection in local government authorities in Tanzania on improvement of social services: A case of Dodoma city', Doctoral dissertation, The University of Dodoma.
- Enwereji, P.C., 2019, 'A payment culture framework for municipal services in the North West province', Doctoral dissertation, North-West University.
- Enwereji, P.C. & Potgieter, M., 2018, 'Establishing a payment culture for municipal services in the North West Province: A conceptual framework', *International Journal of Economics and Financial Issues* 8(3), 221–229.
- Enwereji, P.C. & Uwizeyimana, D., 2020, 'Municipal consumer debt in South African municipalities: Contexts, causes, and realities', *Research in World Economy* 11(3), 333–345. <https://doi.org/10.5430/rwe.v11n3p333>
- Fjeldstad, O.H., 2004, 'What's trust got to do with it? Non-payment of service charges in local authorities in South Africa', *The Journal of Modern African Studies* 42(4), 539–562. <https://doi.org/10.1017/S0022278X04000394>
- Fujo, K.G. & Ali, A.I., 2016, 'Factors affecting financial performance of savings and credit societies in Kilifi County-A case study of Imarika Sacco', *The International Journal of Business & Management* 4(2), 448.
- Gibbons, J., 2021, '"Measuring gentrification's association with perceived housing unaffordability": A Philadelphia case study', *Housing Policy Debate* 31(2), 306–325. <https://doi.org/10.1080/10511482.2020.1810097>
- Goretzko, D., Pham, T.T.H. & Bühner, M., 2021, 'Exploratory factor analysis', *Current use, methodological developments and recommendations for good practice: Current Psychology* 40(7), 3510–3521.
- Imuezerua, E., 2014, 'Budget allocation and expenditure patterns of Sedibeng District Municipality in Gauteng Province, South Africa', *Mediterranean Journal of Social Sciences* 5(27), 100–127. <https://doi.org/10.5901/mjss.2014.v5n27p127>
- Khan, M.A.J.G., 2019, *Credit management system of Agrani Bank Limited*, Daffodil International University, Dhaka.
- Krige, D., 2019, 'Debt/credit, money and social relationships in the underground credit markets of Soweto, South Africa', *Social Science Information* 58(3), 403–429. <https://doi.org/10.1177/0539018419851767>
- Kumaraswamy, S., 2016, 'Impact of working capital on financial performance of gulf cooperation council firms', *International Journal of Economics and Financial Issues* 6(3), 11–36.
- Lubbe, D. & Rossouw, C., 2005, 'The recognition of revenue and the escalating debtors of municipalities in South Africa: Political and social dilemmas vs. accounting realities', *Journal of Public Administration* 40(4), 780–795.
- Madumo, O.S., 2015, 'Developmental local government challenges and progress in South Africa', *Administratio Publica* 23(2), 153–166.
- Makhathini, M.S., Mlambo, V.H. & Mpanza, S., 2020, 'Infrastructure provision as a catalyst for local economic development in South Africa', *Strategic Review for Southern Africa* 42(1), 99–122. <https://doi.org/10.35293/srsa.v42i1.198>
- Mamokhere, J., 2021, '"Evaluating the impact of service delivery protests in relation to socio-economic development," A Case of Greater Tzaneen Local Municipality, South Africa', *African Journal of Development Studies (formerly AFFRIKA Journal of Politics, Economics and Society)* 2021(s1), 79–96. <https://doi.org/10.31920/2634-3649/2021/sin1a5>
- Masiya, T., Davids, Y.D. & Mangai, M.S., 2021, 'Factors affecting the performance of South African municipal officials: Stakeholders' perspectives', *Commonwealth Journal of Local Governance* 25, 97–115. <https://doi.org/10.5130/cjlg.vi25.7701>
- Matovu, F., 2018, *Effects of local revenue management on service delivery In Bukomero town council*, Uganda, Uganda Management Institute, Mbale.
- Mazibuko, G.P., 2014, *The impact of the municipal billing system on revenue collection in selected South African cities*, University of Pretoria, Pretoria.
- Mazibuko, G.P. & Fourie D.J., 2013, 'Municipal finance: Relevance for clean audit outcomes', *Journal of finance* 122(4), 130–152.
- Mbufu, A.K., 2013, *The impact of revenue collection on service Delivery in local governments: A case study of Ilala Municipal Council*, Mzumbe University, Lila.
- Molaoa, M.L., 2011, *Skills development strategy for efficient service delivery at Sedibeng District Municipality*, North-West University, Vanderbijlpark.
- Mphahlele, M. & Zandamela, H., 2021, 'Local government capacity development: A case study of a South African District Municipality', *Journal of Public Administration and Governance* 11(2), 156177–156177. <https://doi.org/10.5296/jpag.v11i2.18373>
- Mphasane, M.E., 2012, *The role of intergovernmental relations in promoting developmental local government: The case of Sedibeng District Municipality*, North-West University, Vanderbijlpark.
- Municipalities Of South Africa, 2021, *Sedibeng District Municipality (DC42)*, viewed 01 July 2021, from <https://municipalities.co.za/overview/114/sedibeng-district-municipality>.

- Namaliya, N.G., 2017, *Strategies for maximizing revenue collection in public water utility companies*, Walden University, Walden.
- Nkabane, N.P., 2016, *An assessment of revenue management of water and sanitation: A case of Harry Gwala District Municipality*, University of KwaZulu-Natal, Durban.
- Onar, S.C., Oztaysi, B. & Kahraman, C., 2018, 'A fuzzy rule based inference system for early debt collection', *Technological and Economic Development of Economy* 24(5), 1845–1865. <https://doi.org/10.3846/20294913.2016.1266409>
- Osinowo, O., 2018, 'The impact of online accounting software as a credit management tool on small business cash flow', Doctoral dissertation, Cardiff Metropolitan University, Wales.
- Pieters, N.N., 2015, *Evaluating revenue collection and allocation challenges faced by Ndlambe local municipality*, University of Fort Hare, East London.
- Republic of South Africa (RSA), 1996, *Constitution of the Republic of South Africa Act, No. 108 of 1996*, Government Printer, Pretoria.
- Republic of South Africa (RSA), 1998, *The White Paper on Local Government*, 09 March 1998, Government Printer, Pretoria.
- Republic of South Africa (RSA), 2000, *Municipal Systems Act, No. 32 of 2000*, Government Printer, Pretoria.
- Republic of South Africa (RSA), 2003, *Municipal Finance Management Act, No. 56 of 2003*, Government Printer, Pretoria.
- Republic of South Africa (RSA), 2004, *Municipal Property Rates Act, No. 6 of 2004*, Government Printer, Pretoria.
- Schreiner, B. & Hassan, R., 2011, (eds.), 'Lessons and conclusions', in *Transforming Water Management in South Africa: Designing and Implementing a New Policy Framework*, pp. 271–276, Springer, Pretoria.
- Sedibeng District Municipality (SDM), 2017, *Spatial development framework*, Government Printer, Gauteng.
- Shrestha, N., 2021, 'Factor analysis as a tool for survey analysis', *American Journal of Applied Mathematics and Statistics* 9(1), 4–11. <https://doi.org/10.12691/ajams-9-1-2>
- Sibonde, A.H. & Dassah, M.O., 2021, "'The relationship between employee motivation and service quality,' Case study of a selected municipality in the Western Cape province, South Africa', *Africa's Public Service Delivery & Performance Review* 9(1), 12. <https://doi.org/10.4102/apsdpr.v9i1.499>
- South African Local Government Association (SALGA), 2011, *Annual Report*, Government Printer, Gauteng.
- South African Local Government Association (SALGA), 2020, *About us: Welcome*, Gauteng, viewed 20 July 2021, from <https://www.salga.org.za/About%20Us%20W.html>.
- Tivavone, B., 2018, *Implications of municipal service consumer debts on service delivery in rural municipalities: A case study of municipalities in Vhembe District*, Limpopo Province, South Africa, University of Limpopo, Polokwane.
- Wichman, C.J., 2017, 'Information provision and consumer behaviour: A natural experiment in billing frequency', *Journal of Public Economics* 152(1), 13–33. <https://doi.org/10.1016/j.jpubeco.2017.05.004>
- Worku, Z., 2018, 'Factors that affect the nonpaymentnon-payment of municipal services in Madibeng, Mamelodi and Soshanguve Townships of South Africa', *Journal of Applied Business Research (JABR)* 34(1), 99–116. <https://doi.org/10.19030/jabr.v34i1.10097>
- Ziervogel, G., 2019, 'Building transformative capacity for adaptation planning and implementation that works for the urban poor', *Insights from South Africa. Ambio* 48(5), 494–506. <https://doi.org/10.1007/s13280-018-1141-9>