

# **Optimization of Payroll System in the Education Sector of Timor-Leste: Ensuring Accuracy and Equity for Civil Servants and Teachers, A Case Study at the Ministry of Education in Dili**

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**Abstract.** This study has the objective of enhancing the precision and equity of the payroll system within the education sector of Timor-Leste. By concentrating on crucial components such as compensation, incentives, auditing and control mechanisms, as well as level/scale adjustments, welfare, and professionalism, this investigation tackles significant concerns. Timor-Leste, having gained independence in 2002, encounters notable hurdles in administering its educational framework, particularly concerning civil servants and teachers. The Ministry of Education confronts challenges including wage inconsistencies, grade/category alignment issues, and teacher entitlements, all contributing to instructional difficulties and the potential for protests. The deficiencies of the current payroll system, encompassing salary disparities, outdated data, and workload discrepancies, amplify discontent, financial insecurity, and perplexity, thus emphasizing the pressing need for system enhancements. Employing a qualitative methodology involving interviews and document analysis, this study delves into the societal, cultural, and political contexts influencing the payroll system. The research scrutinizes the operational mechanisms of the system and the factors influencing its precision and equity, proposing specific measures such as streamlining processes, heightened utilization of information technology, human resources training, and enhanced communication to bolster effectiveness and fairness. These actions aspire to safeguard the well-being and contentment of educators and civil servants, thereby enhancing the calibre of education.

**Keywords.** Principles of Fairness, Payroll System, Performance of Civil Servants, Teacher Welfare.

## **1. Introduction**

Data information is indispensable for agencies, companies, organizations, institutions, and the external environment. Information is deemed highly crucial as it has the capacity to augment knowledge, mitigate uncertainty and the risk of failure, and aid leaders in arriving at effective and efficient conclusions and decisions. One crucial piece of information from a company or government agency pertains to its staffing, encompassing various facets included in the completion of employee data. This includes Category/Level, Rank, Class, Position, Leave,

payroll, and other pertinent details.

The Timor-Leste Ministry of Education Employee Payroll System represents a novel approach to processing employee payroll data. This system is founded on and logically stems from the advancement of information and communication technology. Previously, the use of Microsoft Excel and SPSS data science posed limitations in terms of the time required for data entry processes. However, with the progression of computer science, these shortcomings have been addressed.

Timor-Leste, a newly independent country since 2002, faces challenges in developing an effective education system, particularly in managing human resources such as civil servants and teachers. As the education system evolved, salary-related issues arose, impacting on fairness and accuracy for these professionals (Burns, 2017).

The Ministry of Education in Timor-Leste encounters challenges in optimizing the payroll system within the education sector, encompassing salary discrepancies, alignment issues with grades or scales, and concerns regarding teacher rights. These challenges can impede effective teaching practices, prompting teachers to advocate for their rights and engage in protests. Consequently, there is a pressing demand for a payroll system that is both accurate and equitable for civil servants and teachers alike (Ismanto et al., 2017).

The Ministry of Education (MoE) in Timor-Leste is confronting various challenges within its payroll system, such as salary disparities, insufficient data updates, and workload discrepancies. These issues have the potential to engender dissatisfaction and financial insecurity among education workers (Hayati & Purba, 2023). The system frequently neglects to update information regarding the status of civil servants and teachers, resulting in mismanagement of salary funds. Disparities in workload allocation result in teachers encountering challenging working conditions, whereas civil servants and teachers experience a more favorable work environment. (Lindawati, 2019). A dearth of transparency and accountability may give rise to confusion and distrust, potentially leading to legal and audit complications. Case studies in Dili serve as illustrations of this issue, underscoring the necessity for heightened endeavors to enhance payroll systems within the education sector, ensuring accuracy, fairness, and transparency (Prasetya & Fuad, 2017).

This research endeavors to enhance the payroll system within Timor-Leste's education sector, with the aim of ensuring accuracy and fairness for both civil servants and teachers. The study will concentrate on aspects such as payroll and incentives, audit and control systems, grades/scales, as well as welfare and professionalism. It will analyze how these elements can be enhanced to ensure that adjustments in grade or scale are accurately reflected in the payroll system. Furthermore, the research will investigate how optimizing the payroll system can elevate the welfare and professionalism of teachers and civil servants, consequently enhancing their overall performance within the education sector.

## **2. Literature Review**

### **2.1 Definition of Payroll System Optimisation**

The education sector in Timor-Leste endeavors to enhance its payroll system through several means: supporting basic education, enhancing the availability of data on the creative economy, improving institutions related to the creative economy, and enhancing the efficiency of the education budget. Basic education plays a pivotal role in nurturing individual skills and capabilities, thereby influencing economic and social advancement. Optimization of the payroll system involves the process of enhancing the effectiveness and efficiency of the system by implementing a new payroll information system. This can lead to improved performance in work processes, generation of accurate reports, and facilitation of decision-making. It also entails processing data pertaining to class, position, allowances, deductions, and payroll information to generate detailed payslip reports (Kurniawan Sudalsono, 2009).

The optimization of the payroll system in Timor-Leste's education sector will affect the progress of education and the welfare of the community, so it needs continuous attention and optimization.

## **2.2 The Concept of Accuracy and Fairness in the Payroll Context.**

The precision of payroll in Timor-Leste's education sector is paramount for its efficiency and efficacy. This entails the system's capacity to produce salary data that adheres to prescribed standards and is commensurate with the performance, qualifications, and experience of employees (Cruz, 2022). Accuracy in payroll is related to the fulfilment of needs and established standards, employee performance, and worker qualifications and experience. To optimise the payroll system in Timor-Leste's education sector, it is important to consider basic education support, creative economy data availability, creative economy institutions, and education budget efficiency. This ensures the payroll system functions effectively and efficiently, ensuring the effectiveness and efficiency of the system. (SAR, 2013).

In the context of social interaction and exchange, theories of inequity and social justice play a crucial role in understanding how individuals assess and react to their experiences in social contexts. Inequity in Social Exchange presents an in-depth analysis of how perceptions of injustice and fairness arise and influence behavior in social exchange. This article discusses two key concepts related to perceptions of fairness and inequity: the concept of relative deprivation and the complementary concept of relative satisfaction. (Adams, 1965).

The following are complex concepts that relate to justice and injustice in social exchange and illustrate the depth of complexity of the issue:

1. **Unique Characteristics of Social Exchange**  
(Adams, 1965) emphasizes that exchange is a fundamental and ongoing part of human interaction, with unique features that significantly influence emotions, motivations and behaviors. Without understanding this exchange process, it is difficult to predict or manage its effects on individuals and groups.
2. **The Concept of Relative Deprivation and Relative Satisfaction**  
The article elucidates the significance of comprehending relative deprivation and relative satisfaction within the framework of social justice. Relative deprivation can instigate perceptions of injustice, whereas relative satisfaction can engender a sense of fairness in individuals regarding their interactions with others. This comprehension holds importance for tackling issues of justice within organizational management and public policy.
3. **The Effects of Injustice on Morale and Satisfaction**  
(Adams, 1965) argued that much of the dissatisfaction and decline in morale can be attributed to perceptions of unfairness in social exchanges. This suggests the importance of managing perceptions of fairness to maintain emotional health and satisfaction in the work environment.
4. **Need for Further Research**  
Despite many theoretical analyses, there is still much to learn about how injustice affects individuals and groups. (Adams, 1965) There is an urgent need for further research that not only deepens our understanding of this phenomenon but also helps in the development of ways to manage and reduce injustice in society.

From an interactional justice perspective, communicative elements such as honesty, transparency and respect are key pillars in building trust and fairness in organizational decisions. Emphasis (Bies & Shapiro, 1987) on the criteria of fair communication explains how the management of information and the way decisions are communicated directly affect employees' perceptions of fairness. It is not just about the outcomes they receive, but also about how those outcomes are delivered and processed.

In modern work environments, interactional justice plays a crucial role in shaping employees' perceptions of their organization. Interactional justice theory, which was explored in depth by (Bies & Shapiro, 1987) in their work "Interactional justice: communication criteria of fairness," provides important insights into how communication in the decision-making process and day-to-day interactions between management and employees can influence perceived fairness. This justice not only affects job satisfaction, but also motivation, organizational commitment, and organizational citizenship behavior. Interactional justice plays an important role in strengthening the relationship between employees and management. The emphasis placed on effective and respectful communication underscores its pivotal role as a cornerstone in fostering a fair work environment. Respectful and transparent communication not only enhances job satisfaction but also cultivates greater dedication to the organization, thereby highlighting the significance of equitable communication standards within workplace justice mechanisms (Bies & Shapiro, 1987).

In human resource management research, organizational justice has garnered substantial attention as a crucial factor impacting diverse work outcomes. Employees' perceptions of fairness in organizational procedures can affect significant facets like motivation, job satisfaction, and organizational commitment. In this regard, it is imperative to investigate the interplay between different dimensions of justice—distributive, procedural, interpersonal, and informational—and their influence on employee performance and behavior. Justice at the millennium: A meta-analytic review of 25 years of organizational justice research offers deep insights into the relationship between these justice dimensions and relevant organizational outcomes. The organizational justice dimensions-distributive, procedural, interpersonal, and informational-are moderately to highly related to each other, yet still provide additional explained variance in justice perceptions. Furthermore, the article discusses the unique relationships between different dimensions of justice and organizational outcomes such as job satisfaction, organizational commitment, authority evaluation, organizational citizenship behavior, withdrawal, and performance. Each justice dimension has a different significant contribution to these outcomes, which underscores the importance of assessing and integrating all dimensions of justice in human resource management practices. (Colquitt et al., 2001)..

(Colquitt et al., 2001) (Colquitt et al., 2001) also stressed the importance of further research to understand how the application of fairness practices can be improved in organizational management in order to have a broader and more sustainable positive impact on employee performance and satisfaction. The implications of this research clearly show that fair management is not only important for individual satisfaction but also for overall organizational success.

## **2.3 Factors: Payroll System Optimisation, Data Accuracy, HR Management, Information Technology**

### **2.3.1 Data Accuracy**

Analyze the mechanisms in place to ensure that employee data used in the payroll system is accurate and up to date. This includes data verification and validation systems, as well as how the system is updated to reflect changes such as promotions or salary increases. (Triwahyuni, Irza, Nevi, 2018):

- Data integrity in the payroll system, including validation and verification of employee data.
- Responsive data update mechanism for employee status changes (promotion, retirement, death, etc).
- Use of technology to improve the accuracy of employee and payroll data.

### **2.3.2 HR Management**

Human resource management within Timor-Leste's education sector encompasses the management, development, and regulation of the performance, competencies, and qualifications of human resources. This entails various functions, including payroll, which constitutes a crucial aspect of the sector's operations. (Marnis & Priyono, 2008). (Marnis & Priyono, 2008) Among others:

- HR policies that support career development and achievement recognition.
- Capacity building strategy and training for payroll admin to manage the system more effectively.
- Implementation of a fair and transparent performance evaluation system as the basis for pay and promotion.

### **2.3.3 Information Technology**

Information Technology (IT) is utilised in the education sector in Timor-Leste to optimise payroll processes, improve efficiency and effectiveness. (Susanti & Hidayatullah, 2018). IT plays various functions, among others:

- Implementation of an integrated and automated payroll information system.
- Use of data analytics to improve payroll processes.
- Data security and privacy in electronic payroll systems.

### **2.3.4 Payroll System Optimisation**

The endeavour to optimize the payroll system within Timor-Leste's education sector aims to enhance effectiveness, efficiency, and alignment with essential requirements. The performance of this payroll system can be assessed through various dimensions. (Kurniawan Sudalsono, 2009; Oetarjo & Firdaus, 2022), such as:

- Satisfaction of civil servants and teachers: The extent to which employees are satisfied with the speed, accuracy, and fairness of the payroll process.
- Timeliness of Salary Payment: The frequency with which salary payments are made on time.
- Salary Data Error Rate: Incidence of errors in salaries caused by inaccurate data.
- Salary-Related Complaints: The number and nature of complaints received related to the payroll system.
- Effectiveness of Handling Employee Status Changes: The ability of the system to accurately and timely update data related to promotion, retirement, or death.

By setting payroll system performance as the dependent variable, this study will focus on how improvements in efficiency, data accuracy, and fairness can contribute to a better payroll system and, ultimately, to the welfare and satisfaction of civil servants and teachers. This allows researchers to directly assess the impact of the factors under study on the expected outcomes of the payroll system.

## **3 Result and Discussion**

### **3.1 Employee Perception of Pay Equity**

The findings indicate that the payroll system for civil servants and teachers within Timor-Leste's education sector encounters several issues that require attention. These encompass ambiguous regulations, the intricacy of the payroll procedures, and dissatisfaction among civil servants and teachers regarding the fairness of the payroll system. Presently, the payroll system within the Ministry of Education in Dili continues to grapple with various challenges that impact the accuracy and fairness of payroll processing.

Significant efforts have been made to empirically distinguish between procedural and distributive justice, reflecting the importance of understanding these two dimensions in managing organizational practices. Furthermore, the development of new concepts and their testing continues to inform how justice is applied and perceived in diverse work contexts. In particular, the emphasis on interpersonal determinants of procedural justice judgements highlights the complexity of human interactions in justice judgements (Greenberg, 1990).

The evolution in organizational justice not only addresses existing theories but also continues to identify and test new dimensions. In his article, (Greenberg, 1990) dissected five popular themes in then emerging organizational justice research, including the empirical distinction between procedural and distributive justice, and their influence on various organizational phenomena. (Greenberg, 1990).

In examining the principles of fairness in an organizational context, it is important to understand how theory and practice have evolved over time. Success or failure in implementing an effective justice system in the workplace can significantly affect employee motivation and productivity. In this regard, the work of Jerald (Greenberg, 1990) in 1990, *Organizational Justice: Yesterday, Today, and Tomorrow*, offers valuable insights that link the history of justice theory with its application in modern management practice. (Greenberg, 1990) highlights the conceptual evolution of organizational justice and its impact on managerial practice.

Study (Greenberg, 1990) paved the way for further developments in organizational justice theory and provided a framework for a better understanding of how justice is applied in managerial practice. The implications include methodological updates in procedural justice research and further integration between distributive and procedural justice concepts, which are increasingly important in today's era of globalization and workplace diversity.

In the realm of social and organizational justice, equity theory has historically served as a significant cornerstone for comprehending the allocation of resources and rewards within societies and organizations. Exploring the implications and applications of this theory in the contemporary context reveals its focus on the universal distribution of resources, thereby illuminating fresh perspectives on how justice may be perceived and put into practice across various social hierarchies and organizational structures.

In the face of today's global challenges, where resource distribution and rewards are central issues, Leventhal's thinking provides a rich framework for evaluating and improving existing allocation systems. As Leventhal emphasizes, "Resource distribution is a universal phenomenon that occurs in all social systems, from small groups to society as a whole, *What Should Be Done with Equity Theory? New Approaches to the Study of Fairness in Social Relationships*, (Leventhal, 1980). Its interdisciplinary approach, involving perspectives from politics, economics, sociology, and psychology, highlights the complexity and need for a more holistic understanding in the study of social and organizational justice.

Furthermore, Leventhal investigates the impact of resource allocation fairness on organizational effectiveness and member satisfaction, a critical area for organizational leaders and policy makers seeking to improve well-being and productivity. By offering new strategies and expanding the understanding of equity theory, Leventhal not only delves into existing theory but also encourages the expansion of how we perceive and manage justice at all levels of social life.

Organizational justice is not only an ethical concept but also a critical managerial tool that determines operational effectiveness and employee satisfaction. In the modern management context, understanding the nuances between procedural and distributive justice is essential as both significantly influence employees' perceptions of organizational justice. Procedural justice, which relates to the way decisions are made, and distributive justice, which relates to the outcomes of those decisions, together play an important role in building or undermining employee trust and commitment. An understanding of procedural justice is not only important for management theory

but also for managerial practice, as it can assist managers in building trust and commitment among employees, which ultimately leads to organizational stability. (Konovsky, 2000).

Here are some key points according to (Konovsky, 2000) which can illustrate the complexity and importance of justice in an organizational context:

### **3.1.2 The Importance of Fairness in Organizations**

Deep justice is rooted in various disciplines and is key in binding dissenting individuals, helping to create a more stable and harmonious social structure in organizations.

### **3.1.3 Differences between Procedural and Distributive Justice**

Procedural justice focuses on fair decision-making processes, while distributive justice emphasizes the fairness of outcomes. Perceptions of these two types of justice significantly influence employee satisfaction and loyalty to the organization.

### **3.1.4 Theories of Procedural Justice**

There are four main theories that explain procedural justice in organizations: the self-interest model, group value model, justice judgment theory, and fairness heuristic model. Each model offers a unique perspective and helps explain why procedural justice is important in organizational contexts.

### **3.1.5 Impact of Procedural Justice**

Fair treatment in the decision process can increase job satisfaction, organizational commitment and organizational citizenship behavior. Conversely, failure to apply procedural justice can lead to retaliatory behavior and lower employee morale.

Some aspects of the evaluation of the current state of the payroll system in MoE Dili include:

## **3.2 Financial Discontent and Instability**

Education workers, especially teachers, may experience dissatisfaction and financial instability due to the lack of transparency and data updates in the payroll system. Civil servants' and teachers' dissatisfaction with pay equity is also an issue of concern. Perceived unfairness in salary determination, significant differences between classes or positions in pay, or lack of transparency in the determination of allowances and incentives may lead to dissatisfaction among civil servants and teachers.

Payroll accuracy and fairness, particularly in the context of public service and education in Timor-Leste, is critical to ensuring a fair and transparent payroll system. (Comissão Anti-Corrupção et al., 2020).. Transparency and accountability are essential in payroll to ensure honesty and fairness. Public information on payroll should be easily accessible, and public engagement is essential. Regular monitoring and control is necessary for compliance with standards and regulations. Education and training on payroll is also important. Cooperation with international organisations and communities is essential for compliance. In Timor-Leste, measuring accuracy and fairness in remuneration is important. Regular evaluation, transparency, accountability, community involvement and oversight are necessary. Implementation of these measures ensures remuneration systems in public service and education in Timor-Leste are measured accurately and fairly.

## **3.3 Difficulty in Updating Information**

The system often fails to update information on the status of civil servants and teachers, which can lead to leaks in the management of salary funds. complex payroll processes are also one of the problems faced. A complicated process involving many administrative steps can result in delays in payroll, calculation errors, or difficulties in understanding the payroll mechanism.

(Buchanan & Huczynski, 2017) discussed the importance of compensation and compensation justice in organisational behaviour. Compensation refers to the payments or benefits given to employees in exchange for their work, while fairness in compensation ensures a fair and equitable compensation system for all employees. They emphasise the importance of understanding how employees perceive fairness in compensation, which can be influenced by factors such as the perceived fairness of the compensation system, the level of compensation compared to similar positions, and the decision-making process.

Emphasising the importance of understanding organisational behaviour and compensation fairness in compensation. They suggest strategies such as conducting regular salary surveys, providing transparent communication, and involving employees in decision-making. They also discuss other organisational concepts such as culture, leadership, and structure, which are important for understanding employee well-being. Overall, their comprehensive overview of organisational concepts is critical to ensuring employee well-being and competitive salaries. (Buchanan & Huczynski, 2017).

### **3.4 Challenges in Payroll System**

Dili's Ministry of Education can improve its payroll system by identifying key issues and factors that influence its success or failure. These include:

#### **3.4.1 Lack of Data Updating**

The education sector in Timor-Leste faces a major problem with the lack of up-to-date data in its payroll system. This lack of data can have several negative impacts, including reduced effectiveness, inaccuracy, consistency, transparency, inefficiency, effectiveness and inadequacy. The lack of updated data can result in salary data not matching the performance, qualifications, and experience of workers, and can cause data to be inconsistent with established standards. Transparency is also affected, potentially impacting worker welfare and business development.

A payroll communication plan is essential for employees to understand the process and their rights. This should include regular communication about pay dates, payment methods, and changes. A payroll security plan protects sensitive employee data by implementing secure login procedures, encryption, and restricting access to payroll systems. Continuously monitoring and evaluating payroll processes can identify areas for improvement, such as payroll errors, employee satisfaction, and compliance with laws and regulations. By implementing these recommendations, organisations can optimise their payroll systems, ensuring they are efficient, fair, and compliant with relevant laws and regulations (Greenberg, 2011).

### **3.5 Workload Imbalance**

Inequality in workload distribution between civil servants and teachers can lead to dissatisfaction and impair performance. Workload imbalances in the education sector in Timor Leste can lead to ineffective education due to lack of qualifications, tools, materials, facilities, other support and labour shortages. This imbalance can result in a lack of education, as the labour force lacks the necessary qualifications, tools and materials. Also, a lack of facilities can lead to ineffective education. Furthermore, a lack of human resources, information and technical resources can also lead to ineffective education. In addition, labour shortages can exacerbate these problems. To mitigate the negative impacts of workload imbalance, improving conditions in the education sector is essential.

## Effects of Technology Use on Payroll Efficiency

Discussion of the Effects of Technology Use on Payroll Efficiency in the Context of Employee Perceptions of Payroll Fairness:

### 1. Transparency and Accountability in the Payroll System

The use of technology can increase transparency and accountability in the payroll system. With a computerised system in place, payroll information can be accessed more easily by employees. This ensures that employees have a better understanding of the payroll process and their rights, reduces the vagueness of the rules and increases trust in the system. (Aswad et al., 2023)..

### 2. Accuracy and Fairness in Salary Determination

Technology can assist in determining salaries more accurately and fairly. Automated systems can take into account factors such as performance, qualifications and experience of employees more precisely, reducing disparities in pay between grades or positions. This helps overcome the perception of unfairness in salarydetermination. (Susanti & Hidayatullah, 2018).

### 3. More Efficient Data Updates

The use of technology allows for more efficient data updates in the payroll system. With a computerised system, information on employee status can be updated in real-time, reducing the risk of leakage in the management of salary funds and ensuring that the data used in payroll is always up-to-date (Aswad et al., 2023).

### 4. Better Communication with Employees

Technology enables better communication between management and employees regarding payroll processes. Through the use of digital platforms or specialised applications, information about payment dates, payment methods, and changes in the payroll system can be delivered more quickly and effectively to employees (Hazwir, 2020).

### 5. Improved Administrative Efficiency

A computerised payroll system can improve administrative efficiency in the payroll process. Processes that were previously complex and involved many administrative stages can be simplified through automation, reducing delays in payroll and calculation errors that may occur due to manual processes. (Danuri, 2019).

### 6. Better Monitoring and Control

Technology also enables better monitoring and control of the payroll process. Through a computerized system, management can routinely monitor and evaluate the payroll process to identify potential errors or irregularities, so that corrective action can be taken immediately (Assauri, 2016).

Thus, the use of technology in payroll systems can have a significant impact in improving efficiency, transparency, and fairness in the management of employee salaries, which in turn can address perceptions of dissatisfaction and unfairness in payroll.

## 3.6 Discussion

### Implications of Findings for Policy Practice

Based on these findings, steps that can be taken to optimize the payroll system for civil servants and teachers in Timor-Leste's education sector are as follows:

#### 1. Use of information technology

Information technology integration in payroll systems can improve efficiency and accuracy by implementing computer-based systems or integrated applications.

A well-structured payroll policy is essential for employees to understand the payroll process and their rights and responsibilities, covering topics such as payment frequency, payment methods, and deductions (Greenberg, 2011).

The importance of using IT so as to integrate personnel data related to determining the amount of salary, the aim is to streamline and simplify the payroll administration process so as to reduce the possibility of errors and delays in salary payments. Implementing a centralized payroll system simplifies the payroll process, reduces errors, and ensures accurate and timely payments for all employees (Greenberg, 2011). Automating payroll processing can significantly reduce time and effort, freeing up resources for strategic activities, by integrating payroll software with existing HR systems. (Greenberg, 2011)..

## 2. Improved communication and participation of civil servants and teachers

Improve communication between management and *Funcionário Público* or as they are called in Indonesia "PNS" and Professores "Guru" regarding salary policies, involving them in salary decisions, and providing opportunities for feedback and complaints. Regularly reviewing and updating payroll processes is essential to maintain efficiency and compliance with changes in laws and regulations. This includes reviewing payroll software, updating policies, and ensuring all employees are informed of any changes (Greenberg, 2011).

Implementing a payroll audit process can identify and correct errors, ensuring accurate and timely payment of employees. This includes regular audits of payroll records, employee data, and payroll software. In addition, ensuring compliance with laws and regulations is essential to avoid penalties and fines, including tax and labor laws, to avoid penalties and fines.

### Evidence-based Recommendations for System Improvement

To optimize the pay system for civil servants and teachers in Timor-Leste's education sector, ensuring efficiency, fairness, and satisfaction for these professionals. The following is an example of the outcome of the discussion on steps that could be taken to optimize the payroll system for civil servants and teachers in Timor-Leste's education sector:

#### 1. Use of information technology:

- The implementation of a computer-based payroll system, which is integrated with the personnel and financial systems, aims to minimize human error and speed up the payroll process.
- Use certain applications or software to automatically calculate salaries and allowances based on predetermined parameters.
- Thorough review of payroll administration processes, identifying inefficiencies or redundant steps.
- Eliminate or consolidate unnecessary administrative procedures.
- The implementation of the electronic system aims to speed up and streamline the process of submitting and verifying payroll data.

#### 2. Improved communication and participation of civil servants and teachers:

- Establish forums or working groups for civil servants and teachers to express opinions and suggestions regarding salary policies.
- Periodic meetings are held between the government and government employees and teachers to discuss wage policies, gain insight into their requirements and concerns, and inform them of changes to be made. To improve procedural and distributive justice, it should solicit inputs from employees and teachers.

The discussion reveals concrete measures to optimize the payroll system for civil servants and teachers in Timor-Leste's education sector, aiming to improve efficiency, fairness and satisfaction. These measures are expected to address the identified problems and improve the

existing payroll system, as well as ensure a more efficient and fair compensation system for these professionals. compare the research results obtained.

#### Limitations of the Study and Implications for Future Research

This study focuses on the education sector in Timor-Leste, which may limit its generalizability. The limited number of respondents and sample may also limit the generalizability of the results. The research uses specific methods, such as surveys or interviews, which may be affected by respondent bias or subjective interpretation. Time constraints allow for the investigation of all relevant aspects and long-term observation of changes in the payroll system. In addition, limited resources, both financial and personnel, may limit data collection or analysis. Implications for Future Research:

1. Location and Respondent Expansion

Future research could expand the scope of locations and number of respondents to improve the generalisability of the results. In addition, involving a variety of respondents from different backgrounds and sectors may provide greater insight.

2. Use of Combination Methods

Using different research methods, such as case studies, documentation analysis, or field observations, can provide a more comprehensive understanding of the issue under study.

3. Longitudinal Research

Conducting longitudinal research that tracks changes in the payroll system over time can help understand the impact of policies or interventions over the long term.

4. Better Use of Resources

Expanding the resources available for research, whether in terms of finances, facilities, or personnel, can enable researchers to conduct more in-depth and comprehensive research.

By considering these limitations and taking suggested steps for future research, it is hoped that future research can provide a better understanding and more effective solutions to the problems in the payroll system of civil servants and teachers in Timor-Leste's education sector.

#### **4 Conclusion**

This research yields significant insights into the payroll system within Timor-Leste's education sector. The study's conclusions underscore several crucial findings concerning the aforementioned system. According to the research, the payroll system at the Ministry of Education in Dili encounters several challenges, such as salary disparities, discontentment, financial instability, and challenges in data updating. The notable issue of salary discrepancies between civil servants and teachers demands prompt attention, given the absence of explicit standards, regulations, and transparency in allowance determination, which can precipitate employee dissatisfaction.

Employee dissatisfaction and financial instability can be caused by issues such as lack of transparency, outdated data, and perceived unfairness in salary determination. Optimization of the education system in Timor-Leste's sector is essential to improve accountability and teaching effectiveness. This can be achieved by improving processes, using information technology, providing training and human resource development, and increasing communication and employee participation.

The system often struggles to update information on the status of civil servants and teachers, potentially leading to mismanagement of salary funds and delays in salary payments.

#### **5. Recommendation**

Enhancing Timor-Leste's Education Sector Payroll System is anticipated to involve tangible enhancements, including process streamlining, adoption of information technology, human resource training, and communication enhancement. The objective is not solely to enhance efficiency and precision but also to guarantee the contentment and well-being of civil servants and educators. Therefore, effecting improvements is crucial for attaining accuracy, equity, and welfare for educational practitioners. Recommendations for optimizing the payroll system encompass simplification of procedures, leveraging information technology, enhancing training and human resource development, and fostering communication and engagement among civil servants and educators.

The recommendations aim to improve the accuracy, fairness, efficiency and employee satisfaction of the education sector payroll system in Timor-Leste, thereby creating a more stable working environment and promoting the sustainable development of education in the country.

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