
| RESEARCH ARTICLE

Real Property Tax Administration System Implementation and Clients' Satisfaction in Calamba City Barangays

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| ABSTRACT

The study attempted to investigate real estate owners' views on computerizing the Real Property Tax Administration in Calamba City's barangays. Transparency, accountability, involvement, and compliance were critical due to the high rate of delinquent taxpayers. The study analyzed the connection between customer satisfaction and implementation level. A questionnaire was used to collect 140 responses. Mean, correlation, and Likert scale were used to analyze the data. The main findings of the study revealed that real estate owners in barangay had a positive view of the computerization of real estate tax administration. The combined percentage of "very satisfactory" and "satisfactory" responses was consistent in all key areas. This indicates that the public perceived the local government's services as proactive and customer-centric. Since the variables were inter-connected in a way, this study proved that the implementation of the Real Property Tax System and the Client's Satisfaction level in Calamba City did meet the expected outcome of the research. Respondents positively matched all the questions, which led to a satisfactory result or more, and projected the implementation of the system. The Sub-Variables Responsiveness, Reliability, and Assurance provided a lot of positive results in this research; the answers of the respondents created an idea of advancing the proposal of this study. Despite the high satisfaction rate, there is always room for improvement. Therefore, the output of the study recommended an action plan to enhance the ongoing initiative, develop innovative approaches, and boost the confidence and productivity of barangay workers.

| KEYWORDS

Revenue collection, tax administration, system implementation, clients' satisfaction.

| ARTICLE INFORMATION

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1. Introduction

The promotion of cooperation with clients is one of the key objectives for each company's development. This development goal recognizes the importance of the operation and development of clients and professionals, including the provision of high-quality customer service standards. The decisive factor in ensuring the economic success of a company is increasingly viewed as client satisfaction.

In the 20th century, empirical studies and scientific discussions from the world's most advanced countries led to a conclusion that a greater degree of customer satisfaction attracted more customers, reinforced their fidelity to certain businesses, goods, or brands, produced larger returns, reduced the need for product improvements, and guaranteed less price flexibility (Sharma, 2020). It is, therefore, undeniable that the company needs quality services through information communication technology. Due to the remarkable contribution of information technology to decision-making, saving time, removing uncertainty, bringing prosperity, and adding value to the organization has led to the emergence of various types of information technology.

Over the past 20 years, research indicated that information technology has been installed in operational settings in local government with complete public safety command and control systems, executive information systems, office automation systems, electronic mail, and other sophisticated applications of information technology.

However, the government takes longer to adapt, accept, and routinely implement the tax collection information system in the local communities. One of the main issues faced by the tax administration system is the use of manual paper registration systems. This is particularly true when it comes to property taxes. Taxation is a critical issue to study, but it is a broad topic, and resources are expected to be a bottleneck for its coverage.

Similarly, assessing all aspects of the tax administration system in the Philippines and the revenue authority office across the regions and provinces requires more effort to re-engineer and modernize the information technology systems and procedures to increase the country's competitiveness and improve the delivery of public services and fiscal efficiency. As a result, it involves computerizing accounting information systems, which are set up to make decision-making easier. These are linked to several advantages, including the speed at which regular transactions can be completed, timeliness, speedy analysis, accuracy, and reporting.

To emphasize the significance of an updated e-government technology system, tax capacity is a measure of taxpayer compliance and client satisfaction, both of which are influenced by the caliber of service taxpayers receive from tax authorities. In many nations, tax compliance has always been a significant problem. The ability of authorities to impose taxes may have an impact on the low tax compliance rate. Taxpayer compliance can, therefore, be increased by implementing a real estate tax administration technology system that offers outstanding customer service.

All the same, an improved "Real Property Tax Administration System and Clients' Satisfaction in Calamba City Barangays" would motivate taxpayers to enhance their compliance, which will subsequently raise an economy's tax revenues. Establishing a Real Property Tax Administration System and Client Satisfaction action plan in Barangay 3, Barangay Lecheria, and Barangay Bañadero of Calamba City would present one strategy to raise tax capacity by enhancing taxpayer compliance and prove the tax collection and management mode, proposes a way to enhance the tax collection and management system, enabling taxpayers to pay taxes more swiftly and conveniently.

Information technology in all units of government could not be disregarded because, without it, many of the services they provide would not have been possible. It is already a crucial component of the government, and with time, its role will only grow. All levels of government rely heavily on information technology to run their daily operations; therefore, any disruption to this infrastructure would cause those governments to shut down completely and be unable to operate at any level. That is one of the factors contributing to the government's current fascination with information technologies.

Relatively, the goal of the Treasurer's office of Calamba City was to see the emergence of information technology as a new strategy that could never affect its broad and fundamental commitment to clients and to improve its tax revenues aimed to continually develop a new set of competencies to promote the general well-being and socioeconomic conditions of local communities.

2. Literature Review

The premise behind this chapter includes a review of the related literature that was relevant to the proposed research study. Accordingly, the researcher examined the underlying literature to determine the level of satisfaction of taxpayers in Calamba City barangays with the payment of their real estate taxes. A variety of resources were used and reviewed here, including printed publications, unpublished materials, and published over-the-internet resources.

2.1 Real Property Tax Administration System

As cited by Uhnoma and Owenvbiugie (2020), effective tax administration involves gathering, processing, and utilizing data in the most legitimate, efficient, and effective ways. The increase in tax revenue to pay for government spending was consistent with the tax authorities' sincere efforts. Nevertheless, the quantity of tax revenue collected determined how effective this process was. Effective collection and administration of revenues can result in the government performing well in providing public goods for its citizens.

According to Carpio (2020), the barangay is the place where the community's initial projects and endeavors are planned and carried out. However, it was ironic that it had the minimum quantity of information that served as an initial state for organizing and executing policy. She emphasized the importance of the Barangay Management System (e-barangay) in producing precise statistics, submitting complaints, and expediting administrative procedures like document requests.

Furthermore, as the global environment ages, he stretched further beyond the surface of development initiatives, and the use of digital equipment and other electronic gadgets became the emerging trend for information technology. It was at the forefront of streamlining procedures in both the public and private sectors as process innovation. People no longer had an option; rather, it became a necessity because computers have been instrumental in helping people organize, store, and retrieve vast amounts of information. It was also a tool that allowed its users to accomplish more, which made it an essential tool, particularly in work settings. Information and communication technology was being used more and more in the Philippines and other parts of the world to improve governance, especially at the barangay level, by strengthening the role of the government in public administration, service delivery, and the promotion of participatory democracy.

According to Islam et al. (2020), the expanding sphere and influence of ICT in contemporary times could not be simply undermined. Numerous studies have been conducted since the 1960s, when internet technology first emerged, to chart the evolution and expanding integration of ICT in people's daily lives. From autonomous, stand-alone devices intended primarily for data processing and computation, computer technology has advanced to include electronic information repositories that were always open to the public and may be accessed by anyone, anywhere in the world. Around the world, a sizable number of studies have already been conducted to help connect ICT and governance. The majority of this research was based on the conviction that information and communication technology (ICT) was one of the best, if not the most, instruments for good governance. It was not enough to simply take ICT for development as a participatory mechanism.

As stated by the National ICT Ecosystem Framework, Department of Information Communication Technology (DICT, 2019), in the future, people will live in a society where they will have access to technology that will improve their quality of life through innovations and offer efficient government services. In the constantly evolving digital landscape, government leaders and the Information and Communications Technology (ICT) sector must work hand in hand to address the challenges and opportunities of the industry. By harnessing the power of emerging technologies and innovative ideas, they could develop creative solutions to enhance the efficiency, productivity, and competitiveness of businesses and organizations while improving the quality of life for citizens. Collaboration between these two spheres was a key driver for the growth and success of the digital economy, enabling it to adapt to the changing needs and demands of society.

Moreover, Bona and Camara (2021) stated that in anticipation of the new ICT system, ICT supported the tax administration in the Philippines, which was typically made up of more than 42,000 barangays across the country. As the smallest political unit, the barangay was primarily responsible for carrying out policies, projects, and programs for development. Without the motivated and committed work of the barangays, the country's public service delivery system would collapse at the local level. In comparison to other government units, barangays situated at the base of the bureaucracy exhibited a higher level of public engagement. Therefore, a stronger, more resilient, and more prosperous society may eventually result from the empowerment of each barangay. Ironically, the barangay had the least amount of information available to serve as a baseline for planning, policy implementation, and competency despite being the site of the community's initial project planning and implementation and competency development.

In addition, according to the article from The LawPhil Project (2020) based on the Local Government Code of 1991, local government entities were expected to be independent and productive collaborators in achieving the goals of national development. They should, therefore, provide services, projects, activities, and programs that benefit their constituents. It was anticipated that the Barangay would operate effectively, including the use of ICT. The effectiveness of the performance was assessed based on the caliber and effectiveness of reports submitted to higher authorities and information shared within the local community. Developing an IT-enabled workforce and offering government services to stakeholders online were two of the most pertinent strategic visions for the Philippines. This also applied to elected officials who worked for the government. The abilities that barangay officials have gained from attending workshops and receiving ICT training will help them when utilizing ICT in daily life.

Furthermore, Santiago et al. (2021) highlighted in their statement that doing work at the municipal level, at least in part, required good knowledge and communication skills using computers and office tools to get the job done. A common feature of recent public sector reforms was the use of information and communication technologies (ICTs) to enhance government procedures and processes and to connect governments, citizens, and other governing bodies to promote greater political participation and the making of decisions that could not be seen as a strategy called e-governance. Growing evidence over the past decades demonstrated the development of an international field of study at the nexus of information and communication technologies, society, and government. Terms like "digital government," "e-government," "e-governance," and "information society" were used to describe this field.

Additionally, Santiago stressed that the term's original meaning was little more than an acknowledgment of the convergence of advancements in information technology with the use and implementation of these technologies by government agencies. It had then come to represent the institutional change that resulted in the development of a new social paradigm. As a result, the best definition of e-government instead of this trend would be the application of information technology to more effectively manage public affairs, provide public services, and accomplish more equitable democratic governance. For this reason, data was essential to making wise decisions. The Barangay Chairman, however, was not able to complete these duties by himself. As a result, he designated the Countermeasure and the Barangay Secretary to act as his hands in handling business affairs and finances after being granted authority as the local chief executive. The majority of the barangay's administrative tasks were carried out by the secretary. While some barangays had already shifted to using computers and other electronic devices for official transactions, the majority continued to rely solely on manual processes. To ensure dependability, clearances and certifications are prepared using little to no baseline data.

To bolster the study's conclusions, Vibora and Mandigma (2022) said that since previous research examining the sustainable usage of Modern technology was extremely significant, if not vital, the study's findings may be useful. One of the biggest innovations for the LGU was the ability to make payments online. The goal was to offer a precise and practical method of paying taxes. Given the shifting environment and the speed at which an online platform may be used, this was a need, and flawless execution should occur as quickly as feasible to offer improved offerings to taxpayers. Both internal and external users must be willing and fully committed to the implementation of such a program. Different problems call for different approaches.

Also, based on the article from the ADB Completion Report (2020), Information and communication technology (ICT) has long been acknowledged as the most potent tool for widespread and global dissemination, exchange, and transfer of information. A few years ago, global institutions such as the Asian Development Bank (ADB) joined forces with other organizations and platforms, like the Addis Tax Initiative, to enhance domestic revenue mobilization (DRM) and furnish governments with the necessary funds to fulfill sustainable development objectives and alleviate poverty from their populations. Enhancements to tax regimes may manifest as better legislation, streamlined procedures, and educational initiatives. It also included data warehouses, data matching, internal control functions, management information systems, and basic administrative equipment that interfaced to enable taxpayers to electronically register, file, and provide payment. An upgraded system made a higher degree of transparency possible, and it spread to other government agencies.

Apart from what was stated, many national and sub-national governments around the world share the goal of developing a sustainable administrative revenue system that could manage its source revenues in an easy, efficient, and economical way. The following were the main goals for revenue departments: (1) increase revenue; (2) enhance internal organization; (3) guarantee increased accountability, transparency, and integrity; (4) enhance taxpayer compliance; and (5) enhance taxpayer service delivery. The goal of modernizing revenue administration was to strengthen tax justice and efficiency as the cornerstones of revenue collection. Information and communication technology (ICT) could be used to close the difference between taxes, fees, and charges that were due and those that were collected. On the other hand, the administration of information and communication technology was frequently costly and complex, and it took time to see savings. Therefore, revenue departments must make wise choices. This was especially crucial in developing economies, where buying an "off-the-shelf" system might not be appropriate. Solutions for information and communication technology must take into account the demands of the surrounding area. This could indicate that more.

Moreover, Hamza et al. (2021) stated that both the compliance costs to taxpayers and the administrative expenses to the government needed to have no negative influence on the total amount of taxes collected at the national level. A sustainable tax system could not be arbitrary, nor could the amount due be influenced by bias or sentimental preferences.

Correspondingly, Sabir et al. (2021) noted also that this concept specified that the time of payment, the manner of payment, and the amount to be paid must be clear to the taxpayer as well as the taxing authorities; convenience, on the other hand, required that a good tax system be capable of generating a subsistence for the taxpayer,

Sorguli et al. (2021) mentioned that the following conditions must be met: reliable and accessible internet service, cooperative financial institutions, a technologically astute public, and adequate funding to set up the necessary infrastructure in tax offices (Ahmed et al., 2021). A comprehensive plan for the design, development, and implementation of information technology must include e-filing and e-payment systems.

As mentioned by Ismael (2021), for e-filing to be effective, the following factors were required: skilled personnel, a reliable IT infrastructure, and a good business climate. The first stage in creating a strategic business plan for electronic tax systems was to document concepts and actions, along with the goals and deadlines for each part. This was carried out while taking environmental

opportunities and risks into account, along with the administration's strengths and weaknesses in terms of taxes. In a similar vein, Hamad et al. (2021) suggested that the implementation strategy, including the method for carrying it out, be described in the plan.

Also, Fatah et al. (2021) said that many countries had chosen a staged approach to the introduction of optional electronic filing and payment for segments of the taxpayer base, such as individuals or companies, as part of a phased plan to allow for live testing of the system in the early stages. Taxpayers with specific characteristics, such as companies, were obliged to file returns following the conclusion of testing (Ali & Hamad 2021).

Furthermore, Abdullah (2021) said that there were not enough words to adequately describe the significance of IT in the field of taxation. A few examples included a decrease in the overhead costs associated with running the government agencies in charge of tax administration, instantaneous tax liability computation via online tax calculators, a reduction in the cost of registering taxpayers and generating tax identification numbers instantly, a decrease in taxpayer collusion among staff members regarding tax liability; and a decrease in the number of tax returns filed. Information Communication Technology is the fastest-growing technology in the world today; ICT adoption for running daily administrative and business transactions has made organizations, both private and public, use it as a tool for managing their daily activities and efficient revenue collection. There have been numerous changes in the world of business and government revenue collection. The changes kicked off when technological innovation was equipped for use. ICT strategies for revenue collection applications started in the USA and then spread to developing nations. The need for efficient revenue collection was of importance in many developing countries. ICTs have revolutionized, given competitive advantage, and increased efficiency in revenue collection. The use of e-payment and e-commerce has been of value in the advancement of ICT in business and government services.

In addition, Abdullah underlined that the process of collecting revenue may involve the use of a computer-based electronic system to gather and store statements to assist and direct the organizational decision-making process. Since they offered a foundation for all information systems to function, computers were the center of accounting information. The right software application for an accounting information system needed to be installed on the computer system that would be utilized for it to function.

On the other hand, Adegboye et al. (2022) carried out a similar analysis and discovered that industrialization and ICT were both sufficient and necessary components for tax revenue collection and mobilization below certain ICT thresholds. The author also found that to sustain the overall beneficial impact on tax revenue collection; additional policies were needed above and beyond these ICT limitations. According to Ershaid (2021) analysis, there was a significant correlation between VAT compliance and computerized tax registers.

Also, Apeti and Edoh (2023) discussed further that the lack of political will for a digital approach to tax collecting was a fundamental barrier to revenue mobilization in most developing countries.

2.2 Client Satisfaction with the Real Property Taxes Administration System

According to Rodriques and Sacchi (2019), client satisfaction has been acknowledged as one of the key components of modern marketing theory, especially when it comes to services.

In addition, Gobena (2019) discussed that responsiveness is the willingness to help clients and provide prompt service. In handling client requests, inquiries, grievances, and issues, this dimension placed a strong emphasis on promptness and attentiveness. Flexibility and the capacity to tailor the service to the needs of the customer were also encapsulated by responsiveness. The organization needed to see how services were delivered. Responsiveness reflected the dedication of a service provider to deliver services on schedule. Thus, the readiness and willingness to offer a service constituted the responsiveness dimension. Clients may occasionally find themselves in a situation where staff members are attending to each other's conversations at the expense of the client's needs.

Gobena also mentioned that the competence of the company, the consideration it showed for its clients, and the safety of its operations were all covered by the assurance dimension of service quality. Assurance was defined as the employee's "knowledge and courtesy, and the ability of the organization and its employees to inspire trust and confidence." Bateson and Hoffman (2019) emphasized that competence pertained to the organization's knowledge and skills in performing the promised service and referred to how the organization's employees interacted with the customer and the customer's possessions.

2.3 Relationship between Real Property Tax Administration System and Clients' Satisfaction

With the level of competition in the current market, the quality of service delivered to customers by enterprises plays a significant impact on organizations' competitiveness and sustainability. When customers believed that they received quality service, the possibility of repeat purchases was plausible. On the other hand, when customers experienced bad service, patronizing the

enterprise's products and services was improbable (Sherman, 2019). Without customers, organizations ceased to exist; therefore, delivery of quality service was vital. Providing quality customer service started within the organization. Culture acted as an important tool in shaping people's ideas on how to deliver excellent service to clients. When employees understood the importance of serving customers right, it was much easier for the organization to connect with the clientele (Lovering, 2019).

According to studies conducted by Prasetio et al. (2019), job satisfaction and stress at work are not significantly correlated. The purpose of this study is to investigate the relationship between organizational commitment, job stress, job satisfaction, and intent to quit. Organizational goals and employee welfare can both contribute to the establishment of a more encouraging workplace that lowers stress levels and boosts job satisfaction.

Prasetio et al. (2019) also mentioned that to prevent potential adverse impacts of stress on employees and the company, such as declining health, anxiety, discontent at work, and unsatisfactory performance, organizations must be aware of these parameters. Work satisfaction is crucial, and it needs to be sustained and improved over time.

Moreover, successful leaders and contented workers are seen to be critical components in attaining organizational success.

Luturlean et al. (2019) found that implementing transformational leadership and stress management at work could increase employee job satisfaction. However, they also found that transformational leadership had no significant effect on work stress. This suggested that work stress did not intervene in the relationship between job satisfaction and transformational leadership. Moreover, customer satisfaction was widely recognized as a crucial factor that could impact an organization's overall success. Providing high-quality customer service is essential in today's fiercely competitive business environment and is the foundation of any successful business.

Several studies have identified that the quality of customer service affects the image and reputation of an organization. When service quality was high, the level of customer satisfaction tended to be high, too, and this significant positive relationship was indirectly affected by corporate image (Chien & Chi 2019). Service quality was vital among private organizations, and quality customer service was the central element of the public sector. In the government sector, public service was the fundamental task of every government worker, and the citizens were the ultimate customers. All government units and agencies must guarantee quality customer service to their clientele. The quality of customer services was gauged by the citizens, businesses, and private individuals; hence, government workers were expected to deliver the service that the customers deserved.

The implications of the survey's findings were similar to those made by Ocampo et al. (2019), who stated the importance of service quality evaluation performance among employee-related issues. Similarly, the evaluation focused on how well and responsive the employee personnel in the agency servicing sector were. Responsiveness and promptness of services were the most important dimensions and sub-dimensions of the study; hence, the proposed approach enabled government administrators to direct their efforts and resources toward enhancing service quality in key areas of responsibility. Responsiveness is a metric that tests the ability to solve a problem quickly, deal with consumer complaints efficiently, and be able to assist customers as well as meet their needs.

On the other hand, according to Ramya et al. (2019), the ability of service organizations to deliver the promised service accurately and consistently was referred to as the system's reliability dimension, and it reflected the dependability and consistency of an organization's performance. They added that dependability entailed the company keeping its word regarding problem-solving, service delivery, and service provision. Although clients found unreliable service providers to be highly inconvenient, a concerning amount of organizations continued to fall short of fulfilling their service delivery commitments. Every time, perceptions of client satisfaction were determined primarily by reliability.

In support, Mao and James (2020) provided evidence to support their findings, stating that customers' expectations were shaped by their previous experiences with a company's products or services, as well as advertising and word-of-mouth information. Furthermore, they agreed that customers' expectations served as benchmarks for their evaluations of the quality of service they received. In a similar vein, service providers must recognize that meeting or exceeding client expectations consistently is the foundation of providing high-quality service. Thus, increasing customer satisfaction can result in positive word-of-mouth advertising, which can result in increased revenue and profitability for the government.

The result was in line with the findings of Asuncion and Lacap (2021), who found a strong correlation between provider assurance and customer satisfaction with courteous service providers. They added that service providers should give each customer their full attention and take good care of their needs to boost customer satisfaction. The level of client satisfaction with the service showed a statistically significant relationship between assurance and customer satisfaction, according to the results of the hypothesis testing.

Several researchers, including the findings of Doeleman et al. (2021), revealed that a positive relationship existed between successful strategy implementation and open strategizing practices when transformational leadership was present. Based on the data, "intrinsically motivated" and "empowering" leaders were found to be a moderating factor in supporting the adoption of their own locally developed location strategy. Hence, employee commitment to strategy implementation had a positive impact on employee satisfaction. Consequently, employee commitment to strategy implementation of barangays was correlated with employee satisfaction; thus, the more committed employees to strategy implementation, the higher the level of satisfaction with their firms. As a result, increasing employee job satisfaction through the implementation of transformational leadership and work stress level management had a positive relationship with employee job satisfaction. However, transformational leadership did not have a significant relationship with work stress. This, therefore, meant that there was no mediation of work stress either.

3. Methodology

This chapter presents a brief description of the general method of research employed in the study, the sample of the study, the procedural steps followed in the conduct of the study, which includes research instruments, and the statistical treatment applied for the analysis and interpretation of the data obtained from the City Treasurer’s Office of Calamba.

3.1 Research Design

This study used the quantitative descriptive correlational study (Creswell, J. et al., 2018). The quantitative-descriptive correlational method refers to the method that accurately and systematically describes a population, situation, or phenomenon. It systematically describes a situation or area of interest factually and accurately and helps the researcher discover relationships and causal links between variables while considering all steps involved in the interpretation process.

Through this research, an action plan can be made for improving, maintaining, and rejecting the focus on making it efficient. Since the study described the satisfaction of the clients and the findings were the basis for developing an action plan, the quantitative descriptive survey method was the most appropriate to use in this study.

3.2 Research Locale

The study, which aimed to create a new standard of superior local governance, took place in selected barangays in Calamba City. These included Barangay 3, Barangay Lecheria, and Barangay Bañadero, which had a high rate of taxpayer delinquencies and required a commitment to transparency, accountability, participation, and compliance. The survey was conducted in certain barangays.

3.3 Population and Sampling

In this study, a stratified random sampling technique was applied to select the corresponding number of respondents. The sampling was established with the effect size to quantify the magnitude of the difference between populations, the margin of error, and the confidence level calculated with the statistician using G*Power of 140 taxpayers from selected Barangays, including the 21 Barangay Officials from the three selected Barangays of Calamba City.

3.4 Respondents of the Study

To assess the level of implementation of the real property tax administration system of Calamba City barangays, the researcher included twenty-one (21) officials and key personnel of selected barangay to contribute information about the performances of the Revenue Collection Information System administered by the Treasurers’ Office in their barangay. To supplement the information of the personnel and barangay officials and to assess the level of satisfaction, the one hundred forty (140) clients (taxpayers) were included.

Table A
Respondents of the Study

Group of Respondents	Population	Percentage	Sample Size
Barangay Officials	33	15.21%	21
Clients	184	84.79%	119
Total	217	100%	140

Table A shows that the 33 barangay officials and 184 clients/taxpayers were the respondents who assessed their satisfaction with the Real Property Tax Administration System (RPTAS) implemented by the City Treasurer’s Office in Calamba City. All of them were selected to comprise the study sample, which consisted of 21 Barangay Officials and 119 Clients, using a simple random sampling technique.

3.5 Instrument

A researcher-made questionnaire tailored for the institution checklist was utilized as the main data-gathering instrument. It was patterned from books, articles, periodicals, and some unpublished materials pertinent to the proposed topic and was presented to the adviser and statistician for evaluation, suggestions, and recommendations. The questionnaires were divided into two (2) to evaluate the system and program implemented by the Treasurer's office. The questionnaires explored the perceptions of the clientele, particularly regarding responsiveness, reliability, and assurance.

The questions were structured using the Likert format. In this survey type, four choices were provided for every question or statement. The choices represented the degree of agreement on the given questions. The scale below was used to interpret the total responses of all the respondents for every survey question by computing the weighted mean. The application of the Likert scale in this study was further explained with an interpretation as shown below.

Mean-score Interval and Verbal Interpretation on the Level of Implementation of Real Property Tax Administration System

Ranges of Mean Rating	Categorical Response	Verbal Interpretation
3.25 - 4.00	4 Strongly Agree	Fully Implemented
2.50 - 3.24	3 Agree	Implemented
1.75 - 2.49	2 Disagree	Partially Implemented
1.00 - 1.74	1 Strongly Disagree	Not Implemented

Mean-score Interval and Verbal Interpretation on the Level of Clients' Satisfaction

Ranges of Mean Rating	Categorical Response	Verbal Interpretation
3.25 - 4.00	4 Very Satisfied	Fully Implemented
2.50 - 3.24	3 Satisfied	Implemented
1.75 - 2.49	2 Dissatisfied	Partially Implemented
1.00 - 1.74	1 Very Dissatisfied	Not Implemented

3.6 Validation of the Instruments

To test the validity of the instrument to be used for the study, the instrument was pilot-tested on six barangay officials not included in the group of respondents and 25 clients from one barangay. The dependability and consistency of the instrument's internal data were evaluated using Cronbach's Alpha. The specialists who dedicated their time and effort to considering all the important problems that should be described and clarified in the study process validated and approved this instrument. These specialists were the statistician for the study, a professor from LCBA, and a representative from the Treasurer's Office. As a result, each comment and proposal received thorough attention. Based on proportion relevance, the calculation concluded that the S-CVI Average and S-CVI UA Average met the satisfactory level of 1.0. Hence, the scale of the questionnaire has achieved a satisfactory level of content validity.

3.7 Data Gathering Procedure

Since the study required the participation of respondents, the consent of the selected respondents was secured, relaying all important details of the study, including its aims and purposes. By explaining these important details, the respondents were able to understand the importance of their role in the completion of the research.

A face-to-face survey on the selected Barangays at Calamba City was conducted. Specifically, Barangay 3, Lecheria, and Bañadero. In every Barangay, the researcher randomly administered the survey to one hundred forty (140) respondents, including taxpayers and barangay officials.

The researcher distributed and discussed the custom-tailored questionnaires. After three to four days, the researcher collected the data personally. The results were tallied, prepared in a tabular form, presented, and analyzed in the text by using the appropriate statistical treatment.

3.8 Ethical Consideration

Ethical issues were one of the most important aspects of the research. Thus, this study considered the observance of the Ethics Manual of LCBA. The respondents' informed permission was secured before the survey. The study ensured participants' dignity

should not be compromised in any way, and this was given top attention. Finally, during the process, consideration was given to maintaining the privacy and security of the information obtained.

3.9 Treatment of Quantitative Data

The following statistical treatments were used to analyze the quantitative data:

1. The Mean and four-point Likert scale was used to describe the level of implementation and the level of client satisfaction with the Revenue Collection Tax Administration System.
2. To compare the means of two groups, the paired t-test was used in hypothesis testing to determine whether a process or treatment has an effect on the population of interest or whether two groups are different from one another.
3. The Pearson Product-Moment Correlation was utilized to measure the strength and direction of the relationship that exists between the level of implementation and clients' satisfaction with the Revenue Collection Tax Administration System.

4. Results and Discussion

This chapter presents the summary of findings and the results of the data generated from the respondents' responses relative to the delivery of services. The conclusions framed were correspondingly derived from the findings. Finally, the recommendations were fashioned from the conclusions drawn.

4.1 Summary of Findings

From the data gathered and analyzed, the following findings were presented:

4.1.1 Level of Implementation of Real Property Tax Administration System Implementation in Calamba City Barangays as assessed by Barangay Officials and Clients in terms of:

4.1.1.1 Revenue Collection Information System (RCIS)

It had a general assessment of 3.47, interpreted as Fully Implemented.

4.1.1.2 Revenue Collection Processes

It had a general assessment of 3.47, interpreted as Fully Implemented.

4.1.2 Test of Significant Difference between the Assessment of the Barangay Officials and Clients on the Level of Implementation of the Real Property Tax Administration System in Calamba City Barangays.

There was a significant difference between the assessment of the barangay officials and clients on the level of implementation of the Real Property Tax Administration System in Calamba City barangays. The probability values were .003 and .008.

4.1.3 Level of Client Satisfaction on Real Property Tax Administration System in terms of:

4.1.3.1 Responsiveness

It had a general assessment of 3.36, interpreted as Very Satisfied.

4.1.3.2 Reliability

It had a general assessment of 3.38, interpreted as Very Satisfied.

4.1.3.3 Assurance

It had a general assessment of 3.41, interpreted as Very Satisfied.

4.1.4 Test of Significant Relationship between the Level of Implementation of Real Property Tax Administration System and Clients' Satisfaction Level in Calamba City Barangays.

There was a significant relationship between the revenue collection process and clients' satisfaction in terms of responsiveness, reliability, and assurance. The r-values were between .010 to .025, which indicated a small positive correlation. The null hypothesis was rejected because the probability values .020, .034, and .029, respectively, were all below the level of significance.

4.2 The Proposed Action Plan

The development of an action plan or program awareness was undertaken to further improve the Clients' Satisfaction with the implementation of the Real Property Tax Administration System in Calamba City Barangays.

4.3 Recommendations

Based on the conclusions, recommendations were provided below:

1. The City Government of Calamba, through the Treasurer's Office, may be more sensitive and energized to engage with more clients/taxpayers through the creation of a City Technical Working Group to plan and carry out creative yet realistic system modifications after conducting a diagnostic analysis of the real property tax implementation system's organizational and operational structure. The program's participatory approach aims to bring about a paradigm shift not only for the assessment and Treasury personnel but also for elective officials and other relevant parties such as barangay officials.
2. A technical assistance team from barangays may be arranged to support the working group. It was underlined that an assistant's primary responsibilities are observations and limited advice, clarifications, and suggestions. The City Technical Working Group makes the decision and takes the necessary action regarding the implementation system.
3. The Treasurer's Office of Calamba City may facilitate training and seminars on real property tax payment, particularly to those directly involved in service delivery implementation, to improve their confidence, ability, and expertise in dealing with clients to achieve the goal of customer satisfaction, which is to ensure that the members' satisfaction is maintained.
4. The City Treasurer's Office may implement the proposed action plan/program to further develop and enhance the satisfaction of its clients, as this is the most important factor of customer retention, which has a big impact on the company's future and profitability.
5. Future studies on similar topics are hereby inferred to identify the specific factors not covered by this study to contribute to the cultivation of the program, more research on the implementation of the real property tax implementation system and revenue collection processes, as well as client satisfaction with the program, should be done. A qualitative strategy rather than a quantitative approach will be employed in future research with the purpose of better understanding the clients' experiences and having a great opportunity to do all necessary analyses about the quality of its services and the satisfaction of its clients as a result of this initiative.

5. Conclusion

After presenting the summary of the findings of the study, the following conclusions were drawn:

1. That the Real Property Tax Administration System in Calamba City barangays, as assessed by barangay officials and clients in terms of Revenue Collection Information System (RCIS), is recognized and accepted. Based on the aforementioned data, it can be concluded that barangay workers firmly support the Revenue Collection Information System. Their rules and regulations are a big part of what drives workers to behave a certain way when rendering services. Furthermore, the revenue collection procedures for the Real Property Tax Administration System in the barangays of Calamba City had been fully implemented, according to the revenue collection processes that the barangay personnel primarily agreed upon.
2. Barangay officials' and clients' assessments of the Real Property Tax Administration System's implementation levels in Calamba City barangays vary significantly. It demonstrates that the probability values are .003 and .008, both of which are below the significance threshold of .05. Rejecting the null hypothesis leads to the conclusion that clients and barangay officials have different opinions about how well the Real Property Tax Administration System is being implemented.
3. Tax supervision systems can be improved by considering human issues and standardized tax collection and administration. However, big data complexity presents challenges in computing and statistical analysis. Therefore, addressing humanitarian concerns is crucial. Employee commitment to strategy implementation and transformational leadership positively impact job satisfaction.
4. That improved revenue collection processes lead to higher client satisfaction, but no significant relationship was found between implementation indicators and satisfaction. The study identified three key variables: process, payment, and system image, emphasizing the importance of reliability, responsiveness, assurance, and employee service.
5. That a service enhancement program is necessary to be prepared to incorporate additional strategies on an ongoing basis to strengthen the current program of the Revenue Collection Implementation System while simultaneously increasing employee productivity and confidence levels.

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References

- [1] Abdullah, A. (2021). Evaluating Customer Satisfaction Using the ACSI Model in a Themed Restaurant in Bangkok. *Business Management and Strategy*. Retrieved from <http://dx.doi.org/10.5296/bms.v11i1.16546>
- [2] ADB Completion Report 2020. *Information and Communication Technology for Development Initiative Facility in Asia and the Pacific*. <https://www.adb.org/sites/default/files/project-documents/48240/48240-001-tcr-en.pdf>
- [3] Adegboye et al. (2022). Driving information communication technology for tax revenue mobilization in Sub-Saharan Africa. <https://doi.org/10.1016/j.telpol.2022.102329>
- [4] Ali, D.J & Hamad, H.A, (2021). The role of the cash flow statement to provide accounting information for the financial decision-making process (Case study International Islamic Bank of Kurdistan in the year 2018). *Qalaai Zanist Scientific Journal*, 6(2), 870-887. Retrieved from: DOI:10.22161/ijaems.79.5
- [5] Ahmed et al. Ahmed, SA, Othman, BJ, Gardi, B., Sabir, BY, Ismael, NB, Hamza, PA, Sorguli, S., Aziz, HM, Ali, BJ, Anwar, G (2021). Students' Attitudes towards Learning English in the Kurdistan region of Iraq. *International Journal of English Literature and Social Sciences*, 6(3), 072-087. Retrieved from: DOI:10.22161/ijaems.79.5
- [6] Apeti, AE. and Edoh, ED (2023). Tax revenue and mobile money in developing countries. DOI: 10.1016/j.jdevec.2022.103014
- [7] Asuncion, A. H., Lacap, J. P. G. (2021). Impact of Service Quality on Taxpayers' Satisfaction at Revenue District Office 21A, Bureau of Internal Revenue, Pampanga, Philippine, *PREO Journal of Business and Management* ISSN: 2619-6824 Vol. 2, Issue 1, February 2021
- [8] Batas Pambansa Blg. 337, otherwise known as the Local Government Code, Executive Order No. 112 (1987), and Executive Order No. 319 (1988)
- [9] Bateson and Hoffman (2019). The Impact of Service Quality on Customer Satisfaction: A Case Study on Nekemte Municipality, Oromia Region, Ethiopia DOI:10.19080/ASM.2019.04.555629
- [10] Bona, J.T, and Camara, J.S. (2021) Digital Literacy among Elected Barangay Officials as an Input to a Community Extension Program 6, 1, 2021, P-ISSN: 2672-2984 E-ISSN: 2672-2992
- [11] Carpio, C.O. (2020). Barangay Management System, *International Journal of Multidisciplinary Research and Publications (IJMRAP)*, 3, 2, 26-32, 2020.
- [12] Cha, E. H., Lee, S. H. 2021. An Analysis of the Taxation System from the Property Theory November 2021, *Journal of Real Estate Analysis* 7(3):205-225 DOI:10.30902/jrea.2021.7.3.205
- [13] Chien, L., & Chi, S. (2019). Corporate image as a mediator between service quality and customer satisfaction: difference across categorized exhibitors. *Heliyon*, 5(3), 1-24. Retrieved from: https://www.researchgate.net/publication/348972366_Impact_of_Service_Quality_on_Taxpayers'_Satisfaction_at_Revenue_District_Office_21A_Bureau_of_Internal_Revenue_Pampanga_Philippines
- [14] Creswell, J. and Creswell J.D (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* DOI:10.1002/nha3.20258
- [15] Cuevas-Vargas, H., Parga-Montoya, N., & Fernández-Escobedo, R. (2019). Effects of Entrepreneurial Orientation on Business Performance: The Mediating Role of Customer Satisfaction—A Formative–Reflective Model Analysis. *Sage Open*, 9(2). <https://doi.org/10.1177/2158244019859088>
- [16] Doleman, H.J., Van Dun, D., & Wilderom, C., (2021). Leading open strategizing practices for effective strategy implementation. <https://www.emerald.com/insight/content/doi/10.1108/JSMA-09-2020-0253/full/html>
- [17] Ershaid, O.N (2021) The Attitudes Of VAT Taxpayers Toward The Use Of E- Tax Systems And Their Impact On Tax Compliance: A Field Study Of Tabuk Region, <https://api.semanticscholar.org/CorpusID:231756638>
- [18] Gobena, A.G (2019) *The Impact of Service Quality on Customer Satisfaction: A Case Study on Nekemte Municipality, Oromia Region, Ethiopia*. DOI:10.19080/ASM.2019.04.555629
- [19] Gojoi, BJ. (2021). Service Quality Measures: How It Impacts Customer Satisfaction and Loyalty. *International Journal of Management*. <https://ssrn.com/abstract=3585157>
- [20] Hamad, K.Q., Qader, K.S., & Sharif, R.J.M. (2021). Effectiveness And Adequacy Of Disclosure Provisions In Tehran Stock Exchange. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 18(08), 2379-2388. Retrieve from: DOI:10.22161/ijaems.79.5
- [21] Hamza, PA., Qader, K.S., Gardi, B., Anwer, H., and Anwar, K (2021). Analysis the impact of Information technology on Efficient tax Management. DOI:10.22161/ijaems.79.5
- [22] Huang, P., Lee, B., Chen, C., (2019). The influence of service quality on customer satisfaction and loyalty in B2B technology service industry, *Total Quality Management & Business Excellence*. <https://doi.org/10.1080/14783363.2017.1372184>
- [23] Islam, M., Wesonga, R., Hasani, I and Manei, A. (2021). Prevalence and determinants of mental health issues among university students during COVID-19 pandemic in Oman: An Online Cross-sectional Study *International Research Journal of Public and Environmental Health* 9 (2),pp. 43-54, April 2022. //www.journalissues.org/IRJPEH/ <https://doi.org/10.15739/irjpeh.22.006>
- [24] Ismael, NB, Othman, BJ, Gardi, B., Hamza, PA, Sorguli, S., Aziz, HM, Ahmed, SA, Sabir, BY, Ali, BJ, Anwar, G. (2021). The Role of Training and Development in Organizational effectiveness. *International Journal of Engineering, Business and Management*, 5(3), 15-24. DOI:10.22161/ijaems.79.5
- [25] Lau, E. Y & Faulkner, G. (2019). Program implementation and effectiveness of a national workplace physical activity intervention: UPnGO with ParticipACTION. *Canadian Journal of Public Health* 110:2 187-197. <https://doi.org/10.17269/s41997-018-0170-2>
- [26] Lovering, C. (2019). The importance of quality customer service in the workplace. <https://work.chron.com/importance-quality-customer-service-workplace-3106.html>
- [27] Mao, M. and James, P. (2020) Evaluating Customer Satisfaction Using the ACSI Model in a Themed Restaurant in Bangkok. DOI:10.5296/bms.v11i1.16546
- [28] McCluskey, M. (2019). The role of ICT in property tax administration: Lessons from Tanzania. CMI BRIEF NUMBER 6, JUNE 2019.
- [29] Mendoza, M. C. O. et al (2020) Assessment of E-Service Quality Dimensions and Its Influence on Customer Satisfaction: A Study on the Online Banking Services in the Philippines, 2020 IEEE 7th International Conference on Industrial Engineering and Applications (ICIEA), 2020, pp. 1076-1081. <https://doi.org/10.1109/ICIEA49774.2020.9101940>

- [30] Mullan, H. (2020). Customer Satisfaction as an Antecedent of Customer Loyalty. *International Journal of Research in Social Sciences*. <https://www.indianjournals.com/>
- [31] National ICT Ecosystem Framework, Department of Information Communication Technology (DICT) (2019). <https://opengovasia.com/2019/02/25/philippines-launches-its-national-ict-ecosystem-framework/>
- [32] Ocampo, L. et al (2019). Public service quality evaluation with SERVQUAL and AHP-TOPSIS: A case of Philippine government agencies, *Socio-Economic Planning Sciences*. <https://doi.org/10.1016/j.seps.2017.12.002>.
- [33] Prasetyo, AP., Luturlean, BS., & Saragih, R. (2019). Increasing Employee's Job Satisfaction Through the Implementation of Transformational Leadership and Work Stress Level Management. DOI:10.35609/jmmr..4.3(6)
- [34] Raczkowski, K., Friedrich, S., Węgrzyn, J. (2023). *Tax System Economics*. Warsaw: PWN Scientific Publishers. p. 14. ISBN 978-83-01-22663-3.
- [35] Ramya, N., Kowsalya, A. and, Dharaniptiya, K. (2019). Service quality and its dimensions. https://www.researchgate.net/publication/333058377_SERVICE_QUALITY_AND_ITS_DIMENSIONS
- [36] Republic Act No. 7160, "An Act Providing for A Local Government Code of 1991"
- [37] Rodrigues, B., & Sacchi J.S (2019). The Impact of Service Quality on Customer Satisfaction: A Case Study on Nekemte Municipality, Oromia Region, Ethiopia. *Ann Soc Sci Manage Stud*. 2019; 4(1): 555629. DOI: 10.19080/ASM.2019.04.555629
- [38] Sabir, B. Y., Qader, K. S., Hamza, P. A., Ali, B., Ismeal, S. S., Aziz, H. M., & Anwar, G. (2021). Analysis of Accounting-Based Measures of Expected Returns: A Study of Private SME In Kurdistan. Retrieved from: DOI:10.22161/jjaems.79.5
- [39] Santiago C.S Jr., Cereneo, S., Ulanday, M., Centeno, Z., Bayla, M. (2021). *International Journal of Knowledge Content Development & Technology*; Chungju Vol. 11, Iss. 2, (2021): 37-54. DOI:10.5865/IJKCT.2021.11.2 037
- [40] Sherman, F. (2019). Why is quality in customer service important? <https://bizfluent.com/about-5437915-quality-customer-service-important.html>
- [41] Sorguli, S., Gardi, B. J. Othman, H. M. Aziz, S.A. Ahmed, B.Y. Sabir, N.B. Ismael, P. A. Hamza, B. J. Ali, and G. Anwar. (2021). Innovation: Knowledge Management in the Innovating Industries, 6 (3), 10-23. DOI:10.22161/jjaems.79.5
- [42] Tas, E. et al (2019), Tackling service quality in the telecommunication B2B market, *Journal of Business & Industrial Marketing*, Vol. 34 7, 1580-1591. <https://doi.org/10.1108/JBIM-05-2018-0160>
- [43] The LAWPHIL Project, Arellano Law Foundation, Philippine Laws and Jurisprudence Databank. (2020). <https://lawphil.net/index.html>
- [44] Tran, V. & Le, N.M. (2020). Impact of Service Quality and Perceived Value on Customer Satisfaction and Behavioral Intentions: Evidence from Convenience Stores in Vietnam. *Journal of Asian Finance, Economics and Business*, 7, 517-526. <https://doi.org/10.13106/jafeb.2020.vol7.no9.517>
- [45] Uhunoma, G. & Owenbiugie, R. (2020) Effective tax administration and revenue collection: key indicators of government performance in Nigeria. https://www.researchgate.net/publication/344337224_EFFECTIVE_TAX_ADMINISTRATION_AND_REVENUE_COLLECTION_KEY_INDICATORS_OF_GOVERNMENT_PERFORMANCE_IN_NIGERIA_BY
- [46] Vibora, E.P., & Mandigma, B.S. (2022). The International Journal of Interdisciplinary Organizational Studies. *Implementation of the Online Tax Payment Facility in a Philippine Local Government Unit*, 65. Retrieved from: doi:10.18848/2324-7649/CGP/v17i02/43-65.