





Evaluation of budget management in San Martín department municipalities, Peru: A quantitative analysis from the perspective of key actors in the financial and administrative area

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ABSTRACT

Article History

Received: 7 July 2025

Revised: 13 November 2025

Accepted: 4 December 2025

Published: 19 December 2025

Keywords

Budget management

Economic crisis

Efficiency

Financial planning

Transparency.

To analyze municipal budget management in the San Martín Department, Peru, based on the perceptions of key actors in financial and administrative areas, we evaluate five dimensions: budget execution efficiency, transparency, financial planning capability, impact of the economic crisis on allocation, and staff satisfaction. This diagnosis aims to inform improvements. The study employed a quantitative, descriptive, non-experimental design with a non-probabilistic convenience sample of 108 municipal employees from financial and administrative units. Data collection was conducted through an expert-validated Likert-type questionnaire, and analysis involved descriptive statistics such as frequencies, means, and standard deviations. The overall evaluation of budget management was clustered at a medium level (39.8%), with 30.6% low and 29.6% high. Execution efficiency had the highest share of high ratings (38.0%), while transparency showed the largest share of low ratings (45.4%). Financial planning was concentrated at a medium level (38.0%). The perceived impact of the global economic crisis on allocations was low or medium for most respondents (74.0%), and staff satisfaction was predominantly medium (48.1%). Perceptions reveal heterogeneous practices with recurrent challenges in transparency and planning, alongside pockets of managerial strength in execution. Findings suggest the need for standardized processes, digital transparency, and capacity building in planning to enhance accountability and resilience in resource-constrained settings. The study provides policy-oriented recommendations aimed at transparency portals, lightweight monitoring controls, skills training, and intergovernmental coordination to improve municipal budget management in San Martín.

Contribution/Originality: This study offers municipal-level evidence from a resource-constrained Peruvian region, showing the lowest perceived transparency versus comparatively higher execution efficiency. We add a variables framework and policy-ready recommendations tailored to local governance. The results help prioritize low-cost digital transparency and planning capacities to strengthen accountability and service delivery.

1. INTRODUCTION

In the field of budget management, there is a wealth of knowledge that has contributed to understanding practices and problems, but has also left complex gaps that need to be deepened, especially in the context of Peruvian municipalities. This is the case of [Biondi and Marzo \(2020\)](#), who study how decision-makers make decisions on the

allocation and execution of the public budget. While this research provides good guidelines for understanding the dynamics of capital budgeting at the local government level, it does not provide a "wedge" on how the specificities of Peruvian municipalities affect this process, a gap that needs to be filled for these practices to be better adapted.

At the same time, [Cardoş \(2014\)](#) reviews the budget cycle, highlighting, among others, formulation, implementation, and control in democracies. What is missing in his study is a description of how such processes are executed in environments with aid restrictions, such as municipalities in Peru. This lack of specialization prevents its direct applicability to the context of study and indicates the need for more studies that focus on this particularity. Another is a study by [Parafina \(2018\)](#). One of the aspects he addresses is the issue of transparency along with accountability in the management of public funds and resources, focusing on local government in the Philippines. While the similarities between public management in developing economies may provide useful clues, the study does not address the characteristics of Peruvian municipalities nor how the decrease in funding during a crisis affects the level of transparency, thus leaving a gap.

Another research conducted in Norway by [Nerland, Hestad, Solbu, Hansen, and Nilsen \(2024\)](#) is particularly noteworthy for addressing the question of how a relational sustainability framework can be used in governance at the local level to promote new governance practices. The findings indicated that the incorporation of values, the art of listening, and articulating a clear purpose are critical ingredients in establishing a relational foundation that would enable society to transform toward sustainability. These themes could also be applied in the Peruvian context, where municipalities are required to adopt environmentally and socially responsible spending practices. For this reason, the gap identified in the literature mentioned above was the lack of studies addressing how these relational approaches could be applied in the specific context of Peruvian municipalities with their budgetary constraints and bureaucratic limitations. Furthermore, although the point of bounded rationality is clearly emphasized in relation to the importance of incremental changes, the actual implementation of these strategies in a resource-constrained environment, such as Peruvian municipalities, has not been adequately investigated, highlighting the need for targeted research in this setting.

The recent study by [Santopietro, Solimene, Lucchese, Di Carlo, and Scorza \(2024\)](#) illuminates a key paradox for local governments: how budget constraints can become opportunities to boost energy efficiency. Focusing on the European experience, the paper reveals how the Covenant of Mayors especially in medium and small cities has served as a lever to redirect resources towards green projects with unexpected social impacts.

Participating in municipalities not only improved their energy infrastructure (LED lighting, efficient buildings) but also experienced a positive ripple effect, with every euro invested in modernizing schools generating savings that were then reinvested in educational materials. Reducing energy costs in public buildings freed up funds for teacher recruitment.

Contrary to expectations, it was the smaller cities that demonstrated the greatest budgetary creativity: allocating specific items with sustainability clauses, establishing public-private partnerships for pilot projects, and using energy savings as collateral for new loans.

The most revealing data: municipalities with Sustainable Energy Plans increased their educational spending by 15-20% in 3 years. This suggests that well-implemented environmental policies generate budget surpluses and that citizens are more supportive of budgets when they see tangible benefits (renovated schools + better teacher salaries).

Strategic prioritization: Successful cases followed a clear sequence: energy audits, quick investments with guaranteed returns (e.g., lighting), and reinvestment of savings in social areas.

Transparent governance: Municipalities that published periodic savings reports achieved greater citizen support for new measures.

Budget flexibility: Creating specific funds (not rigidly earmarked) makes it possible to capitalize on emerging opportunities.

This European model, with appropriate adaptations, offers valuable insights for Latin American municipalities seeking to reconcile fiscal austerity with advances in sustainability and social development. The key appears to be viewing energy efficiency not as an expense but as a resource generator for other local priorities.

However, the research leaves unanswered questions that deserve attention. Since it is limited to Europe, it remains to be analyzed whether this model could be adapted to realities such as Peru's, where budgetary urgencies and energy needs follow different paths. Would it be feasible, for example, to replicate these mechanisms in municipalities with fewer technical and financial resources? This limitation opens an interesting window for future comparative studies that could enrich the debate.

This gap highlights the importance of investigating how the principles of budget efficiency could be applied to resource management in various sectors of municipalities in developing nations.

Other research on declining cities, such as that analyzed by [Großmann et al. \(2024\)](#), tends to present two opposing perspectives on local initiatives: as marginal actors or as valuable resources for development. However, both approaches can be misleading as they do not adequately appreciate the real conditions of the initiatives themselves, especially in contexts of poverty and self-management. In studies conducted in Finland and Germany, it was found that the deterioration of these areas is more attributable to the nation that has "forgotten" them than to the simple scarcity of population. This implies that public policies are determinant in the mobilization and progress of local areas, a fact that is directly applicable to Peru's municipalities, which are constantly subject to budget cuts. However, what appears as a gap in the knowledge of this research results from the scarce literature that examines how Peruvian public policies impact the management of municipal budgets in times of crisis. Regarding self-management and financial sustainability of the places analyzed in the province of Lima, it is necessary to investigate in a broader manner as these elements are fundamental to formulate policies, improving the management of the local budget. Regarding self-management and financial sustainability.

Although there are several studies that address issues related to budget management, there is a lack of specific research that considers the particularities of Peruvian municipalities, especially in relation to the reduction of funds, transparency in a context of limited resources, and anti-corruption strategies adapted to weaker institutional realities. This points to the need for a focused analysis that addresses these gaps and provides recommendations applicable to the specific context of municipalities in San Martín, Peru.

Budget management capacity, for example, must contend with inefficiencies in the execution of resources, as well as recurrent economic crises and, in almost general terms, a lack of transparency in the accountability of the management of public funds. These deficiencies are obstacles to the optimization of financial resources and jeopardize the sustainability of development goals, which are more pronounced in developing nations. Meanwhile, in countries such as Brazil, the United Kingdom, and the Netherlands, studies have shown that the institutional structure is an important determinant in the outcome of governance, which in practice affects the execution of public budgets ([Chaves, 2013](#); [Sokolenko, 2022](#)).

This situation is no different in Peru's municipalities. Likewise, municipalities have serious concerns regarding the allocation and implementation of budgets because of cuts in resources from the Central Government, which argues that there are no funds due to the global economic crisis caused by the COVID-19 pandemic. The economic crisis has impacted state budget execution in several important areas in Peru, including municipalities ([Izquierdo et al., 2020](#)).

In this context, the study has the relevance of facilitating a comprehensive diagnosis in the way public resources are managed, increasing accountability actions in the execution of budgets, which is relevant for local development and the population. This study will be of great importance for the improvement of financial management processes in the municipalities of San Martín. Consequently, it will provide empirical evidence of how municipalities can better achieve their development objectives through effective management of budgetary resources, even in times of economic recession. It will also contribute to better formulation of public policies that tend to improve the allocation and expenditure of financial resources.

This study is not just another academic paper on budget management. It has a clear mission: to provide real solutions for local governments in developing countries struggling with resource scarcity. While other research is limited to analyzing technical indicators transparency, efficiency, planning we go further. We propose a practical model that helps municipalities do more with less, even in the most difficult conditions.

What makes this research different is its "from theory to action" approach. We do not settle for diagnostics; we include a concrete tool that any local administration can use to evaluate and improve its budget processes step by step. But there is more. We also provide specific recommendations for problems that are often overlooked, such as how to prioritize the allocation of funds when money is tight and simple but effective strategies to motivate the management team (yes, that human factor that many ignore but that makes all the difference).

The real impact is measured in improved lives. When municipalities manage their budgets better, citizens notice real changes: schools with better conditions, health centers that have medicines, paved streets where there used to be mud. That is the goal: to turn numbers into well-being, spreadsheets into concrete opportunities for the people.

The municipalities of the San Martín Department, particularly the relevant actors in the financial and administrative areas, are the focus of this study, since they are or will be better prepared to carry out these reforms in the management required by the budget. Indirectly, citizens in general will benefit since there will be greater clarity and responsibility in the management of public resources, which will improve the services and projects offered by the municipality.

The general objective of the study is to analyze the budget management of the municipalities of the San Martín Department, Peru, from the perspective of financial and administrative personnel. The specific objectives are: to determine the efficiency of budget execution in municipalities, to evaluate the level of transparency in budget management, to analyze how financial planning capacity affects the fulfillment of municipal objectives, to evaluate the impact of the global economic crisis on budget allocation, and to measure the level of satisfaction of administrative and financial personnel with respect to budget management.

This study analyzes budget management based on the perceptions of key financial and administrative actors. We focus on five dimensions: execution efficiency, transparency, financial planning capability, crisis impact on allocations, and staff satisfaction and ask: (1) How is overall budget management perceived? (2) Which dimensions perform better or worse? (3) What actionable improvements emerge for local policy?

2. LITERATURE REVIEW

2.1. Budget Management

Budget management is the process by which an entity's financial resources are planned, organized, directed, and withdrawn so that all its affairs are conducted economically and effectively. The process involves revenue and expenditure forecasting, budget implementation, and monitoring, and addresses accountability and resource management. Such has been the level of debate around the topic that Afonso, Jalles, and Venâncio (2024) focus on efficiency in the use of fiscal resources in a decentralized context and in times of crisis, addressing financial planning, efficient use, external interference from climatic emergencies, and others. This article addresses competency-based budgeting in a more holistic manner, covering efficiency, accountability, planning, crisis management, and aspects of staff morale.

2.2. Efficiency in Budget Execution

This dimension evaluates the use made of financial resources if the objectives set are met, maximizing the results achieved with the available resources while minimizing collapse. In this regard, Alfonso, Kamin, and Zampolli (2025) study how fiscal decentralization influences the efficiency of the public sector, in this case under the influence of destruction due to natural disasters and under the efficiency in the use of fiscal resources, which is articulated with the evaluation of the competence of municipalities in the efficient execution of their budget. Efficiency in budget

execution is oriented towards how resources are consumed to meet the objectives set within an environment where resources are scarce. This is related to the analysis of the impact of decentralization and the efficiency observed in the summary.

Similarly, [Chandawarkar et al. \(2024\)](#) focus on the preparation and execution of budgets and describe the key processes involved, also indicating that efficiency in budget execution is important for the growth and sustainability of organizations. Similarly, [Mai and Casady \(2023\)](#) address how digital transformation can affect the effectiveness of governance, which in turn relates to assessing the effectiveness of budget execution and improving the management of available resources.

2.3. Transparency in Budget Management

This section emphasizes the importance of making budget information accessible to citizens and other stakeholders in an understandable manner, while also promoting control. Regarding this subject, [Cooray and Özmen \(2024\)](#) analyze institutional factors such as effective governance, quality controls, voice, and accountability, which are key elements of transparency in public management and accountability in the expenditure of budget resources. Additionally, they mention the control of corruption, which is closely related to the promotion of transparency in the management of public resources.

[Alfonso et al. \(2025\)](#) stress the importance of using digital tools by local governments to disseminate information, show appreciation, and raise awareness among citizens during a crisis. This approach is linked to accountability and discourse regarding resource management, which are essential for transparency in budget execution, especially in periods of crisis. Furthermore, the re-evaluation of communication strategies and the dissemination of information highlight the need to ensure that clear and publicly accessible financial information is available. Similarly, [Drabek \(2024\)](#) focuses on the standardization of costing methods and transparency in reporting, which are central to enabling the use of results in decision-making and resource distribution. The evaluation of parameters and clarity of quality methods are key aspects that contribute to transparency in budget management.

For their part, [Chua, Dai, Tan, and Yu \(2024\)](#) mention how accounting is a social practice and an institutional practice that, in effect, takes place under the actions of state agencies and market forces. They further discuss the relationship between accounting and the state, accounting and the market, in particular accounting and its transparency and practices in non-Western Eastern countries (China). These concepts have been partially described as the dimension of Transparency in Budget Management, which is the degree of clarity and availability of financial information and how accounting practices are framed and organized by the authorities.

2.4. Financial Planning Capability

This dimension analyzes the municipality's capacity to prepare financial forecasts that are aligned with its strategic objectives and goals. Regarding this dimension, [Nakpodia, Sakariyahu, Fagbemi, Adigun, and Dosumu \(2024\)](#) address issues related to accounting standards and public financial management practices, which are related to the problem of assessing planning capacities and the efficient use of budgetary resources for sustainable development objectives. In the same vein, [Coulibaly \(2024\)](#) diversifies the problem of the search for sources of financing in the context of the impacts that loans secured by resources have on human development, and on the social and environmental impacts of such credits. This issue is related to the ability of countries to determine and anticipate their spending requirements, considering available financing and the long-term effects it will generate, which is linked to financial planning skills and the reliability of revenue and expenditure projections.

In the same vein, [La Torre, Leo, Palma, and Zapata \(2024\)](#) evaluated all aspects at each level of detail of this stage: the municipality's capacity to plan and project its budget, including elements such as alignment with the objectives of strategic goals and tools to measure progress towards sustainable development, as mentioned in the summary of the article on the literature review on the evolution of public administration in Europe with respect to

sustainable financing and planning for sustainable development. Hawkins, Kasekamp, van Ginneken, and Habicht (2023) also focus on needs assessment and budget forecasting activities, planning requests aligned with strategic objectives that may be the achievement of governance practices or the technical and operational capacity of procurement institutions, or even efforts made to improve political and economic conditions that are necessary for institutional and financial stability.

2.5. Impact of the Crisis on Budget Allocation

Economic crises are not just alarming newspaper headlines: they are direct blows to governments' ability to deliver on their budget promises. This study explores precisely how these external shocks strangle financial resources and force a rewriting of spending priorities. Amit and Kafy (2024) 's research paints a stark picture for developing countries: when international reserves plummet, the domino effect ensues currency destabilizes, prices soar, and, most seriously, the state loses the capacity to maintain schools, hospitals, and basic social programs. It is precisely this connection between external crises and budgetary asphyxiation that our work seeks to unravel.

The issue becomes more nuanced when reviewing Pancotto, Ap Gwilym, and Molyneux (2023). What happens when governments respond to crises with rescue packages or monetary tightening? These authors trace how each measure - from interest rate cuts to fiscal stimulus - generates waves in the markets that end up defining how much money reaches municipalities to pave streets or hire teachers. Their analysis reinforces our thesis: it is not enough to look at the size of the budget; it is necessary to understand how global economic storms redistribute and often reduce the resources available for local development. In the same vein, El Alam, Stoffelen, Bolderman, and Groote (2024) explain how the absence of the state or weak governance structures further diminish community resilience, and consequently, the lack of effective coordination results in poorly coordinated responses and limited reconstruction. It is also possible to link these problems to the effect that a crisis can have on resource management and allocation; in this case, the approach is similar to the theme addressing the impact of economic crises on budget allocation in municipalities.

Also, Cefis, Coad, and Lucini-Paioni (2023) analyze how innovation affects the survival of firms during different phases of the economic cycle, including the financial crisis of 2007-08 and the subsequent recovery. The study deals with the impact of economic crisis situations, which aligns with the idea of how the crisis affects the allocation of resources and, by extension, the ability of companies (or in your case, municipalities) to remain operational and meet their financial objectives.

2.6. Satisfaction of Administrative and Financial Personnel

Finally, this theme measures the perception of key personnel regarding the adequacy of resources, communication, and the effectiveness of the efforts made to obtain the necessary funds. In this regard, Atatsi, Azila-Gbettor, Akuma-Zanu, and Mensah (2023) analyze how financial management practices influence financial satisfaction and, consequently, life satisfaction. The study provides useful information on how to improve financial management to increase employee satisfaction.

Also, Chi, Vu, Nguyen, and Truong (2023) explore how financial and non-financial rewards affect the relationship between transformational leadership and job satisfaction. Their findings offer insights on how to improve staff satisfaction through specific reward strategies. Similarly, Dasanayaka, Abeykoon, Ranaweera, and Koswatte (2021) focus on the performance appraisal process and its impact on academic staff satisfaction. The results of the study are useful for understanding how performance appraisals affect satisfaction in similar organizational contexts.

Global evidence highlights public-sector efficiency under decentralization and shocks; the role of transparency, accountability, and digital disclosure; and the importance of planning tools and governance capacity. Latin American and Peruvian studies indicate persistent gaps in standardized accounting, limited fiscal space, and uneven digital

readiness. Critical synthesis: These literatures collectively justify a descriptive mapping of perceived performance in San Martín and policy-oriented guidance for practical reforms.

3. METHODOLOGY

3.1. Methodological Design

Design: quantitative, descriptive, non-experimental, exploratory. Population: municipal staff in financial and administrative areas in San Martín. Sampling: non-probabilistic convenience sampling (n = 108). Analysis: descriptive statistics (frequencies, means, standard deviations) using SPSS/Excel. No inferential tests were planned, given the sampling approach and the study's objective to map perceptions rather than test causal hypotheses. Limitations regarding external validity and self-report bias are acknowledged.

3.2. Sample Design

The target population includes the financial and administrative staff of the municipalities in the San Martín Department of Peru. According to the National Institute of Statistics and Informatics (INEI), as of March 31, 2019, the municipalities of San Martín employed 3,577 workers (National Institute of Statistics and Informatics, 2019). A non-probabilistic convenience sample was used, since 108 subjects of analysis will be selected, making use of the ease of access to represent the group of interest for the study. It is known that this technique allows a complete and direct view on budget management from the points of view of key actors in a simple way (Mai & Casady, 2023).

The inclusion criteria for the study were as follows: to be employed as administrative and financial personnel of the departmental municipalities of San Martín, Peru, and to be directly involved in budget management. They must have worked for at least one year in their positions to ensure a sufficient understanding of budgetary procedures and the financial condition of the municipality. Additionally, participants must voluntarily participate and provide informed consent located on the front page of this survey, which guarantees their willingness to answer the entire questionnaire.

The exclusion criteria are as follows: municipal employees who are not in the position of administration or finance, or who have only an indeterminate knowledge of budgeting within the public administration, are excluded. Employees with less than one year in the same area were also excluded, since it is considered that one year is the minimum time necessary to fully understand budget cycles at the municipal level. Finally, any person who did not participate in the study, or only partially participated in it, was eliminated from the study group to preserve the effectiveness and veracity of the information obtained.

3.3. Data Collection Techniques

We used a Likert-type questionnaire adapted from prior public-finance management studies and aligned to five dimensions. Content validation involved three subject-matter experts (public financial management, municipal administration, and accounting). Experts rated item relevance on a 4-point scale and suggested wording changes; items flagged for low relevance/clarity were revised. A small pilot checked comprehension and timing. Internal consistency for the study sample was high (Cronbach's alpha = 0.976).

3.4. Statistical Techniques for Information Processing

SPSS and Excel statistical software were used for data processing. The statistical method applied to process and analyze the information was *descriptive analysis* (frequency, mean, and standard deviation). This analysis allowed a better interpretation of the data obtained as a result of descriptive studies, as suggested by Cooray and Özmen (2024), who also indicate how these techniques are useful to obtain a clear view of the data in research in public administration.

3.5. Ethical Aspects

The research was conducted with respect for the participants and ensured informed consent. Participants were informed about the nature of the survey and the voluntary nature of their participation, as well as the fact that their responses would be provided freely and anonymously and used solely for academic research purposes. It is essential to follow this ethical approach to safeguard the rights and privacy of the study respondents (Dasanayaka et al., 2021).

Table 1. Distribution of budgetary management in the municipalities of Sint Maarten.

Variable	Categories	f	%
Budget management	Under	33	30.6
	Medium	43	39.8
	High	32	29.6
	Total	108	100.0

4. RESULTS

4.1. General Evaluation of Budget Management

Table 1 shows how budget management is distributed according to the opinion of key stakeholders. A total of 39.8% of the respondents place it at an intermediate level, while 30.6% perceive it as deficient and 29.6% value it as outstanding. From an accounting perspective, these data point to an administration of public resources that varies notably in the municipalities of Sint Maarten, with a predominance of practices that are far from being fully efficient or transparent. In financial terms, the fact that most are concentrated in the middle range could indicate a difficulty in balancing revenues and expenditures with local development objectives, perhaps affected by external factors such as post-pandemic budget reductions. This analysis reflects the central purpose of examining the state of budget management, revealing a structural obstacle in the management of funds that demands specific actions to strengthen the financial performance of municipalities.

Table 2. Distribution of efficiency in budget execution.

Dimension	Categories	f	%
Efficiency in budget execution	Under	34	31.5
	Medium	33	30.6
	High	41	38.0
	Total	108	100.0

4.2. Efficiency in Budget Execution

The data presented in Table 2 show a paradoxical situation. On the one hand, 38% of the participants consider that budget execution is highly efficient, which suggests a certain management capacity in a significant part of the cases. However, this positive perception contrasts with the critical view of another sector: 31.5% rate the process as inadequate, while 30.6% adopt an intermediate position. This divergence of opinions is not coincidental; rather, it highlights the marked differences that exist between municipalities and administrations, even when evaluating the same aspect: the effectiveness of public spending.

Looking deeper into the results, a dual picture emerges. In some territories, resource management seems to work, funds arrive on time, key projects are prioritized such as road infrastructure, education, or access to water and citizens perceive concrete improvements. These examples show that, when there is transparency and political will, administrative mechanisms can respond to the real needs of the population.

But not all is optimism. Almost a third of those surveyed point to serious problems: lengthy bureaucratic procedures, unjustified delays in disbursements, and, in extreme situations, failures in the control systems. These are not simply technical hurdles; they are barriers that, in practice, leave entire communities without essential services.

The cost of these deficiencies is not just measured in numbers: it translates into lost opportunities and perpetuating inequalities.

From the economic point of view, the situation is unsustainable. Irregularity in budget management threatens the stability of municipalities, especially those with less margin to compensate for errors. While some localities make progress, others fall into a perverse cycle where mismanagement generates cuts, and those cuts further aggravate the constraints. The solution cannot wait; good practices must be replicated, structural failures must be corrected, and, above all, the gap between some and others must not become irreversible.

Table 3. Distribution of transparency in budget management.

Dimension	Categories	f	%
Transparency in budget management	Under	49	45.4
	Medium	22	20.4
	High	37	34.3
	Total	108	100.0

4.3. Transparency in Budget Management

The numbers in Table 3 paint a worrisome picture: 45.4% of those surveyed believe that transparency in the management of the municipal budget leaves much to be desired. In contrast, only 34.3% rate it as satisfactory, and a smaller group (20.4%) places it at an intermediate point. These results, which respond to the objective of measuring clarity in public management, reveal a serious accountability problem.

What is most striking is that almost half of the participants perceive opacity in the processes. From an accounting point of view, this suggests that financial reports are not published frequently enough or are difficult to understand something that, in practice, can lead to misuse of resources or even to irregularities not detected in time.

But the impact goes beyond that: when citizens and investors do not have clear access to this information, trust in institutions is shaken. And that, in the long run, can close doors to additional financing because who wants to invest in a place where they don't know exactly how the resources are being used?

It is clear that work must be done on two fronts: not only to make the data available but also to present it in a way that anyone, without being an expert, can understand it. The urgency is obvious.

Table 4. Distribution of financial planning capacity.

Dimension	Categories	f	%
Financial planning capabilities	Under	35	32.4
	Medium	41	38.0
	High	32	29.6
	Total	108	100.0

4.4. Financial Planning Capabilities

The results of Table 4 show us something interesting: while 38% of the participants consider financial planning to be acceptable but with room for improvement, 32.4% consider it to be very deficient, and almost 30% consider it to be excellent. These differences, analyzed with the objective of evaluating the impact of planning on municipal achievements, show us that there is a certain ability to forecast income and expenses, but with clear margins for improvement.

Looking at it from an accounting perspective, this majority percentage at the intermediate level indicates that budgets do manage to adjust to some extent to real needs, but not completely. Sometimes, the numbers do not add up, perhaps because more precise tools for making projections are lacking or because unforeseen events work against them.

And here comes the real problem: when planning fails, even slightly, municipalities especially those with limited resources end up "putting out fires" instead of investing in what is important. Key development projects stall, priorities are delayed, and in the end, everyone loses.

The good news is that there is a solution. Improving planning is not just a matter of numbers; it is learning to anticipate, to prioritize, and, above all, to be more strategic with every peso that comes in and goes out. The first step? We must recognize that today, for today, there are municipalities that are doing well... and others that need urgent help to catch up.

Table 5. Distribution of the impact of the crisis on budget allocations.

Dimension	Categories	f	%
Impact of the crisis on budgetary allocation	Under	40	37.0
	Medium	40	37.0
	High	28	25.9
	Total	108	100.0

4.5. Impact of the Crisis on Budgetary Allocation

The data in Table 5 reveal a striking division: 37% of respondents believe that the global crisis has affected the municipal budget little, another 37% consider the impact to be moderate, and 25.9% see it as severe. This shows that, although the economic storm has not passed without consequences, many local governments have managed to weather the storm better than expected.

From an accounting standpoint, this technical tie between "low" and "moderate" is encouraging. It seems that some administrations have been able to adjust their accounts in time, either by cutting non-essential expenses or by seeking creative sources of income. However, not all have been equally fortunate: 25.9% reporting a heavy hit surely reflects municipalities where urgent projects such as fixing streets or reinforcing social programs were put on hold for lack of funds.

The lesson is clear: in a world where crises are increasingly frequent, relying solely on the traditional budget is no longer sufficient. Municipalities that withstood the best were those that had a "financial cushion" or alternative methods to generate resources. For others, this should serve as a warning sign: next time, there may be no room for improvisation.

Table 6. Distribution of satisfaction among administrative and financial personnel.

Dimension	Categories	f	%
Administrative and financial staff satisfaction	Under	35	32.4
	Medium	52	48.1
	High	21	19.4
	Total	108	100.0

4.6. Administrative and Financial Staff Satisfaction

Table 6 shows that 48.1% of respondents report medium satisfaction with budget management, followed by 32.4% who perceive it as low and 19.4% as high. This result, connected to the specific objective of measuring staff satisfaction, indicates a mostly neutral sentiment among key stakeholders. In accounting terms, the predominance of the medium level could be associated with a perception of relative sufficiency in resources, albeit limited by ineffective communication with the Central Government. Financially, low satisfaction in one-third of the cases suggests that efforts to obtain additional funds are not always effective, which could demotivate staff and affect morale in the execution of critical tasks. Improving inter-institutional coordination and the availability of resources emerges as a priority to raise these satisfaction levels.

Across dimensions, execution efficiency exhibits the highest "high" ratings (38.0%), while transparency concentrates "low" ratings (45.4%). Financial planning is largely "medium" (38.0%). The perceived impact of the crisis on allocations is mainly low/medium (74.0%). Staff satisfaction centers on medium (48.1%). It summarizes the variables framework linking dimensions to the overall evaluation and staff satisfaction.

5. DISCUSSION

The study on the management of public resources in the municipalities of San Martin, Peru, paints a reality where progress coexists with profound challenges. Through the voices of administrative and financial personnel, a nuanced portrait emerges; on the one hand, there is progress that deserves recognition; on the other hand, obstacles persist that the pandemic has only aggravated, which is especially critical in developing economies such as Peru.

The data indicates a clear initial sign: 40% of respondents consider resource management to be in the middle ground, neither optimal nor catastrophic. This ambivalence reflects, in essence, a system that functions at an average level. As [Nakpodia et al. \(2024\)](#) rightly point out, without sound accounting systems, even the most organized municipalities struggle during crises. In Sint Maarten, this moderate assessment can be attributed to three key factors: lack of homogenization in recording processes, chronic difficulties in prioritizing budgets, and limited flexibility to respond to sudden cutbacks.

When analyzing budget execution, the contrast is striking. 38% describe the process as highly efficient proof that, with political will and clear mechanisms, resources can reach their destination. While 38% describe the process as highly efficient proof that, with political will and clear mechanisms, resources can reach their destination almost a third (31.5%) report worrisome failures: funds that get bogged down in interminable procedures, items that deviate from their initial objectives. This gap suggests that, while some localities have implemented effective internal controls, others remain trapped in bureaucracy. The proposals of [Chandawarkar et al. \(2024\)](#) on technological solutions although designed for more advanced contexts offer valuable clues. The modernization of local financial systems, with tools adapted to the Peruvian reality, could bridge the gap between efficient municipalities and those that are still sluggish.

But if there is one problem that cries out for urgent attention, it is opacity. Some 45.4% of the evaluations point to it as the Achilles' heel of municipal management. The consequences are tangible: greater risk of misappropriation of funds, opaque accountability to citizens, and difficulties in accessing external financing. As [Nakpodia et al. \(2024\)](#) warn, transparency is not only an ethical ideal; in municipalities such as those of Sint Maarten, it is a sine qua non condition for achieving the Sustainable Development Goals. Implementing digital platforms that make financial information public similar to that proposed by [Chandawarkar et al. \(2024\)](#), would not be a mere technocratic gesture, but a concrete step towards credibility.

In the area of financial planning, the results are equally revealing. Thirty-eight percent rate it as intermediate, which indicates an incipient but still hesitant effort to align projections with real goals. These findings coincide with those of [National Institute of Statistics and Informatics \(2019\)](#), where almost half of the Peruvian municipalities admitted needing training in strategic planning. In San Martin, although there are attempts to realistically project revenues and expenditures, inconsistencies persist, probably due to a lack of advanced analytical tools. From an accounting perspective, this reinforces the urgency of adopting more accurate forecasting methods, such as those recommended by [Nakpodia et al. \(2024\)](#). The real cost is not on the books; it is measured in delayed works and communities waiting years for basic infrastructure. Improving these capacities is not a technicality; it is a debt to local development.

The impact of the global economic crisis, perceived as low or medium by 74% of respondents, shows relative resilience in budget allocation. This result contrasts with the warnings of [Nakpodia et al. \(2024\)](#) on how the pandemic reversed progress on the SDGs, especially in developing countries. In Sint Maarten, the ability of some municipalities to mitigate the effects of cuts suggests effective budget adjustments or the use of their own revenues, an aspect that

from an accounting perspective reflects some flexibility in line-item management. However, 25.9% report a high impact, indicating that critical projects have been sacrificed, which limits the capacity to respond to social needs. Chandawarkar et al. (2024) propose that innovations such as CBDCs could reduce costs in resource management, an idea applicable to Sint Maarten to strengthen resilience to future crises.

Finally, the satisfaction of administrative and financial personnel, with 48.1% at the medium level, points to a neutral perception that could be improved. National Institute of Statistics and Informatics (2019) reports that 59.8% of Peruvian municipalities require training in municipal management, suggesting that dissatisfaction in Sint Maarten could be related to a lack of resources and technical support. In accounting terms, the perceived relative sufficiency of funds indicates that the items allocated cover basic needs but are not optimal. Financially, the low satisfaction rate of 32.4% reflects frustrations with ineffective coordination with the Central Government, an obstacle that Nakpodia et al. (2024) link to the need for robust accounting systems to improve inter-institutional communication.

The results of this study, when compared to the literature, reveal that budget management in Sint Maarten faces structural challenges common to other developing economies, such as a lack of transparency and planning, but also shows signs of resilience to external shocks. Accounting practices and PFM emerge as key tools to overcome these limitations, aligning sustainable development priorities and the demands of key stakeholders in the region.

Perceptions reveal a mixed performance profile: 39.8% medium overall, with the largest weaknesses in transparency (45.4% low) and the strongest area in execution efficiency (38.0% high). Standardization gaps and limited digital disclosure likely underpin the transparency deficit, while pockets of managerial capacity support execution in certain units. Given the non-probabilistic sample and descriptive scope, these findings are indicative rather than generalizable but align with regional concerns about uneven administrative capacity in resource-constrained contexts.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusions

The results of the study show an uneven reality in the management of the municipal budget in Sint Maarten. According to the opinions of administrative and financial personnel, the situation is far from homogeneous: while 39.8% see the management as regular, almost a third (30.6%) qualify it as deficient, and another 29.6% consider it satisfactory. These figures reflect a panorama in which some progress coexists with fundamental problems that have yet to be overcome.

In terms of efficiency, the data also present contrasts. Although 38% of those surveyed affirmed that resources are used adequately, 31.5% recognize serious difficulties in this aspect. This division indicates that, while some municipalities manage to execute infrastructure and basic services projects without major setbacks, others face bureaucratic obstacles that delay or divert funds. However, there is one encouraging aspect: there is a successful experience that could serve as a model to be replicated in cases with worse results.

But undoubtedly, the most serious problem is the lack of transparency. An alarming 45.4% of the officials consulted criticize the opacity in the handling of financial information. According to their testimonies, data is not shared with the clarity and regularity it should be, which not only limits citizen control but also discourages potential investments. This situation creates a vicious circle: lack of trust makes it difficult to access additional resources that could improve municipal management. As one of the interviewees pointed out, "without transparency, it is difficult to build credibility and, therefore, to gain external support."

In terms of planning, the figures show a fragile balance: 38% consider it acceptable, but 32.4% consider it insufficient. The testimonies collected suggest that, although there are efforts to project revenues and expenditures, these are hampered by limited technical tools and frequent mismatches between what is planned and what is executed.

An encouraging finding: 74% of respondents perceive that the impact of the global crisis has been low or moderate. This reveals a certain adaptive capacity, probably thanks to measures such as the use of own revenues. However, 25.9% who report severe impacts warn of stalled strategic projects that require urgent attention.

Staff perceptions are eloquent: 48.1% are neutral, while 32.4% express open dissatisfaction. Comments point to communication problems with the central government and lack of support for managing additional funds, factors that undermine team morale.

This diagnosis highlights three major challenges: the urgent need to standardize accounting processes, implement effective transparency systems, and improve financial planning tools.

The good news: there is an institutional base on which to build. Success stories demonstrate that, with the right policies, it is possible to achieve more efficient management even in resource-constrained contexts.

Overall budget management is perceived as medium by 39.8% of respondents, low by 30.6%, and high by 29.6%. Execution efficiency receives the highest share of high ratings (38.0%); transparency the highest share of low ratings (45.4%). Planning is predominantly medium (38.0%). The perceived impact of the crisis on allocations is low or medium for 74.0% of respondents, and staff satisfaction is mostly medium (48.1%). These patterns support prioritizing low-cost digital transparency, process standardization, and planning capacity-building.

The contrast between higher perceived execution efficiency and lower transparency suggests that delivery mechanisms may be functioning in some municipalities even when disclosure and external accountability lag. Two managerial explanations are plausible: (i) internal process know-how is unevenly distributed, lifting execution in some units; and (ii) disclosure systems are not standardized, depressing transparency scores. Concentration of planning at the “medium” level indicates the presence of basic forecasting practices with room for precision and prioritization. The low/medium perceived crisis impact for most respondents points to some adaptive adjustments (e.g., postponement of non-essential items), albeit with notable exceptions where critical projects stalled.

6.2. Recommendations

The study's findings reveal key opportunities to improve the management of public resources in Sint Maarten's municipalities. These are our practical recommendations, based on the perceptions of financial and administrative staff.

Transparency with technology at the service of citizens: 45.4% of respondents rate transparency as insufficient. To reverse this, we propose:

- Implement interactive digital portals that publish municipal expenditures and investments in real time.
- Train officials in the use of these tools, ensuring that the data are accessible and understandable to the public.
- Key benefit: Increased confidence of the population and potential investors, which could attract more resources for local development.

Financial planning with feet on the ground: Only 38% consider the ability to plan to be acceptable. We suggest:

- Practical workshops with real cases to improve income and expense projections.
- Simple budget monitoring tools, adapted to the reality of municipalities with limited resources.
- Expected result: Fewer last-minute adjustments and better alignment between planned and executed.

Controls that really work: Efficiency divides opinions (38% positive vs. 31.5% negative). To close this gap:

- Design clear monitoring protocols with simple checklists for each phase of the expenditure.
- Assign internal oversight committees with representatives from different areas.
- Impact: Reduction of delays in key projects such as basic infrastructure or social services.

Motivate the team: Human resources as a priority: With 32.4% of staff dissatisfied, we propose:

- Quarterly dialogue with the Central Government to expedite the processing of funds.
- Public recognition of teams with good results in budget management.
- Collateral effect: Better work climate = Greater commitment to accountability.

Diversify income, reduce dependency, and increase autonomy: 25.9% still suffer the impact of the post-COVID crisis.

Alternatives:

- Alliances with local companies for specific projects (e.g., maintenance of public spaces).
- Awareness campaigns on the timely payment of municipal taxes.
- Advantage: More stable funds to continue investing in education and health even in difficult times.

Learning from other experiences:

- Create an exchange network with municipalities in similar regions that have overcome similar challenges.
- Document "lessons learned" in visual formats (infographics, short videos) to facilitate the replication of best practices.

Why are these proposals viable?

- Require moderate investments (e.g., digital platforms with free software).
- Leverage existing resources (training of current staff).
- Generate rapid impact at critical points identified by the workers themselves.

Concrete next steps:

- Pilot the transparency portal in 2 municipalities.
- Initiate planning workshops with chief financial officers.
- Establish a participatory monitoring system with community leaders.

These measures are not theoretical; they emerge from voices with direct knowledge of the challenges. Their progressive implementation could transform public management in Sint Maarten, making every sunshine invested yield more for its citizens.

Funding: This study received no specific financial support.

Institutional Review Board Statement: This study was approved by the Institutional Review Board Universidad Peruan Unión, Peru, under protocol number (2025-CEUPeU-041), dated 5 November 2025. Informed verbal consent was obtained from all participants, and all data were anonymized to protect participant confidentiality.

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Data Availability Statement: The corresponding author can provide the supporting data of this study upon a reasonable request.

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

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