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Strategies for Maximizing Revenue Collection in Public Water Utility Companies

Nicholas Gracious Namaliya
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Walden University

College of Management and Technology

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Nicholas Namaliya

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Walden University
2017

Abstract

Strategies for Maximizing Revenue Collection in Public Water Utility Companies

by

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MBA, University of Sunderland, 2013

MA, Amity University, 2011

BA, University of Sunderland, 2008

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

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Abstract

Africa has a high rate of revenue under-collection in public water utility companies. This rate currently averages 20-50%, and the rate is 18% for Malawi alone. The purpose of this single-case study was to explore credible business strategies senior managers of water utilities use to address inefficiencies in collecting water fee revenues. The conceptual framework for this study was revenue management, which includes strategic constructs for increasing amounts of revenue collection. The target population for this study was 5 senior managers of a public water utility in Malawi, which is located in the southeastern part of Africa. Data collection included semistructured, face-to-face interviews and a review of company documents. The data analysis process involved the use of thematic analysis, including methodological triangulation, to identify 4 themes: innovative strategies, effective metering and billing, customer relationship management, and disconnection of water supply from customers with overdue bills. These themes highlighted credible business strategies that, for these 5 senior managers, were effective in revenue collection. Addressing inefficiencies in collecting water fee revenues will facilitate positive social change by increasing profits, growing the water business, reducing the crime rate by employing more people, providing potable water to reduce waterborne diseases, and contributing to the sustainable social and economic development of the people of Malawi.

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Dedication

I dedicate this doctoral study to my family, and the people of Malawi, especially the caring men and women who wake up very early in the morning to go and fetch for water from unprotected sources, because either the potable tap water has stopped running or there is intermittent water supply caused by poor service delivery.

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Section 1: Foundation of the Study

Under-collection of revenue is a major problem that affects business leaders of public water utility companies in Africa and beyond. For example, under-collection of revenue from sales of water is as much of a problem in the United Kingdom as it is in Africa (Clerk, McDonald, & Boden, 2012). In a study of water utility financial practices, Boyle (2014) stated that water sales are the primary source of revenue for African water utilities. These sales provide quality water supply services, yet revenue shortages occur when consumers consistently fail to pay their water bills.

The focus case of this research study was a public water utility company located in Malawi, a country in the southeastern part of Africa. In the study, I explored credible business strategies that senior managers of the public water utility companies use to address inefficiencies in collecting water fee revenues. The results of the study may compel the leaders of all public water utility companies in Malawi to employ strategies that increase revenue to attain financial viability.

Background of the Problem

Managers of public water utilities in Africa have difficulties in efficiently collecting water bills from their customers (Chitonge, 2013). Billing and revenue collection are the two factors that drive cash flows of water utilities because billing and revenue collection involve collection costs, billing costs, and bad debts. Chitonge (2013) stated that managers of water utilities could experience negative effects on financial viability when there is under-performance in billing and revenue collection. Boyle (2014)

likewise noted that a decline in revenues threatens the financial viability of public water utilities, and that a decline in revenues affects business liquidity and profitability.

Public water utility companies lose money for three reasons: (a) low rates of revenue collection, (b) high levels of nonrevenue water, and (c) low tariff rates (World Bank, 2013). According to a funding plan report for the Malawi public water utilities, senior managers could improve the financial viability of the utility companies by increasing the revenue collection rates from the current 82% to 95% (World Bank, 2013). The preceding descriptions are a justification for the belief that inefficient collection of revenue is a problem for the public water utility companies.

Problem Statement

Inefficient methods of collecting revenue negatively affect the profitability of businesses (Rao & Apparao, 2014). Leaders of water utilities in Malawi fail to collect revenue from 18% of their customers (World Bank, 2013). The general business problem is that the inefficient collection of revenue from water fees may negatively influence business profitability of public water utilities. The specific business problem is that some senior managers of water utility companies lack credible business strategies to address inefficiencies in collecting water fee revenues.

Purpose Statement

The purpose of this qualitative single-case study was to explore credible business strategies senior managers of water utilities used to address inefficiencies in collecting water fee revenues. The targeted population for this study was five senior managers from a public water utility company located in Malawi. I targeted senior managers with

experience in resolving financial challenges that affect the public water utility company. Leaders of public water utilities in Africa, as a whole, fail to collect revenue from about 20-50% of their customers (Koehler, Thomson, & Hope, 2015). In a study of financial practices of water utilities, Boyle (2014) stated that senior water managers have experience in resolving financial challenges that affect the water utility companies. It is for this reason that I targeted the population of senior managers. The implication for positive social change included the potential to identify strategies that senior managers could use to enhance amounts of revenue collected and needed for improved operational performance of public water utility companies. The social change significance of the study is that the improved operational performance of public water utility companies would reduce incidences of intermittent water supply, increase the number of consumers accessing potable water, and contribute to reduction of water-borne diseases.

Nature of the Study

In the study, I considered utilizing three methods of research, namely, qualitative, quantitative, and mixed methods. I ultimately decided to use a qualitative methodology. Using qualitative methodology was justifiable for three reasons: first, there is no predetermined answer to the research question (Yin, 2014); second, qualitative research methodology is useful in collecting views of participants in a research study (Malagon-Maldonado, 2014); and third, a researcher in a qualitative study derives common themes from experienced respondents (Grossoehme, 2014). Quantitative methodology would not have been ideal for the following three reasons: (a) participants in the study provided detailed responses in relation to their experiences (see Pathak, Jena, & Kalra, 2013); (b) I

did not test the theory using statistical methods, as is done in mixed methods (see Hoare & Hoe, 2013), and (c) I did not measure relationships among variables, and generated no numerical data (see Pathak et al., 2013). Mixed methods research, a hybrid of the qualitative and quantitative methods research approaches (Hashemi & Babaii, 2013), would not have been ideal for the study because it involves the intensive collection of data and suffers time constraints (Fredrick, 2015).

There are five primary research designs for qualitative methodology (Yin, 2013). For purposes of this study, I considered three: ethnography, phenomenology, and case study. Of the three, I used the case study design because, as Yin (2013) stated, it is appropriate for developing recommendations because it involves subjective analysis of participants' views. Madu (2016) determined that case study design is ideal for exploring views of participants. Houghton, Casey, Shaw, and Murphy (2013) determined that using case study design is appropriate in context like this because a researcher can make sound conclusions by comparing views of different participants.

Phenomenology involves studying human experiences from those living with the phenomenon (Chan & Walker, 2015; Conklin, 2013; Davidsen, 2013). As such, I determined that it was not ideal for exploring credible strategies aimed at addressing inefficiencies in collecting water fee revenues. Ethnographic design is applicable in studies involving cultural and behavioral aspects of ethnic groups, and involves studying participants for a long time (Letourneau, 2015; Reich, 2015; Robinson, 2013). Therefore, ethnography was not appropriate for exploring credible business strategies aimed at

addressing inefficiencies in collecting water fee revenues. In summary, I found that qualitative research methodology and case study design were best suited for this study.

Research Question

What credible business strategies do senior managers of public water utilities use to address inefficiencies in collecting water fee revenues?

Interview Questions

Participants in this doctoral study responded to the following semistructured interview questions:

1. What strategies do you use to enhance the collection of water fee revenues?
2. What experiences do you have with overbooking as a revenue collection and enhancement strategy?
3. What experiences do you have with prepayment as a revenue collection and enhancement strategy?
4. What experiences do you have with differential pricing as a revenue collection and enhancement strategy?
5. What revenue collection strategies do you consider effective in collecting water fee revenues?
6. What other revenue collection strategies not addressed already would you like to share with business leaders?

Conceptual Framework

The conceptual framework for this study was revenue management. Bell (2012) described revenue management as strategic marketing concepts for increasing sales and

amounts of revenue. Westermann (2015) described it as a set of commercial strategies aimed at maximizing amounts of revenue, while Huefner and Largay (2008) described it as various techniques applied in business to increase revenue so that the business can earn good profits. Revenue management, in sum, is a concept aimed at enhancing business revenue, which may result in increased business profitability.

Robert Crandall of American Airlines was the first to conceptualize revenue management in 1985 with an aim to undercut competitors in the airline industry (Cross, 1997). Price discrimination was the first strategy business leaders used in the 1985 revenue management concept (Huefner & Largay, 2008). In price discrimination, a business charges different prices at different times and places (Huefner & Largay, 2008). Bell's (2012) summary of revenue management, including differential pricing and overbooking, was useful in my study because it showed how differential pricing involves segmenting the market so that customers belonging to different segments pay different prices. Huefner (2015) described revenue management as the use of various business strategies including pricing, marketing, and financial decisions to enhance amounts of revenue and business profitability. Business strategy constructs such as prepayment, discounting, differential pricing, and outsourcing could be examples of business strategies that can help to increase amounts of revenue. Therefore, I determined that the conceptual framework of revenue management was applicable to and fit well with my study.

Operational Definitions

In this study, I used the following operational definitions:

Liquidity: Liquidity is the ability of leaders to settle a company's debts when they fall due (Rao & Apparao, 2014).

Nonrevenue water: Nonrevenue water is water produced and lost in the supply networks that result in revenue losses (Ezeabasili, Anike, & Okonkwo, 2014).

Profitability: Profitability is an accounting measure of the excess of revenues over expenses (Marwa & Aziakpono, 2014).

Revenue management: Revenue Management is a management strategy for ensuring good financial performance and survival of an organization (Li, Miao, & Wang, 2013).

Strategies: Strategies are the dynamics of the relationship between a business and its environment for which actions taken help leaders to attain business goals (Ronda-Pupo & Guerras-Martin, 2012).

Water fee: Water fee is revenue generated for a utility company by billing customers (Pozzoli, Landriani, & Romano, 2014).

Assumptions, Limitations, and Delimitations

I made four assumptions in this doctoral study. In addition to the assumptions, there were limitations and delimitations because reliability and credibility of the study report depend on responses from an interview inquiry. In the subsections that follow, I focus on issues relating to assumptions, limitations, and delimitations.

Assumptions

Assumptions are unproven but logical statements of truth without which a study may not progress (Leedy & Ormrod, 2013). Four assumptions subtended my design and

implementation of this study. First, I assumed that a single-case study of a public water utility was suitable for meeting my research objectives. My second assumption was that interviews with five senior managers of a public water utility would produce adequate study results. My third assumption was that the effects of revenue management strategies are major factors in determining the soundness of revenue management. Finally, I assumed that the research participants would have relevant experience and knowledge in the area of collecting water fee revenues.

Limitations

Limitations are uncontrollable weaknesses inherent in a study (Connelly, 2014; Henderson, Kimmelman, Fergusson, Grimshaw, & Hackam, 2013; Yin, 2014). In this study, there were two limitations. The first limitation was that the study involved only a single case, and the second limitation was that the location of the study was only in the central region of Malawi.

Delimitations

Delimitations are controllable characteristics used to narrow the scope of a study (Marshall & Rossman, 2016). I set two delimitations in this study because of temporal and logistical constraints. The first delimitation was that the geographic location of the chosen case study was close to my place of residence. The second delimitation was that I involved only five participants.

Significance of the Study

Exploring strategies for maximizing amounts of revenue collection from water fees may help business leaders of utility companies in Malawi to adopt revenue collection

techniques that can enhance their revenue. An improvement in such collected revenue can result in reducing financial risks that business leaders of public water utilities face. Improved revenue collection tools and techniques may enhance the revenue capacity of the water boards, boost productivity, initiate new jobs, and accelerate expansion of water supply to new areas, which, in turn, can affect positive social change.

Contribution to Business Practice

In the hospitality and service industries, revenue management strategies are widely used (Zatta & Kolisch, 2014). However, revenue management strategies in public water utilities are limited to reducing nonrevenue water. Researchers seem to have overlooked the importance of revenue collection to the profitability of water utilities. This study may enhance understanding among business leaders regarding the importance of managing revenue collection in all forms of business. Application of revenue collection techniques in water utility companies can advance the financial viability of the companies through improved profitability. There is a fundamental link between improved flow of revenues, good business performance, and quality customer service (Baik, Chae, Choi, & Farber, 2013).

Implications for Social Change

In a study conducted to determine the impacts of utility investment, Quinn et al. (2014) sampled 30 public water, wastewater, and storm-water utilities in the United States. Quinn et al. found out that the contribution from water utilities to the U.S. economy was approximately \$524 billion, including 289,000 permanent jobs and more jobs per \$1 million than investments in other sectors of the economy. Water utilities can

generate significant revenue that can promote and contribute to social change. Subsidies to public companies often burden government budgets (Adekola, 2014). Strategic revenue collection would enhance revenues and reduce the burden of subsidies on the government. Further, improved revenues can accelerate the quality delivery of water supply services, and by implication spur social change.

A Review of the Professional and Academic Literature

I determined that a qualitative case study was ideal for exploring strategies that leaders of well-functioning public water utilities use to maximize the collection of revenue from water fees. In the process of developing and undertaking this study, I conducted a literature review using sources I gathered from the following databases: ProQuest Dissertations and Theses, ProQuest ABI/INFORM Global, and EBSCOhost Business Source Premier. The literature review supported the study by ensuring the synthesis of all the information I gathered for it. Specifically, I sought out scholarly and peer-reviewed journal articles that contained strategies that enhance the collection of revenue to meet the liquidity and profitability of businesses. In what follows, I give special attention to the selection, evaluation, and analysis of the scholarly peer-reviewed and secondary sources relevant to the business problem. Analyzing the literature helped me link the research topic to the background of the study. Reviewing secondary sources led me to material that may explain revenue collection and maximization strategies in the public water utilities of Malawi.

This literature review has 298 references including 10 dissertations, 10 seminal works, and two technical reports from a World Bank website. Of the 298 references, 265

(89%) have been published in the last 5 years, and 258 (87%) are peer-reviewed.

Reviewing multiple sources helped familiarize me with concepts relating to the study and research phenomenon. In the research report, I depicted in tables all the concepts, themes, theories, and quantities. Relevancy of the concepts, theories, and themes can vary to the extent of their connection to the problem statement, purpose statement, and research question. In what follows, I review literature on business strategic constructs related to the conceptual framework ideas of revenue management—namely, revenue and profitability, and innovations such as prepayment, discounting, differential pricing, overbooking, and outsourcing.

Revenue Management Strategic Constructs

The purpose of this study was to explore credible business strategies senior managers of water utilities use to address inefficiencies in collecting revenue from water fees. Strategies are dynamics of the relationship between a business and its environment for which actions taken can help in attaining desired goals (Ronda-Pupo & Guerras-Martin, 2012). Developing effective revenue management strategies involves the guidance of revenue managers (Beck, Knutson, Cha, & Kim, 2012). Beck et al. (2012) investigated critical revenue management activities in the wake of a growing need for skilled staff in managing revenue for the lodging industry. They found that managers needed to embrace revenue management for effective revenue performance.

In my discussion of the conceptual framework, I have noted four definitions of revenue management. However, for the purpose of this sub-component, I use Huefner's (2015) definition, which frames revenue management as the use of various business

strategies including pricing, marketing, and financial decisions to enhance amounts of revenue and business profitability. The revenue management strategic constructs that inform the study include pricing, marketing, and financing. There are several examples of the financial strategic constructs. Mantz (2012), for instance, recommended using revenue collected from utility service delivery for the intended purposes as one mode of revenue management. Wagenhofer (2014) recommended using an appropriate revenue recognition accounting standard by making a proper classification of commercial transactions in terms of the nature and timing of revenue recognition to help improve business earnings in times of financial difficulty. Bagchi (2013) noted that in spite of high competition in China, Canada, and Mexico, Wal-Mart leaders managed to maximize revenue generation because they applied good financial management strategies. Finally, Pierce (2012) found that privatizing water utilities would increase efficiency of water utilities, boost demand, and result in collecting adequate revenue because private actors are more business-oriented than are public actors. However, Pierce also noted that in spite of the advantages of privatization, the water utility managers he studied failed to achieve full cost recovery because of failure to collect water bills on time. Likewise, Mbuvi and Schwartz (2013) also acknowledged the advantages of privatization, but noted that privatizing the water sector can meet resistance if current public actors feel that their interests are at stake.

Strategic marketing constructs include controlling supply of goods and services. For example, a low water supply negatively affects the cash collection forecast because the utility company has little water to deliver. In a study of revenue maximization Gill,

Barbour, Wilson, and Infield (2013) determined that business leaders who save energy during periods of high supply could enhance revenue generation during times of low supply. Leaders of most companies employ several strategies to improve revenue and profit. Many customer service strategies, such as customer royalty programs, can have an impact on revenue and profit (Eggert, Hogreve, Ulaga, & Muenkhoff, 2014). In a study involving the construction industry in Uganda, Alinaitwe, Apolot, and Tindiwensi (2013) found that delayed payments negatively affected completion of projects. Therefore, business leaders who reduce payment delays improve cash flow and foster expanded growth from the revenue collected. Sound corporate governance is a good strategy for businesses to employ to improve amounts of revenue from business operations (Amarjit & Nahum, 2013). For example, revenue management strategies should ensure the adequacy of cash revenues needed for working capital, some of which are reinvestment in the businesses for generating more revenues. Therefore, leaders of business organizations should embrace strategies that would ensure adequacy in amounts of revenue collected to achieve profitability. Organizations such as the Malawi Water Board get the bulk of their reinvestment revenue from donor aid from international financing institutions (World Bank, 2013). Therefore, financial aid can be a part of a revenue management strategy. Alstete (2014) claimed proper utilization of donor aid should support revenue generation.

Several researchers (Adkins, Samaras, Gilfillan, & McWee, 2013; Emrich, 2015; Mitchelmore & Rowley, 2013; Phillips & Knowles, 2012; Rosenthal & Strange, 2012) agree that having a strategy is linked to business success and profitability. Leaders of water utilities attain financial viability and sustainability by generating and collecting

revenues that can cover full operations and maintenance costs (Wichelns, 2013).

However, leaders of water utilities in Africa do not collect adequate revenue from water fees due to inefficiencies (Chitonge, 2013). Leaders of water utilities can increase revenue using several strategies, for instance, Zhao et al. (2013) stated water utility managers could enhance revenue from water fees by controlling costs and improving efficiency in the delivery of water supply services. Therefore, leaders of water utilities can apply strategies such as controlling production and delivery costs, and maintaining efficiency in the water production and delivery supply chain.

In the forgoing subsection, I have described the revenue management constructs in general. My descriptions of the revenue management constructs have centered on sustaining the flow of revenue, improving revenue growth, and ensuring business profitability. In the following parts of this subsection, I specifically describe the revenue management strategic constructs of segmentation and differential pricing, overbooking, pricing and billing, liquidity and profitability, revenue and nonrevenue water, outsourcing, discounting, innovations, and prepayments, electronic payments, and electronic record.

Segmentation and Differential Pricing

Szabo and Ujhelyi (2015) claimed that application of strategies other than threats of service disconnection could enhance payment of utility bills. One of the constructs in the conceptual framework is marketing. In what follows, I describe a few ideas related to marketing that may have a bearing on revenue management strategies.

In a study of revenue opportunities among Internet retailers, Agatz, Campbell, Fleischmann, Nunen, and Savelsbergh (2013) acknowledged that revenue management is demand management. Agatz et al. alluded to the fact that organizational leaders can maximize revenue by exploiting market heterogeneities such as charging different rates to different market segments. Thus, Agatz et al. concluded that organizations could achieve better revenue performance by implementing price discrimination and market segmentation policies. Further, Agatz et al. determined that the potential for demand management extends beyond Internet retailing. Similar to Agatz et al., Edwards (2013) conducted a study on revenue management and noted that revenue management developed from yield management, and is a business process. Further, Edwards appraised strategic revenue management in all its aspects of demand generation, marketing strategies for revenue, strategic pricing, strategic packaging, and distribution channel management. Edwards found that marketing mix and customer relations management are some of the key areas to consider when strategizing to enhance revenue generation.

There are many forms of achieving customer relations management to attain long-term sustainable financial success. Businesses survive because of customers (Cespedes, Dougherty, & Skinner, 2013). Good customer service ensures success of business enterprises (Bush, 2016) and sustained customer loyalty (Armstrong, 2013). Customers are the backbone of businesses, and business leaders must serve customers well to maintain customer loyalty (Nevele, Wu, Leingpibul, & Jiang, 2016). Business leaders may attain success by implementing revenue management strategies focused on maintaining loyal customers (Eggert et al., 2014). In a study about improving water

services in Karnataka, India, Burt and Ray (2014) found that for the leaders of a utility firm to improve its revenue collection base, leaders had to improve water supply first because the customers had expressed a willingness to settle water bills on the condition that the water supply improved. Therefore, good customer relations coupled with customer satisfaction can result in increased revenue collection.

Revenue management is a discipline comprised of several practices such as segmentation, forecasting, and tactical rate management involving corporate rates, overbooking rates, and group rates. In a study of revenue management in different industries, Chiang, Chen, and Xu (2012) found that customer behavior and perception could influence the performance of revenue. Further, Chiang et al. determined that different revenue management strategies such as pricing and forecasting could help solve revenue management problems. Likewise, in a study of revenue management involving toll pricing on roads, Hassan, Abdekgany, and Semple (2012) concluded that businesses could increase revenue by using strategies such as charging different prices, increasing tariff values, and ensuring customers are willing to pay for the rendered service. However, Petrick, Steinhardt, Gonsch, and Klein (2012) had a different view, and concluded that companies dealing in flexible products could improve revenue when demand is uncertain if the firms do not reveal the capabilities of their products. Likewise, in a study aimed at finding customers reactions' to variable pricing, Zhan and Lloyd (2014) found that customers who pay high prices tend to complain and change suppliers more than do customers who pay lower prices. Therefore, charging varying prices for the

same product may negatively affect revenue generation because customer responses may be unexpected.

Leask, Fyall, and Garrod (2012) claimed that adopting revenue management practices such as price differentiation helps maximize revenue management. Hassan et al. (2012) similarly noted that price discrimination enhances revenue collection, while Mathies, Gudergan, and Wang (2013) went further to suggest that a combination of price discrimination and customer-centric marketing could enhance revenue collection. The combination of price discrimination and customer-centric marketing could also help in maintaining profitability by ensuring the existence of a good relationship between business leaders and high-earning customers. However, Yu, Wee, and Su (2013) argued for the need to take into account price sensitivity when devising tariff levels because price constraints can affect revenue maximization. Another contrary view came from Cheng (2013), who determined that leaders of public water utilities wanting to enhance revenue collection should avoid discriminatory pricing between the rich and the poor.

In the study of multi-agent modeling for revenue management, Cleophas (2012) undertook a modeling and simulation analysis of customer behavior because revenue management success depends on customer decisions. Cleophas concluded that in multi-agent models of revenue management, the supplier is an agent as well as a maximizer of revenue, and should be part of the customer model. In a study of nonpayment of bills in urban water boards in Manila, Cheng (2013) noted discriminatory treatment in payment recovery and settlement of arrears between the poor and the non-poor. Cheng determined that inequalities in treatment deter water company leaders from achieving maximum

revenue collection. Therefore, equal treatment of customers can help business leaders recover more revenue from debtors.

There are several ways of ensuring an improvement in revenue collection. Aubke, Wober, Scott, and Baggio (2014) noted some of the marketing methods include (a) maintaining satisfied customers, (b) creating trust for customers, and (c) knowledge sharing including proper communication and coordination of all staff. As a result, customers can avoid reliance on the expertise of the revenue manager who may leave the organization at some point to honor water bills and improve revenue collection. In a study of revenue management teams, Szabo and Ujhelyi (2015) agreed with Aubke et al. but added that using strategies such as campaign messages could enhance revenue collection. In a study of revenue strategies, Mishra (2012) noted that business leaders could improve revenue collection by segmenting the market, initiating pricing innovations such as subscriptions and social networking, using payer innovation such as advertising to encourage customers to pay, and creating package innovation that involves changing the value customers place on products. Therefore, business leaders who practice various marketing techniques would help to improve the revenue base and profitability.

In a study of rapid deployment strategies for revenue management in India, Varini, Sirsi, and Kamensky (2012) found that revenue management faces challenges and risks because of competition, falling margins, and modern consumer behavior. Revenue management can pose risks that may result in failure to achieve revenue targets. Meissner, Strauss, and Talluri (2013) stated that applying systems of revenue management should include risk-reducing strategies such as setting low revenue targets

and price discrimination. Price discrimination is good for businesses to realize maximum revenue from high-paying customers (Guillet, Law, & Xiao, 2013). Wichelns (2013) recommended using block-tariff rates to differentiate prices between the rich and the poor. The justification, according to Wichelns, was that block-tariff rates put social concern into the revenue management cycle of the water utilities. Li et al. (2013) supported using revenue models that ensured pricing discrimination. On the contrary, Cheng (2013) found that discriminatory pricing disincentivizes consumers and their willingness to settle bills on time. Therefore, although revenue management faces challenges and risks as alluded to previously, such challenges may not arise in certain businesses such as water utilities because water companies run monopolistic businesses.

Proper coordination of marketing and operations ensures good revenue management. Activities such as price differentiation and delivery time need proper coordination because the activities affect revenues and costs (Agatz et al., 2013). Mathies et al. (2013) agreed with Agatz et al. (2013) but further added that the combination of revenue management and customer-centric marketing could help to ensure achievement of revenue maximization and profitability. Therefore, the same time combining revenue management and customer-focused marketing could increase revenues and enhance profits.

Overbooking

Business leaders have at times improved business revenues by classifying customers as high value and low value during certain periods (Ovchinnikov & Milner, 2012). Ovchinnikov and Milner (2012) found out that placing all customers on a waiting

list, and after crossing the threshold, selling the units by regulating the customers on the waiting list helped to increase revenue from those who would otherwise not have bought a product. Bell (2012) referred to this process as overbooking. Berg et al. (2013) measured the impact of overbooking customers and the cost a business would suffer if some customers fail to turn- up after booking. Berg et al. used statistics software to analyze data using the discrete-event simulation model. Berg et al. found that implementing no-show strategies reduced net losses and that overbooking patients countered the no-shows and resulted in no losses. No-shows can implicitly reduce revenues, but overbooking can offset losses that can arise from no-shows.

Pricing and Billing

Proper billing and pricing are effective for enhancing revenue stability (Wichman, 2014). Public water utilities can have losses because of incompetent tariffs and billing, inadequate metering, nonrevenue water, and illegal connections. Ezeabasili et al. (2014) revealed water companies can lose revenue by failing to implement an effective billing system, failing to implement a strong tariff structure, and failing to collect revenue from the water produced and sold. Likewise, Abubakar (2016) claimed that efficient metering, billing, and revenue collection could improve revenue generation in public water utilities. Therefore, in this part of the subcomponent, I describe how the constructs of tariff, billing, metering, and illegal connections influence revenue.

Efficient billing and water pricing could enhance revenues. Several researchers posited that increasing block-rate tariffs could enhance revenues because high-income households would pay in a higher consumption block than low-income households

(Mugisha, 2013; Wichelns, 2013). Similarly, introducing volumetric pricing model so that higher income earners pay more than poor income earners would enhance revenue (Mukherjee, Chindarkar, & Gronwal, 2015). In another study, Wichelns (2013) noted that increasing tariffs could be advantageous in that it encourages wise use of water supply and sanitation services, thereby reducing amounts of water bills. Likewise, Angel-Urdinola and Wodon (2012) posited that increasing tariffs is an ideal strategy for utility managers to collect revenues needed to increase water service delivery. However, Chitonge (2013) contended that increasing tariffs could not solve the revenue problem in water utilities because such increases can result in bill payment default by many customers. Therefore, in as much as increasing prices of water could enhance revenue from water fees, a consideration for poor households is a good thing.

Efficient metering can provide a solution to illegal connections, which are a cause for revenue loss in water utilities. In a study of revenue management conducted in California in the United States, by replacing old water meters with new ones, Shields, Barfuss, and Johnson (2012) found that the inaccuracy of water meters reduced water revenue. Therefore, Shields et al. recommended a planned course of action to replace old meters with new ones to realize maximum revenue from water sales. Likewise, Yadav, Singh, Shah, and Gamit (2014) undertook a case study on performance evaluations of water supply services in developing countries in which the findings were that metering water point connections and ensuring water supply continuity needed improvement.

In a study aimed at finding ways to bring awareness to public–private partnerships about risks that can affect benefits accruable to the partnerships in water companies,

Ameyaw and Chan (2013) found that, among other things, delayed and nonpayment of water bills had the potential to constrain the financial success of water companies. In another study, Mugisha (2013) found that the application of incentive theory factors such as threats of punishment and coercion could help business leaders of water utilities overcome problems of delayed and unpaid water bills. Abubakar (2016) agreed with Mugisha that using a threat of disconnection as a strategy can make customers pay outstanding bills. Likewise, Cheng (2013) noted that policing and disconnection campaigns, as well as negotiations for settlement of arrears, are a few strategies used to enhance revenue collection.

Liquidity and Profitability

Companies have to maintain their liquidity at a level that enables them to settle their obligations in time. A relationship exists between liquidity and profitability (Kesenmwa, Oima, & Ogida, 2013). Rao and Apparao (2014) agreed with Kesenmwa et al. (2013) but noted that adequate revenue ensures liquidity, which determines the profitability of a company. Therefore, adequate revenues are necessary for the survival of any business. In a case study of Safaricom Limited of Nairobi in Kenya, Kesenmwa et al. found that strategic decisions are essential for enhancing the performance of a business. Therefore, organizations survive when their leaders display good financial performance. By implication, business leaders of public water utilities can fail to maintain adequate liquidity and fail to survive when they fail to maximize revenue collection from water fees.

Business leaders should spur revenue collection and management strategies to ensure the businesses operate in liquidity positions that would guarantee future investment. One such strategy is cash management, which is the predominant way to ensure future liquidity for future investments (Acharya, Almeida, & Campello, 2013). Ondiek, Deya, and Busaka (2013) agreed with Acharya et al. (2013) but added that an effective cash management way should involve the following: (a) controlling payments, (b) speedy cash collection, and (c) cash flow synchronization. All these techniques support the following three major cash revenue management techniques: (a) collecting cash, (b) delaying paying creditors, and (c) using cash and payment receipts to control revenue. Therefore, business leaders should implement cash management techniques to maintain sufficient liquidity to finance future projects for additional business revenue and growth.

Revenue is important because it affects earnings of a business regarding how a company has performed over a particular period (Wagenhofer, 2014). Several factors affect business profitability. For example, companies that fail to generate and collect the revenues needed to meet operational costs could end up in economic failure (Oghoghomeh & Anthony, 2013). Boyle (2014) agreed with Oghoghomeh and Anthony (2013) when he noted that accelerated revenues are good for the survival of businesses because revenues can determine liquidity and profitability while decreased revenues with increased costs can create a gap, which can negatively affect business profitability. Romano and Guerrini (2014) found that the composition of the board can negatively affect the business profitability of water utilities. Romano and Guerrini noted that

possessing a degree in a certain field or falling within a certain age range does not guarantee a meaningful contribution to the financial well-being of a firm, and that publicly owned water utilities show lower profitability than privately owned utilities because of the composition of the board. Rao and Apparao found that adequate capital liquidity derived from revenue collection contributes to the profitability of business organizations. Therefore, revenue collection and management is important for the survival of business organizations.

The business leaders of most public water utilities in Africa fail to achieve full financial cost recovery and so fail to provide satisfactory services (Danilenko, van den Berg, Macheve, & Moffitt, 2014). Ezeabasili et al. (2014) found that systems' failure to embrace, among other things, the willingness of customers to pay for water they consume characterized the literature on water studies. There is a strong link between the willingness of consumers to pay for water and low quality of services (van den Berg, 2015). For instance, low water supply or intermittent water supply can cause a reluctance to settle water bills. The consequence is that leaders of water utilities fail to realize full financial cost recovery, which in turn affects business profitability.

Attaining business profitability involves undertaking several strategies and techniques such as revenue generation, reducing costs of production, productivity, and flexibility (Gibler & Lindholm, 2012). Unpaid water bills that attract provision for doubtful debtors in the accounting statements negatively affect business profitability (Trujillo-Ponce, 2013). In a study of real estate strategies that support revenue and profitability growth, Gibler and Lindholm (2012) found that most firms practice

strategies other than revenue generation to attain profitability. Therefore, business leaders that believe in revenue maximization to achieve profitability should avoid accruing doubtful debtors and be efficient in the whole supply chain.

Business leaders employ quick revenue collection strategies because collection of revenue from sales is critical to organizations. Muscettola (2014) noted business leaders that collect cash quickly from debtors can reinvest the cash in order to enhance business profitability. Quick collection of cash from debtors has a positive impact on business profitability (Samuel & Abdulateef, 2016). Several researchers conducted different research and concluded that quick collection of cash from sales improves business profitability because an organization does not have to incur borrowing costs (Muhammad, Jibril, K/Wambai, Ibrahim, & Ahmad, 2015; Salman, Folajin, & Oriowo, 2014).

Ondiek et al. (2013) found that leaders of business management enterprises rely on cash to survive. Ondiek et al. claimed cash management practices such as delayed payment of creditors and timely collection of debtors are good for the success of businesses. Therefore, the leaders of business enterprises ought to ensure cash and revenue management techniques, which would sustain business finances and avoid failure.

In the preceding subsection, I have described how revenue management affects business profitability. I have also described what business leaders should do to enhance revenue collection to achieve profitability. Wichelns (2013) determined that water companies could achieve financial sustainability and profitability when water sales

revenues are sufficient to meet the operational and maintenance costs of the water company. Other researchers, Sualihu and Rahman (2014) found that proactive billing drives cash flows because billing coupled with a strong collection process can improve revenue base. The conclusion from the discussion is that revenue management is an aspect of business requiring application of various strategic management techniques to enhance amounts of revenue needed for profitability.

Revenue and Nonrevenue Water

In a study of the U.S. water sector, Boyle (2014) found among other things that selling water to customers was the main source of revenue for water utilities and that rate and fees were the main revenue contributors. A direct effect is present between revenue and business earnings. Gilliam (2014) claimed revenue ranks second to earnings, and revenue is a number that users of financial statements use to assess the financial position and performance of business entities. Tarfasa and Brouwer (2013) posited that adequate revenue resources are essential for expanding water supply to unconnected areas, but for improved revenues, public water utilities should provide uninterrupted water supply services. Therefore, increasing revenue collection from water fees would have a positive social effect of improving the supply of potable water, which is good for the health of the people.

The concept of revenue management is important for organization wishing to maximize revenue collection to sustain business operations. Many studies emphasized the importance of revenue management in maximizing revenue and suggested strategies for doing so. For example, Lovrić, Li, and Vervest (2013) conducted a study on public

transport and determined that the concept of revenue management is important for maximizing revenue. Aubke et al. (2014) undertook a study in the hospitality industry in which they underscored the importance of the practice of revenue management in maximizing revenue collection.

Hoang and McKinley (2012) studied the management of utility cash flow instability and noted that organizations can maximize revenue by (a) reducing revenue instabilities by quantifying the source of instability and implementing policies that mitigate it; (b) applying a block rate with an increase in the monthly service fixed charge to realize stable revenues; and (c) avoiding the use of variable sales revenue to meet fixed costs of operations, maintenance, debt servicing, and other costs related to capital maintenance and acquisition. Ndirangu, Ng'ang'a, Chenge, de Blois, and Mels (2013) suggested that using geographical information systems and management information systems could help to reduce nonrevenue water and help maximize revenue. Therefore, revenue management is important for maximizing revenue collection, and as suggested by Kechiche and Soparnot (2012), credible and efficient business strategies are ideal for maximizing revenue collected from business ventures.

Many factors hamper the financial success of water service providers. For example, Boyle (2014) identified the drivers of financial challenges to be declining water resources and resultant falling use, which led to a decline in revenue and climate change, which may cause drought and a reduction in water use and revenue. Gambe (2015) identified factors such as inadequate staff, poorly trained staff, nonrevenue water, and revenue collection inefficiency as causes of financial challenges in public water utilities.

Further, Gambe found that nonrevenue water was the main determinant of unsustainable financial performance in public water utilities.

Nonrevenue water, also known as unaccounted-for water, refers to water produced and lost in the supply network that results in revenue losses (Ezeabasili et al., 2014). Nonrevenue water, arising from illegal connections, can result in loss of revenue (Magombo & Kosamu, 2016). Addressing issues of high nonrevenue water could result in enhanced revenue collection (Harawa, Hoko, Misi, & Maliano, 2016). Leaders of public utilities strategize their companies into competitive business models to sustain the companies financially (Pozzoli et al., 2014). Revenue is the product of the water fee generated by a utility billing customers.

Inflation rates may affect the financial sustainability of water utilities (Rehan, Unger, Knight, & Haas, 2015). Therefore, it may be necessary to maintain water fees above the market inflation rate to cover losses arising from nonrevenue water due to leakages. Nonrevenue water is water produced, but not billed to customers. Strategies aimed at reducing nonrevenue water are appropriate because water utilities serve more customers for longer hours, thereby realizing high revenue. Nonrevenue water has direct costs for water utilities, which makes the water utilities receive less revenue, fail to recover production costs, and fail to meet operational and maintenance costs. Nonrevenue water also imposes indirect costs on consumers, which results in consumers receiving less water and an intermittent water supply (Wichelns, 2013). Mugisha (2013) suggested reducing nonrevenue water through incentive factors such as increasing the number of

staff employed, production, and customers connected. Reducing nonrevenue water can make water utilities realize high revenue (George, 2015).

Factors like nonrevenue water, revenue collection inefficiencies, and unpaid water bills by government institutions account for inadequate revenue in public water utilities (Chitonge, 2013). Because of these factors, increasing water tariffs cannot be a solution for inadequate revenue in public water utilities in the sub-Saharan African region. Tariff increases are not a solution to inadequate revenue in water utilities because other factors such as unpaid water bills by government institutions and low levels of collection efficiency affect internal revenue for water utilities (Chitonge, 2013).

Reducing nonrevenue water and conserving as much water as possible would enable the leaders of public water utilities to sell more and earn more revenue. Doing so enhances revenue collection (Kenny, 2014). Strategies to increase revenue should include an assessment of probable benefits. Van den Berg (2015) posited that bidding to increase revenues by water utility managers should take into consideration whether benefits of reducing nonrevenue water exceed the costs. Leaders of water companies need to think of increasing revenue as well as reducing costs so that the companies accrue benefits.

Some researchers have conducted studies on nonrevenue water. For example, van den Berg (2015) undertook a study on the effectiveness of the techniques used in reducing nonrevenue water. One finding was that factors such as population density and water network infrastructure had a bearing on nonrevenue water. The determination was that water utility managers should undertake the cost-benefit analysis of reducing nonrevenue water to see if the benefits exceed the cost. Business leaders should

understand that nonrevenue water means loss of revenue, and any attempts to enhance revenue undergo the cost-benefit analysis.

In a case study on the level of nonrevenue water in water utilities, Kanakoudis, Tsitsifli, Kouziakis, and Lappos (2014) established that water utilities apply various strategies to reduce nonrevenue water to improve revenue from water sales. Kanakoudis et al. also established that water utilities in Greece do not practice strategies that reduce nonrevenue water but included a fixed charge in the billing to allow for nonrevenue water. By implication, leaders of water companies in Malawi can enhance revenue collection and management without practicing strategies for reducing nonrevenue water by including a fixed charge in their bills.

In a study of methods and tools for managing nonrevenue water, Mutikanga, Sharma, and Vairavamoorthy (2012) concluded that water losses and unbilled, unmetered water were the main issues in managing water utilities. The leaders of the utilities could improve revenues by rehabilitating infrastructure, reducing water losses, and reducing volumes of unbilled water uses of nonrevenue water (Mutikanga et al., 2012). Adequate flow of water 24 hours a day is essential to ensure maximum revenue generation (Alkassseh, Adlan, Abustan, Aziz, & Hanif, 2013). In a study aimed at estimating water loss at night, Alkassseh et al. (2013) recommended using pipes of the right size and attending to maintenance work as essential elements in minimizing the loss of water. Water loss means revenue loss because utility managers include the lost water in the revenue and financing of the water supply system.

Business leaders of water utilities in Malawi may be able to apply similar strategies in pursuit of improved revenue management. The leaders who face financial difficulties fail to expand and fail to enhance revenue (Shibuya, Hernandez-Sancho, & Molinos-Senate, 2014). In a study involving water utilities in Japan, Shibuya et al. (2014) found that leaders of most water utilities faced financial problems that made it difficult for the utilities to expand and enhance utility revenue. Shibuya et al. also found that the financial problems arose from poor infrastructure and unqualified staff. Poor infrastructure results in loss of water and revenue.

Outsourcing

Unpaid public utility bills are constraints for quality service delivery. Therefore, business leaders engage able people for collection of debtors in a strategy known as outsourcing. Lisowski and Sanderson (2013) noted that some business leaders enhance revenue by outsourcing the collection of bills because outsourcing could lead to the reduction of operational costs and the achievement of efficiencies. Issa (2015) claimed that outsourcing is advantageous in that it can expose an organization to skills and capabilities not available internally. Further, Seppala, Kylaheiko, and Jantunen (2014) found that outsourcing revenue collection enhanced the amounts of revenue collected.

Although several researchers suggested using outsourcing (Issa, 2015; Lisowski & Sanderson, 2013; Seppala et al., 2014), other researchers expressed reservations (Chuprinin, Massa, & Schumacher, 2015; Estevez-Abe & Hobson, 2015; Szabo & Ujhelyi, 2015). Outsourcing can cause an organization to lose power and employees to lose jobs in addition to causing problems in monitoring subcontractors (Chuprinin et al.,

2015; Estevez-Abe & Hobson, 2015). Finally, an organization that uses its employees could collect more revenue than an organization that outsources activities (Szabo & Ujhelyi, 2015).

Discounting

Discounting could be a strategy to utilize for maximizing revenue collection. Customers who settle bills by certain dates can get discounting allowed (Chen & Schwartz, 2013). In a study involving last minute bookings by college students, Chen and Schwartz (2013) found that when customers expect better deals by certain dates, they would settle such bills by the due dates and in large numbers. Likewise, Babaei, Mirzasoleiman, Jalili, and Safari (2013) found that offering discounts could help boost revenue for a firm. Although Chen and Schwartz and Babaei et al. recommended discounting, Murphy, Semrad, and Yost (2013) found the opposite to be true. In a study on the impact of discounting, Murphy et al. found that discounting during certain periods of the year did not significantly influence revenues. Therefore, despite the findings of Murphy et al., discounting could be a construct that senior managers of water boards can use to encourage customers with their water bills in arrears to make a settlement, ultimately boosting the revenue collected from water fees.

Innovations

Business leaders in public water utilities need to apply innovative strategies to improve business liquidity and profitability because such innovations have been beneficial to modern industries. Innovations can lead to high organizational performance (Slater, Mohr, & Sengupta, 2014). Executing innovation strategies in all areas of business

operations ensures sustained growth in a firm's revenue (Oke, Walumbwa, & Myers, 2013). Sandvik, Duhan, and Sandvik (2014) noted that a positive relationship exists between innovative strategies and profitability. Zatta and Kolisch (2014) stated that business leaders in many organizations fail to achieve profitability because they lack, among other things, attention, knowledge, and strategies for identifying innovative revenue collection systems. Abubakar (2016) suggested the following ways to increase amounts of revenue from water fees: (a) improved billing and revenue collection, (b) pre-paid metering to avoid debtors and serve billing and disconnection costs, and (c) implementing electronic payment systems. Therefore, embracing innovations in revenue management collection is necessary because it contributes to profit (Zatta & Kolisch, 2014).

The use of strategic tools like the Internet can help in maximizing revenue generation for a business. Di Foggia and Lazzarotti (2014) undertook a study on the impact of revenue management activities in the Italian tourism industry and found that the Internet promotes e-commerce and market knowledge, which are some of the factors that would affect the effectiveness of revenue management. Babaei et al. (2013) posited that the Internet could help boosting organizational performance. Mithas, Tafti, Bardhan, and Goh (2012) noted that organizational leaders should invest in innovations and technologies that reduce operating costs and improve revenue growth. In a study involving business environments and innovations in businesses, Oke et al. (2013) agreed with Mithas et al. (2012) that embracing innovation and technological strategies could help business leaders optimize revenue growth.

Businesses can use various forms of innovations such as computer modeling and forecasting to enhance revenue collection. Aubke et al. (2014) agreed with various researchers on the following viewpoints: (a) management systems yield increased revenues (Lieberman, as cited in Aubke et al., 2014); (b) management requires the use of information technology (Cleophas & Frank, as cited in Aubke et al., 2014); (c) revenue management can be used in service companies, although its integration in the business structure is not complete (Ivan & Zhechev, as cited in Aubke et al., 2014); and (d) management requires business intelligence from staff in sales, marketing, finance, and operations. Innovative strategies such as using powerful computers to model and forecast demand could enable automatic price changes and enhance the amount of revenue accruing to the businesses (Chen, Tsai, & McCain, 2012).

Revenue management is an essential operating strategy, and proper forecasting of revenue management can increase revenues by 1% (Koupriouchina, van der Rest, & Schwartz, 2014). Koupriouchina et al. undertook a study to explore the inherent problems in forecasting revenue management. Koupriouchina et al. found a need for revenue managers to make proper forecasts of demand that would initiate revenue generation. Chen et al. (2012) modified and used a demand forecast approach known as Croston to determine a revenue model that would maximize casino revenue. Chen et al. recognized that revenue management in casinos is complex; thus, they proposed to apply principles of revenue management using an improved forecasting model. Chen et al. also recognized that there was a difference in revenue management principles between hotels and casinos, for casino leaders can change the rates while a game is underway, whereas

hotel leaders fix rates after a customer pays. Chen et al. found that casino leaders could use a forecasting model to maximize revenue.

Eskaf et al. (2014) conducted a study to determine ways of pricing in advancing conservation without compromising the revenue goals of a utility company, in which the findings indicated that it is difficult to forecast maximum and minimum revenues. Eskaf et al. made two further determinations: (a) pricing alone cannot predict revenue ranges, utilities can maximize and minimize revenues through rate structures, and nonpricing strategies such as keeping reserves can mitigate risks in revenue management; and (b) consideration of pricing is essential when modeling revenue ranges because rate determines the revenue utilities can generate. Therefore, business leaders of water utilities could enhance revenue collection from water fees by employing powerful computers to formulate proper models and realistic forecasting strategies.

Technological innovations in collecting revenue help to improve revenue collection and cash flows. The use of innovations such as autonomous and intelligent systems, real-time technologies such as on-site billing and prepaid metering could be ideal for timely production of bills and timely collection of revenue (Nguyen, Stewart, & Zhang, 2013; Shinde & Kulkarni, 2015; Symmonds, 2015). The use of an efficient modern technology can help boost revenue collection (Kim, Chung, Jung, & Park, 2013). In a study of online shopping aimed at finding how to maximize revenue collection, Kim et al. (2013) found that using efficient technology enhanced revenue collection in an online trade. Embracing the Internet can help to boost revenues. In a study involving the use of the web for revenue management, Maier (2012) found that web modeling coupled

with product pricing was an effective tool for enhancing hotel revenue, though the two strategies may not be as effective if all hotels use the same model. In supporting the idea of innovation, Oke et al. (2013) determined that strategizing for innovation leads to increased innovation outcomes, which result in revenue growth. Therefore, technological innovations, like enabling customers to transact online, can boost revenues.

Water customers expect quality service delivery from water utilities. Water service providers need to be financially stable to provide quality water services (Shibuya et al., 2014). Financial stability accrues to businesses whose leaders seek to improve revenue by investing in modern technologies, research and development, marketing, and suitable pricing models (Uddin & Hasan, 2013). Mugisha (2014) posited that applying strategies such as monetary incentives to staff could help to enhance performance capacity, increase service coverage, and improve the flow of revenues. Therefore, adopting various revenue management strategies that include innovative technologies is a step towards attaining adequate revenues needed to provide quality water supply services.

Prepayments, Electronic Payments, and Electronic Records

Prepayment is an innovative strategy used to enhance revenue collection. Zhuang and Li (2012) found that a risk-averse manager prefers taking advance payment for services to maximize revenue. The tool used for prepayment in water utilities is a prepayment meter. Koehler et al. (2015) suggested that using prepayment water meters would increase revenue collection when compared to postpaid meters. Postpaid meters promote credit sales, which expose a company to credit risk. Prepayment meters help companies to reduce credit risk. Miyongo, Ondieki, and Nashappi (2013) claimed that

customers would generally embrace prepaid meters. However, these meters are reliability based and their introduction is debatable. For example, Mburu and Sathyamoorthi (2014) argued that customers could be ready to embrace prepayment meters on condition that managers ensured performance efficiency of the prepaid meters before introducing the technology. Benefits such as controlled consumption and budgeting for service utilization accrue to customers who use prepayment meters, however, self-disconnection upon running out of credit can disadvantage poor consumers (O'Sullivan, Howden-Chapman, Fougere, Hales, & Stanley, 2013). Despite the debate, prepaid meters were helpful in collecting payments from water bill defaulters (Gambe, 2015; Koehler et al., 2015). Therefore, business leaders of water utilities who install prepayment meters have the advantage of increasing revenues.

Business leaders of water utilities can increase revenue collection by making payments convenient for customers. Using strategies such as mobile money services was helpful in enhancing the settlement of water bills (Koehler et al., 2015). Apart from making payment convenient for customers, mobile money payments also help to reduce petty corruption in the revenue collection process (Mishra, 2012). Krolkowski (2014) conducted a study in Tanzania where the mobile-enabled payment strategy was in use. Krolkowski found out that the strategy enabled customers to settle their water bills on time and make more payments per year as well as to enhance revenue collection. Therefore, innovations in revenue collection, such as the use of mobile payment systems, can enhance revenue collection because customers enjoy payment convenience.

Business leaders who fail to make operational changes required to realize benefits would incur losses. For example, in a study involving the introduction of an electronic records management system, Adler-Milstein, Green, and Bates (2013) found that some practices would achieve a gain while others would incur a loss. The implication for business is that the adoption of an electronic record management system could have a positive financial impact for practices that leverage the system to increase revenue and that those that fail to make the required operational changes would incur losses. Haensel and Koole (2013) undertook a study on sales processes for a company and found that automation of sales processes would help in making feasible decisions that ensure the yielding of more revenue and profit for the company. Enforcing strategic innovations like using modern technologies can help to optimize revenue collection (Pascoe, 2013). However, firms achieve higher profitability through technologies that enable growth of revenue than do technologies that enable cost reduction (Mithas et al., 2012).

In the preceding component, I have described eight constructs for revenue management as identified in the conceptual framework. The purpose of the literature review in the qualitative single-case study was to explore credible business strategies senior managers of public water utilities use to address inefficiencies in collecting water fee revenues. The literature review involved synthesizing various research works relevant to the study phenomenon to enrich academic rigor (Wolfswinkel, Furtmueller, & Wilderom, 2013). The relevant revenue management constructs have shown a strong link towards achieving maximum revenue collection and attaining business profitability. Revenue management strategies must be in place and effective if businesses have to

maximize revenue. There must be strong controls, monitoring, and evaluation to prevent loss of water and revenue. The water market may need to undergo a proper analysis, which could influence decisions about pricing, billing, discounting, outsourcing, innovations, and segmentation.

In summary, the aim of every business is to profit, and so collecting adequate revenues enhances liquidity, which influences profitability. There are challenges and risks in revenue management, which revenue managers must mitigate to maximize revenue collection. The core of the literature review in the study is on the need for business leaders, especially those in public water utilities, to execute various strategic actions to maximize revenue collection. Among the strategic actions are pricing and billing, innovations, outsourcing, discounting, segmentation, nonrevenue water management, and liquidity and profitability management.

Transition

Section 1 was an introduction to the topic and the business problem that I intend to address. The section contained a brief overview of the study and subsections including the problem statement, purpose statement, nature of the study, research question, conceptual framework, significance of the study, and literature review. In the subsection of conceptual framework and literature review, I have conceptualized and explored the theory of revenue management and its applicability to the current study. I identified eight constructs, which inform the conceptual framework. In Section 2, I describe details for conducting the study. The detailed components include the purpose of the study, role of the researcher, study participants, research methodology, research design, population, and

sampling and ethical research. In addition, I identify data collection instruments, data collection techniques, data organization techniques, data analysis, and validity and reliability of the research. In Section 3, I present and describe findings from the study including the applicability of the findings to professional practice, the implications that the study can have on social change, recommendations for future research, and a reflection of my experience with the doctoral study.

Section 2: The Project

The phenomenon of profitability and liquidity is crucial to the survival of a business. Business leaders in the 21st century need to embrace strategies that enhance the collection of revenue. This section of the study includes discussions of the purpose of the study, role of the researcher, research participants, research methodology, population and sampling, data collection methods, and data analysis, reliability, and validity.

Purpose Statement

The purpose of this qualitative single-case study was to explore credible business strategies senior managers of water utilities use to address inefficiencies in collecting water fee revenues. The targeted population for this study was senior managers from a public water utility company in Malawi, located in the southeastern part of Africa. I targeted senior managers with managerial experience in resolving financial challenges that affect the public water utility company. In a study of financial practices of water utilities, Boyle (2014) stated that senior water managers have experience in resolving financial challenges that affect the water utility companies. It is for this reason that I targeted this population. The implications for positive social change include the potential to identify efficient business revenue collection strategies that senior managers can use to enhance amounts of revenue collected and needed for improved operational performance of public water utility companies. The social change significance of the study is that the improved operational performance of water utility companies would reduce incidences of intermittent water supply, increase the number of consumers accessing potable water, and contribute to reduction of water-borne diseases.

Role of the Researcher

The qualitative researcher becomes a research instrument responsible for interacting with participants (Sarker, Xiao, & Beaulieu, 2013). Roles of a researcher help in determining research results (Collins & Cooper, 2014). Marshall and Rossman (2016) stated that a researcher is a facilitator, and Morse, Lowery, and Steury (2014) have noted that the researcher is the main research instrument. Hlady-Rispal and Jouison-Laffitte (2014) described the researcher as the person responsible for conducting interviews and collecting data in addition to analyzing and interpreting data. Thus, my role in the study was to act as the main research instrument responsible for developing the interview protocol, conducting interviews, collecting data, analyzing data, and interpreting data.

An interview protocol is a useful tool to guide, ensure uniformity, fairness, and quality of exploratory interviews. Platt and Skowron (2013) reported using an interview protocol known as *genogram* to establish relationships with research participants and to accord the participants an opportunity to provide appropriate responses based on their experiences. A well-structured research protocol is useful for ensuring the quality of research results (Kono, Izumi, Kanaya, Tsumura, & Rubenstein, 2014). Therefore, I used an interview guide to establish a sound relationship with participants and to provide a protocol for collecting data from them (see Appendix A). Alimo (2015) encouraged the use of researchers from outside the organization to ensure research objectivity. I was an outsider to the business organization under study, and had no connection with the study participants; thus, I was better able to maintain objectivity in the research.

Ethical conduct is necessary for maintaining the credibility of a research study (Akhavan, Ramezan, & Moghaddam, 2013). In regard to ethical considerations, my role was to ensure compliance with ethical requirements by ensuring that the process of data collection began after receiving a Walden University Institutional Review Board (IRB) approval, which ensured that my study adhered to the ethical principles, including the ethical principles prescribed in the Belmont Report protocol to protect human subjects. Several researchers have touted the significance of this protocol. For example, McLaughlin and Alfaro-Velcamp (2015) and Brakewood and Poldrack (2013) noted the significance of the Belmont Report protocol in protecting vulnerable research participants such as children and the elderly.

There are three principles in the Belmont Report protocol: (a) justice, (b) beneficence, and (c) respect for persons (McLaughlin & Alfaro-Velcamp, 2015). I used the consent form to achieve the principle of respect-for-persons by asking for their consent to participate. I used the same consent form to achieve beneficence, which is the principle meant to reduce harm to participants by maintaining confidentiality and anonymity. Finally, I used the same consent form to ensure the principle of justice, which is a principle of fairness and equal treatment of study participants by allowing them to withdraw from the study without penalties.

A face-to-face semistructured interview was the data collection tool. I audio recorded the interviews and took notes while the interviews were in progress to record emotions and other unrecordable views. Doody and Noonan (2013) noted that interviewing is important in a qualitative study, and Bryman and Bell (2015) suggested

the use of interviews provide room for follow-up questions needed to reach saturation and reduce subjectivity. Yin (2014) encouraged the use of multiple sources of data to achieve triangulation. I conducted interviews in an unbiased and neutral manner by recognizing the personal views and interpretations of the study participants (Marshall & Rossman, 2016).

During the audio-recorded interviews, I observed and took notes on facial expressions and body language to supplement audio-recorded data and eliminate bias that may exist if only one source of data is used. Doody and Noonan (2013) noted that attentive listening while the interview is in progress reduces bias. Silver and Rivers (2015) suggested that critical and well-performed data analysis is a means to eliminating bias, and O'Reilly and Parker (2013) encouraged the use of member checking to eliminate bias. My role was thus to pay attention and remain active throughout the interview process by taking notes, recording the participants, and conducting data analysis with reflexivity. To eliminate bias further, I ensured that each interviewee had an opportunity to respond to the same set of questions. At the end of the interviews, and after analyzing and interpreting the data, I performed member checking.

Interviews help the researcher get a deeper understanding about experiences participants have on the phenomenon under study (Doody & Noonan, 2013). An interview protocol (see Appendix A) is an ideal tool for conducting interviews and collecting useful research data because it connects the researcher and participants (Leins, Fisher, Pludwinski, Rivard, & Robertson, 2014). An interview protocol should help a researcher eliminate bias and maintain accuracy by being consistent throughout the

research process and with each interviewee (Brown et al., 2013). An interview protocol should prescribe what the researcher can do from the beginning to the end, which includes using a script for the beginning and ending of interviews, ordering interview questions and any follow-up questions, wrapping up by thanking participants, member checking, and following up with member checking activities (Onwuegbuzie & Byers, 2014).

Participants

Participants in a qualitative study must meet certain eligibility criteria (Hays & Wood, 2013). Palinkas et al. (2015) and Suri (2013) noted that participants' knowledge and experience with the research phenomenon should form the basis for choosing participants. Cooper et al. (2015) used, among other things, age, as criteria for eligibility of study participants. Federman et al. (2014) noted that readers could judge the usefulness of findings of a study if a researcher gives proper descriptions and notes the characteristics of eligible participants. In my study, the eligibility criteria were that participants must have been senior managers of a public water utility company who were not less than 18 years old, had been with the company for not less than 3 years, and had used credible business strategies to address inefficiencies in collecting water fee revenues.

Blix and Wettergren (2015) noted that sometimes researchers tend to feel insecure and inferior before gatekeepers to the extent that the researchers fail to access eligible participants. Pugsley (2016) recommended several ways of gaining access to research participants including: (a) obtaining an ethical approval, (b) ensuring confidentiality and

anonymity, (c) explaining the purpose of a study, (d) obtaining consent from participants, and (e) ensuring voluntary participation and right to withdraw. Savage, Moro, Boyden, Brown, and Kavanaugh (2015) recommended, among other things, obtaining consent from study participants. Likewise, Hoyland, Hollund, and Olsen (2015) found that gaining access to research participants should involve maintaining transparency, explaining aims of the research, conducting negotiations, and obtaining consent from the participants.

In the study, my strategies for gaining access included (a) seeking permission from the chief executive officer (CEO) at the study site to conduct the research and gain access to the research participants (see Appendix B); (b) asking the participants to read and understand the research protocol (see Appendix A); and (c) asking the participants to read, understand, and email a response with the words “I consent” on the informed consent form, which gave assurances regarding confidentiality, anonymity, and security. In accordance with Haahr, Norlyk, and Hall’s (2014) recommendations, I sent participants information indicating that they could opt out of the study at any time without penalties. Gaining access involved keeping constant communication and maintaining personal contacts with the participants.

Conducting qualitative research can be challenging if the working relationship with research participants is not good (Narui, Truong, & McMickens, 2015). Browne and McBride (2015) recommended socializing with possible participants as a strategy for establishing a good working relationship with participants. Poremski, Whitley, and Latimer (2016) found out that creating trust between the researcher and participants is a

good strategy for establishing a working relation with participants. Quinn (2015) used the ethical principles stipulated in the Belmont Report namely, respect for persons, beneficence, and justice as strategies for establishing a working relationship with participants. Strategies I used for establishing such a relationship involved (a) self-introduction and introducing of the project to the participants, (b) assuring the participants of their freedoms and security for participating in the study, (c) obtaining permission and consent from the gatekeepers and participants to conduct interviews in an environment of their own choice, and (d) administering the interviews only after obtaining an IRB approval to ensure the participants of the seriousness of my position regarding the maintenance of trust, confidentiality and anonymity. My use of the CEO at the study site to connect with the participants was a strategy aimed at establishing trust and safety, and securing participation only for those of the right age and qualifications.

All five participants qualified for participation because they were senior managers over 18 years old who had been with the company for not less than 3 years. The study findings originated from data I collected from the participants and the company documents. Participants in the study consented to participation through email. I conducted interviews with the participants over a 5-day period, and each interview lasted between 25 and 45 minutes. I held each interview at a different location. Member checking took place within 7 days after I summarized the transcribed interview data.

Research Method and Design

In this subsection, I outline the strategies I used for conducting the study. Researchers such as Saunders, Lewis, and Thornhill (2015) suggested using a framework

known as the “research onion” to guide the research process. The research onion framework includes layers such as a philosophy of strategies, time horizons, and data collection methods. Saunders et al. suggested two approaches to conducting research: one approach is a deductive approach, whereas the other is an inductive approach. The deductive research approach includes a quantitative method, which was not suitable for this study. Using a qualitative method and an inductive approach was ideal because (a) I was not going to generalize the research findings, (b) there was no hypothesis at the beginning of this study, and (c) the process involved obtaining subjective data regarding the phenomenon from the respondents. Yin (2014) noted that a successful research project arises from a correct research design. Further, Marshall and Rossman (2016) and Denzin (2013) suggested using a research question to identify the research design. In sum, there are several ways for identifying a specific research design.

Research Method

Researchers use the problem statement to select research methods, and to provide clarity on what the study results would contribute (Jacobs, 2013). Yin (2014) advised using a qualitative method when researchers want to learn from individual work experiences. Denzin (2013) stated that exploration that involves describing and interpreting data is characteristic of a qualitative study method. Pugach, Mukhopadhyay, and Gomez-Najarro (2014) likewise noted that a qualitative method is suitable for exploring the lived experiences of study participants. In this study, I thus adopted a qualitative method because its purpose was to explore strategies senior managers of a public water utility used to address inefficiencies in collecting water fees revenues.

Two research methods not used in the study were quantitative and mixed methods. Quantitative methods involve quantifying a phenomenon with an aim to examine a causal relationship (Yin, 2014). In a quantitative method, the design of a research instrument is for research participants to answer closed questions and usually test a hypothesis (Balkin, 2014). Quantitative methods involve statistics (Wester, Borders, Boul, & Horton, 2013). It might be difficult to achieve triangulation in a quantitative research method because of lack of descriptive experiences by participants (Frels & Onwuegbuzie, 2013). In this study, I did not use statistics, did not test hypotheses, did not examine causal relationships among variables, and did not want difficulties in achieving triangulation. Hence, the quantitative method was not appropriate.

Mixed-methods research is a hybrid of qualitative and quantitative research methods (Venkatesh, Brown, & Bala, 2013). Palinkas (2014) recommended using a hybrid method to ensure collection of rich data. The mixed-methods approach requires more time for both methods to be concluded (Venkatesh et al., 2013). Mixed methods also involve measuring the relationship existing among variables (Sparkes, 2014). In mixed methods, researchers face challenges in turning statistical data into text (Riazi & Candlin, 2014). Therefore, I used a qualitative method rather than mixed methods because I did not conduct the research over a long period, I did not plan to measure relationships among variables, and I did not plan to lose any meaning during data analysis and interpretation.

Research Design

In the research design subcomponent, I discuss the nature of the study in relation to the research design. A research design serves as a framework for providing satisfactory responses to a research question. The design involves collection, analysis, and use of different strategies (Saunders et al., 2015). The research design also serves to enhance the validity and accuracy of study data (Saunders et al., 2015). Qualitative researchers commonly use five research designs, namely, (a) ethnography, (b) narrative, (c) phenomenology, (d) grounded theory, and (e) case study (Vaismoradi, Bondas, & Turunene, 2013; Yin, 2014). For purposes of this study, I considered three research designs, which were ethnography, phenomenology, and case study. Of the three designs, I chose case study.

Case study involves in-depth exploration to contextualize a phenomenon in its real world setting (Yin, 2013). Yin (2013) used case study research design to explore in-depth aspects of validity and generalization. Cronin (2014) found that using case study design was a powerful form of inquiry. De Massis and Kotlar (2014) determined that case study is best for studies involving organizations and that case study design is an ideal approach for exploring and understanding in-depth conditions in the context of real-life experiences. Hyett, Kenny, and Dickson-Swift (2014) stated it is more flexible to use case study than phenomenology. Therefore, of the three research designs, I employed a single-case study research design.

Phenomenological research design involves exploring how the lived experiences of the participants reveal themselves to inquirers (Ilkay, 2013). Phenomenological

research design is not as flexible as case study design (Hyett et al., 2014). Researchers use the phenomenological design to create knowledge from the lived experiences of individual participants from the environment in which they live (Lien, Pauleen, Kuo, & Wang, 2014). Wagstaff and Williams (2014) stated that phenomenological design is ideal when many participants are involved in a study. Therefore, phenomenology was not appropriate for my study.

Researchers use the ethnographic design to gather data and analyze ethnic and cultural behaviors (Smyth & McInerney, 2013; Symons & Maggio, 2014; Thierbach & Lorenz, 2014). Ethnography requires plenty of time to observe and understand the in-depth characteristics of groups of people (Marshall & Rossman, 2016; Moran, 2013). Ethnographical studies involve studying cultural groupings (Robinson, 2013). I studied business organization and not groups of people in their cultural settings and did not spend too much time in observing participants. Therefore, an ethnographic design was not appropriate for the study.

Data saturation is necessary for achieving objectives of a qualitative research study (Marshall, Cardon, Poddar, & Fontenot, 2013). Research data reaches saturation when the data are of good quality and sufficient to support the study (Anyan, 2013; Roer-Strier & Sand, 2015). Saturation occurs when data from several participants reveal common characteristics, making them possible to replicate (Fusch & Ness, 2015; Morse, 2015). Data saturation also occurs when new themes stop emerging from an inquiry, and when there is no possibility for new coding (Fusch & Ness, 2015; Marshall & Rossman, 2015). Clearly, Horsfall and Hayter (2014) recommended using participants of different

experiences and specialization to achieve data saturation. Porte (2013) stated that a researcher could reach data saturation by using a methodology that other researchers used before. Fusch and Ness (2015) stated that use of interviews as data collection methodology helps researchers reach data saturation. Further, Fusch and Ness suggested conducting additional interviews and follow-up member checking to reach data saturation. Therefore, I ensured data saturation by using interviews as a data collection methodology. Further, I ensured data saturation by conducting interviews until reaching a stage at which I could replicate the results, where no new information, no new themes, and no new coding emerged from the inquiry. If the sample of five did not bring about saturation, I would conduct follow-up member checking interviews to obtain in-depth data needed to reach data saturation.

Population and Sampling

In the population and sampling sub-component, I describe and justify the sampling method, the number of participants, and achievement of data saturation. The final part of this sub-component contains the criteria for selecting participants and the interview setting. Purposeful sampling was the sampling method for the study. The study sample comprised five participants from a population of 10 senior managers of a public water utility located in Malawi in the Southeastern part of Africa. Palinkas et al. (2015) indicated that purposeful sampling is justifiable when a researcher has limited resources. Palinkas et al. and McBeth et al. (2014) stated that using purposeful sampling helps researchers to gain in-depth understanding of a phenomenon. Suri (2013) noted that using purposeful sampling helps a researcher to get participants who are knowledgeable in the

subject under study. Likewise, Duan, Bhaumik, Palinkas, and Hoagwood (2014), agreed with Uprichard (2013) that purposeful sampling in qualitative is ideal in case studies. The use of a purposeful sampling simplifies categorization and formation of themes (Blau, Bach, Scott, & Rubin, 2013; Ginsberg & Sinacore, 2013; Ilkay, 2013; Prendergast & Maggie, 2013). Therefore, I used purposeful sampling for the research study.

Palinkas et al. (2015) indicated that a small sample is adequate for qualitative studies. Likewise, Yin (2014) noted that small sample sizes could be adequate in qualitative case studies and purposeful sampling. A qualitative study could result in achieving complete balance without a large number of respondents (Prendergast & Maggie, 2013). Marshall and Rossman (2016) stated that use of a small sample is justifiable when a researcher wants to achieve quality and get full understanding of the study phenomenon. O'Reilly and Parker (2013) used a small sample to achieve flexibility. Leedy and Ormrod (2013) recommended using between five and 28 participants. Therefore, I used a small sample of five participants from the population of 10 senior managers to get an in-depth understanding from knowledgeable and experienced participants.

The aim of data saturation is to guarantee qualitative research rigor (Morse, 2015). It is necessary for enhancing the validity of research findings (Fusch & Ness, 2015; Morse et al., 2014). Fusch and Ness (2015) posited that data saturation occurs when a researcher can no longer ascertain new coding, new themes, and new information and when there is commonality in responses from the participants. Fusch and Ness recommended use of follow-up member checking interviews to reach data saturation.

Likewise, other researchers (Elsawah, Guillaume, Filatova, Rook, and Jakeman, 2015) found that data saturation occurs when the interview responses become replicable. Using a small sample of experts is good for achieving data saturation (Morse, 2015). However, using a large sample may not guarantee data saturation (Fusch & Ness, 2015).

Anderson and Hartzler (2014) noted that a sample size could influence bias in most qualitative studies. In contrast, Marshall et al. (2013) noted that size of the sample does not help reach data saturation but the composition of the sample size. Therefore, I ensured data saturation by exploring all responses from the participants until no new themes, no new coding, and no new data emerged from the interview. Finally, I ensured data saturation by interviewing participants of different professions who were knowledgeable and experienced enough to provide quality, accurate and in-depth data. If the sample did bring about saturation, I would use follow-up member checking interviews to obtain in-depth data needed to reach saturation.

Robinson (2014) described five purposive sampling strategies for a single-case study namely, significant case, intensity case, deviant case, extreme case, and typical case. Robinson stated that the strategies are applicable as follows: (a) significant case is applicable in psychobiography studies, (b) intensity case is applicable in studies aimed at comprehending rich information from participants known to have experienced a crisis, (c) deviant case is applicable in studies aimed at testing theory, (d) extreme case is applicable in studies aimed at understanding individuals with strange behavior, and (e) typical case is applicable in studies that are typical examples of therapeutic and success stories of previously faced challenges.

Therefore, of the five purposive sampling strategies, I employed the typical case strategy to explore how the knowledgeable and experienced senior managers of the focus case study address inefficiencies in collecting water fee revenues. Experienced participants are capable of providing data rich enough to achieve saturation and to satisfy the requirements of a study (Palinkas et al., 2015). O'Reilly and Parker (2013) stated that availability of study participants and sufficiency of the study sample are characteristic of an adequate study sample. Therefore, experience and availability of study participants formed the criteria for their selection.

Robinson (2014) posited the need for a researcher to get permission from an individual who can easily access all possible participants. Therefore, I sought permission of the CEO of the focus case study to help in identifying senior managers experienced in addressing inefficiencies in collection of water fee revenues, to help in providing a quiet conference room for conducting interviews, and to assure the participants that their contributions would be strictly confidential.

Interview Setting

An interview setting must be private, quiet, and convenient for the research participant (Bell, 2013). According to Marshall and Rossman (2016), the site must be comfortable to enable the participant to respond meaningfully. Bell (2013) agreed with Doody and Noonan (2013) in recommending use of a quiet place such as a public library where the participants would be open to express themselves without fear. After identifying the study participants, I sought the permission from the CEO of the focus case study to consent to the participation of selected respondents, to provide a quiet

conference room where interviews would take place, and to assure the participants that their contributions would be strictly confidential. Nevertheless, this strategy did not work because the participants preferred their own setting. Instead, an alternative approach was to follow the recommendation of Davis (2013) and Bell (2013), which involved reaching agreement with individual participants for locations of their choice. Researchers are responsible for protecting research participants from harm (Bell, 2013). Interview sites must not be risky and must be easily accessible by the participants (Marshall & Rossman, 2016). Therefore, interviews took place at mutually agreed upon sites, were convenient for the study participants, and involved alternating locations to protect participants from harm and to ensure confidentiality.

During the interviews, I began by instilling confidence and trust in the participants by shaking the hand of each interviewee, expressing welcome remarks, sharing a copy of the interview questions, walking through each question, and reading and interpreting them before asking (see Appendix A). I used the consent form as a guide to assure each interviewee of security, confidentiality, and freedom to withdraw from the study without penalties. The aim of the assurance was to enhance trust between the interviewer and the interviewee. Each interview ended upon reaching data saturation. Then, after summarizing the interview data, and as posited by O'Reilly and Parker (2013), I carried out member checking to allow study participants to verify the interpretation of the data.

Ethical Research

Ethics in research call for embracing and understanding of conflicts in a manner that ensures moral obligations (Avasthi, Ghosh, Sarkar, & Grover, 2013). Vanclay, Baines, and Taylor (2013) provided 18 principles that should govern the conduct of research among human participants. Among the 18 governing principles are (a) right to withdraw, (b) informed consent, (c) data protection, and (e) right to modify a transcript. Marshall and Rossman (2016) and Angelos (2013) noted that participants express informed consent to participate in a study by agreeing to participate voluntarily. Angelos and Amarasinghe et al. (2013) determined that each research participant must provide voluntary consent to participate in a study. In the present study, I ensured informed consent by asking the participants to respond voluntarily to an email with the words “I Consent.” I stated in the consent form the voluntary nature of the research so that the participants could make informed decisions about participating in the study.

Connelly (2014) noted that participants should know they have the right to withdraw from a study. Similarly, Haahr et al. (2014) determined that participants in a study have the right to withdraw at any time during the study without penalties. Connelly further noted that participants have a right to verify the findings. Therefore, I used member checking for participants to verify the analyzed findings, and I was ready to respect the decisions of those who would refuse to participate in the research by allowing them to leave. None of the participants who consented decided to leave but three of the originally invited participants did not respond to the invitation. I left them out. Hadidi, Lindquist, Treat-Jacobson, and Swanson (2013) suggested researchers keep a record of

withdrawing participants to enhance depth of the case study; otherwise, Hadidi et al. recommended retention of a record of all research participants. No participant withdrew from the study after consenting. Providing incentives to participants could influence the decision to participate in a study (Amarasinghe et al., 2013). Robinson (2014) claimed incentives could encourage participation; however, offering incentives can motivate provision of biased and fabricated data. Therefore, I did not provide any incentives to the participants.

Ethical principles characterize the responsibility of researchers in conducting research whose conclusions could be easy to confirm, validate, and remain relevant. Researchers in business should be mindful of ethical considerations (Arend, 2013). The suggested five characteristics of ethical principles in undertaking research are beneficence, autonomy, and protection of vulnerable participants in addition to justice and respect for participants. Maintaining ethics during research helps in reducing possible risks that research participants may experience, contributing to professional knowledge in research, and promoting respect for individuals by allowing them to make informed choices while participating in the research (Allen, 2015; Bell, 2013; McAreavey & Das, 2013). I ensured ethical protection of participants by requesting CEO of the case study company to connect me with qualifying participants (see Appendix B). Data collection started upon receiving Walden University IRB approval. To conform to ethical standards, I avoided all forms of action that would distort or misrepresent the data. The data was for the purpose of the study only. I maintained the confidentiality of the identity name of each participant in the study. Participants in the study received further protection by

keeping all the audiotapes and computer external drives used in the study in a secure strongbox. I plan to retain sole access to the strongbox and destroy the audiotapes and external drivers at the expiry of 5 years by shredding them with eraser software and physically destroying any computer external drives used in the study.

Federal regulations in the United States require researchers to keep study participants free from risks by seeking IRB approval before conducting research involving human participants. To comply with the regulations, I started recruiting participants and conducting the study after obtaining Walden IRB approval number 10-07-16-0447542, and I completed the National Institutes of Health (NIH) online certification test before embarking on data collection. In a study involving human participants, nondisclosure of names of study participants ensures the maintenance of confidentiality (Baines, Taylor, & Vanclay, 2013). Grosseohme (2014) stated that readers cannot identify names of participants in a study when researchers maintain privacy and confidentiality. Bell (2013) determined the need for protecting study participants from harm. I ensured full protection of participants from harm by using pseudonyms to maintain confidentiality and security. I used R1, R2, R3, R4, and R5 as code names for participants one through five, and CD1 and CD2 as codes for company document no. 1 and company document no. 2, which I reviewed to achieve methodological triangulation. CD1 was a recent annual report, while CD2 was a 5-year strategic plan. CD1 contained a report on the performance of the public water company throughout the year, and it presented financial statements for the present and previous financial years in line with international financial reporting standards. Notes to the financial statements included a

summarized credit policy and aspects of customer relationship management. CD2 contained, among other things, information on business success factors needed to attain financial sustainability and profitability. Therefore, I used fictitious names for the study participants. Further, the study report does not disclose names of participants and the case study public water utility company to narrow the range of possible contenders for any comments made.

Data Collection Instruments

In qualitative research, the researcher is the primary data collection instrument because of direct involvement in hearing, seeing, and interpreting the data (Marshall & Rossman, 2016; Sarker et al., 2013; Yin, 2014). Therefore, I was the primary data collection instrument. Yin (2014) agreed with Taylor (2013) in noting that using more than one method such as review of documents, interviewing, and observing are processes involved in qualitative case studies. Collecting data from different sources, embracing transparency, and providing rich descriptions of research findings enhance credibility and transferability of results (Wilson, 2014). Replicable and repeatable studies are synonymous with reliable research (Hietanen, Sihvonen, Tikkanen, & Mattila, 2014; Kaczynski, Salmona, & Smith, 2013). Because I was the principal data collection instrument, I used face-to-face semistructured interviews as the main tool for collecting primary data for my study so that I could have the opportunity to take notes of nonauditory observations such as facial expressions and body language. Several researchers reviewed documents to augment and corroborate research evidence from

other sources (Colli, 2012; Colli, Howorth, & Rose, 2013; De Massis & Kotlar, 2014).

Therefore, I used documents as a secondary source of data for my study.

An interview protocol (see Appendix A) served as a guide for the interviews. The use of open-ended questions combined with note taking of nonauditory observations such as facial expressions and body language helped to elicit rich information necessary for a study (Moen & Core, 2013). Yin (2014) suggested the use of audio recordings to enhance credibility while Schoorman (2013), Alimo (2015), and Madu (2016) recommended using note taking during interviews to capture data that audio recordings cannot capture. Thus, I used face-to-face semistructured interviews with open-ended questions, audio recorded the interview processes, and took notes of nonauditory observations during the interview. I used the consent form as an instrument for seeking permission to conduct the research. Face-to-face semistructured interviews followed after obtaining consent from the participants.

I used member checking to enhance reliability and validity of the data collection instrument. The process of member checking included processes suggested by Onwuegbuzie and Byers (2014) in which research participants review transcribed and analyzed data. Transcribing and analyzing comments that participants make can enhance validity (Houghton et al., 2013). The first member checking interviews took place at the end of each interview session. Follow-up member checking interviews enhance validity (De Ceunynck, Kusumastuti, Hannes, Janssens, & Wets, 2013). Therefore, I conducted follow-up member checking interviews following steps put down in the interview protocol.

Data Collection Technique

The overarching research question for the qualitative case study was: What credible business strategies do senior managers of water utilities use to address inefficiencies in collecting water fee revenues? In this subsection, I describe the process for collecting the data and provide an abridged interview protocol. Yin (2014) noted that there are six possible sources for case study data and recommended collection of data from two of the six sources, which are (a) documentation, (b) archival records, (c) interviews, (d) direct observations, (e) participant observation, and (f) physical artifacts. Interviews, observations, and review of documents are common methods of collecting data for qualitative research (Jamshed, 2014; Marshall & Rossman, 2016; Yin, 2014). Therefore, of the six sources, I utilized interviews as the main data collection tool supplemented by review of documents.

During interviews, digital recording and note taking of interviewee body language are good for qualitative data collection (Alshenqeeti, 2014; Houghton et al., 2013). Therefore, I took notes of interviewee body language to corroborate and supplement recordable findings of the research. The data collection procedure involved use of face-to-face semistructured interviews because personal contact ensures trust, brings flexibility, and enables the interviewer and interviewee to exchange information (Onwuegbuzie & Byers, 2014; Uribe-Jongbloed, 2014; Vogl, 2013). An interview protocol (see Appendix A) is an essential tool because it provides a guide of the interview process and contains interview questions. It also contains initial meeting arrangements, follow-up meetings, and clarification on reaching data saturation (Clearly et al., 2014;

Leins et al., 2014; Yin, 2014). Therefore, I used the interview protocol (see Appendix A) as a guiding tool for conducting the interviews.

Doody and Noonan (2013) supported the use of interviews to collect qualitative data while Myers (2013) described qualitative data as a record of statements participants make during an inquiry. Deakin and Wakefield (2014) described face-to-face interviews as a preferred way for collecting qualitative data. I, therefore, utilized face-to-face semistructured interviews to collect data. Several researchers supported the use of digital recording devices during semistructured interviews (Fredrick, 2015; Patton, 2015; Richardson, 2014). Therefore, I used a dicta phone and a Samsung Galaxy S5 equipped with recording features as main recording devices. An audiotape recorder and a laptop computer equipped with recording features were backup recording devices in case of malfunction or failure of main recording devices.

Face-to-face semistructured interviewing could pose a few advantages and disadvantages. Some of the advantages include the following: (a) participants could have freedom to provide responses to probing questions (Alshenqeeti, 2014; Doody & Noonan, 2013; Yin, 2014); (b) face-to-face semistructured interviewing could help the researcher to explore unknown and hidden issues by observing nonverbal communication (Alshenqeeti, 2014; Onwuegbuzie & Byers, 2014; Yin, 2014); and (c) face-to-face semistructured interviewing could achieve a high response rate made possible by the trust of interviewer and interviewee facing each other and being ensured of confidentiality (Comi, Bischof, & Eppler, 2014; Jamshed, 2014; Vogl, 2013).

Some of the disadvantages that face-to-face semistructured interviewing could pose include the following: (a) face-to-face interviews could be expensive and require a lot of time to conduct (Alshenqeeti, 2014; Jamshed, 2014; Onwuegbuzie & Byers, 2014); (b) respondents may not be comfortable in explaining sensitive and challenging issues (Alshenqeeti, 2014; Onwuegbuzie & Byers, 2014; Saunders et al., 2015); and (c) face-to-face semistructured interviewing could be prone to interviewer or interpreter bias (Alshenqeeti, 2014; Jamshed, 2014; Vogl, 2013; Yin, 2014). Revenue collection inefficiencies could be a sensitive subject. Telephone interviews are valuable and viable for collecting data on sensitive subjects (Drabble, Trocki, Salcedo, Walker, & Korcha, 2015). However, telephone interviews were not instrumental because telephone interviews can be ineffective (Irvine, Drew, & Sainsbury, 2013).

Although participant observation and direct observation may be preferred data collection techniques, the techniques are associated with observer bias and may infringe on privacy and confidentiality (Xu & Storr, 2012). Rimando et al. (2015) noted that environmental noise and general disturbances might distract the researcher during observation. Hennik and Weber (2013) posited that observation could be disadvantageous when participants are sensitive to their privacy. Documents review and archival records are essential data collection techniques, because the researcher can access information, which may not be available to the public. The disadvantage is that the documents and archival records may be outdated for the study (Bryde, Broquetas, & Volm, 2013). The documents, archival record, and physical artifacts may help to triangulate data because the data are from multiple sources, but may provide redundant data (Yin, 2014).

In spite of the disadvantages of documents review, several researchers used documents review to augment research findings (Colli, 2012; Colli et al., 2013; De Massis & Kotlar, 2014). Therefore, in the research study, I used face-to-face semistructured interviews and document review to collect data. Documents review involved a review of annual report and a 5-year strategic plan. The website of the case study company contained valuable information, which was irrelevant to the research question. Therefore, I did not use the website data.

The process for conducting the study started after receiving Walden University IRB approval. There was no pilot study after receiving the IRB approval following recommendations from my study committee. Pilot studies allow researchers to pretest the data collection instrument and allow for modification where necessary (Clearly et al., 2014; Morin, 2013). Marshall and Rossman (2016) stated that pilot studies enhance research validity. However, Pritchard and Whiting (2012) noted that flexibility is characteristic of qualitative research. Following from the understanding, that qualitative research is flexible, and from committee recommendation, I did not use a pilot study. Doody and Noonan (2013) recommended researchers ensure confidentiality and seek permission from participants before recording the interview. During the interview process, I followed the recommendation that Doody and Noonan made. At the end of the interview session, I administered member checking. After transcribing the interview data into MS Word, and after uploading the data into MS Excel, I filed the raw data from each respondent and document in a soft copy folder in my computer, in an external drive and in the cloud drive. I coded and analyzed the data into categories of themes. Koelsch

(2013) and O'Reilly and Parker (2013) touted the significance of member checking for ensuring credibility and validity of research data. Therefore, I administered the process of member checking after the initial data analysis by taking the summarized themes to the participants for validation. No changes to the data arose from the member checking process, for the participants agreed with the summarized findings from the data.

Member checking is a research process carried out after data collection and interpretation. It is the process of getting feedback from the participants (Andrasik et al., 2014). During member checking, participants have a chance to validate accuracy of statements made during data collection (Koelsch, 2013). Harvey (2015) noted that member checking enhances credibility and validity of study findings because participants have a chance to validate the findings for accuracy. Alimo (2015), Madu (2016), and Emrich (2015) all used member checking to enhance the credibility of their research findings. Therefore, I used member checking of the data interpretation to get feedback from the participants and to enhance credibility and validity of study findings. The process involved analyzing and interpreting what the respondents said, taking the interpretation back to the respondents, and requesting that they provide feedback on whether the findings were reasonable, fair, and accurate. All participants agreed with the interpretation without effecting changes to the data.

Data Organization Technique

In the study, I aimed to explore credible business strategies senior managers use to collect water fee revenues. The exploration involved conducting face-to-face semistructured interviews. In this section, I explain systems for tracking interview data

and emerging themes. The conclusion of the section includes a statement on ensuring the safety of raw data for 5 years.

Properly stored and analyzed research data aid in understanding the research process; as such, the data need proper organization (Korhonen, 2014). Verification of data could be easier when researchers create databases (Camfield & Parmer-Jones, 2013). Properly stored data are password protected to prevent unauthorized persons from accessing the files (Miles, Huberman, & Saldana, 2013). Connelly (2014) and Grossoehme (2014) noted that it is critical to maintain privacy and confidentiality of the data. Data are password-protected to ensure privacy and confidentiality. Backing up of data in different locations and forms such as in pen drives and cloud drives could help in data recovery when disasters occur (Madu, 2016).

Proper organization of raw research data is necessary for easy data analysis. The data are properly organized and tracked when the researcher maintains documentation of all processes involved in the research, keeps a reflective journal or checklist, and uses computer software to store the data (Alimo, 2015; Boblin, Ireland, Kirkpatrick, & Robertson, 2013; Camfield & Parmer-Jones, 2013). To keep track of raw data, and to keep in line with the thinking of Camfield and Parmer-Jones (2013), Korhonen (2014), and that of Boblin et al. (2013), I created a research log in a Microsoft Excel database. The research log had four columns: the first column was for participant identification, the second column was for recording responses, the third column was for noting direct quotations, and the fourth column was for recording interview data.

Yin (2014) recommended categorizing and referencing stored data. Likewise, Alimo (2015) and Gibson, Benson, and Brand (2013) encouraged use of multiple categories in organizing storage of research data. Therefore, categorization of research respondents involved assigning of unique numbers such as R1 to refer to Respondent 1. Therefore, to facilitate easy retrieval, to mitigate risks of data loss when disasters occurs, and to maintain privacy and confidentiality, I, in line with the thinking of several researchers (Connelly, 2014; Grossoehme, 2014; Leins et al., 2014; Korhonen, 2014) organized the data in password-protected electronic folders, which had unique identification numbers; collated all responses in one research log for easy thematic analysis; and stored the data in different locations and forms such as external drives and cloud storage.

Walden University researchers agree with the need to store raw data for 5 years before destroying it to keep the integrity of the research data and to maintain confidentiality of study participants. For example, Davis (2013), Gilliam (2014), and Fredrick (2015) undertook doctoral research in different concentration areas in compliance with the rule to store raw data securely for 5 years. Researchers can protect all research data by storing the data in electronic files and digital format. Anyan (2013), Richardson (2014), and Alimo (2015) used electronic files and digital formats to keep research data safe. Therefore, to comply with the 5-year safety rule, to keep confidentiality of study participants, and to maintain the integrity of the research data, I encrypted the data before storing them in a cloud drive. The data in storage disks would be in a lockable home safe for 5 years before destroying it with KillDisk software.

Data Analysis

Data analysis in qualitative research is a process that involves sorting and analyzing the data into categories that a researcher can interpret to make meaning for a reader (Lawrence & Tar, 2013). Yin (2014) and Wilson (2014) recognized and described four types of triangulation in a study, which are (a) data triangulation, (b) investigator triangulation, (c) theoretical triangulation, and (d) methodological triangulation. Wilson (2014) used methodological triangulation to understand data. Wahl, Avery, and Henry (2013) found methodological triangulation useful for enhancing the quality of research findings. Zuze and Weiderman (2013) found comfort in using methodological triangulation. However, Burau and Andersen (2014) found theoretical triangulation useful for a study in capturing the changing role of expertise. Yin (2014) noted that all four types of triangulation are useful for maintaining consistency in qualitative data analysis so long as a researcher is mindful of the applicability of the research design in relation to the type of triangulation chosen. Therefore, I used within-methodological triangulation to analyze my research data because data analyzed originated from interviews, documents such as annual reports and 5-year strategic plans.

In the study, I used thematic analysis because Elo et al. (2014) posited that such analysis helps a researcher to determine the meaning participants attribute to the data. The process for analyzing the qualitative data was interactive and involved categorizing, unitizing, forming relationships, and making grounded conclusions. The process of data analysis was logical and sequential. First, data collection involved conducting semistructured, face-to-face interviews to obtain raw data. Second, data processing

involved audiotaping and note taking of the raw data and transcribing the data to have a record of work done in the field. Third, the process involved an actual data analysis one, which included sorting and classifying the recorded data. The process of data reduction followed the sorting and classification process.

The conceptual plan for data reduction involved coding the data using Microsoft Excel. Elo et al. (2014) noted that coding the data helps researchers find relationships between the coded data and the phenomenon, which would help to draw inferences to inform the purpose of the study. There are three ways of data reduction through coding: open coding, axial coding, and selective coding (Sarker et al., 2013). Yin (2014) used different names for data analysis in a case study design: (a) compiling, (b) disassembling, (c) reassembling, (d) interpreting, and (e) concluding. Buchanan (2013) used the method suggested by Yin (2014) and confirmed the results of the study.

In this study, I used data reduction through coding to attain the same results as suggested by Yin (2014). At open coding, I achieved *sensemaking* of the data by reading, listening, and organizing the data into categories, sentences, and phrases. In axial coding, I scrutinized and reexamined the data in open coding to compare the data with research objectives. Keywords-in-context is another name for the process described under the axial coding (Onwuegbuzie & Byers, 2014). For selective coding, I looked at the axial coding, illustrated the themes and categories, and reassembled the themes into meaningful parts that relate to each other. The process of *Sensemaking* involves bringing meaning to themes to see how data relate to each other (Paull, Boudville, & Sitlington, 2013).

In any interview qualitative inquiry, the researcher identifies themes from the respondents (Vaismoradi et al., 2013). Computer-assisted qualitative data analysis is efficient for analyzing qualitative data into themes (Sinkovics & Alfoldi, 2012). Therefore, I utilized Microsoft Excel to identify the themes. The process involved creating a spreadsheet, worksheets for each interview question, a worksheet for responses to each interview question, and a worksheet for data analysis. In the worksheet for data analysis, I had six columns: one for number of responses, two for responses, three for codes for responses, four for themes, five for codes that relate the responses, and six for frequency of themes in relation to the number of responses. Coding the themes is ideal for relating the responses to the themes (St. Pierre & Jackson, 2014). Identification of themes is an important step in qualitative studies (Grossoehme, 2014). I, therefore, used different symbols to represent different themes, and theme analysis involved matching equal symbols in the thematic column to equal symbols in the response column.

The revenue management theory grounded the study. I focused on the key themes from the conceptual framework to the literature review. Marshall and Rossman (2016) proposed coding to start when certain keywords from the literature and conceptual framework begin to emerge from an interview. Yin (2014) believed that key words from the literature review and conceptual framework trigger and help to generate categories. The key words from the literature review and conceptual framework that I used included outsourcing, nonrevenue water, innovations, overbooking, price discrimination, innovations, disconnections, and liquidity. O'Reilly and Parker (2013) recognized that maintaining an inductive approach to use categories enhances data saturation. Therefore,

in determining the themes, I used some preconceived knowledge and understanding of the conceptual framework and literature review.

The final stage in data analysis involved verification. Madu (2016) used direct quotations from respondents to verify findings through a process called member checking. Further, Boblin et al. (2013) supported the use and confirmation of direct quotations with respondents to enhance the validity of data analyzed and interpreted. Horton (2014) noted that member checking increases the validity of research results. Therefore, I concluded the process of data analysis by interpreting the findings and going back to the respondents for verification using member checking.

Reliability and Validity

Quality research ensures quality results and promotes a better contribution towards a study phenomenon (O'Reilly & Parker, 2013). According to Marshall and Rossman (2016), the principle criteria for achieving quality and rigor in a qualitative study are dependability, credibility, transferability, and confirmability. Dependability is similar to reliability in a quantitative study. Credibility and transferability are synonymous to validity in quantitative studies while confirmability is a philosophical perspective for objectivity (De Ceunynck et al., 2013; Houghton et al., 2013; Kornbluh, 2015).

In a study aimed at establishing qualitative rigor, Houghton et al. (2013) determined that the principle criteria of confirmability and dependability use the same processes. In this section, I discuss the position of reliability and validity in achieving qualitative vigor within the comparable criteria of credibility, transferability,

dependability, and confirmability. The discussion encompasses issues of member checking, triangulation, and data saturation. The four criteria of dependability, credibility, transferability, and confirmability are characteristic of qualitative research (Onwuegbuzie & Byers, 2014) while reliability and validity are characteristic of quantitative research (Zohrabi, 2013).

Reliability

Reliability is a concept in quantitative studies, which researchers achieve when research information is not biased (Hess, McNab, & Basoglu, 2014). Replication of research results is possible when reliability is achieved (Noble & Smith, 2015). In qualitative studies, researchers try to have unbiased research information to establish rigor (Gringeri, Barusch, & Cambron, 2013). Yin (2014) supported the use of proper documentation to record the research process. Gringeri et al. (2013) supported note taking, audio recording, and coding to enhance reliability. The use of reflexive journaling describing a step-by-step process from data collection to making final decision on the study helps to achieve dependability (De Ceunynck et al., 2013).

Dependability is a concept in a qualitative study similar to reliability. In a qualitative study, Hess et al. (2014) determined that achieving reliability requires a researcher to maintain dependability and consistency throughout the research process. In another study, Garside (2014) noted that reliability ensures dependability of results of a qualitative study. Harvey (2015) recommended member checking to confirm dependability and reliability of information with participants in a qualitative study.

In a study involving homosexual black men, Andrasik et al. (2014) used member checking to get feedback on statements that participants in the study made during a qualitative research inquiry. O'Reilly and Parker (2013) supported member checking as a valuable process for enhancing quality control because it involves allowing the participants an opportunity to review the statements they made during an inquiry. Marshall and Rossman (2016) supported the process of member checking as ideal for enhancing academic rigor. I, therefore, ensured dependability through member checking.

Researchers maintain consistency and achieve dependability when they use the same participants and the use of the same research instruments throughout the research process (Harvey, 2015; Zohrabi, 2013). Thus, I maintained the same research participants and used the same interview guide to achieve dependability. Methodological triangulation enhances quality research findings because the data collected are from different sources. Both Yin (2013) and Zohrabi (2013) recommended triangulation as a way for achieving dependability in a study. I, therefore, used semistructured interviews, reviewed documents, and reports to achieve methodological triangulation. Member checking of data interpretation involved sharing the interpretation of the interview with the participants and requesting that they validate the findings and themes for accuracy, reasonableness, and credibility.

Validity

Methods used for validation should be effective for users to accept the findings from a study (Barry, Chaney, Piazza-Gardner, & Chavarria, 2014). Marshall and Rossman (2016) rejected the concept of validity in qualitative research, preferring instead

credibility and transferability. Credibility is achievable if research participants testify that they believe in the truthfulness of the research results (Griffith & Montrosse-Moorhead, 2014; Yuen-ling, Zenobia, & Wai-tong, 2013).

Credibility occurs when study participants have a chance to agree with interpretations from the study (Yin, 2014). I ensured credibility through member checking. Houghton et al. (2013) supported the use of member checking and persistent observation of participants during the interviews to enhance credibility of research results. Taylor (2013) and Wilson (2014) determined that methodological triangulation enhances credibility. Bekhet and Zauszniewski (2012) achieved credibility by using quotations to reflect the views of the respondents. Therefore, I used quotations to achieve credibility. The process of member checking for credibility and dependability was the same as found by Reilly (2013). In summary, the process of member checking involved conducting an interview with participants, interpreting the responses from the participants, and sharing the interpretations with the participants so that they could provide feedback on the accuracy or otherwise of the findings.

Transferability occurs when the reader of each study has the power to decide on the applicability of the research findings in other settings (Bryman & Bell, 2015; Burchett, Mayhew, Lavis, & Dobrow, 2013; Rodriguez Jaime, 2013)). Transferability depends on the judgment of decision makers (Rodriguez Jaime, 2013). I bear no responsibility for the transferability of the study findings, leaving the reader to make any decisions. To help future users and readers do so, I maintained the same interview protocol for all study respondents, used the same techniques such as audio recording,

encouraging member checking, and triangulating the interviews with the review of an annual report and a 5-year strategic plan. Bekhet and Zauszniewski (2012) achieved transferability by reaching data saturation. I ensured reaching data saturation to help future readers and researchers make decisions on transferability of the research results.

Confirmability of a study arises when other researchers can use the same data to collaborate the findings (Marshall & Rossman, 2016). Houghton et al. (2013) determined that neutrality and accuracy of data through an audit trail strategy enhance confirmability because neutrality and accuracy ensure objectivity. Such neutrality and accuracy are achievable through the maintenance of documentation analyzing how the researcher reached a decision (Houghton et al., 2013). Elo et al. (2014) argued that research data must accurately reflect what the respondents said. Bekhet and Zauszniewski (2012) maintained neutrality and objectivity to achieve confirmability. Therefore, I ensured confirmability through an audit trail, using quotations, and remaining neutral and objective throughout the research process. I adhered to the purpose of the study to ensure that the study achieved confirmability by following the objectives of the study, taking steps such as using semistructured interviews, recording the interviews on audiotapes, administering member checking, and reporting some direct quotations to enhance confirmability.

Sample size does not ensure data saturation (Fusch & Ness, 2015). O'Reilly and Parker (2013) noted that data saturation occurs when information collected for the study attains the level of breadth and depth. O'Reilly and Parker noted that reaching data saturation ensures achievement of quality research results. At data saturation, information

is redundant or collected information becomes repetitive (Marshall et al., 2013). Morse (2015) stated that a researcher could reach data saturation even with a small but adequate sample so long as the sample comprises experts in the field of interest. I ensured that I reached data saturation by maintaining a small sample size of five participants and by ensuring that all five participants were well experienced in revenue collection and revenue management strategies applicable to public water utilities. To reach data saturation further, I took time to probe into the insights of the respondents by asking follow-up questions to get in-depth responses for achieving saturation.

Transition and Summary

Section 2 of the study included a restatement of the purpose of the study, describing the role of the researcher in relation to the topic and study participants. The section involved describing criteria for choosing, accessing, and establishing a working relationship with the study participants. Further descriptions involved the choice of the research design, the research method, study population, and sample. Thorough descriptions were made of the data collection, organization, analysis, and the reliability and validity of the processes to ensure attainment of quality results. In summary, I used face-to-face semistructured interviews and reviewed two company documents to collect research data. Data collection involved the use of digital and audio recording devices. Review of documents supplemented interviews. I stored raw data in different places and forms to mitigate loss in the event of disaster. Interviewing participants ended upon administering member checking and reaching saturation. Interviewing participants commenced upon receiving an IRB Approval. All participants answered similar questions

as presented in the interview protocol. Participants had the liberty to participate in the interview, and I administered a participating consent form.

Section 3 includes an overview of the study and a detailed presentation of findings from the study, including the contribution the study makes to professional business practice. The section also includes a discussion of the findings from the data analyzed. The section ends with conclusions, recommendations, and reflections based on the study.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative single-case study was to explore credible business strategies senior managers of water utilities use to address inefficiencies in collecting water fee revenues. The data came from face-to-face semistructured interviews with senior managers, and from a review of company documents including an annual report and a 5-year strategic plan. Together, the findings showed the strategies that senior managers have used to enhance the collection of water fee revenues. These strategies included customer relations management, innovation, effective metering and billing of customers, and disconnection of water supply to customers with overdue water bills. In this section, I (a) discuss the findings from the study, (b) outlined the study's application for professional practice, (c) discuss the study's implications for social change, (d) make recommendations for action and further research, and (e) offer reflections and a conclusion.

Presentation of the Findings

The overarching research question that I sought to answer was: What credible business strategies do senior managers of public water utilities use to address inefficiencies in collecting water fee revenues? Data collection included semistructured face-to-face interviews with five senior managers, and triangulation of the interview data with data from a review of two company documents: (a) an annual report, and (b) a 5-year strategic plan. Revenue management was the conceptual framework for this qualitative single-case study. The findings arising from methodological triangulation of

face-to-face semistructured interviews and review of company documents showed four emergent themes, which supported the conceptual framework of revenue management in accordance with the definition of Huefner (2015). The four themes were (a) customer relations management, (b) innovative strategies, (c) effective metering and a billing, and (d) disconnection of water supply. The minor themes for customer relations management were (a) customer satisfaction and loyalty, and (b) customer service and complaints. The minor themes for innovative strategies were (a) new ideas of doing things, and (b) embracing modern information and communication technology (ICT). The minor theme for effective metering and billing was timely billing. The minor theme for disconnection of water supply was enforcement of credit policy. Table 1 shows major themes and related responses from participants. Table 2 shows minor themes and related responses from participants.

After conducting and analyzing interview data, I used methodological triangulation to corroborate the findings. To do this, I reviewed two company documents: (a) an annual report for the 2015-16 fiscal year, and (b) a strategic plan for 2013-17. I used the code CD1 to refer to the annual report, and CD2 to refer to the strategic plan. CD1 was a description of the activities the company undertook over the years 2015 through 2016, including the financial performance. Among the activities were revenue management elements, which helped the company to achieve objectives for the years. The elements were (a) timely billing of customers to ensure early settlement of bills, (b) using mass media to disseminate information regarding bill payments, and (c)

disconnecting water supply to customers with overdue accounts. CD 2 presented a 5-year strategic plan for all areas including revenue management.

In regard to revenue management, the document stipulated plans to enhance timely billing and customer relationship management by sending notices and reminders to customers before disconnecting the water supply. The stipulated plans are in agreement with the results of a study by Smith, Maheshwari, and Simmons (2014) in which the researchers determined that provision of customer-focused services is ideal for overcoming challenges in the water sector. On innovations, the documents included statements to introduce on-site billing and prepaid meters. Further, the document stated plans to open customer accounts with all major banks in the country to bring payment convenience to customers. Therefore, data from the two documents methodically triangulated with the major themes from the interview data, namely: (a) customer relations management, (b) innovative strategies, (c) effective metering and billing, and (d) disconnection of water supply to customers with overdue water bills.

Table 1

Major Themes, Number of Responses, and Percentage of Respondents

Theme	Number of respondents	Percentage of respondents' agreement
Innovative strategies	5	100
Customer relations management	4	80
Disconnections of water supply	4	80
Effective metering and billing	4	80

Table 2

Minor Themes, Number of Responses, and Percentage of Respondents

Theme	Number of respondents	Percentage of respondents' agreement
Customer satisfaction and loyalty	3	60
Customer service and complaints	2	40
Embracing modern ICT	5	100
New ideas of doing things	2	40
Timely billing	4	80
Enforcing credit policy	4	80

Theme 1: Innovative Strategies

Data analysis resulted in my identification of the first major theme, which indicated that embracing new ideas, change, and modern ICT could help address inefficiencies in water fee revenue collection. Karabulut and Nur Ersun (2013) described innovation as the promotion of new and creative ideas to remain relevant in modern business. Najmaei (2014) described strategic innovation as the targeting of customers to realize business value and profitability. According to the participants in the study, examples of innovative strategies included use of new ICT, and new ideas of doing things such as on-site billing, prepaid metering, electronic payments, mobile money payments, and outsourcing of the billing and debt collection processes.

Data analysis revealed that all five of the participants (100%) used innovative strategies in the pursuit of addressing inefficiencies in collecting water fee revenues (see Table 1). This theme aligned with the revenue management conceptual framework and literature from previous studies. Huefner (2015) and Westermann (2015) noted that revenue management is a set of business strategies, including financial decisions, which can help enhance revenue collection and improve business profitability. Embracing innovative strategies is an example of the financial decisions business leaders can make. My findings align with the findings from previous researchers who have found that embracing innovations and technologies such the Internet could help improve revenue growth and business survival (Babaei et al., 2013; Meseko, 2014; Oke et al., 2013; Prorokowski, 2014).

All five (100%) participants reported embracing ICT, and two of five (40%) gave responses that indicated their support for new ideas of doing things (see Table 2). All five participants (100%) indicated that strict use of ICT such as on-site billing, prepaid metering, mobile money, and electronic payments were credible business strategies that senior managers could use to enhance revenue collection. R1 and R4 added that embracing new ideas of doing things such as outsourcing billing and debt collection, and opening up of several convenient pay points were credible business strategies leaders could use to enhance the collection of water fee revenues.

The responses from all participants regarding embracing ICT confirmed the conceptual framework and previous research findings that embracing innovations and technological advances could help business leaders optimize revenue growth and business profitability (Mithas et al., 2012; Oke et al., 2013; Zatta & Kolisch, 2014). Further, the findings support previous studies' findings which have shown that efficient modern technology can help boost revenue collection (Kim et al., 2013; Pascoe, 2013). Responses by R1 and R4 regarding using new ideas such as outsourcing of the billing and debt collection activities, and opening of several payment points resonated with the findings of other researchers who have determined that payment convenience is necessary for constant flow of revenue, which in turn is necessary for business profitability (Baik et al., 2013; Krolkowski, 2014). From the evidence, I can further confirm findings in which researchers agreed that outsourcing was advantageous in enhancing revenue collection (Issa, 2015; Lisowski & Sanderson, 2013; Seppala et al., 2014). Although several researchers from previous studies mentioned disadvantages of

outsourcing (Chuprinin et al., 2015; Estevez-Abe & Hobson, 2015; Szabo & Ujhelyi, 2015), the participants in this study did not describe any disadvantages associated with outsourcing.

Participants indicated different experiences regarding the conceptual constructs of overbooking and prepayment. In line with the description by Karabulut and Nur Ersun (2013) and Najmaei (2014), overbooking and prepayment could be examples of strategic innovations business leaders can use to realize value and profitability from customers. All respondents agreed that overbooking and prepayment were not current strategies used for enhancing collection of water fee revenues. The participants explained overbooking in relation to new connections. R1 and R3 stated that overbooking was a big challenge because its application could affect customer satisfaction and frustrate revenue enhancement efforts if the water utility does not plan the customer connection program well.

R2, R4, and R5 stated that, from knowledge and experience, overbooking could not address inefficiencies in collecting water fee revenues because funds collected were not water fee revenues but capital contribution towards new water connections. Contrary to the experiences and knowledge of R2, R4, and R5, R3 indicated that overbooked customers could bring in more revenue, which could improve the cash flow of the utility company. Therefore, the evidence from three of the five participants was in sharp contrast with previous researchers who suggested that overbooking could help increase revenues (Bell, 2012; Ovchinnikov & Milner, 2012).

On prepayment, all participants indicated knowledge and experience gained from other organizations. In addition, all participants stated the various advantages that could come with a prepayment system. According to the participants, prepayment meant asking a customer to deposit money with the company before a consumption bill is out. However, the participants indicated that prepayment was not in use as a strategy for addressing inefficiencies in collecting water fee revenues. The evidence presented by participants seemed contrary to the conceptual framework of Huefner (2015), and literature from previous studies where researchers such as Gambe (2015), Koehler et al. (2015), Miyongo et al. (2013), and Bell (2012) recommended prepayment as a credible business strategy for addressing inefficiencies in collecting water fee revenues.

Theme 2: Disconnection of Water Supply

The second major theme to emerge was disconnection of water supply from customers with overdue unpaid bills. Table 1 shows that four of five participants (80%) experienced and used disconnection of water supply as a strategy for addressing inefficiencies in collecting water fee revenues. Consistent with the major theme, the minor theme revealed that 80% of the participants enforced a credit policy to ensure that customers settled their outstanding bills (see Table 2). The theme of disconnection of water supply supported the conceptual framework and previous studies in which several researchers (Abubakar, 2016; Cheng, 2013; Mugisha, 2013) found that threats of punishment, threat of disconnection, and actual disconnection of water supply could make customers pay outstanding bills.

Evidence from R2, R3, R4, and R5 indicated that disconnection of water supply was a credible business strategy used to address inefficiencies in the collection of water fee revenues. Disconnection of water supply involved enforcing the credit policy whereby any customer with unpaid water bills for over 30 days would have their water supply disconnected. R2 stated that disconnection of water supply was a last option when customers failed to settle their outstanding bills after getting reminders, notices, and threats of disconnection. R3 stated that disconnecting the water supply would happen to customers with water bills in arrears to make them pay, and R4 stated that grand disconnection would happen to all customers who owed the company for over 30 days. R5 indicated that disconnection of water supply helped to enhance collection of water fee revenues. The assertions by R2 through R5 were consistent with those of participants in previous studies by Abubakar (2016), Cheng (2013), and Mugisha (2013) who reported that disconnection of water supply would address problems of delayed and unpaid water bills.

Theme 3: Effective Metering and Billing

The third major theme was effective metering and billing. Table 1 shows that four of five participants (80%) used effective metering and billing to address inefficiencies in collecting water fee revenues. This finding agreed with the finding by Wichman (2014) that proper billing and pricing are effective for enhancing revenue stability. The theme also confirmed the conceptual framework and literature from previous studies. According to previous researchers, effective metering, coupled with pricing according to customer categories, was effective to address inefficiencies in collecting water fee revenues

(Abubakar, 2016; Ezeabasili et al., 2014; Mugisha, 2013; Mukherjee et al., 2015; Wichelns, 2013). The minor theme for effective metering and billing was timely billing. Timely billing came out four of five (80%) of the responses from participants (see Table 2).

Evidence from responses of participants aligned with the major theme. Participant 2 indicated that managing the meter reading and billing process was essential to reduce the billing cycle to ensure quick collection of revenue, and that billing based on customer categorization and consumption were ideal for improving revenue collection and cash flows. Participant 3 indicated that invoicing customers promptly was one of the strategies for enhancing revenue collection, and that billing based on charging customers differently according to usage was ideal for high revenue collection. Participant 4 indicated that speedy billing of customers ensured timely collection of revenue, and that billing according to customer categorization was ideal for enhancing revenue collection because high consumption customers would pay at a higher tariff rate than would low consumption customers.

Participant 5 indicated that adhering to the billing cycle was a sure way to enhance collection of water fee revenues, and that rich customers can subsidize poor customers because rich customers usually consume more water than poor customers and as a result, rich customers pay at a higher rate than do poor customers. The evidence presented in this paragraph confirms the conceptual framework and literature from previous studies that using various strategies including metering and timely billing could increase sales and amounts of revenue (Bell, 2012; Huefner, 2015; Westermann, 2015).

The evidence further affirms the conceptual framework of revenue management by Bell (2012), and the literature from previous studies by Hassan et al. (2012), Leask et al. (2012), and Mathies et al. (2013) where differential pricing of customers was one of the constructs.

Theme 4: Customer Relations Management

The fourth theme to emerge was customer relations management. This theme came out four of five (80%) of responses from participants. Each of the related minor themes of customer satisfaction and loyalty, and customer service and complaints came out four of five (80%) of supporting responses to the major themes. Businesses survive because of customers (Cespedes et al., 2013). Good customer service ensures the success of business enterprises (Bush, 2016). It also ensures sustained customer loyalty (Armstrong, 2013). Customers are the backbone of businesses, and business leaders must serve customers well to maintain customer loyalty (Nevele et al., 2016). Therefore, the theme of customer relations management supports literature from previous studies as well as the conceptual framework.

The study participants identified customer relations management as an effective strategy for addressing inefficiencies in collecting water fee revenues. Good relationships between business owners and customers are good for the survival of business (Allen, Ericksen, & Collins, 2013). It is good to provide customers with quality service because poor service level results in reluctance to settle bills (Koehler et al., 2015). R1 supported the need for providing quality service. R1 stated that building customer loyalty through conducting interface meetings and customer satisfaction surveys is a good strategy for

assuring good customer service, and making customers feel obliged to settle their water bills

R2 stated that holding meeting with customers helps customers appreciate problems the utility undergoes, how unpaid bills affects both the business and the consumer, and so the necessity for paying bills on time. Further, the respondent indicated that making announcements about overdue accounts and making threats of disconnection also help in enhancing revenue collection. R3 indicated that customers come to pay their water bills upon receiving water bill invoices and upon reading newspaper publications reminding them of unpaid water bills. R5 indicated that engaging customers in meeting to push for payment was one of the strategies for enhancing revenue collection.

The evidence from participant responses confirms the applicability of customer relations management as a credible business strategy for addressing inefficiencies in collecting water fee revenues. The theme of customer relations management supports literature from previous studies. For example, from the literature on previous studies, Eggert et al. (2014) determined that customer satisfaction and customer loyalty programs could have an impact on revenue and profit. Mathies et al. (2013) determined that customer-focused marketing could increase revenues. Burt and Ray (2014) found that better customer service increased the willingness of customers to settle their water bills. Edwards (2013) found, among other things, that customer relations management could enhance revenue collection. In a recent study, Aka, Kehinde, and Ogunnaike (2016) agreed with Burt and Ray that customer relation marketing, communication, and service quality are prerequisites for customer satisfaction and loyalty. Therefore, the theme of

customer relations management supports the revenue management conceptual framework and literature from previous studies.

Summary of Themes

Innovative strategies, customer relations management, disconnection of water supply from customers with overdue bills, and effective metering and billing were the four themes that morphed from the study. Summarily, study participants revealed that innovative strategies could help business leaders to maximize revenue collection. The revelation from study participants regarding effectiveness of innovative strategies augers well with effective business practices. From the literature review, Krolikowski (2014) determined that use of ICT platforms such as mobile-enabled payment systems could enhance revenue collection. Haensel and Koole (2013) agreed with Pascoe (2013) in determining that using modern ICT can help to optimize revenue collection. On customer relations management, the study participants explained the importance of good customer relations in the success of businesses. Literature on effective business practice compared well with the assertions of study participants. Burt and Ray (2014), Edwards (2013), and Aka et al., (2016) found that good customer relations management is important for enhancing customer loyalty and customer willingness to settle bills. On disconnecting water supply from customers with overdue bills, study participants agreed on the effectiveness of the strategy. The agreement by study participants compared favorably with literature on effective business practice. Several researchers (Abubakar, 2016; Cheng, 2013; Mugisha, 2013) found that that disconnecting water supply from customers with overdue bills could make customers settle outstanding bills. Finally, on the theme of

effective metering and billing, revelations from researchers on effective business practice evidently supported the finding. For example, Bell (2012), Huefner (2015), and Westermann (2015) found that metering and effective billing could help leaders to increase sales and amounts of revenue.

Applications to Professional Practice

The objective of the study was to explore credible business strategies senior managers use to address inefficiencies in collecting water fee revenues. Revenue is important to the financial viability and liquidity of water utility companies. Failure to collect revenue would negatively affect business profitability. The study is relevant to identifying effective strategies for collecting revenue in public water utility companies. These companies struggle to collect revenue, struggle to maintain liquidity, and to be profitable. The findings from this study apply to public water utilities regarding strategies that can help to enhance revenue collection and improve business liquidity and profitability. Supporting the revenue management conceptual framework, the findings are in four categories of themes: (a) innovative strategies, (b) customer relationship management, (c) effective metering and billing, and (d) disconnection of water supply to individual customers with overdue water bill accounts.

In concluding different studies, Zatta and Kolisch (2014), and Pascoe (2013) determined that embracing various forms of innovative strategies could enhance revenue growth in a business. According to the findings in this study, the aim of practicing innovative business strategies in public water utilities is to improve the way customers can access billing information, can access the payment platforms, and find it convenient

to settle their bills. Such improvements are possible using the Internet. Developing new ideas such as outsourcing billing and debt collection activities are relevant for ensuring expertise in timely collection of revenue using private institutions, which may possess experience and skills in those areas. Elimination of human error in the billing systems coupled with timely production and delivery of bills result in customers settling their bills in time, and with few complaints.

Billing and proper metering can enhance amounts of revenue that leaders of water utility companies can collect (Abubakar, 2016; Shields et al., 2012; Wichman, 2014). The timely delivery of error-free bills would enhance revenue collection and improve business liquidity. The use of prepayment systems makes it easy for leaders to collect payments in advance before the customer consumes the product. The use of on-site billing would entail timely delivery and settlement of bills. The use of electronic money transfers and mobile money payment platforms would enhance revenue collection because customers can settle their bills at their convenience. The use of threats of punishment such as water supply disconnection, sending of notices and reminders, and sending out press releases on the need for customers to settle their water bills on time does not only maintain customer relations management, but the strategies also make customers feel obliged to settle their water bills on time.

Disconnecting water supply from customers with overdue bills could make customers settle outstanding bills (Abubakar, 2016; Cheng, 2013; Mugisha, 2013). Carrying out physical disconnection of water supply works well for enhancing revenue collection because water is a natural good, and nobody would want to be embarrassed or

live without it. Therefore, the findings are relevant and applicable with respect to the professional practice of business because all themes point towards ensuring that the leaders receive payment on time for the product they sell, the leaders are able to maintain business liquidity and settle liabilities in time, and they are able to maintain financial viability. In summary, the findings indicate that by applying the strategic themes revealed in this study, there would be an improvement in business liquidity, profitability, and a possible continued existence of the business for the near future.

Implications for Social Change

Viable businesses grow, are profitable, and can help in addressing social concerns in a country. Quinn et al. (2014) determined that water utility companies could enhance the creation of jobs and economic growth. Adekola (2014) determined that leaders of water utility companies could collect adequate revenues and free the government from subsidizing the companies. The implications for social change include the potential for public water utilities to develop and use credible business strategies, which would ensure business financial viability. The findings from this study could implore leaders in the water sector to embrace strategies, which can influence the growth of public water utilities, help improve the delivery of water supply services, reduce waterborne diseases among the population, and employ more people. The social change effect could be reduction of the unemployment rate, improved health for using potable water, and possible reduction of the crime rate, which rises when unemployment is high.

Recommendations for Action

Some senior managers of public water utilities use credible business strategies to address inefficiencies in collecting water fee revenues. When the senior managers use such strategies, they help not only to collect all revenue on time, but also to improve the liquidity and profitability of businesses, which exist to make profit. Therefore, the need for profitability cannot be overemphasized. Current and future senior managers of all public water utility companies should focus on recommendations arising from (a) innovative strategies, (b) customer relations management, (c) effective metering and billing, and (d) disconnecting water supply services from customers with overdue accounts.

The first recommendation is for senior managers to keep abreast of developments taking place in information and communication technology to embrace change and adopt new ideas and ways of doing things. Ability to embrace change, adopt new ideas, and to find ways of carrying out work, can have a positive impact on financial viability of businesses (Salter, Criscuolo, & Ter Wal, 2014). Certain innovations can cause an organization to lose power and employees to lose jobs (Chuprinin et al., 2015). Therefore, senior managers in public water utility companies should strive to embrace innovative strategies. The senior managers should be keeping in mind the fact that certain technologies need proper piloting before adoption to avoid possible disruptions to existing business systems. Senior managers should include the innovative strategies in a strategic plan document made available to all staff for implementation.

The second recommendation for senior managers of public water utility companies is that they should maintain constant communication with customers through a properly designed customer relations management framework. Communicating with customers regarding what a company is doing to address customer complains is good for maintaining their satisfaction and loyalty. Findings from the study indicated that building customer loyalty through conducting interface meetings and customer satisfaction surveys are good strategies for assuring good customer service, and making customers feel obliged to settle their water bills. Therefore, senior managers should ensure that staff is acquainted with customer relations management issues by conducting training and holding meetings to update them.

The third recommendation is for senior managers to use modern and error-free meters for billing to avoid billing complaints. Customer complaints regarding incorrect bills could result in low revenue collection. Findings from the study indicated that managing the meter reading and billing process was essential to reduce the billing cycle to ensure quick collection of revenue, and that billing based on customer categorization and consumption was ideal for improving revenue collection and cash flows. The ICT department accompanied by the marketing department should monitor and disseminate the results through training, literature, and conferences.

The final recommendation to senior managers seeking to enhance revenue collection is to continue with administering disconnection of water supply services to customers with overdue accounts. When doing so, the senior managers should be careful in their approach to avoid losing sales. In this regard, senior managers should apply

elements of customer relations management. For instance, senior managers could send out reminders and notices in the press to warn of water supply disconnection to all who do not settle their bills by a certain date. Evidence from R2 and R3 in relation to disconnection of water supply services agreed with other researchers (Abubakar, 2016; Cheng, 2013; Mugisha, 2014) in supporting the recommendation for business leaders to continue disconnecting water supply. In summary, the revenue managers should monitor credit policy and effect water supply disconnection accordingly.

The results of this study are vital for the public water utility companies because the findings agreed with literature from several researchers on the need for effective strategies to address revenue collection inefficiencies. Leaders of public water utility companies can benefit from results of this study because implementation of the strategies can help controlling costs, which can result in increased revenues for improved business performance. In this regard, I would achieve effective implementation of the strategies by disseminating the results through radio documentaries, distribution of leaflets, holding of symposiums, and training of staff on customer relationship management.

Recommendations for Further Research

This study had two limitations. The first limitation was that the study involved a single case. The second limitation was that the location of the study was in Malawi, a country in only in one region of the southeastern part of Africa. Therefore, the first recommendation for future research is to conduct a quantitative multiple-case study in all public water utility companies in all regions of Malawi to identify strategic variables, which influence customers to settle water bills. The second recommendation for future

research would be to conduct a qualitative phenomenological-case study with a large sample of at least 20 participants to increase the chances of acceptance of study results by other researchers. The following is a list of recommendations for further study related to improved business practice:

1. Future researchers could explore the viability of introducing prepaid meters in public water utilities.
2. Future researchers could explore the impact of introducing public-private partnerships on the financial viability of public water utilities.
3. Finally, researchers could conduct research on strategies for enhancing revenue collection in a different public utility, such as an electricity supply company, in order to compare and contrast the findings for the possibility of benefitting from each other.

Reflections

Upon reflecting on my DBA Doctoral Study process, I realize that my bias towards quantitative study was unfounded. Undertaking a qualitative study is equally possible and effective. I never believed that a researcher could analyze qualitative data using computer software. I have used Microsoft Excel and have been able to code, analyze, and categorize my research data. I found it easy to use Excel, and do hope to use the same in any future qualitative study.

Recruitment of participants was the most difficult part of my study. I had to complete an Institutional Review Board form expressing my compliance with ethical guidelines for conducting research on human subjects. The process to approval was not

easy. It took me 5 weeks to get an approval before I could recruit research participants. I had nine names recommended to me by the CEO of the case study company, but I wanted five. After sending invitations to the five, three did not respond. I could not force or coerce them, so I sent fresh invitations to three of the remaining four. Fortunately, all consented to participate. The participant recruitment process gave me a lesson that it is indeed true that during research, there would be qualifying individuals who would not be willing to participate in a study. It is possible to be tempted to persuade such individuals to participate. Thanks to the ethical directive not to do so, I did not persuade any participant to take part in the study. My thinking now is that it is important to seek consent from participants in any type of study, which is what I would do in the future to avoid falling into an unethical trap.

Finally, I have to realize that the DBA Doctoral Study Process was a learning journey befitting reflection. I was familiar with the Harvard writing style, and now I have skills in the American Psychological Association (APA) style. I had one mentor for my study for a master's degree, yet now I have three mentors for my DBA. I appreciate and realize that a degree for a purpose requires scrutiny and completeness.

Conclusion

The purpose of this qualitative single-case study was to explore credible business strategies senior managers of water utilities use to address inefficiencies in collecting water fee revenues. The data came from face-to-face semistructured interviews with senior managers and company documents. I triangulated the data methodically by reviewing an annual report and a 5-year strategic plan. Data saturation occurred when no

new themes emerged. I analyzed the coded data and categorized the themes. The results indicated that senior managers of water utilities used strategies to address inefficiencies in collecting water fee revenues

The findings from the study were in categories of four themes: (a) innovative strategies, (b) customer relations management, (c) effective metering and billing, and (d) disconnection of water supply to customers with overdue accounts. I confirmed and disconfirmed the findings by linking them to the conceptual framework of revenue management and literature from previous studies. In summary, business leaders in public water utility companies embrace credible business strategies to collect all water fee revenues in a timely way to improve business financial viability. The significance of a financially viable public water utility is that the business leaders would concentrate on improving and providing quality water supply services. The business leaders could also use the profits to employ more people, and expand water supply to unconnected communities, thereby, improving the social well-being of the people.

In conclusion, senior managers of public water utilities can overcome inefficiencies in collecting water fee revenues, improve business profitability, and enhance business growth by striving to employ effective and credible business strategies. Examples of such strategies include using cutting-edge technologies through innovative strategies along with embracing customer relations management, effective metering and billing, and disconnection of water supply to customers with overdue water bills.

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Appendix A: Interview Protocol

Interview Protocol

Action (What I did)	Script (What I said)
<p>Introduce the interview and set the stage—over a meal or coffee</p> <ul style="list-style-type: none"> • While watching for non-verbal queues • Paraphrase as needed • Ask follow-up probing questions to get more in-depth 	<p>I welcome you to this research interview the purpose of which is to explore strategies you employ to enhance revenue collection from water fees. The purpose of the study is also stated in the informed consent form in your possession. You may now sign the consent form and be assured that this is a strictly confidential process. I will take an audio recording and notes for the interview for proper records and I hope you will allow me to do so, won't you?</p> <ol style="list-style-type: none"> 1. What strategies do you use to enhance the collection of water fee revenues? 2. What experiences do you have with overbooking as a revenue collection and enhancement strategies? 3. What experiences do you have with prepayment as a revenue collection and enhancement strategy? 4. What experiences do you have with price discrimination as a revenue collection and enhancement strategy? 5. What revenue collection strategies do you consider effective in collecting water fee revenues? 6. What other revenue collection strategies not addressed already would you like to share with business leaders.?
<p>Wrap up interview thanking participant</p>	<p>I wish to thank you sincerely for participating in this research interview and for making meaningful contribution to the study.</p>
<p>Schedule follow-up member checking interview</p>	<p>I am going to analyze and interpret this interview within 14 days. On the 15th day I will come again with the interpretation for your validation.</p>
<p>Introduce follow-up interview and set the stage</p>	<p>Welcome again to this follow up interview whose aim is to validate the interpretation from the interview we had two weeks ago</p>

Share a copy of the succinct synthesis for each individual question	I will now share with you a copy containing each interview question and the relevant succinct synthesis of the interpretation for your review and validation
Bring in probing questions related to other information that you may have found—the information that must be related to ensure probing and adhering to the IRB approval.	
Walk through each question, read the interpretation and ask: Did I miss anything? Or, What would you like to add?	<ol style="list-style-type: none">1. Question and succinct synthesis of the interpretation—in a paragraph or as needed2. Question and succinct synthesis of the interpretation— in a paragraph or as needed3. Question and succinct synthesis of the interpretation— in a paragraph or as needed4. Question and succinct synthesis of the interpretation— in a paragraph or as needed5. Question and succinct synthesis of the interpretation— in a paragraph or as needed6. Question and succinct synthesis of the interpretation— in a paragraph or as needed

Appendix B: Organizational Permission

[REDACTED]

September 22, 2016

Dear Nicholas Namaliya,

Letter of Cooperation/Organizational Permission

Based on my review of your research proposal, I give permission for you to conduct the study entitled Strategies for Maximizing Revenue Collection in Public Water Utility Companies within the southeastern part of Africa, Malawi. As part of this study, I agree to provide you a listing of participants with knowledge and experience in revenue collection and management, and I authorize you to conduct 30-60 minute interviews with them. I further authorize you to take the initiative of inviting the participants to take part in this data collection. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include: provision of senior managers who have worked for not less than three years in the public water utility that are knowledgeable and experienced in collecting water fee revenues. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

XYZ
CEO, [REDACTED]