

**AFRICA UNIVERSITY**  
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**REVENUE FORECASTING IN LOCAL GOVERNMENT:  
A CASE OF CITY OF MUTARE.**

**BY**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS OF THE DEGREE OF EXECUTIVE MASTER IN BUSINESS  
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## **Abstract**

The main objective of the study was to analyse the revenue forecasting techniques at Mutare City Council. The study adopted an explanatory research design where data was collected using questionnaires and interviews from staff at Mutare City Council. Data was analysed through descriptive statistics and content analysis. The results showed that the trend analysis method is the most used forecasting method, followed by the consensus method. The least used methods were the moving average and the time series method. The study found out that inaccurate revenue forecasting resulted in insufficient funds to allow for operations such as procurement of water chemicals, procurement of equipment and machinery used by MCC, in provision of street lighting, road maintenance and sewer maintenance. The study also found out that revenue forecasting was affected by information availability, political interference, lack of expertise, macro-economic factors, failure to predict time horizons and nature of revenue streams. The study concluded that Mutare City Council relied only on a few forecasting techniques, which may affect its revenue processes. The study also concluded that that poor revenue forecasting resulted in budgetary constraints which negatively impacted on service delivery at Mutare City Council. The study recommended that Mutare City Council should adopt other revenue forecasting techniques and not rely on a few techniques. Adopting various techniques simplifies the forecasting process and provide much better analysis which takes into account different changing variables.

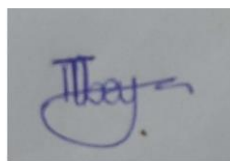
**Key Words:** Revenue Forecasting, Service Delivery, Local Authority

## Declaration

I declare that this dissertation is my original work except where sources have been cited and acknowledged. The work has never been submitted, nor will it ever be submitted to another university for the award of a degree.

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## **Dedication**

I dedicate this study to myself for proving that all things require undivided effort to overcome the challenges that are encountered in life. I also dedicate this to my family.

## **List of acronyms and abbreviations**

MCC	Mutare City Council
SPSS	Statistical Package for Social Science
GIS	Geographical Information System
NPM	New Public Management



## **Definition of key terms**

**Revenue Forecasting-** Revenue forecasting is the process of or estimating what an organisation's revenues will be over a specific time period, typically quarterly or annually.

**Service Delivery-** In the context of local authorities, service delivery is the provision of goods and services such as roads, schools, and hospitals.

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## **CHAPTER 1 INTRODUCTION**

### **1.1 Introduction**

This chapter provides the background to the study, the problem statement, the study objectives and the research questions. The delimitations, significance of the study and the limitations are also presented in this chapter.

### **1.2 Background to the Study**

Local and regional governments play a crucial role in both public finance and citizens' welfare. To be able to carry out all their activities in a planned and organized manner, governments must have an accurate estimation of future revenue (Batog & Batog, 2021). The potential overestimation of revenue may require unexpected constraints in expenditures, resulting in a reduction in investment activity and an increase in the volume of debt, and consequently may negatively determine the level of development of the community, the competitiveness of the local economy and local welfare (Boukari & Veiga 2018). On the other hand, under forecasting may lead to excessive tax levies and charges. Planning well for the delivery of government services and programs requires an accurate estimate of the revenue needed and costs related to carrying out all necessary activities. Without precise and accurate forecasts, governments will find it difficult to avoid budgetary shortfalls and to meet expenses, especially capital expenditure (Batog & Batog, 2021).

The provision of social assets and services to the people by local authorities thus, cannot be achieved without revenue. Proper revenue forecasting is also crucial for a sustainable fiscal program (Mikesell, 2018) and it is a cornerstone of budget preparation especially in multiyear budgeting. Reliable estimates of revenue and



expenditures can provide an understanding of available funding; evaluate financial risk; assess the likelihood that services can be sustained; and identify the key variables that cause a change in the level of revenue. An important aspect of local government revenue forecasting is also the fact that this process is closely tied to public policy planning and implementation and it is therefore expedient that city councils adopt suitable revenue forecasting models that will expand their internally generated revenue to enable effective service delivery (Marumahoko, 2020).

The Zimbabwean Constitution of 2013 amendment number 20 Section 276 (2) (b) and the Urban Councils Act (29:15) gives local government authorities the power to collect revenue from local areas within their jurisdictions to ensure that service deliveries for the areas they are responsible for. Local Authorities therefore has the discretion and autonomous freedom to collect revenue from excise and sales taxes; business commercial taxes; vehicle and transportation taxes; property taxes; clinic fees; burial charges; residential rates; charges amongst others. However, many loopholes exist in the revenue mobilisation devices, resulting in failure to correctly forecast revenue (The Auditors General Report, 2021).

Situated 260 kilometres southeast of Harare, the City of Mutare is the fourth largest city in Zimbabwe. It is the capital of Manicaland province, one of the ten provinces in the country. The city has an estimated population of 306, 760 people as of 2022 when the Zimbabwe Statistical Agency (ZIMSTATS) undertook a national census. Mutare city has faced several challenges in service delivery, which had all pointed to issue relating to revenue constraints. Marumahoko (2020), on a study on service delivery found out that despite its best intentions and efforts, the City of Mutare has so far not yet succeeded in facilitating better service delivery.

Revenue estimates as shown by the report from Ministry of Local Government have shown great disparity in terms of revenue collection, a result of possible poor revenue forecasting among other factors, thereby affecting the level of capital development and service delivery. Table 1.1 below shows the revenue figures as reported by the ministry of Local Government Public Works and National Housing.

Table 1.1: Revenue Collection efficiency for 2023

<b>City</b>	<b>Budget (ZWL)</b>	<b>Billing ( Actual Performance) ZWL</b>	<b>Performance %</b>	<b>Variance %</b>
Bulawayo	173,1 billion	330.21 billion	47%	53%
Masvingo	14.9 billion	11.17 billion	75%	25%
Gweru	69 billion	34.63 billion	50%	50%
Harare	703.12 billion	330.21 billion	47%	53%
Mutare	153.55 billion	99.8 billion	65%	35%

Source: Ministry of Local Government, Public Works and National Housing (2023)

The above table shows variances on revenue estimates in comparison with other cities, and indicates a negative 35% variance for Mutare. Table 1.2 below shows the 5-year budget variances for Mutare City which clearly indicates the wide discrepancies being experienced in the local authority.

Table 1.2: City of Mutare 5-year Revenue budget data

<b>YEAR</b>	<b>BUDGET</b>	<b>ACTUAL</b>	<b>VARIANCE</b>	<b>Performance %</b>	<b>Variance %</b>
2023	153,545,707,566.82	99,804,709,918.43	53,740,997,648.39	65	35
2022	13,211,293,005.77	12,404,213,667.02	807,079,338.75	94	6
2021	3,875,587,121.60	2,345,300,158.41	1,530,286,963.19	61	39
2020	848,426,487.26	643,968,421.54	204,458,065.72	76	24
2019	31,453,499.00	23,146,142.00	8,307,357.00	74	26

Source: City of Mutare Budgets (2019-2023)

The statistics shows that the greater the city the higher discrepancies being expected. In Mutare City the actual collections and the estimated revenue has shown discrepancies that range from 6% to 39% as shown in table 1.2. that covers 5 years review of budget variations. In his speech the then Minister of Finance and Economic Development when addressing heads of local authorities highlighted that the issue of budget remains a challenge in local authorities and urged councils to reconfigure their budget (Madzianike, 2023). The City of Mutare has not been spared in lack of resources to finance service delivery as unearthed by the external audit report for 2022 by the Auditor General which reported that the actual revenues are far diverted from the budgeted revenue resulting in poor collections and thereby affecting service delivery. On several occasions it has been reported that service delivery is at stake in the city as residents sue council over service delivery (Chigeza, 2018). This poses questions on the reliability of the forecasts produced by the city indicating possible gaps in its revenue forecasting. Such discrepancies lead into cutting expenditure there by affecting service delivery as expected by residents during the budget year (Marumahoko, 2020). Given this background, there is need to analyse the revenue forecasting methods and determine factors that affect revenue forecasting methods and processes at City of Mutare.

### **1.3 Statement of the Problem**

According to Batog & Batog (2021), revenue forecasting in Local government underestimate revenues and the available information is often used inefficiently. The accuracy of revenue forecast is one important factor in determining the ability of a Local Authority to conduct reasonable financial management in determining the level of investment level in an area. In terms of budgetary control, the planned

estimates are reviewed against the actual performance and such results must be positively related to the overall policy of the organisation (Usman et al. 2016). In Local Authorities Mutare City Council has failing to maximize on revenue collection as the actual revenues continue to fall significantly short of the predicted revenues. Evidence on the ground suggests that revenue mobilisation remains a challenge for the local authority, as supported by revenue figures showing disparities from 6% to 39% over the five-year period from 2019 to 2023. Failure to forecast revenue has some negative consequences in the Council's performance.

Chen and Wu (2021) highlighted the importance of revenue projections in supporting effective service delivery and the need for local authorities to adopt robust forecasting methodologies to enhance budgetary planning. According to evidence from the notes on the audited financial statements (Budget Comparison) the budgeted revenue has shown various discrepancies which the Auditor General raised concerns on the level of variances noted, (Audited Financial Statements, 2019, 2020, 2021 and 2022). The question that arises to the general public is whether revenue forecasting is a formality or reality in Local Government. In addition, studies that have been conducted focusing on Mutare City Council, such as studies by Marumahoko (2020), Maregere (2021), Chisango, Manuere and Muranda (2022) and Mupedzi, Olarewaju and Phesa (2023) have mainly focused on revenue collection and service delivery with little attention to revenue forecasting techniques. It is against this background that this study seeks to evaluate the Mutare City Council revenue forecasting methods and the impact of its failure to properly forecast revenues. The study seeks to close the literature gap on the impact of poor revenue forecast and also provide practical recommendations on the factors that affect revenue forecasting.

## **1.4 Research Objectives**

The objectives of this study were to:

1.4.1 Establish the extent of adoption of revenue forecasting methods and forecasting process at City of Mutare.

1.4.2 Analyse the impact of poor revenue forecasting at Mutare City Council.

1.4.3 Investigate factors that affect revenue forecasting methods and processes at City of Mutare.

## **1.5 Research Questions**

The following were the research questions:

1.5.1 To what extent has revenue forecasting methods and forecasting processes been adopted at City of Mutare?

1.5.2 What is the impact of poor revenue forecasting at Mutare City Council?

1.5.3 What factors affect revenue forecasting methods and processes at City of Mutare?

## **1.6 Significance of the Study**

The findings from this study are expected to provide insights and provide value addition to the academia, to the organisation (Mutare City Council) and to other local authorities on the impact of revenue forecasting on service delivery.

### **1.6.1 To the Academia**

To the academia, this study brings valid outcomes based strategies for embracing revenue forecasting techniques for the improvement of service delivery and organisational performance. The study is therefore important in fulfilling gaps in literature and therefore contributing to the body of knowledge by providing additional evidence on revenue forecasting and service delivery for local authorities. In terms of Education 5.0, this study expects to generate new ideas and knowledge on revenue forecasting practices and how they impact on organisations' service delivery.

### **1.6.2 To Mutare City Council**

This study will be of significance to Mutare City Council as it establishes the importance of revenue forecasting on service delivery, as well as unearthing other challenges affecting revenue forecasting at Mutare City Council. The study also aims to provide strategies that can be adopted by Mutare City Council to improve revenue forecasting methods and processes at City of Mutare. This study therefore prompts a rethink to management in terms of the need to adopt revenue forecasting strategies that improves the cash flows of the entire organization for service delivery.

### **1.6.3 To Policymakers**

Mutare City Council is a government organisation and therefore this study provides a framework for the identification of key determinants for successful revenue forecasting. In addition, the study will inform the formulation of key revenue management policies that will be implemented to ensure improved service delivery

of organisations. Against this background, this timely research aims to proffer evidence based revenue forecasting impacts that if the relevant authorities take into account, can lead to better and faster adoption of new revenue forecasting techniques across the local authorities.

### **1.7 Delimitations of the study**

This study uses a single local authority as a case study, i.e. Mutare City Council. The study focused on the relationship between revenue forecasting and service delivery and on factors affecting revenue forecasting methods and processes. The study period is from 2019 to 2023. This is the period where there have been numerous reports about poor service delivery and revenue budget variances at City of Mutare. The study was conducted in Mutare.

### **1.8 Limitations of the study**

Data accessibility is a challenge to most Local Authorities in Zimbabwe. The major limitation the researcher faced was reluctance by respondents to provide information considered private and confidential. Some respondents could not divulge all information due to fear of victimisation since this is a topic which reflects on management's alleged inefficiencies in crafting and adopting sound revenue management policies. The researcher however informed respondents that the study was for academic purposes only and guaranteed them confidentiality.

Mutare City Council is a government entity and common with all state owned entities is bureaucracy in obtaining information. There was too much bureaucracy in getting information from the government officials as most of them were sceptical about the

implications of the study. However, the researcher, assured the respondents of confidentiality of responses and that the study was for academic purposes only.

The researcher also works for the company where revenue forecasting initiatives were being investigated and implemented, it would be fair to state that the researcher was not entirely independent of this study. Here, the researcher's perspective and setting could impact the gathering and analysis of the data (Jorgensen, 2018). To reduce the possibility of bias while gathering data and to adopt a neutral stance while conducting the research, a pilot study was first carried out with several executives.



## **CHAPTER 2 REVIEW OF RELATED LITERATURE**

### **2.1 Introduction**

This chapter reviews literature on revenue forecasting and service delivery in the case of local authorities. The chapter provides an exploration of various theories underpinning revenue forecasting and service delivery. The chapter also reviews what other researchers have found in investigating the relationship between revenue forecasting and service delivery.

### **2.2 Theoretical framework**

There are various theories underpinning studies on revenue forecasting and service delivery in academic literature. This study discusses the Efficiency Services Model, the New public management theory and the Administrative management theory which the study found relevant in discussing revenue forecasting and service delivery.

#### **2.2.1 New Public Management Theory**

According to De Oliviera, Jing and Collins (2015) the development of the New Public Management (NPM) theory is linked to the introduction of market-based values to promote the importance of the state's performance and accountability. Funck and Karlsson (2019) state that the challenges of growing public expenditure and the need to position the public sector to perform business-like management practices to enhance efficiency were fundamental to the emergence of NPM. The NPM theory is important in explaining the relationship between revenue forecasting and service delivery by local authorities. NPM emphasizes the need for performance measurement and accountability in the public sector. Revenue

forecasting plays a crucial role in setting targets, budgeting, and evaluating the performance of local authorities in delivering services. Accurate revenue forecasts provide a basis for measuring financial performance and holding local authorities accountable for the efficient and effective use of resources in service delivery (Maregere, 2021). NPM promotes the use of market-like mechanisms in the public sector to improve efficiency. Revenue forecasting assists local authorities in estimating the financial resources available to provide services. By understanding revenue projections, local authorities can adopt market-oriented approaches, such as cost recovery mechanisms, user fees, or public-private partnerships, to enhance service delivery and resource allocation efficiency. In addition, the NPM emphasizes decentralization and local autonomy as a means to encourage innovation and responsiveness in service delivery. Revenue forecasting enables local authorities to have a better understanding of the financial resources they can generate independently (Maregere, 2021). This knowledge empowers them to make informed decisions about service delivery priorities, tailor services to local needs, and allocate resources effectively within their jurisdiction. While the NPM theory has been influential in public sector reform, it has also faced criticisms in academic literature (Maregere, 2021). Some common criticisms include overemphasis on efficiency. It has been argued that the NPM theory's exclusive focus on efficiency and market-oriented mechanisms may undermine the broader goals of public service provision, such as equity, social justice, and democratic accountability.

Another criticism of NPM according to Paile (2018), is that the transfer of private sector models to public administration and the exaggerated view that bureaucracies are inherently incompetent, are flawed. Despite the criticism of NPM, the literature provides evidence that accountable service delivery is crucial and numerous private

sector models of performance, such as setting measurable standards were brought to the public service (Maregere, 2021).

### **2.2.2 The Administrative Management Theory**

The study was also guided by the administrative management theory. The administrative management theory as propounded by Henri Fayol attempts to find a balanced way to manage an organization as a whole. The theory calls for a formalized administrative structure, a clear division of labour and delegation of power and authority to administrators relevant to their areas of responsibilities (Fayol, 1976). The fact that to realize better revenue, designated town council entities need to execute management functions of which planning, controlling, organizing, and leading among others constitute some of the functions in practice to improve revenue management. The theory explains how local revenue is managed to ensure the timely delivery of public services within the town council. The theory explains how Mutare City Council (MCC) personnel engage in the planning of revenue in terms of revenue forecasting strategies. In addition, the theory provides a detailed account on how MCC personnel organize and provide the resources necessary to provide service delivery.

One major administrative problem today for many councils is their inability to forecast and collect fully the revenues due to them. In most council there are huge gaps between reported and projected revenues. Prior studies conclude that this is due to poor administrative capacity to assess the revenue bases and poor administrative capacity to estimate and forecast revenues and external pressure on the local finance department to provide optimistic projections which may not be realistic.

### **2.3 Relevance of the Theoretical Framework to the study**

The New Public Management (NPM) and the Administrative Theory offer valuable perspectives on the relationship between revenue forecasting and service delivery in the context of local authorities. The NPM approach emphasizes principles such as performance measurement, accountability, market-like mechanisms, and decentralization. In the context of revenue forecasting and service delivery by local authorities, NPM provides a framework for improving efficiency and effectiveness. It promotes performance-based budgeting, encourages local autonomy in resource allocation, and supports the use of market-oriented approaches to enhance service delivery. By adopting NPM principles, local authorities can use revenue forecasting to set performance targets, measure financial performance, and allocate resources more efficiently. NPM's focus on accountability and market-like mechanisms can help local authorities align revenue forecasts with service delivery goals, prioritize services based on performance indicators, and enhance the overall effectiveness of service provision.

The Administrative Theory encompasses various management and organizational principles that are relevant to revenue forecasting and service delivery in local authorities. It focuses on concepts such as planning, coordination, decision-making, and organizational structure. In the context of revenue forecasting and service delivery, administrative theory provides insights into the importance of effective planning and coordination. Local authorities need to plan their service delivery strategies based on accurate revenue forecasts, allocate resources efficiently, and coordinate efforts across different departments or units. Administrative theory can guide local authorities in designing effective organizational structures, decision-

making processes, and coordination mechanisms to optimize service delivery based on revenue forecasts.

## **2.4 Adoption of Revenue Forecasting and Forecasting Processes**

Revenue forecasting refers to the process of estimating a company's future revenue over a specific period, typically quarterly or annually (Mupedzi, Olarewaju & Phesa, 2023). This estimation process takes into account factors such as historical data and current trends in predicting future revenues. Accurate revenue forecasting enables companies to set realistic budgets and allocate resources effectively (Evah, 2019). By understanding the potential revenue for a given period, businesses can make informed decisions regarding investments, hiring, and other strategic initiatives. In addition, effective revenue forecasting helps in managing cash flow by providing insights into expected income (Mupedzi et al, 2023). This information assists businesses in managing expenses, avoiding financial crises, and ensuring funds are available for essential operations and growth opportunities. Comparing actual revenue performance against forecasted figures allows management to assess company performance and identify areas for improvement. This evaluation can lead to adjustments in sales strategies and an increased focus on underperforming areas. Revenue forecasting helps businesses identify potential risks and challenges ahead of time. By understanding potential fluctuations in revenue, local authorities can develop contingency plans to mitigate the impact of unforeseen circumstances (Batog & Batog, 2021).

Techniques used in government revenue forecasting include both qualitative or judgmental (expert, naive) approaches and quantitative methods. Quantitative methods include accounting-based approaches, trend analysis, time series methods

(incremental), econometric modelling (causal models) and microsimulation modelling (Khan, 2019). Examples of other methods used include predictive models with optimization based on genetic algorithms (Batog & Batog, 2021). Qualitative methods of revenue forecasting rely on unmeasurable data and expert opinions. These methods are often used when historical data is limited or when a business is entering a new market. Some common qualitative methods include:

Expert opinions: Consulting industry experts or internal stakeholders to gather insights and opinions about the market and future revenue growth (Khan, 2019).

Market research: Conducting surveys, interviews, or focus groups with customers or potential customers to understand their preferences, needs, and willingness to buy a product or service.

Delphi technique: A structured communication process that involves a panel of experts who anonymously answer a series of questions about future revenue potential, with each round of questionnaires refining the group's collective opinion (Khan, 2019).

Quantitative methods of revenue forecasting rely on measurable data and statistical techniques to predict future revenue based on historical performance and current trends. Some common quantitative methods include:

Straight-line method: A simple forecasting method that uses historical figures and trends to predict future revenue growth. This method assumes a constant growth rate and extrapolates it into the future (Mikesell, 2018).

Moving average: This method uses the average of a series of historical data points, typically by adding up all revenue numbers from one year and dividing them by the

number of months in that year. The resulting average monthly revenue can then be projected forward (Mikesell, 2018).

Exponential smoothing: A weighted average method that assigns more importance to the most recent data points, with the weights declining exponentially as data points get older.

Regression analysis: A statistical technique that identifies the relationship between two or more variables, such as revenue and sales or revenue and advertising budget, to forecast future revenue based on changes in those variables (Khan, 2019).

#### **2.4.1 Revenue Forecasting techniques**

Local authorities should budget for local revenue using various assumptions, such as basing it on the previous year's revenue and a reasonable percentage increase based on the previous years' increases (Mikesell, 2018). According to Khan (2019), averaging forecast methods are used to predict revenue with a combination of a range of possible forecasting results. The choice of revenue forecasting method depends on the type of revenue stream being estimated and the time horizons of the forecast. In Zimbabwe the Urban Councils Act chapter 29 lays down the budgeting procedure which advocates for a participatory approach which use the consensus forecast technique.

##### **2.4.1.1 Judgmental forecasts**

This class of forecast uses opinions from staff, experts, executives, managers and customer surveys which are largely subjective and include methods such as expert judgements, consensus, and casual methods (Khan, 2019) these are most useful were the economic and political conditions are not stable, history data will be

obsolete thereby irrelevant to current forecasting. In Judgmental forecasting a group of experts give expert advice and predictions of the likelihood of the future occurrences on a particular revenue source for the period concerned (Batog & Batog, 2021). According to Franklin (2017), a consensus forecast is developed through an agreement by an official group that represents two groups that is the legislative and the executive.

#### **2.4.1.2 Time series forecasts**

The approaches use the maxim that, ‘history repeats itself unless proved to the contrary’, by using past or historic data to project into the future without analysing causes of the patterns or trends (Mutandwa, 2020). The time series use two sets of sequentially gathered data that are correlated to estimate the next number, and such methods can be simple or complex. These methods include simple exponential smoothing, damped trend exponential smoothing, Holt exponential smoothing and moving average (Mutandwa, 2020). At local government level simple techniques such as trend analysis, simple moving averages, time index regression, average of past data, growth rate and rate of change are common in use, though such methods are usually inaccurate (Chisango et al, 2022).

#### **2.4.1.3 Associative models**

This method predicts the future by using explanatory variables, it uses regression analysis (Ncube, 2018). This technique uses other variables that exclude time horizon to determine the future revenues, they are simple to explain though not usually applicable to local government situations but at national level.

#### **2.4.2 Revenue forecasting aspects**



There are three key aspects of revenue forecasts according to Franklin (2017). These are itemized as level of accuracy, level of political acceptance and level of transparency.

#### **2.4.2.1 Level of Transparency**

Ncube (2018) agrees that transparency is an important element to reduce discretionary and ad hoc adjustments of revenue estimates. Some governments use conservative forecasts while others are more objective in their forecasts. On the other hand, certain fiscal policies can also predict more transparency in forecasting and states that have policies that govern surpluses and use of funds for other purposes have less forecast bias (Chisango et al, 2018). The International Monetary Fund (IMF) and The Organisation for Economic Co-operation and Development (OECD) has recommended the disclosure of key economic assumptions in budget preparation such as inflation and employment rates. In contrast some states do not tie these assumptions to the revenue forecasts and some do not publish them at all (Mupedzi et al, 2023). However, some states still adopt consensus forecasting in a bid to improve transparency.

#### **2.4.2.2 Level of political Acceptance**

According to Chakunda (2020) consensus revenue forecasting can help dilute the forecasting process from undue political influences. Franklin (2017) states that political interferences, mainly opportunistic behaviors increases error while the use of independent groups experienced in forecasting reduce the errors due to political expediency. Rueben and Randall (2017) reported that in India the political acceptability of forecasts by users is more important than the accuracy of the forecasts.

#### **2.4.2.3 Level of Accuracy**

Franklin (2017) puts forward that use of consensus forecasting method, reviewing forecasting at the start of every budget year and combination of independent forecasts are factors that influence accuracy of forecasts. Chakunda (2020) states that study on consensus forecast does not show how it contribute to accuracy though it dilutes the whole process from undue political interference. Franklin (2017) stated that forest error range of 0 % to 3 % are considered as relatively accurate and is supported by Pew-Rockefeller report predictions. Stevenson (2018) puts it clear that forecast should be accurate to enhance better planning and the residual error should be stated each time a forecast is made. Mikesell (2018) agreed that forecast accuracy is an essential aspect of forecast since it is the basis of formulation of a sustainable budget and provides a measure of test to the forecast its self. However, forecasters have always argued that an accurate forecast is not the best forecast (Mananavire, 2019).

#### **2.4.3 Revenue forecasting process**

According to Chakunda (2020) there are 5 (five) steps in revenue forecasting involving defining the problem, gather information, conduct a preliminary/ exploratory process, select method and implement the method. In India a two-step revenue forecasting process is followed when estimating revenue, that is formulation of statistical equations that define the relationship between the economic variables and tax revenues which is carried out by a technical team, the next step is the consulting group forecasting macroeconomic variables (Mikesell, 2018). On the other hand, Mikesell (2018) identified 7 (seven) steps in revenue forecasting which start with selection of forecast method, examination of data for

stationarity, third step is adoption of assumption, selection of forecasting method, fifth step is evaluation of estimates, monitoring of outcome and comparison with forecast and lastly updating forecasts.

A six-stage forecasting process was also explained by Stevenson (2018). The initial stage is to identify the problem, obtain information, select the method, implement methods, evaluate methods and lastly use the forecast and continuously monitor the selected methods for efficiency. The process is as shown overleaf.

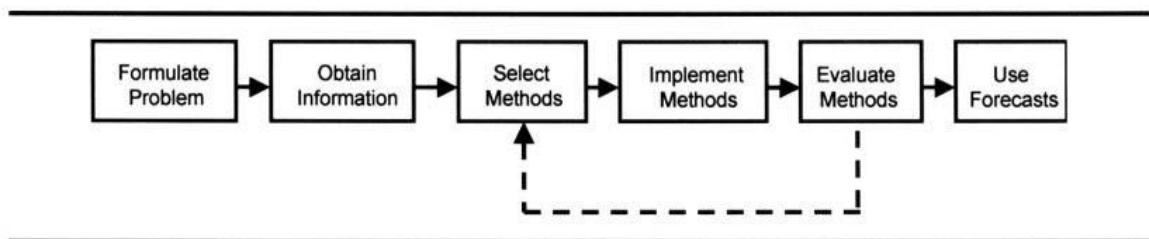


Figure 2.1: Stevenson (2018)

Stevenson (2018) states the forecasting process as comprising six (6) essential steps, as follows:

**Step 1: Determine the purpose of the forecast:**

This is the initial step to that sets the tone of the forecast by providing the level of accuracy and detail required as well as resources required in the forecast (Stevenson, 2018).

**Step 2: Establish time horizon**

Each forecast must have a time horizon identified and documented with the understanding that longer time horizons reduces accuracy of the forecast. (Stevenson, 2018) It is also important to note that some forecasting is suitable for longer periods and others for shorter period of forecasting.

### **Step 3: Obtain, clean and analyse appropriate data**

Once data is obtained it is cleaned so as to remove unnecessary data to obtain better results (Stevenson, 2018). Maxwell and Criswell (2018) states that data evaluation include normalizing and removing data outliers, evaluate the relevance of historical data to current situation, data pattern and quality evaluation.

### **Step 4: Select Forecasting technique**

There are various techniques that can be used to forecast depending on the item and purpose of the forecast, the available information or data, time required to analyses data, prepare the forecast and the time horizon it should cover (Stevenson, 2018). It is also important at this stage to select the approach to forecasting be it conservative or objective approach (Maxwell & Criswell 2018). The main factors to consider on choosing a technique is cost of producing the estimate and accuracy it will provide (Stevenson, 2018). High uncertainty revenue sources use qualitative methods while quantitative methods are most suitable for sources that are more stable, with reliable and sufficient historical data (Maxwell & Criswell 2018). Kavanagh and Iglehart (2016) provides a flow chart on how to choose a forecasting method which is presented below:

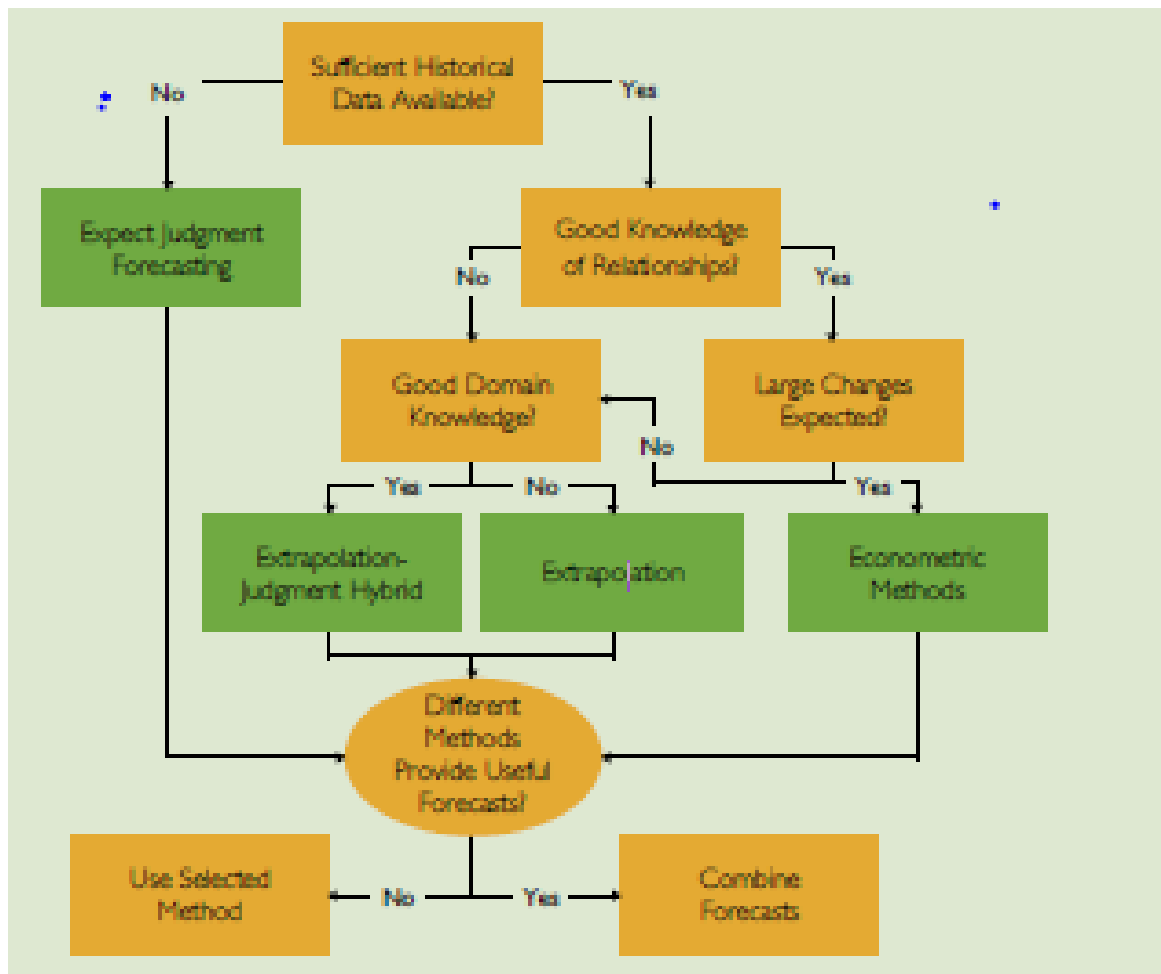


Figure 2.2: Selecting Forecasting Method

Source Adopted from Kavanagh and Iglehart (2018)

### Step 5: Make the forecast

At this stage the forecast is done using the collected data and the selected technique. (Stevenson, 2018)

### Step 6: Monitor the forecast

Monitoring is the last stage to determine the performance of the forecast and make necessary adjustments where need arises (Stevenson, 2018). This is similar to evaluation where the validity and reliability of the forecasts by either using

sensitivity analysis or comparing different forecasting methods results (Maxwell & Criswell, 2018). These adjustments could include changing the method, data validity and changing the assumptions. The possible causes of forecast errors include among others, wrong forecast method in use, wrong interpretations of the forecast and random variations.

#### **2.4.4 Characteristics of an effective revenue forecasting process**

The revenue forecasting process has three (3) key elements namely formality, simplicity and transparency as highlighted by Lee and Kwak (2020).

##### **2.4.4.1 Formality**

This involves the use of documented methods of formal forecasting, how forecasts are initiated, defined and reviewed. It is a common aspect in smaller governments and higher per capita income countries (Lee & Kwak, 2020).

##### **2.4.4.2 Transparency of forecasts**

This is measured by the availability of information published in the budget, involvement of outsiders or experts, micro economic assumptions used and other supplementary information to the forecast (Lee & Kwak, 2020). Franklin (2017) found that most countries do not connect forecasts to economic trends in order to make forecasts transparent. Transparency in economic forecasts increases accuracy and credibility of forecast though it is reduced by corruption.

##### **2.4.4.3 Simplicity**

It entails how the process is centralized and coordinated since a number of agencies are used in forecasting thus production of various competing forecasts

(Kyobe & Danninger, 2021). Mananavire (2019) also advocated for use of simple and easily understandable methods unless there is substantiated evidence that complex methods would be the most appropriate.

#### **2.4.5 Service Delivery in Local Authorities**

Service delivery is measured by five dimensions as put forward by Thika (2019) in his study in Tanzania case of Mwanza District Council. The indicators used to explain service delivery performance in this study include the ability of a local authority to ensure the maintenance of community roads, provision of safe water, continuous collection of garbage and waste and maintenance of public lighting. These indicators are a result of good revenue forecasting by the local authority which ensure adequate financing.

Local authorities are capable of providing public services, mobilizing community resources, stimulating private investments, expanding rural-urban linkages, adopting national development to local conditions and investing in local infrastructure (Lee & Kwak, 2020). They can also be a crucial source of empowerment by offering opportunities for long neglected citizens to participate in the Local decision making processes. They hence act as a voice for local needs at higher levels and providing adapted support for local people's initiatives (Marumahoko, 2020).

#### **2.4.6 Determinants of service quality**

Yarimogln (2018) discussed various models of service quality and ten factors that raise service delivery which are, responsiveness, competence, reliability, access, communication, courtesy, credibility, security, knowing/ understanding the

customer and tangibles. Mohammed and Mohammad (2021) summarises the dimensions of service delivery in a table adopted from Ziethaml et al (1990) as follows:

**Table 2.1: The five (5) broad dimensions of service quality**

<b>Dimension</b>	<b>Definition</b>
Tangibles	Appearance of physical facilities, equipment, personnel and written materials
Reliability	Ability to perform the promised service dependably and accurately.
Responsiveness	Willingness to help customers and provide prompt service.
Assurance	Employees' knowledge and courtesy and their ability to inspire trust and confidence.
Empathy	Caring, easy access, good communication, customer understanding and individualised attention given to customers.

Source: Adapted from Mohammad (2021)

### **Availability of tangibles**

These are referred to as the physical evidence and representation of the service (Yarimoglu, 2018). Local governments should monitor the conditions of the major physical infrastructure such as roads trafficability, clinics and hospitals, water and sanitation facilities, cleanliness of streets, schools' buildings and presence of insects and rodents, Shah 2001. Alhkami and Alarussi (2019) added aspects of tangibles as including such things like appealing physical facilities, materials availability and up to date equipment.

### **Responsiveness**



The response time is defined as the time that expired from when the request was initiated to the time the response was effectively provided. It is further elaborated by Yarimogln (2018) as the readiness or willingness to provide a service by the employees, quick customer feedback, time taken to provide a service as well as prompt service provision. The citizens are more concerned with response time for emergency services such as fire and ambulance as well as on all other services such as time taken to obtain a receipt, licenses and permits. UN-HABITAT (2015) also states that governance in Local Authorities entails how responsive are Local Authorities are to the needs and demands of their constituencies. Thus it also entails how quickly and professionally a failed service can be resumed or corrected (Alhkami & Alarussi, 2019). Joshi (2021) claims that increased responsiveness on part of service providers is enhanced by accountability and transparency in service provision. Shah (2019) states the measurement of response time using automated machines as best practice than the manual records which are mostly used by Developing countries.

### **Access and assurance of service**

According to Alhkami and Alarussi (2019) assurance of a service is referred to as the skills and competence of staff in responding to customer needs. SERVEQUAL model as developed by Parasuraman et al (1988) added organization competence and operational security as other dimensions of assurance. Othman and Owen (2013) also cited the ability of employees to communicate fluently with confidence and politeness as providing security and safety on a service. Crous (2019) states that access to service entails residents to have uninterrupted and equal access to a service that they are entitled to receive which includes employees' attitude, understanding the customer and physical access, while Yarimogln (2018) included the

accessibility of a service both physically and by any communication channel, location of service and time of operation as access to a service. Shah (2019) provides that public access to information on activities happening and take part in decision making provides transparency which is used to evaluate local enterprises. UN HABITAT (2015) states that lack of access to service delivery can be as a result of the financing side or delivery side. Huseynli (2021) puts forward that access to broad information on services procedures, fees and public participation results in transparency in service delivery.

### **Reliability of services**

Reliability of a service is referred as dependability and performance consistency by performing the service on time and accurate record keeping by Yarimogln (2018). Reliability is regarded as an important aspect of service quality as it involves the delivering of the promised service on time and accurately to the clients (Alhkami & Alarussi, 2019). Yousfani et al (2019) agrees that reliability concerned with the consistence and truthfully an organization completes its service.

Shah (2019) further develops that it not just the response time that is crucial but also the quality and outcome of the service rendered to the customer thus the reliability of the service. The purpose of a service is to transform the user who is the primary beneficiary of the service. Reliability of a service also include the reliability of E-Commerce to customer which include aspects such as, website availability, accurate online records and order completeness (Omar et al, 2019).

### **2.5 Impact of poor revenue forecasting**

Revenue forecasting helps local authorities estimate the expected income they will generate over a specific period, which in turn influences their ability to fund and deliver essential services to the community. According to a study by Garg and Chakrabarti (2019), revenue forecasting plays a critical role in determining the financial resources available for service delivery by local authorities. Planning well for the delivery of government services and programs requires an accurate estimate of the revenue needed and costs related to carrying out all necessary activities (Batog & Batog, 2021). Anticipating the level of revenue is essential for both short- and medium-term planning of current and investment projects and for determining policy on the level and source of debt financing.

Without precise and accurate forecasts, governments will find it difficult to avoid budgetary shortfalls and to meet expenses, especially capital expenditures (Batog & Batog, 2021). In their research on revenue forecasting in US cities, Melkers and Willoughby (2018) highlight the direct impact of revenue forecasts on service delivery decisions. Their study emphasizes the importance of revenue projections in enabling local authorities to make informed choices about resource allocation and prioritize essential services.

A study by Bahl and Martinez-Vazquez (2020) which explored the relationship between revenue forecasting and service delivery in the context of developing countries emphasized the need for accurate revenue projections to ensure sustainable financing of public services and meet the growing demands of rapidly urbanizing areas.

In a study on revenue forecasting practices in local governments, Chen and Wu (2021) highlighted the importance of revenue projections in supporting effective

service delivery. Their research emphasizes the need for local authorities to adopt robust forecasting methodologies to enhance budgetary planning and ensure the provision of essential services to the community.

The following are the impact of poor revenue forecasting:

#### **2.5.1 Financial Instability**

Poor revenue forecasting can lead to budget deficits, financial instability, and cash flow problems for local authorities. This can result in delayed or inadequate funding for essential services, infrastructure development, and maintenance projects (Chakunda, 2020).

#### **2.5.2 Inefficient Resource Allocation**

Inaccurate revenue forecasting can hinder effective resource allocation. Local authorities may face challenges in allocating funds to priority areas, leading to suboptimal utilization of resources and potentially impeding the delivery of key services to the community (Chen & Wu, 2021).

#### **2.5.3 Reduced Service Quality**

Insufficient revenue projections can impact the quality and availability of public services (Chakunda, 2020). Local authorities may struggle to provide essential services such as waste management, water and sanitation, healthcare, education, and transportation, leading to dissatisfaction among residents.

#### **2.5.4 Increased Debt Burden**

Poor revenue forecasting can lead to overestimation of revenues, potentially resulting in excessive borrowing to cover budget shortfalls. This can increase the

debt burden of local authorities, leading to financial strain and limited capacity for future investments (Chen & Wu, 2021).

### **2.5.5 Limited Development and Maintenance**

Inadequate revenue forecasting may hinder the ability of local authorities to invest in infrastructure development and maintenance projects. This can result in deteriorating public facilities, roads, bridges, and public spaces, negatively impacting the overall liveability and attractiveness of the local area (Batog & Batog, 2021).

### **2.5.6 Reduced Economic Growth**

Local authorities play a critical role in fostering economic growth and attracting investment. Poor revenue forecasting can hinder economic development efforts, as it may limit the availability of funds for economic initiatives, business support programs, and infrastructure projects that are crucial for attracting businesses and creating job opportunities (Omar et al, 2019).

### **2.5.7 Trust and Confidence Erosion**

Inaccurate revenue forecasting can erode public trust and confidence in the financial management of local authorities (Lee & Kwak, 2020). This can lead to decreased support for local government initiatives, reduced community engagement, and challenges in building partnerships with stakeholders.

## **2.6 Factors affecting revenue forecasting**

According to the Lee and Kwak (2020), revenue forecasting is affected by the movements in the economic environment. Frank (2018) confirms that limited

forecasting expertise and historic data availability affect revenue forecasting. Revenue forecast would also depend on the type of revenue source being forecasted, availability of historic data, existing economic data coupled with other factors that derive revenue. Nelson (2020) concurs that economic cycle's severity, state economic status and the structure of state tax systems affect the variability in revenue forecasting. The revenue forecasting is a function of tariff setting and development level in the community.

According to Marumahoko (2020), the identification of revenue sources is quite a challenge to the local authorities. For example, it may be quite difficult to identify various income generating activities, as most of the economic activities are not well documented. This affect revenue forecasting. There are also inadequate capacity and technical skills to manage local revenue forecasting, with the problem being compounded by the fact many workers within local authorities lack the necessary academic qualifications, or training, and or modern experience in dealing with changing technologies that might assist them in revenue planning.

### **2.6.1 Revenue Diversity and Volatility**

Revenue diversity refers to the composition of revenue sources available to local authorities, while volatility relates to the stability or fluctuation of revenue streams. Both factors can significantly impact revenue forecasting accuracy. A study by Bahl and Martinez-Vazquez (2020) found that revenue diversity can enhance forecasting accuracy by reducing the impact of economic shocks on overall revenue. However, revenue volatility can pose challenges for accurate forecasting, as it introduces uncertainty and makes it difficult to predict future revenue levels.

### **2.6.2 Scope and Time Horizon of Forecast**

The scope and time horizon of the revenue forecast refer to the extent of revenue sources considered and the period over which the forecast is made. Research by Chen and Wu (2021) suggests that a comprehensive revenue forecast that considers all relevant revenue sources leads to more accurate predictions. Additionally, the time horizon of the forecast plays a role, with shorter-term forecasts generally exhibiting higher accuracy compared to long-term forecasts due to the increased uncertainty associated with longer timeframes.

### **2.6.3 Macroeconomic Factors**

Macroeconomic factors, such as GDP growth, inflation rates, and employment levels, can significantly influence revenue forecasting. Research by Garg and Chakrabarti (2019) highlights the importance of incorporating macroeconomic factors into forecasting models to capture their impact on revenue generation. These factors provide insights into economic conditions and help improve the accuracy of revenue forecasts.

### **2.6.4 Responsibility of Forecasting**

The responsibility of revenue forecasting can vary among different entities within local authorities. A study by Melkers and Willoughby (2018) emphasizes the importance of clearly defining roles and responsibilities for revenue forecasting to ensure accountability and accuracy. Involving finance departments, budget offices, and other relevant stakeholders in the forecasting process can enhance accuracy and mitigate potential biases.

### **2.6.5 Availability of Information**

The availability and quality of information play a critical role in revenue forecasting. Accurate and comprehensive data on historical revenue trends, tax collection rates, economic indicators, and other relevant factors are essential for reliable forecasts. The study by Chen and Wu (2021) highlights the importance of data collection and management systems to support accurate forecasting.

#### **2.6.6 Employees' Performance and Efficiency**

The performance and efficiency of employees involved in revenue forecasting can impact its accuracy. Training and expertise in forecasting techniques, data analysis, and understanding of revenue sources are crucial for producing reliable forecasts.

#### **2.6.7 Efficiency and Accuracy of Forecasting Models**

The choice and effectiveness of forecasting models employed can influence the accuracy of revenue forecasts. Advanced statistical techniques, time series analysis, and econometric models are commonly used for revenue forecasting. However, the suitability of models depends on the specific characteristics and data availability of the local authority. Research by Chen and Wu (2021) highlights the importance of selecting appropriate models and regularly evaluating their performance to enhance accuracy.

### **2.7 Empirical studies**

There are numerous studies that have been conducted on the impact of revenue forecasting on service delivery. Frankel (2011) in a study on revenue forecasting mentioned that accurate forecasting of revenues and expenditures is important for avoiding both underfunding and excessive funding of the government, and related consequences of associated surpluses or deficits. The study noted that failure to do



proper revenue forecasting impacts negatively on service delivery as it affects budgets from where allocation of funds is made.

A study conducted by Allen et al (2018) on revenue forecasting indicated that revenue forecasting is key to successful budgeting in the public sector. Just as demand analysis and forecasting in the private sector is of critical importance because revenue sustain the financial health of business, adequate and predictable tax and non-tax revenues underpin the financial sustainability and stability of government. The study highlighted the need to have proper revenue forecasting for improved service delivery in local authorities. However, the study was conducted in a different country from Zimbabwe and local authorities' policies may differ, hence the findings cannot be generalised to this study.

A study by Whitfield and Duffy (2018) on revenue forecasting revealed that revenue forecasting is an important topic for management to track business performance and support related decision making processes (e.g. headcount or capital expenditure). The paper described the development of a revenue forecasting tool appropriate for service provision. The study concluded that organisations need to properly forecast their revenues if they are to obtain funds to improve service delivery.

Matovu (2018) conducted a study on the effects of local revenue management on service delivery in Bukomero Town Council, Uganda. The objectives of the study included investigating the effect of revenue enhancement planning on service delivery; investigating the implementation of the revenue enhancement plan on service delivery and investigating the effect of revenue expenditure control on service delivery. The study noted that revenue expenditure controls gaps negatively

affect service delivery. Therefore, Local Governments (LGs) should carry out proper planning decisions at budget level, do complete enumeration and assessment of taxes for financial decentralization to succeed in improving local revenue collection or management. This is instrumental in realizing more required revenue for the town councils to accomplish the objectives of the government which is to majorly provides a number of required urban services namely proper planning of infrastructure, provision of safe water, maintenance of community urban roads, garbage collection and disposal as well as addressing other cross cutting issues like environmental concerns.

Marumahoko (2020) conducted a study on service delivery in the city of Mutare, focusing on the perspective from local residents. Using social attitude survey, the article assessed the extent to which the City of Mutare had reversed or failed to significantly impact poor local public service delivery. The results of the study suggested widespread public despondency over the state of local public service delivery; a feat seemingly not only attributed to dismal municipal performance but also underperformance among the three spheres of government. The study also did not focus more on revenue forecasting techniques.

Evah (2019), conducted a study on the effect of public revenue management on the delivery of local services in Mpatta district in Uganda. The study found out that actions of public managers, such as revenue collection and forecasting have a bearing on service delivery.

Batog and Batog (2021) conducted a study on regional government revenue forecasting in Poland. The study mentioned that accurate revenue prediction is a key factor for the reliable determination of the investment part of entire regional

and local budgets, particularly during economic downturns and fiscal uncertainty. The study also indicated that budget forecasts often under predicted revenue and found out the need for accurate revenue forecasting to improve service delivery.

Maregere (2021) investigated the factors influencing service delivery trends in the Mutare City Council in Zimbabwe. The main purpose of the research was to conceptually, contextually and empirically investigate the nature and scope of devolved local government service delivery post-2013 in Zimbabwe and the City of Mutare in particular, to determine how the effectiveness of local governance in Zimbabwe can be improved. The study found that there are ever-increasing challenges related to service delivery in Zimbabwe local government, particularly in the case of Mutare City Council as attributed to insufficient funds as well as lack of a proper implementation strategy service delivery. The study however did not focus on revenue forecasting techniques and their relationship with service delivery.

Chisango, Manuere and Muranda (2022) conducted a study on revenue collection in Zimbabwe Municipalities (Local Authorities) in economic doldrums in the case of Harare City Council. The major research objective was to investigate revenue collection at Harare City Council (HCC) during economic doldrums. The research was also aimed at assessing factors hindering the successful collection of revenue at HCC. The study established that local authorities in Zimbabwe are struggling with their operations due to failure to effectively collect revenue. The study however did not focus much on revenue forecasting techniques indicating a gap.

Mupedzi, Olarewaju and Phesa (2023) conducted a study on improving municipal billing system and revenue generating strategy in Chivi rural district. The study revealed that municipalities, in general, need help in their revenue generation.

However, this problem is most severe among rural district councils as they tend to have relatively more minor revenue bases, a culture of non-payment on the part of ratepayers, poor service delivery, inefficient billing systems, poor planning, and poor debtor management. As a result, rural district councils in Zimbabwe, face self-sustainability concerns due to financial difficulties. The study found out that there is need for better ways of revenue collection and this should commence with good revenue forecasting.

While there are a number of studies that have been conducted on revenue management and service delivery across the globe, in the Zimbabwean context, few researches have been conducted in this field indicating a gap, necessitating the need for this study to examine the impact of poor revenue forecasting. Despite the continued decline in revenue forecasting performance by local authorities, there has been limited investigation into the revenue forecasting by local authorities, and if local authorities do not assess their revenue forecasting, they may face intense challenges in delivering services to the people.

## **2.8 Summary**

This chapter has provided literature on the relationship between revenue forecasting and service delivery. Theories discussed include the New Public Management Theory (NPM), the SERVQUAL model and the Administrative Theory. The chapter has also reviewed prior studies on revenue forecasting and service delivery in local authorities to identify gaps in literature. Various factors that affect revenue forecasting have been discussed, which include revenue diversity and volatility, scope and time horizon of the forecast, macroeconomic factors, responsibility of forecasting, availability of information, employees' performance and efficiency, and

the choice of forecasting models. The following chapter presents the methodology of the study.

## **CHAPTER 3 METHODOLOGY**

### **3.1 Introduction**

This chapter presents the research methodology that was adopted in conducting this study. The chapter presents the research design, the population and sampling methods, data collection instruments, analysis and organization of data and ethical issues.

### **3.2 The Research design**

This study utilized an explanatory research design, which aims to establish cause-and effect relationships and provide explanations for observed phenomena (Creswell, 2014). Explanatory research focuses on understanding how various factors come together and interact, ultimately leading to an improved understanding of unresolved problems. It seeks to answer "why" and "how" questions by establishing causal relationships between variables (Yin, 2014). In this study, an explanatory research design was deemed most suitable as the study aimed at investigating the causal relationship between revenue forecasting and service delivery. By employing this design, the study seeks to uncover the underlying reasons behind the observed relationship between these variables and provide a comprehensive explanation for their existence.

In this study, a mixed methodology approach was adopted, which involved collecting, analysing, and interpreting both quantitative and qualitative data. This decision was made because of the strengths offered by the mixed methods approach. The study therefore used a pragmatism research approach which combined quantitative and qualitative methods. Mixed methods were used

concurrently with data being gathered from questionnaires and interviews concurrently. By combining different sources of data, any limitations or biases present in one source can be compensated for by the strengths of another source. This approach helps to ensure the reliability and validity of the data collected, ultimately strengthening the findings of the study (Creswell, 2014).

### **3.3. Population and Sampling**

Population is defined as the entire group of objects upon which a researcher seeks to obtain information about a specific research relevant for the study (Cooper & Schindler, 2011). The population for this study was entirely staff at Mutare City Council. Mutare City council employs 500 employees (City of Mutare, 2023).

#### **3.3.1 Sampling**

This study used non-probability sampling in terms of convenience and purposive sampling. Purposive sampling is a useful strategy for the study of service delivery in a local authority (City of Mutare), since it looks for people with the necessary experience and knowledge to provide information that can be studied in-depth, with purpose and within specific categories, such as age, culture, positions and experience. Convenience sampling relies on data collection from population members who are conveniently available to participate in the study. Purposive sampling is related to convenience sampling as it relies on the selection of participants on the basis of their individual qualities which include their ability to provide information related to the study. Convenience or purposive sampling is suitable for this study as practicality, proximity and easy access to participants were considered by the researcher.

### 3.3.2 Sample Size

In calculating the sample size, the Yamane (1973) statistical formula was adopted.

The sample size was calculated as below;

n=	N
	$(1 + Ne^2)$

Where; n = required sample size

N = size of the population

e = alpha level, that is, allowable error e = 0.05 at 95% confidence interval

n=	500
	$(1 + 500(0.05*0.05))$

n= 222

Having determined a sample of 222 respondents however, for convenience purposes, a sample of 80 respondents was used in the study. These were selected from the supervisory and management level. For qualitative data collection, the sample consisted of 15 top management personnel who were drawn separately from the selected 80 respondents.

### 3.4 Data Collection Instruments

A combination of questionnaires and interviews was used to collect data. Documentary records were used as secondary data collection tools. Questionnaires were used to gather quantitative data while interviews were used to collect



qualitative data. Documentary records provided both quantitative and qualitative data.

### **3.4.1 Questionnaire**

In this study, structured questionnaires were employed as a primary data collection method for gathering quantitative data. The questionnaires consisted of both open-ended and closed questions, designed based on the research questions specific to this study. Closed questions were rated using a five-point Likert scale. To ensure equal intervals, a rule of thumb approach, as mentioned by Mesfin (2016), was utilized for creating intervals within the five-point Likert scale, which ranged from "strongly disagree" to "strongly agree."

The questionnaire was divided into two main sections. The first section focused on gathering general demographic information about the respondents, including gender, age, level of education, and period of employment. The second section addressed the research questions related to each research objective.

Questionnaires were chosen as the data collection tool in this study for several reasons. Firstly, questionnaires provide respondents with the freedom to express their opinions honestly as they remain anonymous, relieving them of any potential liability for their answers. Additionally, questionnaires afford respondents the opportunity to carefully consider and reflect upon the questions before providing their responses, as noted by Yin (2014). Furthermore, questionnaires guide respondents along the lines of thought established by the researcher.

However, it is important to acknowledge some limitations of questionnaires. The data obtained is confined to what respondents choose to answer, leaving little room

for clarification or elaboration. Moreover, there were delayed responses as a result of bureaucracy by some respondents. However, the researcher made continuous follow ups to the respondents.

### **3.6.2 Interviews**

In this study, semi-structured interviews were utilized as a primary data collection method. The researcher conducted face-to-face interviews with participants, posing open-ended questions regarding revenue forecasting and service delivery. These interviews specifically targeted high-level management to gather in-depth information about revenue forecasting techniques in place and the processes of revenue forecasting at Mutare City Council. In addition, interviews complement other information sources (Maregere 2021).

The decision to focus on senior management was based on the understanding that they are primarily involved in strategic planning processes and hold valuable knowledge that can contribute meaningfully to the study. Conducting interviews with these individuals provided an opportunity for the interviewer to seek clarification on certain facts or information directly from the respondents.

Semi-structured interviews were chosen as a data collection method because they allow participants to voice their perceptions and provide a platform for clarification on any ambiguous questions or answers. This approach enabled the collection of relevant and useful data. Interviews offered the advantage of continuous probing to obtain information on intricate matters which could not be brought out through questionnaires.

However, it is important to acknowledge some limitations of interviews. Transcribing and physically storing handwritten notes was time-consuming. Additionally, interview questions have the potential to be misleading, potentially eliciting answers that are not directly related to the core research subject.

### **3.2.3 Documentary review**

In addition to other data collection methods, the researcher examined the annual reports of the Council. The importance of document use is to corroborate and argue evidence from various sources. The use of documentation is to construct interviews, clarify facts, and or make inferences from specific arguments or facts. As noted, various sources of documentation were used in the research design to understand the challenges of service delivery. Documentary sources from which secondary data was obtained included relevant academic textbooks and other literature. By analyzing these documents, the study aimed to obtain a comprehensive understanding of events that could not be fully captured through other research instruments like questionnaires and interviews. The use of documents provided both numerical data on revenue figures and qualitative data on revenue forecasting policies. Documents provided unbiased and factual data. Secondly, using documents was cost-effective as they were readily available and do not require additional resources for data collection. By incorporating document analysis into the research methodology, the study was able to complement the insights gained from other data collection methods, ensuring a more comprehensive

### **3.5 Pilot Study**

A pilot study is a small-scale preliminary study conducted in order to evaluate feasibility, time, cost, adverse events, and improve upon the study design prior to

performance of a full-scale research project. A pilot study was conducted as a pre-test to identify any possible flaws or errors in the research instruments as well as to identify unclear or ambiguously formulated items in the research instruments. The pilot study was used as a benchmark to determine the ability of the respondents in answering the research questions. All errors on the research instruments were such as wrong wording, inadequate time limit and measurability of variables were corrected. The instruments were pre-tested by purposely selecting 5 respondents before the data collection commenced.

### **3.6 Data Collection Procedure**

The questionnaires were distributed both physically and through email to the respondents. Prior to their participation, all respondents were provided with a clear understanding of the study's purpose and the importance of voluntary participation. Respondents were provided with a 48-hour window to ensure they had sufficient time to do so. To maximize the response rate, follow-up phone calls were made to the respondents.

Additionally, a total of 15 interviews were conducted, allowing for non-verbal responses to be noted, which provided valuable insights and allowed the researcher to draw conclusions. These interviews were conducted both in-person and through telephone and Skype, providing flexibility for the participants.

### **3.7 Analysis and Organisation of Data**

#### **3.7.1 Data analysis**

In this study, both qualitative and quantitative data were collected, and specific data analysis methods were applied accordingly. Descriptive statistics were utilized to

analyse the quantitative data, using the Statistical Package for Social Sciences (SPSS) computer software. The gathered information was analysed in relation to the theoretical framework presented in the literature review, allowing for appropriate inferences to be drawn.

For the analysis of qualitative data, content and narrative analysis methods were employed. Content analysis involved systematically examining all the questions to identify common themes, patterns, and relationships. Thematic content analysis was conducted on each interview to gain insights from the data. Qualitative survey responses obtained through face-to-face interviews were transcribed into text to ensure that all details were accurately captured. Thematic analysis, as described by Yin (2014), proved to be an effective approach for categorizing the collected data into different meaningful categories.

### **3.7.2 Data presentation**

Tables, pie charts and graphs were used to present the findings. The use of both tables and graphs simplified the understanding of the study results. Data was also presented in form of explanations and quotes.

### **3.7.3 Validity and Reliability of Findings**

To ensure reliability in this study, a pilot study was conducted. The researcher administered questionnaires to a sample of 5 respondents to assess the feasibility of the research instruments. Additionally, the interview guide was pre-tested with 3 respondents to determine its usability and the ease with which interviewees could answer the questions.

When developing the questionnaires, the researcher took care to use simple and conversational language, avoiding complexity that could potentially confuse the respondents. The pilot study aimed to identify any flaws in the research instruments, rectify errors, eliminate ambiguous questions, and address any issues in the data collection process. Feedback from the pilot study was carefully considered, resulting in necessary changes to the research instruments. Ambiguous questions were removed to avoid confusion among the respondents.

To enhance the validity and reliability of the data, multiple data sources were utilized, following the principle of triangulation. Both primary and secondary methods of data collection were employed to gather more reliable and relevant information.

To test the reliability of the data, Cronbach's alpha functionality in SPSS was utilized. Cronbach's alpha measures the internal consistency of a set of items, indicating how closely related they are as a group. Before analyzing the data, the questionnaires were checked for accuracy and missing values, ensuring completeness. By conducting a pilot study, using multiple data sources, and employing reliability testing measures, the study aimed to ensure the reliability and validity of the collected data, thereby enhancing the overall quality of the findings. Data triangulation was also used to strengthen the findings of the study.

### **3.8 Ethical Consideration**

The major ethical issues that were addressed in this study related to lack of informed consent, privacy and confidentiality. The study adhered to ethical principles including obtaining ethical approval from the Africa University Research

Ethics Committee (AUREC). Permission to conduct the research was obtained from Mutare City Council.

To avoid lack of informed consent the researcher sought consent through a written consent letter to conduct research from the University. All the respondents were informed that the study was purely for academic purposes and that their participation to the study was voluntary as they also could withdraw at any time they wished to. Confidentiality of all respondents was maintained and no participants' name was revealed and neither was their identity shared. In addition, the case study company was also asked for permission to conduct the study at their organisation.

The researcher is an employee of the company and it was necessary to put some safeguards to enhance her objectivity during the study. To ensure that the results have no bias the researcher complimented the results obtained from the questionnaires and interviews with the information gathered from documentary review. The responders were asked to volunteer information and were assured of non-victimisation. The researcher also got assistance in distributing and collecting the questionnaires to avoid bias in responses.

### **3.9 Summary**

This chapter provided a discussion on the research methodology used by the researcher. The chapter provided in detail the research design adopted, which was an explanatory design. The target population and its composition was also explained in this chapter and the research instruments used which were questionnaires and interviews. Ethical consideration, the reliability and validity of

the research instruments used were also discussed in this chapter. The following chapter (Chapter 4) presents the findings of the study.



## **CHAPTER 4 DATA PRESENTATION, ANALYSIS AND INTERPRETATION**

### **4.1 Introduction**

This chapter presents the results and findings of the study obtained from the responses analysed from the research instruments. The first section presents the demographic information of the respondents. The second section presents findings on the extent of adoption of revenue forecasting methods and forecasting process at Mutare City Council, findings on the impact of poor revenue forecasting at Mutare City Council and findings on factors that affect revenue forecasting methods and processes at Mutare City Council. Both quantitative and qualitative findings are presented.

### **4.2 Data Presentation**

#### **4.2.1 Response rate**

The response rate obtained from the questionnaires and interviews during the study are presented in Table 4.1 below.

**Table 4.1: Response Rate**

<b>Research Instrument</b>	<b>Distributed/ Scheduled</b>	<b>Successful</b>	<b>Percentage Response</b>
Questionnaire	80	68	85
Interviews	15	15	100

Source: Field data (2023)

The findings as shown in table 4.1 indicate that 80 questionnaires were distributed and 68 were returned, completely filled which signified an 85% success rate, while

the interviews achieved a success rate of 100%. The high response rates obtained in this study demonstrate a strong level of participation and engagement from the targeted sample. To obtain these high response rates, the researcher employed effective communication strategies to clearly convey the purpose, importance, and confidentiality of the study to the participants.

#### **4.2.2 Reliability Statistics**

To assess the reliability of the measurement scale used in this study, Cronbach's alpha was employed. To check for the research instruments' internal consistency, a Cronbach Alpha was computed. Table 4.2 below shows the computed reliability statistic for the data used in this study.

<b>Table 4.2: Reliability Statistics</b>		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.863	0.869	68

The Reliability analysis performed on the 68 items of this study showed a Cronbach Alpha of 0.863 which was above the acceptable level of 0.7 as advocated by Muhunyo (2018) and therefore we conclude that the instrument was reliable.

#### **4.2 Demographic Details of the Respondents**

The study also investigated on the demographic profiles of the respondents. These included their gender, age, highest academic qualification as well as the highest professional qualification possessed. The findings from this investigation are presented in table 4.3 overleaf.

**Table 4.3: Demographic data**

	Variable	Description/Category	Frequency	Percentage
1	Gender	Male	44	64.7%
		Female	24	35.3%
		N	68	
2	Educational	O level	15	22.1%
		A level	53	77.9%
		N	68	
3	Professional Qualifications	Certificates	00	00%
		Diploma	11	16.2%
		Degree	35	51.5%
		Other	22	32.4%
		N	68	
4	Years in service	0-5years	0	0
		6-10years	13	19.1%
		11-15years	29	42.6%
		16 years and above	26	38.2%
		N	68	
5	Age	20-30years	0	0%
		31-40years	10	14.7%
		41-50years	44	64.7%
		51years	14	20.6%
		N	68	
6	Departments	Finance	17	25%
		Town Clerk	6	9%
		Housing and Community Services	5	7%
		Chamber Secretary	10	15%
		Mayor	3	4%
		Health	11	16%
		Engineering	16	24%
		N	68	

Source: Field data (2023)

The demographic information in table 4.3 above shows that the organization has a great gender disparity where 64% of the employees were male and only 35% were female. The statistics indicated a high level of professional qualifications with more than half of the respondents possessing either a degree (51.5%) or other professional body qualifications (32.4%) while only 16% have a diploma. Based on the collected data, the sample was sufficiently educated to deliver well-reasoned responses to the questions. The statistics also showed that more than half of the respondents had more than 10 years of experience and were thus well vested with

the organisation and its operations. This demonstrates that the sample was of persons with experience in their respective fields who could provide sound and accurate responses to the given. The results as presented in table 4.3 above shows that a greater proportion of the respondents were in the 41-50 age (65%) followed by those above 51 years (21%) with those in the age group 31-40 (15%). This also implies that those who responded to the survey are highly mature personnel capable of responding well to questions about their work. Most of the respondents were from the Finance and Engineering department with 25% and 24% response rate respectively. Based on the collected data, the sample has sufficient comprehension of Mutare City Council operations and processes and could provide well-reasoned responses to the questions posed.

#### **4.3 Discussion and Interpretation**

##### **4.3.1 Revenue forecasting techniques at Mutare City Council**

This objective sought to establish the extent of adoption of revenue forecasting techniques at Mutare City Council. The respondents were asked on the type of revenue forecasting techniques that are currently being used by City of Mutare. The respondent indicated by ticking the techniques that are being used, the responses are summarized in table 4.4 overleaf.

**Table 4.4: Revenue Forecasting methods at Mutare City Council**

	Strongly Agree and Agree		Unsure %		Disagree %		Strongly Disagree %	
Expert judgment	51	75%	5	7.4%	12	17.6%	0	0%
Consensus	55	80.9%	0	0%	8	11.8%	5	7.4%
Trend Analysis	63	92.6%	5	7.4%	0	0%	0	0%
Incremental	15	22.1%	0	0%	47	69.1%	6	8.8%
Moving averages	3	10.7%	0	0%	53	77.9%	12	17.6%
Time series-simple regression	9	13.2%	3	4.4%	0	0%	56	82.1%
Casual Models	43	63.2%	7	10.3%	0	0%	18	26.5%

Source: Primary data (2023)

Most respondents agreed that the trend analysis method was the most used method (92.6%), followed by the consensus (80.9%). The least method being used is the moving average (10.7%). Most respondents (77.9%) disagreed that the moving average method is used in revenue forecasting. The forecasting technique that most respondents disagreed to be in use is the time series method (82.1%). A significant number of respondents were not sure on whether the casual models (10.3%), expert judgment (7.4%) and trend analysis (7.4%) method were being used.

The following responses were gathered from the interviews:

***Response 1:***

*The City of Mutare has embraced revenue forecasting methods and processes to a significant extent. We have implemented various techniques, such as trend analysis,*

*historical data analysis, and econometric modelling to forecast revenue streams accurately.*

**Response 2:**

*Revenue forecasting methods and processes have been widely adopted at the City of Mutare. We have established a dedicated team that utilizes both quantitative and qualitative approaches to forecast revenues, ensuring a comprehensive and robust forecasting system.*

**Response 3:**

*The City of Mutare has made considerable progress in adopting revenue forecasting methods and processes. We have implemented advanced software tools and analytical models to enhance the accuracy and reliability of revenue projections, enabling effective financial planning and resource allocation.*

**Response 4:**

*At the City of Mutare, revenue forecasting methods and processes have been integrated into our financial management practices. We regularly review and update our forecasting techniques, incorporating industry best practices, to ensure the reliability of revenue projections for informed decision-making.*

**Response 5:**

*Revenue forecasting methods and processes are well-established at the City of Mutare. We have implemented a systematic approach that includes stakeholder consultations, data analysis, and scenario planning to generate reliable revenue*

*forecasts. This enables us to proactively address financial challenges and optimize resource allocation*

**Response 6:**

*The City of Mutare has made significant strides in adopting revenue forecasting methods and processes. We have implemented data-driven approaches, including trend analysis to enhance the accuracy and reliability of revenue projections.*

**Response 7:**

*Revenue forecasting methods and processes have been fully integrated into the financial management practices of the City of Mutare. We have established a dedicated department responsible for forecasting revenues, conducting regular reviews, and continuously improving our methodologies.*

**Response 8:**

*The City of Mutare has embraced a proactive approach to revenue forecasting methods and processes. We use mainly the trend analysis method to forecast our revenues.*

**Response 9:**

*Revenue forecasting methods and processes have been widely adopted and institutionalized at the City of Mutare. We have implemented advanced forecasting models, including trend analysis, expert judgement and consensus forecasting techniques.*

**Response 10:**

*The City of Mutare has prioritized the adoption of revenue forecasting methods and processes as a strategic imperative. We have invested in training our staff, leveraging technology, and collaborating with external experts to ensure that our forecasts are robust, reliable, and aligned with the best practices in the field.*

The findings showed a convergence of views on forecasting techniques from both questionnaire responses and interview responses.

#### **4.3.1.2 Process of revenue forecasting**

When asked whether Mutare City council had a budget development policy encompassing revenue forecasting, a total of 55.9% of respondents pointed out that Mutare City council has a budget development policy encompassing revenue forecasting, 11.7% were unsure and 42.9% disagreed.

The respondents were also assessed on whether the following stakeholders participate in the revenue forecasting process of Mutare City Council. Different people gave different responses and these are summarised in the pie chart below:

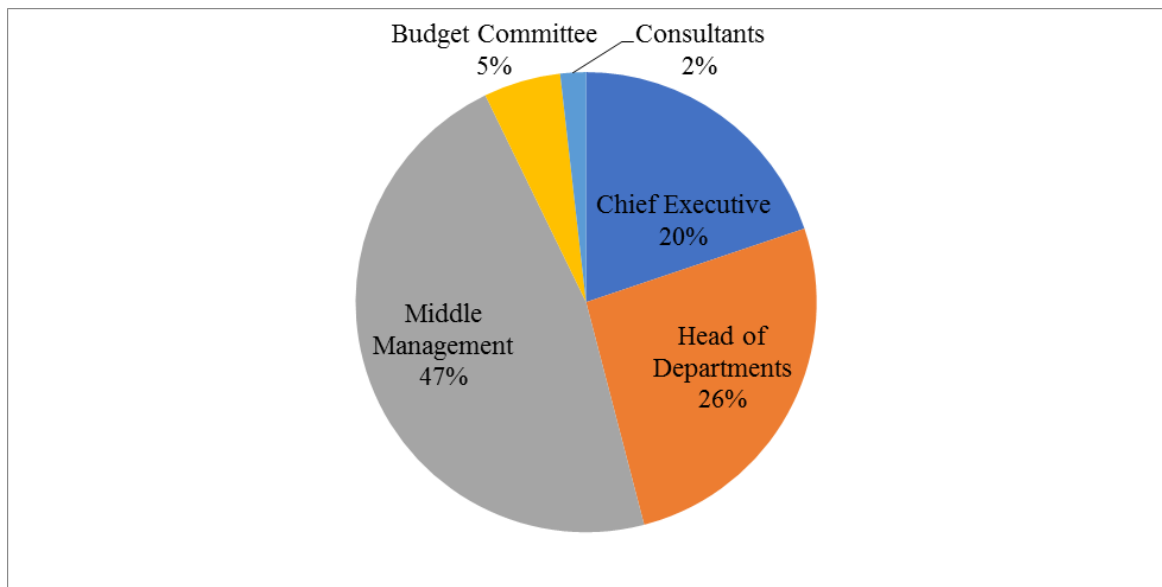


Fig 4.1: Participation in Revenue Forecasting Process



The respondents agreed that Heads of departments (26%), Middle management (47%) and the chief executive (20%) are involved in revenue forecasting. The budget committee (5%) and consultants (2%) have less if no involvement in revenue forecasting.

#### 4.3.1.3 Process followed in revenue forecasting

The respondents were asked to give an outline of the process followed by the organisation in coming up with revenue forecast. Most respondents (62%) did not understand the process of forecasting but instead outlined the budgeting process. The table overleaf shows analysis of results from SPSS and interpretation thereof.

**Table 4.5: Revenue forecasting process**

		Knowledge of forecasting systems		Odds Ratio (OR)	Confidence Interval of the OR	P-Value
		Yes	No	2.2500	(0.7369 6.8701)	0.08402
Finance Department	Yes	9	8			
	No	17	34			
Years in service	>10yrs	16	39	0.1231	(0.0299 0.5068)	0.0014146
	</10yrs	10	3			

Respondents from the finance department were knowledgeable of Mutare City Council's forecasting than those from other departments, however this association was not statistically significant because the P-Value of the Odds ratio is more than 0.05 and the confidence interval of the odds ratio includes 1.

#### 4.1.3.4 Frequency of forecasts

**Table 4.6: Frequency of revision of the forecast**

	Strongly Agree and Agree		Unsure		Disagree and Strongly Disagree	
Monthly	7	10.4%	0	00.0%	61	89.7%
Quarterly	13	19.1%	1	1.50%	54	79.4%
Mid term	49	81.7%	3	11.1%	6	8.8%
When needed.	10	14.7%	2	2.9%	56	82.4%

Most of the respondents pointed out that the forecast is reviewed half yearly (mid-term) (81.7%) followed by those who said quarterly basis (19.1%) and the least pointed-out that it is reviewed on monthly basis (10.4%).

#### 4.1.3.5 Accurateness of revenue forecasting methods

The respondents were also assessed on whether the forecasting methods provide accurate revenue estimates. The responses were summarized in the biography below.

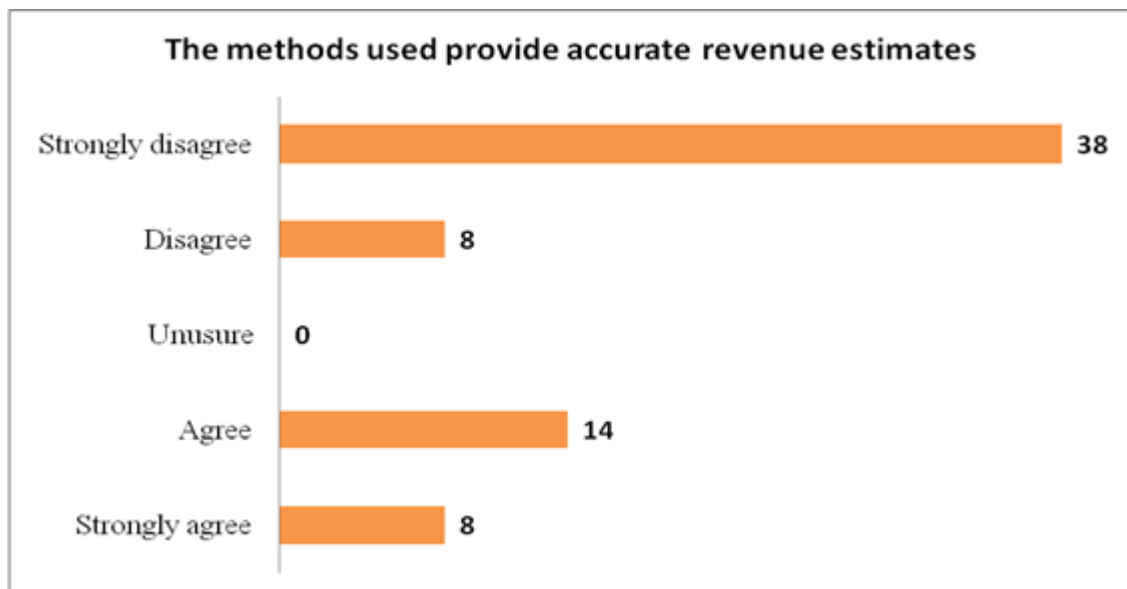


Fig 4.2: Accuracy of methods being used

The respondents (46) disagreed that the forecasting methods in use were giving accurate results while 22 agreed that the methods give accurate results.

### 4.3.2 Impact of poor revenue forecasting at Mutare City Council

This study objective aimed at the impact of poor revenue forecasting at Mutare City Council. The analysis looked into the consequences of revenue forecasting techniques adopted at Mutare City Council. Table 4.7 below shows the descriptive statistics.

Table 4.7: Impact of poor revenue forecasting

Impact	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
Financial instability and budgetary shortfalls	68	4.14	.079	0.962
Leads to failure to deliver essential services	68	4.07	.066	0.997
Results in inefficient resource allocation	68	3.79	.063	1.026
Results in increased debt burden and financial strain	68	3.61	.041	1.142
Hinders the council's ability to invest in infrastructure	68	3.52	.057	0.920
Unmet revenue expectations erode public trust	68	3.40	.047	1.123
Valid N	68			

The findings from the questionnaire responses provided in Table 4.7 above highlighted that poor revenue forecasting results in financial instability and budgetary shortfalls (mean of 4.14), poor forecasting leads to failure to deliver essential services (mean of 4.07), leads to insufficient resource allocation (mean of 3.79), results in increased debt burden as the council has to rely on borrowings to fund its operations (mean of 3.61), hinders the council's ability to invest in public infrastructure (mean of 3.52) and erosion of public trust (mean of 3.40). The findings represent that revenue forecasting had a bearing on financial stability and overall service delivery of the council.

Respondents cited that accurate revenue forecasting ensures that there are sufficient funds to allow for operations such as procurement of water chemicals, procurement

of equipment and machinery used by MCC, in provision of street lighting, road maintenance and sewer maintenance. Revenue forecasting identifies gaps between actual and planned collections, which helps to devise appropriate methods to improve service delivery. Forecasting revenue helps to budget all expenses early on, providing with a reliable forecast to compare progress with. The local authorities have challenges in financing service delivery when they are constrained by revenue instruments which will result in wide gaps between local revenues and service delivery and where fees are properly set, ratepayers will get the service for as long as they have paid the marginal cost of production.

The following interview responses were also noted on the impact of poor revenue forecasting at Mutare City Council.

***Response 1:*** *Poor revenue forecasting at the Mutare City Council has led to financial instability and budgetary shortfalls. It has resulted in inadequate resource allocation, impacting service delivery and infrastructure development projects.*

***Response 2:*** *The impact of poor revenue forecasting at the Mutare City Council can be detrimental to long-term financial planning and sustainability. It has led to overestimation or underestimation of revenue streams, affecting the council's ability to meet its financial obligations and deliver essential services to the community.*

***Response 3:*** *Inaccurate revenue forecasting at the Mutare City Council has hindered effective financial management and decision-making. It has resulted in budget deficits, unplanned expenditure cuts, or inefficient resource allocation, hampering the council's ability to address community needs and priorities.*

**Response 4:** *Poor revenue forecasting at the Mutare City Council has undermined the council's credibility and financial stability. It has led to a reliance on short-term borrowing or emergency measures to cover budget shortfalls, potentially resulting in increased debt burden and financial strain.*

**Response 5:** *The impact of poor revenue forecasting at the Mutare City Council extends beyond financial implications. It has eroded public trust and confidence in the council's ability to manage resources effectively, hindering partnerships and collaborations with stakeholders and impacting the overall development of the city.*

**Response 6:** *Poor revenue forecasting at the Mutare City Council has led to budget deficits and financial instability, affecting the council's ability to meet its financial obligations, such as debt repayments and employee salaries.*

**Response 7:** *The impact of poor revenue forecasting at the Mutare City Council extends to long-term planning and development projects. Insufficient revenue projections have hindered the council's ability to invest in infrastructure, public services, and social programs, impacting the overall quality of life for residents.*

**Response 8:** *Inaccurate revenue forecasting at the Mutare City Council has resulted in missed revenue targets and a reliance on short-term measures to fill budget gaps. This has led to reactive decision-making, reduced financial flexibility, and limited capacity to respond to emerging needs and opportunities.*

**Response 9:** *Poor revenue forecasting at the Mutare City Council has undermined the council's ability to attract investment and secure external funding. Unreliable revenue projections deter potential investors and lenders, limiting the council's access to additional resources for development initiatives.*

***Response 10: The impact of poor revenue forecasting at the Mutare City Council has strained relationships with stakeholders and the community. Unmet revenue expectations erode public trust, leading to decreased confidence in the council's financial management and potentially hindering collaboration and support for council initiatives.***

There was a convergence of responses from both questionnaires and interviews with most of the responses pointing to the fact that inaccurate revenue forecasting leads to budget deficits which affect the council's ability to provide efficient services.

These findings are in line with the findings of Chakaipa (2010) who stated that inaccurate revenue forecasting affects revenue inflows which affects service delivery. Gajewar and Banal (2018) states that an accurate revenue forecasting is a pre requisite for effective planning and when there is effective planning, service delivery is improved. UN-HABITAT (2015) also argues that provision of service delivery is also dependent on revenue forecasting and can be seriously affected by poor revenue forecasting unless there are systems to enforce resource mobilization.

Franklin (2017) also agreed that the forecasts provide a ceiling on state spending and sets the budget tone. A study in Nigeria by Edogbanya and Sule (2013) showed that government developments are strongly related to the revenue generated by such governments. Torome (2021) study in Nairobi revealed that local authorities with good revenue forecasting achieve higher revenue mobilization and therefore perform better in terms of service delivery.

The findings are also in line with the findings of a study in Kanjiado Local Authority Kenya by Makayeza et al (2018) who confirmed that poor revenue planning and forecasting has a negative impact on the ability of a local authority to

provide public goods. When there is less actual revenue collected than the budgeted figures it creates a deficit which has an effect of hindering provision of effective service delivery. Thus, accurate revenue forecasting improves revenue avenues which can be channelled to provision of services by the municipality.

### **4.3.3 Factors that affect revenue forecasting methods and processes at City of Mutare**

This objective aimed at identifying factors that hinder or affect revenue forecasting at MCC. Identifying these factors is important for strategy determination which can help policy makers and relevant authorities to improve revenue forecasting. The findings are presented in Table 4.8 below.

### **4.8: Factors affecting revenue forecasting**

Variable	Strongly Agree and Agree		Unsure		Disagree and Strongly Disagree	
Information availability	61	89.7%	3	4.4%	4	5.9%
Political Interference	56	82.0%	0	00%	12	18.0%
Lack of Expertise of forecasters	56	82.0%	4	6%	8	12%
Macro-economic factors	62	91.2%	6	8.8%	0	00%
Time Horizon	60	88.2%	2	3%	6	8.8%
Nature of revenue stream	62	91.2%	0	00%	6	8.8%

Table 4.8 above shows that the majority of respondents agreed that revenue forecasting is affected by information availability (89.7%), political interference (82%), lack of expertise (82%), macro-economic factors (91.2%), failure to predict time horizons (88.2%) and nature of revenue streams (91.2%). The factor analysis shows that these 6 main factors are behind the failure by Mutare local authority to accurately predict revenue streams.

Interview responses also revealed that revenue forecasting challenges included inadequate resources, poor revenue Inflow and lack of proper revenue policies. The following responses were recorded from the interviews:

***Response 1:*** Several factors influence revenue forecasting methods and processes at the City of Mutare, including economic conditions, changes in government policies and rates and the overall business environment within the city.

***Response 2:*** At the City of Mutare, revenue forecasting methods and processes are influenced by factors such as historical revenue trends, seasonality, demographic changes, political and regulatory developments, and the performance of key economic sectors within the city.

***Response 3:*** The accuracy of revenue forecasting at the City of Mutare is influenced by factors such as data availability and quality, the level of staff expertise, external funding sources, and the reliability of economic indicators used in forecasting models.

***Response 4:*** Various external factors affect revenue forecasting methods and processes at the City of Mutare, including changes in economic conditions, inflation rates, currency fluctuations, investment and business growth trends, and the overall stability of the local and national economy.

***Response 5:*** Revenue forecasting methods and processes at the City of Mutare are impacted by factors such as the level of compliance and enforcement of revenue collection mechanisms and the accuracy of financial data and records.



**Response 6:** Revenue forecasting methods and processes at the City of Mutare are influenced by factors such as changes in government policies and regulations and revenue collection mechanisms.

**Response 7:** The accuracy of revenue forecasting at the City of Mutare is affected by the economic environment which impact revenue streams and require adjustments to forecasting models.

**Response 8:** The availability and quality of data play a crucial role in revenue forecasting at the City of Mutare. Factors such as data collection methods, data management systems, and data accuracy significantly impacts on the reliability and accuracy of revenue projections.

**Response 9:** The level of collaboration and coordination between different departments within the City of Mutare impacts revenue forecasting. Factors such as data sharing, cross-departmental communication, and alignment of objectives can influence the accuracy and effectiveness of revenue forecasting methods.

**Response 10:** The political and regulatory landscape can also affect revenue forecasting methods and processes at the City of Mutare. Changes in government policies, such as changing currencies significantly affect forecasting methods. such as currency changes and introduction of new currencies.

**Response 11:** Failure to gather all the necessary information results in failure to develop proper budget assumptions which also affects reliability of the estimates.

**Response 12:** Lack of skill in forecasting results in poor forecasting and poor revenue inflows. Lack of skills is further compounded by failure to understand the basic tenets of the revenue forecast process which affect the reliability of the

*forecast. Local authorities' budget processes are also hindered by political interferences which affect the estimates.*

***Response 13:*** *Political interference results in some of the expected anticipated revenues being written off, such as water bills, electricity bills and other bills due to the council owed by residents. This usually happens during the elections time, which is a common feature in Zimbabwe, or when the council assumes the debts are irrecoverable.*

These findings are in line with the findings of a study by Frank (2018) who opined that the process of revenue forecasting was not understood by many serve for some finance staff who showed the relevancy of expertise and qualifications to the understanding of the process.

The findings on the factors affecting revenue forecasting are in line with findings of a study by Frank (2018) who confirmed that limited forecasting expertise and historic data availability affect revenue forecasting.

Mbufu (2013) also puts forward that revenue forecast depends on the type of revenue source being forecasted, availability of historic data, existing economic data coupled with other factors that derive revenue. The study findings also concur with the findings of a study by Nelson (2019) who opined that the economic cycle's severity, state economic status and the structure of state tax systems affect the variability in revenue forecasting. The revenue forecasting is a function of tariff setting and development level in the community.

The findings of this study on information availability as a factor affecting revenue forecast also concur with the findings of a study by Gajewar and Bansal (2016) who

stated that forecasting requires historical data and information on revenue forecasting and the failure to get sufficient information affect the forecast process.

#### **4.4. Summary**

The chapter has provided the findings analysed from the responses of the distributed research instruments. Analysis was made in line with the objectives of the study. The chapter has presented that that expert, consensus and trend analysis methods are the most common methods used to forecast revenue while casual methods and time series are not common. The chapter has also presented that the impact of poor revenue forecasting is budgetary constraints which ultimately leads to poor service delivery by the council. In addition, revenue forecasting is affected by information availability, political interference, lack of expertise, macro-economic factors, failure to predict time horizons and nature of revenue streams. The following chapter (Chapter 5) presents the summary, conclusion and recommendations, implications as well as areas for further study.

## **CHAPTER 5 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter presents the summary, conclusions, recommendations, implications and suggest areas for further research. The chapter presents the conclusions and recommendations on the basis of the findings detailed in the preceding chapter of this study (Chapter 4) and in line with the objectives of the study presented in Chapter 1 of this study.

### **5.2 Discussion**

The first chapter (Chapter one) of this study has presented and highlighted the introduction, the background of the study, the statement of the problem, the objectives of the study, the research questions, significance of the study and the scope of the study. The main objectives of the study were to investigate the relationship between revenue forecasting and service delivery and at Mutare City Council, to determine factors that affect revenue forecasting methods and processes and to suggest ways of improving revenue forecasting methods and processes at City of Mutare. The second chapter (Chapter two) reviewed literature relevant to the study and provided the theoretical, conceptual and empirical literature. The chapter provided a comparison and provided a critique of literature from other scholars and other scholarly material in revealing the study gap. Theories discussed included the New Public Management Theory and the Administrative Theory which the study found relevant. Chapter three discussed the research design, population, target population and sampling techniques, research instruments, data collection and data analysis. An explanatory case study was adopted as the research design and

data was collected using questionnaires and interviews from supervisors and managers at Mutare City Council. Ethical issues taken into consideration included permission, informed consent and confidentiality of respondents. Chapter four provided a presentation and analysis of the findings from the responses of the questionnaires administered to the target population of the study. Data was analysed through descriptive statistics, content analysis and presented through tables and charts.

The major findings were as follows:

#### **5.2.1 Revenue forecasting techniques in City of Mutare**

The findings on this objective showed that the trend analysis method is the most used forecasting method, followed by the consensus method. The least methods being used was the moving average and the time series method. Respondents were not sure on whether the casual models, expert judgment and trend analysis were ever used at Mutare City Council. The findings also revealed that Mutare City Council has a budget development policy encompassing revenue forecasting.

#### **5.2.2 Impact of poor revenue forecasting at Mutare City Council**

The study found out that poor revenue forecasting results in financial instability and budgetary shortfalls, leads to failure to deliver essential services, leads to insufficient resource allocation, results in increased debt burden as the council has to rely on borrowings to fund its operations, hinders the council's ability to invest in public infrastructure and erodes public trust.

#### **5.2.3 Factors that affect revenue forecasting at City of Mutare**

The study found out that revenue forecasting is affected by information availability, political interference, lack of expertise, macro-economic factors, failure to predict time horizons and nature of revenue streams. Factor analysis showed that these 6 main factors are behind the failure by Mutare City Council to accurately predict revenue streams. Interview responses also mentioned that failure to gather all the necessary information results in failure to develop proper budget assumptions which also affects reliability of the estimates. Lack of skill in forecasting also results in poor forecasting and poor revenue inflows.

### **5.3 Conclusions**

From the findings obtained, the study made the following conclusions:

#### **5.3.1 Revenue forecasting techniques at Mutare City Council**

The study concluded that Mutare City Council mainly used the trend analysis method with the least methods used was the moving average and the time series method. The study concluded that Mutare City Council relies only on a few forecasting techniques, which may affect its forecasting processes as differing variables may require different forecasting techniques.

#### **5.3.2 Impact of poor revenue forecasting**

The study concluded that poor revenue forecasting resulted in budgetary constraints. As a result, the council is faced with insufficient funds to allow for operations such as procurement of water chemicals, procurement of equipment and machinery, provision of street lighting, road maintenance and sewer maintenance. The local authorities have challenges in financing service delivery when they are constrained by revenue instruments which will result in wide gaps between local

revenues and service delivery and where fees are properly set, ratepayers will get the service for as long as they have paid the marginal cost of production.

### **5.3.3 Factors that affect revenue forecasting at Mutare City Council**

The study concluded that the main factors affecting revenue forecasting include lack of expertise, lack of sufficient information on revenue bases and failure to predict time horizons and nature of revenue streams. Lack of skill in forecasting was therefore concluded to be the major factor resulting in poor forecasting.

## **5.4 Implications**

This study has contributed to the understanding of the significance of revenue forecasting for service delivery. The research provided empirical evidence on the relationship that exist between revenue forecasting and service delivery of local authorities. This points out to the importance of understanding factors that impact on revenue forecasting. Furthermore, the study also presented the findings, conclusions drawn from the study and provided recommendations on how local authorities can improve service delivery through appropriate revenue forecasting. This gives a wakeup call to management in local authorities to put more focus on these factors as this has a bearing on the revenue and ultimately service delivery.

## **5.5 Recommendations**

From the findings and conclusions made, the study made the following recommendations:

### **5.5.1 Revenue forecasting techniques at Mutare City Council**

The study recommends that Mutare City Council should adopt other revenue forecasting techniques and not rely on a few forecasting techniques, which may affect its forecasting processes as differing variables may require different forecasting techniques. Adopting various techniques simplifies the forecasting process and provide much better analysis which takes into account different changing variables.

### **5.5.2 Impact of poor revenue forecasting**

The study recommends that Mutare City Council focus more on revenue forecasting because of its implications on its overall performance. Poor forecasting impacts negatively on service delivery, thus revenue forecasting should be taken as a priority, making sure that all revenue sources and base are identified. Identifying all revenue bases helps to establish gaps in the revenue management processes and taking of corrective action to tap into all revenue centres.

### **5.5.3 Factors that affect revenue forecasting at Mutare City Council**

The study recommends that Mutare City Council should gather sufficient information on revenue bases and accurately predict time horizons and nature of its revenue streams. Sufficient information is important in developing correct forecasting assumptions. The study also recommends that the organisation should seek the help of external consultants in revenue forecasting.

## **5.6 Suggestions for Further Research**

One limitation of this study is that the study has been conducted as a single case study focusing on one organisation only, thus limitation in findings for comparative purposes. Future research could look at increasing the sample size or as a survey of



at least five local authorities in Zimbabwe to further understand if there are any variations in the revenue forecasting methods used. Future researcher need to acquire knowledge on other factors that affect service delivery apart from revenue issues.

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## APPENDICES

### APPENDIX 1: INFORMED CONSENT

**Dear Sir/Madam**

My name is Tsitsi Useya, a final year (EMBA) student from Africa University (AU). I am carrying out a study titled “**Revenue Forecasting and Service Delivery at City of Mutare**”. I am kindly asking you to participate in this study by filling in the questionnaire.

The purpose of the study is to investigate the relationship between revenue forecasting and service delivery at City of Mutare. If you decide to participate you will be given seven days to fill in the questionnaire.

You may have discomfort in giving out information perceived confidential with fear of victimisation, or inconveniences in own time allocation-these are normal feelings. However, the researcher guarantees confidentiality and to add on to that, no mention of own name will be requested and will remain anonymous. The requested information will not take long to fill in but ample time is given so that it does not put pressure on the part of the participant.

The information requested for is expected to be given on a willing to basis without expectation of payment in return. However, should the participant want to know the results of the survey the researcher is willing, after completion, to share the results with the participants.

Participation in this study is voluntary. If, as a participant you decide not to participate in this study, this will not affect the future relationship with the researcher. If you chose to participate, you are free to withdraw your consent and to discontinue participation without any harm or penalty.

Before you sign this form, please feel free to ask any questions on any aspect of this study that may seem not clear to you.

If you have decided to participate in this study, please sign this form in the space provide below as an indication that you have read and understood the information provided above and have agreed to participate.

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Name of Research Participant (please print)

Date

-----

Signature of Research Participant or legally authorised representative

Should you have any questions concerning this study or consent form beyond those answered by the researcher including questions about the research, your rights as a research participant, or if you feel that you have been treated unfairly and would like to talk to someone other than the researcher, please feel free to contact the Africa University Research Ethics Committee on telephone (020) 60075 or 60026 extension 1156 email aurec@africau.edu

Name of Researcher –Tsitsi Useya.

## **QUESTIONNAIRE TO MANAGEMENT AND EMPLOYEES OF CITY OF MUTARE**

Dear respondent.

My name is Tsitsi Useya, a student undertaking a research on Revenue Forecasting and Service Delivery. May you kindly assist by answering the questions below. You are advised of honesty when answering the questions below and the information provided will be treated with outmost confidentiality and will be used solely for academic purposes only.

### **Instructions**

- I. Do not write your name on the questionnaire
- II. Please answer all questions.
- III. Please provide answers to the following questions by ticking in the boxes given and filling in the spaces provided.

### **SECTION A: BACKGROUND INFORMATION**

1. How long have you been employed by City of Mutare?

0 – 5 years ☐ 6 – 10 years ☐ 11 – 15 years ☐ 16+ years ☐

2. Age 20 - 30 ☐ 31 - 40 ☐ 41 - 50 ☐ 51 + ☐

3. Gender: Male ☐ Female ☐

4. Educational Qualifications

“O” Level ☐ “A” Level ☐ None ☐

5. Professional Qualifications

Certificate ☐ Diploma ☐ Degree ☐ Others ☐



## SECTION B: REVENUE FORECASTING TECHNIQUES IN CITY OF MUTARE

### 1. Revenue forecasting techniques in use at City of Mutare.

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Expect judgment					
Consensus					
Trend Analysis					
Incremental					
Moving averages					
Time series – simple regression					
Casual Models					

Comments: -----

-----

-----

-

### 2. Different methods are used for different revenue streams

Strongly agree ☐ Agree ☐ Unsure ☐ isagreeestro ☐ disagree ☐

### 3. The methods used provide accurate revenue estimates

Strongly agree ☐ Agree ☐ unsure ☐ Disagree ☐ strongly ☐  
disagree

### Process of Revenue Forecasting

4. Council has a budget development policy encompassing revenue forecasting

Strongly agree ☐ Agree ☐ unsure ☐ Disagree ☐ strongly ☐  
disagree

5. Participation in the revenue forecasting process

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Chief Executive					
Heads of departments					
Middle management/ section heads					
Budget Committee/ revenue committee					
Consultants					

Comments: -----  
-----  
-----

6. Outline process followed by Council in forecasting revenue.

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

7. How often is the forecast revised

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Monthly					
Quarterly					
Midterm/ Trimester					
As needed					

Comments: -----

-----

-----

### Factors Affecting Revenue Forecasting

8. Factors affecting revenue forecasting

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree

Information availability					
Political interference					
Experience of forecasters					
Macro-economic factors					
Time horizon					
Nature of revenue stream					

Comments: -----

-----

-

### **Relationship Between Revenue Forecasting And Service Delivery**

#### 9. Relationship between revenue forecasting and service delivery

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Positive relationship					
Negative relationship					
No relationship					

Comments: -----

-----

-

10. Council is meeting needs of residents in service delivery.

Strongly agree ☐ Agree ☐ Unsure ☐ Disagree ☐ Strongly disagree ☐

Which services are not being offered: -----

-----

-----

11. Challenges faced by council in offering service delivery

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
Poor revenue inflows					
Lack of skills					
Political interference					
Lack of policies					
Availability of resources					

**Thank you for completing the questionnaire**

**APPENDIX 3: INTERVIEW QUESTIONS**

1. To what extent has been revenue forecasting methods and forecasting process adopted at City of Mutare?

.....

2. Is there a revenue forecasting policy at Mutare City Council?

.....

3. Which methods of revenue forecasting are the most used at MTC?

.....

4. Does revenue forecasting improves service delivery? In what ways? Kindly explain?

.....

5. What factors affect revenue forecasting methods and processes?

.....

6. Which strategies can be adopted to improve revenue forecasting methods and processes?

.....

**THANK YOU FOR YOUR PARTICIPATION**

## APPENDIX 4: AUREC APPROVAL



### AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE (AUREC)

P.O. Box 1320 Mutare, Zimbabwe, Off Nyanga Road, Off Mutare Tel: +263 201 60275/50026/61611 Fax: +263 201 51785 website: www.africa.edu

Ref: AU1205/19

17 January, 2020

Tsitsi Useya  
C/O CBPLG  
Africa University  
Box 1320  
Mutare

**RE: REVENUE FORECASTING AND SERVICE DELIVERY AT CITY OF MUTARE**

Thank you for the above titled proposal that you submitted to the Africa University Research Ethics Committee for review. Please be advised that AUREC has reviewed and approved your application to conduct the above research.

The approval is based on the following.

- a) Research proposal
- b) Questionnaires
- c) Informed consent form.

• **APPROVAL NUMBER** AUREC1205/19

This number should be used on all correspondences, consent forms, and appropriate documents.

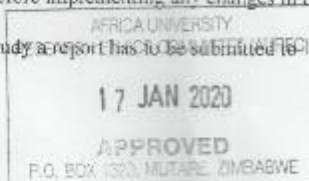
- **AUREC MEETING DATE** NA
- **APPROVAL DATE** January 17, 2020
- **EXPIRATION DATE** January 17, 2021
- **TYPE OF MEETING** Expedited

After the expiration date this research may only continue upon renewal. For purposes of renewal, a progress report on a standard AUREC form should be submitted a month before expiration date.

- **SERIOUS ADVERSE EVENTS** All serious problems having to do with subject safety must be reported to AUREC within 3 working days on standard AUREC form.
- **MODIFICATIONS** Prior AUREC approval is required before implementing any changes in the proposal (including changes in the consent documents)
- **TERMINATION OF STUDY** Upon termination of the study a report has to be submitted to AUREC.

Yours Faithfully

MARY CHINZOU – A/AUREC ADMINISTRATOR  
FOR CHAIRPERSON, AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE



## Appendix 5 CITY OF MUTARE APPROVAL



ADDRESS ALL CORRESPONDENCE TO THE  
**OFFICE OF THE FINANCE DIRECTOR**

No. 1 Queensway, Civic Centre, P.O. Box 910 Mutare, Zimbabwe  
**PHONE:** +263 20 64412 **EMAIL:** fdmutarecity@gmail.com

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**CITY OF MUTARE**

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IF CALLING OR TELEPHONING  
PLEASE REFER THE MATTER  
TO: 320 \273  
B.CHAFESUKA  
A. Makweche

Your Ref: .....

Our Ref: KBF/am

Our Ref: KB/ekj

05 December 2019

USEYA T  
STAND 4153  
CHIKANGA 2  
MUTARE

Dear Madam

**RE: REVENUE FORECASTING AND SERVICE DELIVERY AT CITY OF MUTARE**

The above matter refers.

In response to your letter dated 18 November 2019 requesting to carry out a research entitled Revenue Forecasting and Service Delivery, your letter has been approved.

Yours faithfully

  
**KB CHAFESUKA.**  
**FINANCE DIRECTOR**