

The Implementation of Payroll Accounting Information Systems in Indonesia: A Systematic Literature Review

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Abstract.

This research presents an in-depth analysis of the implementation of the Payroll Accounting Information System in Indonesia through a Systematic Literature Review (SLR) approach. Involving ten accredited journals, this research describes the processes and obstacles in payroll systems in various companies, including PT. Varia Usaha Bahari, Faculty of Economics and Business, Sam Ratulangi University, and PT. True Primary Gamma. The results show that there are deficiencies in internal control, such as duplication of tasks and lack of efficiency in preparing payroll. Even though several companies have implemented payroll accounting information systems well, there are still weaknesses in supporting documents and internal controls. This research shows that effective implementation of a payroll accounting information system requires good integration between technology, managerial supervision, and a well-organized company organizational structure. Challenges continually arise with the development of technology, requiring companies in Indonesia to improve their payroll systems to remain compliant with applicable accounting standards and ensure effective internal controls. This research provides a comprehensive insight into developments and trends in this domain, providing a basis for companies to improve their payroll systems to achieve salary management that is accurate, reliable, and compliant with applicable regulations.

Keywords: Information Systems, Accounting, Payroll, Company

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1. Introduction

Payroll accounting information systems have become essential in effectively managing a company's human and financial resources in the present digital era. Indonesia, being a nation with a progressing economy, is currently undergoing swift advancements in the

implementation of payroll accounting information systems. Payroll is a crucial component of a company's financial administration, encompassing the computation of employee wages, deductions, and perks. Effective management necessitates the implementation of a comprehensive and precise payroll accounting information system. The payroll accounting information system in Indonesia serves the dual purpose of calculating employee salaries and ensuring companies' compliance with tax regulations and labor laws. Companies can mitigate the likelihood of calculation errors, enhance data accuracy, and expedite the payroll process by adopting an advanced payroll accounting information system.

Payroll and wage accounting information systems are crucial for facilitating efficient management of employee salary and wage data by the management. Tampi & Tinangon (2015) propose that the salary accounting system is specifically developed to address issues related to inaccuracies and inconsistencies in the salary calculation and payment process. This system facilitates efficient and precise salary calculations and payments, adhering to a predetermined schedule, thereby assisting management in their tasks. According to Agatha & Mulyadi (2018), this system serves as a control mechanism that enables companies to establish employee salary levels and also oversee, manage, enhance, and regulate employee salary expenses. Therefore, the payroll and wage accounting information system plays a crucial role in the Company's management of human and financial resources.

In addition, the implementation of a payroll accounting information system also enables companies to enhance employee productivity. Through convenient access to comprehensive data on compensation and perks, employees can gain a lucid comprehension of the various elements comprising their earnings. Consequently, this enhanced understanding has the potential to bolster motivation and performance. Despite the numerous benefits brought about by advancements in information technology, there are still obstacles to overcome when it comes to implementing a payroll accounting information system that aligns with local requirements and regulations. Several challenges encompass a deficiency in comprehending technology, training requirements for competent personnel, and adherence to frequently evolving regulations.

The significance of overseeing a payroll accounting information system resides not solely in its administrative efficacy, but also in upholding integrity and equity when determining employee salaries and wages. According to Natalia (2020), management must handle the payroll system with professionalism to mitigate the risk of fraud that could potentially damage the company. This entails establishing practical and sustainable internal controls to ensure that salaries and wages are processed by relevant procedures. Furthermore, it is crucial to segregate interconnected operations and establish distinct obligations, as underscored by Indrasti & Sulistyawati (2021). Implementing a robust payroll accounting information system enables companies to promptly identify irregularities or fraudulent activities, guarantee equitable salary disbursements to employees, and enhance operational effectiveness.

According to Mursidah et al. (2020), employee compensation not only serves as a financial incentive but also has substantial motivational consequences. Adhering to legal requirements when determining salaries not only ensures employees' financial stability but also enhances their motivation and sense of accountability toward their jobs. Furthermore, implementing a salary policy that is equitable and determined by factors such as expertise, tenure, and job level serves as a motivating force for employees to consistently enhance their job performance

and cultivate their skills. An effective payroll accounting information system not only upholds company integrity but also fosters employee development and drive, thereby cultivating a productive and competitive workplace.

Aprilliadi (2020) states that the internal control system for payroll and wages encompasses various functions within the company. The personnel department is accountable for the process of recruiting, selecting, and placing employees, as well as making decisions regarding salaries and wages. The time recording function is responsible for documenting employee attendance, while the payroll and wages function encompasses the calculation of gross income and the deduction of relevant expenses. The accounting function documents the company's liabilities pertaining to employee compensation, including salaries and wages payable as well as taxes. The finance department is responsible for conducting verification procedures before the disbursement of salaries and wages.

According to Intishar & Muanas (2018), the payroll and wage accounting information system has the possibility of experiencing fraud, manipulation, and delays in employee salary payments. This can adversely affect the company, leading to excessive salary expenses and employee discontent. Hence, it is imperative to establish effective internal control measures to ensure the smooth and lawful execution of the payroll and wage process. By exercising robust control, companies can effectively mitigate financial losses and prevent conflicts with employees, while also ensuring the continuity of the company's operations.

The interviews with employees in the company revealed a phenomenon characterized by various issues pertaining to absenteeism and excessive overtime hours. Certain employees tend to infrequently utilize fingerprint tools for attendance, leading to the system's failure to detect attendance data. In addition, manual attendance is typically employed as a precautionary measure when the fingerprint device fails and is usually only done upon returning home from work. This violates the company's regulations that mandate employees to clock in and out of work, as it significantly impacts the payroll procedure. Another issue pertains to the scheduling of overtime, wherein there exists a substantial disparity between the projected and actual number of overtime hours, as well as the quantity of employees engaged in overtime work. This scenario demonstrates the presence of ineffectiveness and inefficiency in managing overtime hours, leading to expenditures on overtime wages that deviate from the intended plan. Hence, companies must address this issue by enforcing more stringent regulations and ensuring that employees adhere to relevant attendance and overtime policies.

Therefore, conducting thorough and methodical scientific research using the Systematic Literature Review (SLR) method is highly pertinent for investigating the advancements, obstacles, and advantages of implementing payroll accounting information systems in Indonesia. SLR enables the systematic organization of existing knowledge, identification of knowledge gaps, and analysis of current trends and patterns in relevant literature. Hence, employing the SLR methodology, this study seeks to delineate the most recent advancements in the adoption of payroll accounting information systems in Indonesia, ascertain the obstacles encountered by organizations, and devise suggestions to enhance the implementation of this system in response to economic fluctuations and regulatory modifications in Indonesia.

2. Research Methods

This study employs a Systematic Literature Review (SLR) methodology to examine the implementation of payroll accounting information systems in Indonesia. The SLR approach offers a methodical framework for identifying, assessing, and integrating prior research findings that are pertinent to this research topic. The research methodology comprises several steps, including the selection of literature sources, data collection, qualitative analysis, and synthesis of findings. The researchers will conduct a comprehensive search of academic databases, scientific journals, conferences, and official published literature pertaining to the implementation of payroll accounting information systems in Indonesia. The selection of literature sources will be based on predetermined criteria for inclusion and exclusion, ensuring their relevance and quality.

This study identified ten nationally recognized journals that are closely aligned with the specified keywords. The journals were discovered using Google Scholar and the Publish and Perish application. The data extracted from these journals is subsequently organized in a tabular format, encompassing details such as author credentials, publication year, journal title, and research findings. The chosen journals are those that contain research that is comparable to the topic addressed in this study. Once a journal has been chosen, the subsequent step involves conducting a thorough examination of the research journal's contents. Every journal is thoroughly examined to comprehend the employed methodology, acquired findings, and resulting conclusions. The findings of this analysis are subsequently condensed and amalgamated into a comprehensive discourse within this journal. At this stage, researchers will emphasize the resemblances, disparities, and deductions derived from each scrutinized journal. The data extracted from these journals will be utilized to construct a comprehensive overview of the implementation of payroll accounting information systems in Indonesia. The insights derived from prior journals will aid in constructing compelling arguments in this study, while also establishing a robust theoretical framework to substantiate research findings.

This research utilizes an SLR (Systematic Literature Review) approach to present the findings of a comprehensive analysis of previous relevant research on the implementation of payroll accounting information systems in Indonesia. This research will offer thorough and current insights into advancements and patterns in this field.

3. Results and Discussion

Results

The results of the research data included in this literature review are the results of analysis and summaries from various documented journals, especially those related to Payroll Accounting Information Systems in Indonesia. This data has been summarized and presented in tabular form, presenting important information such as research methodology, main findings, and conclusions from each journal included in this research. Through this analysis and summary, the research aims to provide a comprehensive picture of the implementation of payroll accounting information systems in Indonesia based on the findings that have been presented in related journals which are presented in the following table.

Table 1. Research Results on the Implementation of Payroll Accounting Information Systems in Indonesia

Researcher Name	Research Title	Year of Research	Journal	Research result
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Teddy Aprilliadi	Analysis of Payroll and Wage Accounting Information Systems in Internal Control Efforts for Outsourcing Employees	2020	Warrior: Journal of Character Education	The research results highlight deficiencies in the implementation of payroll and wage systems and procedures for outsourced employees at PT. Varia Usaha Bahari, which is located at the Ciwandan packing plant of PT. Semen Indonesia (Persero) Tbk. This research reveals that internal control in the payroll system is still not optimal. Findings include duplication of tasks, lack of efficiency in procedures for preparing payroll and wages, as well as weaknesses in the payment of salaries and wages. The accounting records used were also proven to be incomplete due to the absence of a general journal, product cost card, and cost card. In addition, absenteeism management via fingerprint machines is not properly monitored, and payroll and salary deductions do not receive adequate authorization from the company's personnel or personnel department. These findings indicate an urgent need to improve the internal control system so that payroll and wage processes can run more effectively and efficiently and by applicable ethical standards and regulations.
Gita Gabriella, Kakasih Sifrid S. Pangemanan, and Sherly Pinatik	Implementation of a Payroll Accounting System (Case Study at the Faculty of Economics and	2019	EMBA Journal: Journal of Economics, Management, Business and	The research results highlight the payroll system at the Faculty of Economics and Business, Sam Ratulangi University. The payroll

	Business, Sam Ratulangi University)		Accounting Research	process involves several personnel administration procedures, recording attendance time, making payroll, and paying salaries, with documents such as employee data, assignment letters, and attendance lists. The functions involved, such as personnel, payroll, and finance, run effectively according to existing procedures. However, this research emphasizes the need for improvements in the implementation of payroll accounting systems, with a focus on optimizing processes so that the system is not vulnerable to errors or virus attacks. This indicates the importance of improving security and efficiency in payroll systems to ensure their reliability and integrity.
Amirah Yayang Intishar & Muanas	Analysis of the Implementation of Payroll Accounting Information Systems in Supporting the Effectiveness of Payroll Internal Control	2018	Scientific Journal of Unitary Accounting	The research results show that PT. Dwi Prima Rezeky has implemented a payroll accounting information system well because it fulfills the elements of an accounting information system needed to support the effectiveness of internal control. However, several weaknesses were found in internal control, especially related to the function of making payroll and paying salaries. This process is still carried out by the finance function without any re-examination and authorization from the accounting department. This indicates the need

				for improvements in the authorization system and internal control procedures to ensure accuracy and reliability in the company's payroll process.
Dita Mawar Indrasti, Ardiani Ika Sulistyawati	Implementation of the Payroll Accounting Information System to Support the Effectiveness of Internal Control	2021	SOLUTION: Scientific Journal of Economics	The payroll accounting information system and payroll procedures at PT Omni Electrindo have been implemented quite well, with procedures that are by existing theory and the main documents for calculating salaries have been fulfilled. However, there are weaknesses in the documents supporting salary calculations, such as the absence of employee pay slips and the lack of formal letters regarding salary changes. Furthermore, the company's internal controls still appear to be less effective. Several functions, such as calculating salaries and financial functions, are carried out by one section, namely the General Manager. This condition raises the risk of calculation errors because no verification from other departments can ensure correctness and accuracy in salary calculations. Therefore, it is necessary to improve the organization of related functions and improve documentation supporting salary calculations to ensure more effective internal control.
Zein Ghozali, Irsan, Masnoni, Lia Sari, Rizki Vitalia	Analysis of the Implementation of the Payroll Accounting	2019	ECOBIS Journal: Economic and Business Studies	The results of this research are that the South Sumatra BKSDA implements the ASN

	Information System at the South Sumatra Natural Resources Conservation Center			and PPNPN payroll process with stages starting from the personnel and administration section, followed by changing employee salary data which is then processed by the Finance Section according to the 8 applicable salary types. However, in payroll reporting, the South Sumatra BKSDA still carries out manual recording before the data is input into the application so that it complies with applicable accounting standards. The recommendation given is the need to increase HR competency in the ASN and PPNPN payroll systems to understand and implement the latest government regulations quickly. In addition, a sufficient number of implementing employees is required to support the correct and efficient processing of employee data, ensuring that the workload is distributed according to their respective duties and functions.
Jaluento, SPT and Rizka Parasmita Dewi	Study of the Implementation of Internal Control of Outsourcing Payroll Accounting Information Systems	2018	Aditya Fiber – Scientific Journal UNTAG Semarang	The results of this research reveal several obstacles in the internal implementation of payroll accounting information systems for outsourcing. Some problems include document authorization and recording procedures that are not yet effective, the use of simple applications in the recording and payroll process, as well

				as unhealthy practices such as determining salaries for outsourced employees that are not based on the work performance achieved by the employees. Apart from that, the outsourcing payroll accounting information system also shows the need for improvement, especially in terms of outsourcing employee salary payments which are often paid first according to the payroll period, and then billed to the service user (second party) for payment of the outsourcing employee's salary. To increase efficiency and fairness in payroll, improvements in authorization procedures, the use of more advanced technology, as well as adapting payroll practices to the work performance of outsourced employees are expected to be effective steps.
Desi Anggreni Br Sembiring, Rintan Saragih, Mitha Christina Ginting	Evaluation of the Implementation of the Payroll Accounting Information System to Improve Internal Control at PT. SCS Facility Service Medan	2023	SiAkun: Accounting Thesis Journal	Implementation of a payroll accounting information system at PT. SCS Facility Service Medan has been running quite well and effectively. The payroll function, payroll documents, and payroll procedure network have been implemented well, including payment of employee salaries via transfer. Standard operational documents such as working time cards, employee attendance lists, salary lists, cash-out receipts, and pay slips have been

				implemented effectively by established procedures.
Lifry Corry Ertavina, Hendrik Manossoh, Hendrik Gamaliel	Analysis of the Implementation of the Payroll Accounting Information System at the National Land Agency of North Sulawesi Province	2023	LPPM Journal for EkoSosBudKum Sector (Economic, Social, Cultural and Legal)	The accounting information system at the National Land Agency of North Sulawesi Province is still facing several problems. There is a double duty in the civil service function, which acts as a recorder of attendance and payroll, causing a lack of efficiency in carrying out tasks. Even though the documents used meet the applicable theory, the payroll procedure is not fully effective by the existing theory. Internal control is also still not optimal because there is no clear separation of duties between related functions. The payroll system has experienced positive developments, but there are still weaknesses such as duplication of duties in functions, incompatibility of payroll documents with applicable theory (for example the use of salary envelopes which should not be needed because payroll is done by transfer), and the use of fewer procedures than the theory should be applied.
Ni Komang Erina Liliani, and I Gede Agus Pertama Yudantara	Implementation of the Payroll Accounting Information System for ASN and Non-ASN Employees at the Buleleng Regency Regional Financial and Revenue Management Agency	2022	Scientific Journal of Accounting and Humanics	The payroll system for civil servants and contract employees at the Regional Financial and Revenue Management Agency of Buleleng Regency has differences in the supporting documents for salary assignments, the section that handles document submissions,

				and the time for salary assignments. However, salary procedures are generally by the provisions set by the regional government. Internal control in cash disbursement procedures, especially employee salary payments, has been implemented well, with a clear understanding of duties between the finance department and the personnel department. Using a Payment Order as the basis for a Fund Disbursement Order (SP2D) and collecting complete employee files are important factors before the payroll process is carried out.
Bella Natalia	Analysis of the Payroll Accounting Information System to Increase the Effectiveness of Internal Control at PT Gamma Utama Sejati	2020	PROCEEDINGS OF BIEMA Business Management, Economics, and Accounting National Seminar	In PT Gamma Utama Sejati's payroll system, internal control has been implemented effectively by established operational standards and by existing theory. In this research, it was discovered that several developments and changes had occurred. One striking change is the use of salary envelopes which are no longer used. Salary payments are now made by transfer to each employee's account, while still including a pay slip containing details of each employee's salary. Apart from that, supervision of the entry of attendance cards has also changed. The use of fingerprint attendance has been implemented, which allows the system to record attendance times computerized.

With this change, PT Gamma Utama Sejati's payroll system has followed technological developments and best practices in managing employee salaries.

This research revealed a number of problems in implementing systems and procedures for outsourcing employee salaries and wages in various companies. Research results from various researchers highlight deficiencies in internal control in companies such as PT. Varia Usaha Bahari, Faculty of Economics and Business, Sam Ratulangi University, PT. Dwi Prima Rezeky, and the South Sumatra Natural Resources Conservation Center. These findings include duplication of tasks, lack of efficiency in payroll procedures, as well as weaknesses in accounting records. Even though several companies such as PT Omni Electrindo have implemented a payroll system well, there are still weaknesses in the documents supporting salary calculations and internal controls. Likewise, research at PT Gamma Utama Sejati shows the effectiveness of internal control through the use of technology such as fingerprint attendance and salary payments via transfer. In conclusion, improving internal control and implementing an efficient and secure payroll accounting information system is important to ensure payroll processes are accurate, reliable, and according to applicable regulations in various companies.

Discussion

An examination of the literature on the implementation of payroll accounting information systems in Indonesia provides valuable insights into the effectiveness, dependability, and internal regulation in the management of employee salaries across various companies. According to Agatha & Mulyadi's (2018) study on PT. Batik Arjuna Cemerlang Sukoharjo, despite the implementation of a payroll accounting information system, the company still faces several deficiencies due to the continued reliance on manual processes. This exemplifies the difficulties encountered by companies in Indonesia when transitioning from manual systems to computerized systems, despite the presence of well-organized payroll processes.

The study conducted by Tampi & Tinangon (2015) at the Respondent's Grand Sentral Supermarket demonstrates that effective internal control can be attained by implementing structured function recording and direct supervision from company management. This study emphasizes the significance of managerial oversight to ensure that payroll operations adhere to company protocols and benchmarks. The results align with the findings of the study conducted by Jermias (2016) at PT. Bank Sinarmas Tbk, Manado. The study concluded that a well-functioning payroll accounting information system can enhance managerial performance. However, it also identified some shortcomings in the supervision of payroll preparers.

According to Febriyanti (2017), implementing computerized salary payments and supervision through the accounting department can enhance the efficiency of a company's internal control. This study highlights the significance of employing a unified accounting information system to guarantee precision and dependability in payroll. Nevertheless, there are still obstacles to the successful implementation of efficient payroll accounting information

systems, as indicated by the research conducted by Langi et al. (2019) at PT. Glorious Gold Indonesia. This study emphasizes the significance of task allocation and the implementation of healthy practices within a company's organizational structure in relation to internal control efforts.

Based on this context, it can be inferred that the successful implementation of a reliable and secure payroll accounting information system necessitates seamless integration of technology, direct managerial oversight, and a well-structured organizational framework within the company. Companies in Indonesia must consistently enhance their payroll systems to comply with relevant accounting standards and establish efficient internal controls, as technology advancements present ongoing challenges.

4. Conclusion

After analyzing and summarizing multiple studies on the implementation of the Payroll Accounting Information System in Indonesia, it is evident that numerous companies encounter difficulties in efficiently and reliably implementing this system. Research in the field of literature indicates that despite the adoption of computerized payroll accounting information systems by numerous companies, there are still deficiencies in internal control, task allocation, and documentation pertaining to salary calculations. The results of this study emphasize the significance of managerial oversight in guaranteeing adherence to company protocols and benchmarks during the payroll procedure. Effective internal control is crucial for achieving an accounting information system that is integrated and supported by sound practices in the company's organizational structure. While technology has indeed made salary payments more convenient through transfers and the use of fingerprint attendance, there are still obstacles to overcome, such as insufficient documentation and inefficient task allocation. To surmount this obstacle, Indonesian companies must persistently enhance their payroll systems through the integration of cutting-edge technology, bolstering managerial oversight, and refining internal organizational frameworks. In addition, it is necessary to enhance HR training and expertise in the area of payroll accounting information systems to promptly comprehend and execute the most recent government regulations. By adhering to relevant regulations in Indonesia, companies can guarantee the dependability, precision, and trustworthiness of the payroll process.

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