Journal of Applied Business, Taxation and Economics Research (JABTER)
Vol. 1, No. 5, June 2022 (Page: 427-438) P-ISSN 2828-4976
DOI: 10.54408/jabter.v1i5.86 E-ISSN 2808-263X

Analysis of Financial System Modeling for Integrated Petty Cash Based on Business Process Management

Bagas Brian Pratama[1*], Kurnia Ekasari[2], Andi Kusuma Indrawan[3]

[1,2,3] State Polytechnic of Malang, Indonesia

Corresponding Author: bagas.brian.bb@gmail.com [1)]*

Keywords : *Business Model, Petty Cash Information System, System Integration, Business Process Management*

Abstract:
This study aimed to analyze the modeling of financial information systems for integrated petty cash using the concept of a Business Process Management System. The object of study was a training service company. This case study analysis was conducted to find problems in the study's object and then formulate. This study applied a qualitative method using Yin's (2009) explanatory case study analysis techniques with several stages ranging from data collection, case identification, and in-depth analysis to theory development and implications for settlement. The result of the study was a business process model based on Business Process Management Notation (BPMN) which could increase effectiveness and efficiency so that it had implications for improving the quality of the company's business processes.

Introduction

A company's business process is a series of business activities that are continuous to realize the company's goals. Each company has its business processes adapted to its environment and characteristics, such as its financial activities, organizational development, and human resources management (Sudjiman, 2020). Business Process is a collection of interrelated work to solve a particular problem. A business process can be broken down into several subprocesses. Each of them has its attributes but also contributes to achieving the goals of the super process (De Ramón Fernández *et al.*, 2020). Companies that have good business processes will have higher adaptability and are usually able to outperform their competitors. For this reason, there are many analytical techniques that companies can use to improve the quality of their business processes, one of which is by using the concept of business process management.

Business Process Management (BPM) is an approach to increasing effectiveness and efficiency through building process automation and agility to manage change. BPM helps companies monitor and control all elements of business processes, such as employees, customers, suppliers, and workflows. BPM improves the quality of business processes by providing better feedback mechanisms. Continuous and real-time reviews will help companies identify problems and solve them more quickly before the problem develops into a bigger one (Zuhaira & Ahmad, 2021).

Meanwhile, *Business Process Modeling Notation* (BPMN) is a graphical notation that describes the logic of the steps in a business process. This notation has been specifically designed to coordinate the sequence of processes and messages that flow between actors in different activities. The main goal of BPMN's efforts is to provide an easily understood notation by all people, especially *software* activists. The existing business analysts create initial drafts of the processes up to technical developments covering the flow and work in the form of models or notations. BPMN also creates a standardized bridge for the gap between business process design and process implementation (Bondar *et al.*, 2020).

So One of the various business activities of the company is financial administration activities. Financial administration activity is one of the company's main activities that show how it manages its documents, information, and financial management appropriately. The company's financial administration process includes the company's financial preparation and planning activities; regulation of the flow of company funds movement; analysis of debt, assets, and payment schemes; the audit of the company's financial budget for specific needs; and the archiving and management of the securities (Mikesell, 2018).

Currently, many companies have used financial administration systems to assist company operations. The financial administration system is responsible for managing the financial processes within a particular company or form of business. The purpose of regulating the financial system is undoubtedly for the company's positive achievements. In more detail, some of the objectives of financial administration are as follows (1) Financial administration can show quickly and clearly the company's financial condition at a particular time. It can be achieved because the financial administration generally has the task of bookkeeping and

P-ISSN 2828-4976
E-ISSN 2808-263X

control over the financial statements; (2) Financial administration intends to facilitate the process of transactions carried out by companies, both in terms of income and expenses; and (3) Recording and mapping of finances carried out by the company within a certain period (Millaty *et al.*, 2019).

This study was a case study on the company object as one of the companies with the business field of accounting and taxation training services. This company was established in 2007 with the support of a professional teaching team. The company is headquartered in Malang City and currently has three branch offices in Jogjakarta, Tangerang, and Makassar. The Company's main products are Brevet A and B training services, accounting computer training, management and taxation consulting, and *in-house training* for special needs regarding finance and taxation of corporate clients. The company's development is relatively rapid by opening branches in several areas such as Jogjakarta, Makassar, Tangerang, and head office in Malang City. It certainly brings an impact on improving the Company's business processes. One of them is the company's financial administration process.

The Company's financial administration process consists of two input and output activities, especially between branch offices and the head office. Reporting financial income and expenditure is currently still limited to sending online documents manually via email or social media. Planning, controlling, and evaluating reporting are still carried out on a *people-to-people* basis. Thus, it poses a high risk for the company. Moreover, this company's actual financial administration activities are quite complex, where all branches do the processing independently and then send reports to the central branch in Malang. Furthermore, the central administration and finance department checks and records the incoming financial data to be later checked and reported manually. This process certainly impacts the company's ineffectiveness and efficiency of financial administration activities. It was supported by several findings from previous cases, such as delays in financial reports, difficulties in finding past financial data, and sub-optimal synchronization of financial information between branches. This process has led to the emergence of significant problems in the Company, namely the poor quality of financial administration. Based on this explanation, a fishbone analysis model in figure 1. was described to help in mapping the problems and finding the best solution.

Based on fishbone analysis, it could be identified that three main factors caused the company's lack of quality financial administration, including business processes, human resources, and documentation or archiving. These three factors should be controlled more easily when the company has an Information System that is implemented in the company's operations (Wahyudi et al., 2022). In particular, from the various modules in the Company's MIS, it is possible to develop the financial administration system module to improve the quality of its financial administration management. Using a financial administration information system, the company can create an integrated financial administration process with several branches. With the integrated system, all information will be centralized in one database, making it easier to synchronize and extract complete information (Kot *et al.*, 2019). The use of systems in the right business processes will also align with and support the company's vision to make continuous improvements in the current technological era (Ibrahim & Yunia, 2022; Pratama, Eltivia, et al., 2021).

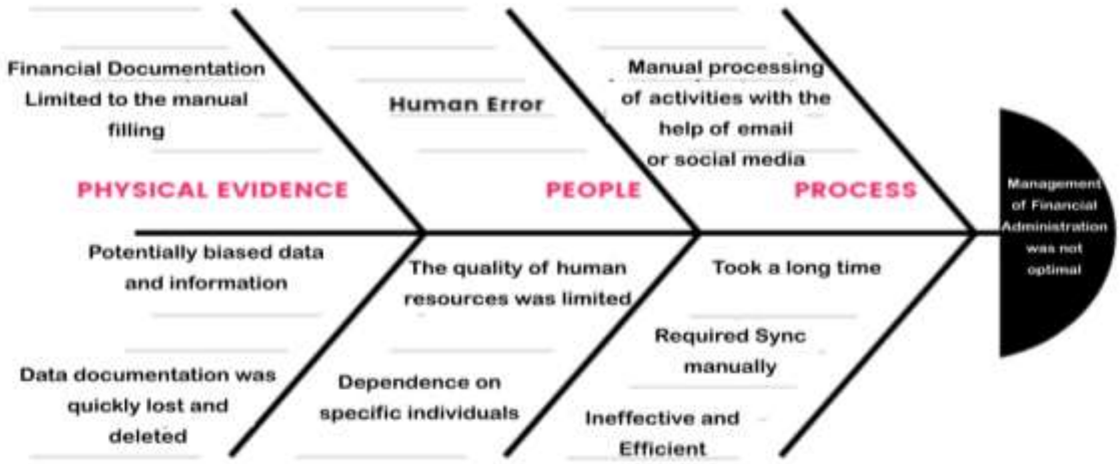

Figure 1. Fishbone Diagram of Corporate Financial Administration Problems

This study will focus on one part of the company's financial administration process, namely petty cash. This is in order to produce deeper analysis results to become a pioneer in the implementation of integrated systems in the company. The integration of the company's petty cash system will be the first step to integration of the entire company's financial administration process in the future. The petty cash financial information system itself is part of a financial information system that focuses on the company's petty cash management function, especially on several aspects of controlling petty cash funds starting from fund planning, namely all plans for income and expenditure of money that are calculated within a certain period. Use of funds, namely the transfer of funds to various previously planned activities even before the budget is drafted. Fund management, namely the use of money to improve company performance. Search for sources of funds, namely activities carried out to obtain funds from owners of capital. Fund control, namely the activities of assessing, controlling, and improving the performance of the company's use of funds. Depository of funds, namely collecting funds owed by the company to be stored profitably. Lastly, a fund audit is an activity of checking or auditing finances to see that the use of funds is carried out effectively and without fraud (Kot *et al.*, 2019).

So Based on the background of the problems, in this research, analysis and modeling were carried out related to the company's financial processes, especially in the petty cash disbursement process. The study used a *case study* method to analyze more deeply the problem cases as the objects of study. In this study, a business model for the petty cash disbursement process was formulated to integrate all of the company's branch offices into the same financial administration system. The analysis process was based on the *Business Process Management System* (BPMS), supported by modeling using the *Business Process Management Notation* (BPMN). The results of this study were expected to provide a

P-ISSN 2828-4976
E-ISSN 2808-263X

proposed business model that could improve the effectiveness, efficiency, and quality of the company's business processes.

Research Method

This study was a qualitative case study (*explanatory case study*). A case study was an empirical knowledge-seeking process to investigate and examine various phenomena in real-life contexts. By using this method, an in-depth analysis could be carried out related to particular problems found by authors to then be formulated in solving these problems using the fundamental questions "How" and "Why" (Yazan, 2015). The analysis technique used a case study design by Yin (2009), with the first analysis stage being data collection. Data collection in this study used interviews, observation, documentation, and literacy studies. The second stage was identifying cases. This stage was carried out by selecting the data and information collected to focus on the case studies' problems. The next stage was to conduct an in-depth analysis based on the "How" and "Why" question patterns. At this stage, a solution would be formulated for the problem of the analyzed case. The last stage was developing the theory and implications of the completion according to the conditions of the object of study (Nur'aini, 2020).

Result and Discussion

Petty cash reporting activities from branch offices to head office were a financial budget accountability process carried out by each branch to the head office in Malang City. The business processes and petty cash reporting activities from branch offices to head office were as follows:

Every month the finance department in each branch office made a petty cash report to account for the office's operating budget. The branch petty cash report was then sent to the head office finance admin utilizing a personal electronic message. Next, the central finance admin received an electronic message attached to the branch's petty cash report and recapitulated it. The branch petty cash report was then reported to the head of the administration and finance department for verification.

After that, the administration and finance department head verified and checked the financial information. If an error occurred, the branch petty cash report was returned to the financial admin and then returned to the branch office for repairs. If there were no errors, the petty cash report was approved, and then an authorization process was carried out to the general manager.

The general manager received a petty cash report that has been verified by the head of the administration and finance department and then authorized it. The authorization process was used to ratify the petty cash report as a sign that the petty cash reporting process from the branch office has been well received and according to company standards.

The final process was a petty cash report that has been authorized to be received back by the administration and finance department for later manual archiving of data via desktop storage or personal google drive. Based on these details, for a more detailed, the description of the business process for financial reporting from branch offices to the head office is as follows :

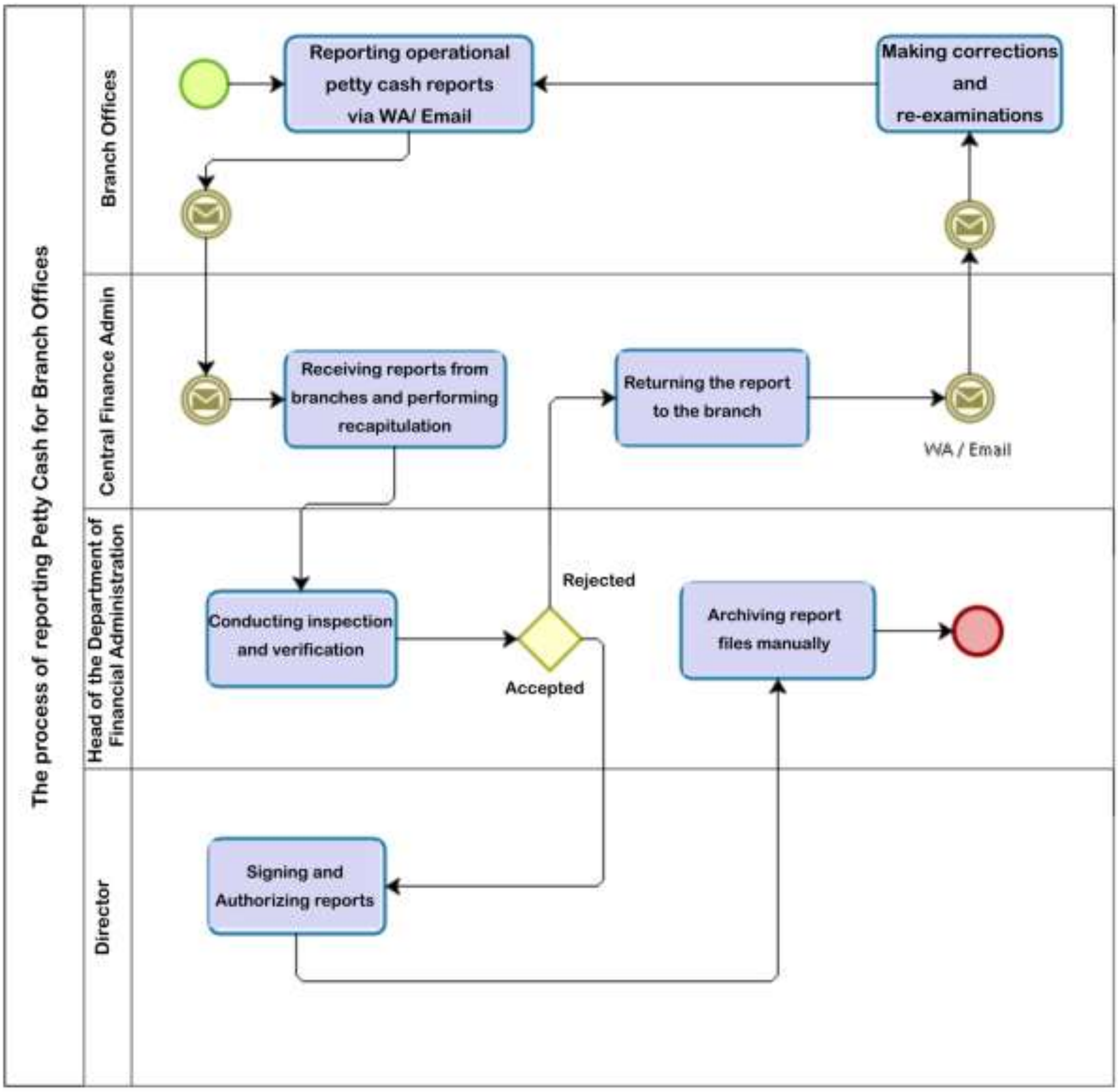

Figure 2. Business Process of Petty Cash Reporting (As-Is Model)

The company's current branch office petty cash reporting business process had many weaknesses. As explained in the background of the previous problems, the reporting process, which was still based on people to people manuals, caused high risks during the reporting process. The analysis results that the authors could describe from the process and activities of the branch office petty cash reporting are as follows:

First, sending electronic mail-based reports personally took much time because users could not control the reporting process systematically. If there were currently several branch offices, the head office admin received many different e-mails from each branch's financial admin personal account. At this point, the financial admin would find it very difficult to *follow up* one by one for each branch office of the company.

P-ISSN 2828-4976
E-ISSN 2808-263X

Furthermore, the process of checking and recapitulation became ineffective. The central financial admin needed to synchronize petty cash reports in every incoming electronic mail. Branch office financial data and information were divided into several media with limited personal access. Communication conveyed through private electronic mail also had a high possibility of information bias between the sender and recipient of the message (Ogwu *et al.*, 2020).

Third, the company's financial data became very risky. When petty cash report information was submitted only through private electronic messages, the data source came from the central financial admin's private message. The archiving process was undoubtedly very risky because the central finance department had to download the data personally and then put it in one company folder. The risk of deleted and lost messages was also high considering that people carried out the reporting communication *process to people*. In addition, the process of communicating and sending financial data via email also had a high-security risk. It included transparency and control over financial data in electronic messages only personally controlled by the respective email owners (Haesevoets *et al.*, 2021).

The three explanations above showed that the reporting of petty cash reports from branch offices to the head office was generally carried out by companies today from a managerial point of view to be very inefficient. Company management could not directly control the petty cash reports of branch offices. Processing only relied on one door, and the process flow could not be monitored directly. Communication was also very limited by relying on a private electronic mail network, so the information path was very narrow. Effective and efficient business processes were one of the company's key strengths in realizing the company's vision more optimally (Prokopenko *et al.*, 2020).

Based on the analysis results, a business model proposal for branch offices' petty cash reporting process could be made to the head office, assisted by a financial information system. This financial information system would make the reporting process more effective and efficient. The following in figure 3. was an image modeling of business processes assisted by the company's financial information system, which was proposed to improve the quality of the company's business processes.

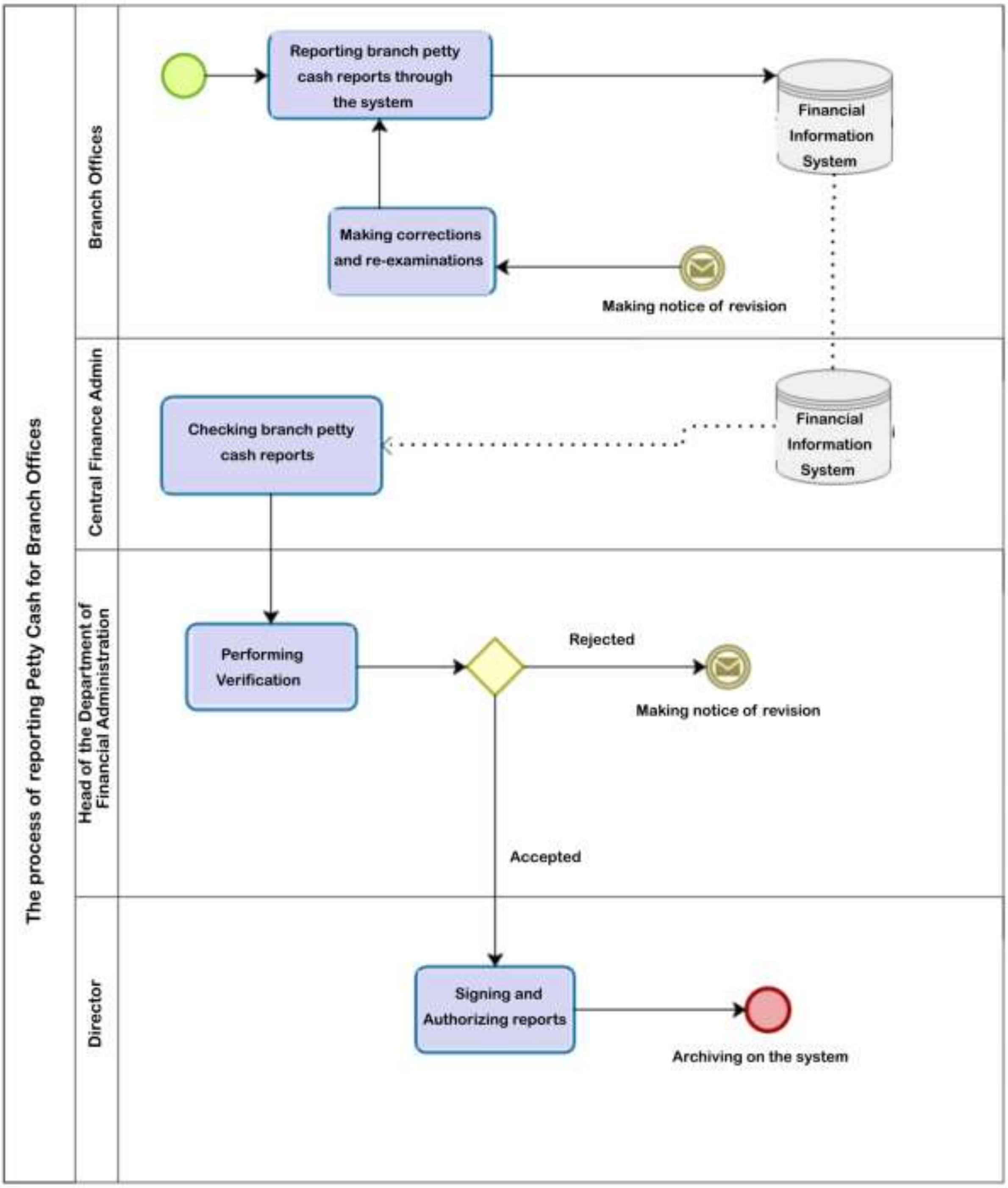

Figure 3. Business Process of Integrated Petty Cash System (To-Be Model)

For more details, the business process modeling in Figure 3 can be described in the stages of reporting petty cash from branch offices to the proposed head office as follows:

1. Each branch office sent petty cash reports every period into the company's financial information system.
2. Central financial admin could check the branch petty cash reports reported in the system at a specific time limit. Furthermore, the financial admin could process the petty cash report uploaded to the system.

P-ISSN 2828-4976
E-ISSN 2808-263X

3. The administration and finance department head verified the branch petty cash reports and directly provided feedback on the verification results through the system. When the report was not received, or there was an error, the branch office would get a sign in the financial information system for later re-examination and the reporting process again by the branch office.
4. For petty cash reports that have passed the verification of the head of the department, authorization could be directly carried out by the general manager through the financial information system. Furthermore, the filing process could be done automatically in the company's financial information system database.

The proposed new business process improved the effectiveness and efficiency of the company's business processes (Abu Salma *et al.*, 2021; Bae *et al.*, 2014). Among them, first, saving time in the reporting process. The long process through personal electronic messages took a very long time, in contrast to the use of the system in Figure 2, which could cut processing time much faster. The reduced processing time indicated an improvement in the company's business processes (Sugiyama & Schmidt, 2014). To process one output, the time savings that could be made would have a domino effect on optimizing the following process in a row. It would be a good improvement for the company considering its economic principle was to get maximum profit with a minor sacrifice (Pratama, Muwidha, et al., 2021).

The proposed new business model also systematically increased control over the branch's petty cash reporting process. The company's management had access to a financial information system in which it could directly control the activities of sending financial data and information from branches to the center. Data control was necessary, considering that financial data contained crucial information managed by management (Al-Dmour *et al.*, 2018). Errors in data management could be fatal for the company, such as potential errors in retrieving the required data and communication failures between departments to leakage of important data out of the company. Therefore, company management could more accurately monitor the entry and exit of company financial data by using this financial system.

Finally, all *Databased* companies were in the same facility using a financial information system described in the model. Therefore, there would be no errors in storing and searching for financial data that might be lost as in the previous process. Databased on the system had an essential role in optimizing the company's financial data archiving process. Ensuring the process of archiving financial data went well could improve the company's internal control (T. *et al.*, 2012). This good internal control system functioned to properly manage and control company risks to create healthy and safe operations. Having an electronic database directly connected to the company's financial system could allow management to carry out more optimal control.

Lastly, the business process modeling designed in this study improved the company's management to make strategic decisions optimally. The financial and economic information generated from this business model was of higher quality. Therefore, the company's management could more easily process the company's financial data more precisely. With the proposed business model, the company's management obtained relevant company financial information with real-time access to the company's financial system. It was necessary, considering that financial information was one of the most crucial information to influence future management policies (Al-Dalabih, 2018).

Conclusion

Business processes were the core of all activities in a company or organization. To achieve company goals, it was business processes that would empower all existing resources in the company. In this study, it was found that there were business process problems in the administrative and financial processes, especially in the petty cash disbursement proces. This study used qualitative case study techniques to formulate a business process model that could overcome these problems. The study results indicated that the proposed business process model based on the Business Process Management System could be an alternative for companies to increase the effectiveness and efficiency of the company business processes. With the application of this model, the quality of the company's business processes could be increased. With this modeling, evaluation and continuous improvement could be carried out more optimally for the company in the future. Suggestion for further studies is to analyze the application of the model results of this study in real on the company so that the value of the increase achieved can be measured.

References

Abu Salma, A. J., Prasolov, V., Glazkova, I., & Rogulin, R. (2021). The impact of business processes on the efficiency of small and medium-sized enterprises. *Montenegrin Journal of Economics*. https://doi.org/10.14254/1800-5845/2021.17-3.11

Al-Dalabih, F. A. N. (2018). The Impact of the Use of Accounting Information Systems on the Quality of Financial Data. *International Business Research*. https://doi.org/10.5539/ibr.v11n5p143

Al-Dmour, A. H., Abbod, M., & Al Qadi, N. S. (2018). The impact of the quality of financial reporting on non-financial business performance and the role of organizations demographic' attributes (type, size and experience). *Academy of Accounting and Financial Studies Journal*.

Bae, H., Lee, S., & Moon, I. (2014). Planning of business process execution in Business Process Management environments. *Information Sciences*. https://doi.org/10.1016/j.ins.2013.12.061

Bondar, M., Iershova, N., Tkachenko, M., Garkusha, V., & Yavorsky, S. (2020). FINANCIAL DECISIONS TAKING INTO ACCOUNT MANAGEMENT REPORTING OF ENTERPISE. *Financial and Credit Activity: Problems of Theory and Practice*. https://doi.org/10.18371/fcaptp.v2i33.206532

De Ramón Fernández, A., Ruiz Fernández, D., & Sabuco García, Y. (2020). Business Process Management for optimizing clinical processes: A systematic literature review. *Health Informatics Journal*. https://doi.org/10.1177/1460458219877092

P-ISSN 2828-4976
E-ISSN 2808-263X

Haesevoets, T., De Cremer, D., De Schutter, L., McGuire, J., Yang, Y., Jian, X., & Van Hiel, A. (2021). Transparency and Control in Email Communication: The More the Supervisor is Put in cc the Less Trust is Felt. *Journal of Business Ethics*. https://doi.org/10.1007/s10551-019-04220-w

Ibrahim, M. I., & Yunia, D. (2022). Transformation of the Financial Services Authority in the Digitalization Era. *Journal of Applied Business , Taxation and Economics Research (JABTER)*, *1*(4), 385–392. https://doi.org/10.54408/jabter.v1i4.75

Kot, S., Štefko, R., Dobrovič, J., Rajnoha, R., & Váchal, J. (2019). The main performance and effectiveness factors of sustainable financial administration reform using multidimensional statistical tools. *Sustainability (Switzerland)*. https://doi.org/10.3390/su11133609

Mikesell, J. L. (2018). Financial Administration. In *Defining Public Administration*. https://doi.org/10.4324/9780429501074-35

Millaty, M., Salehawati, N., Avi, M. F., Syarifudin, I., & Supriyatna, U. (2019). PELATIHAN MANAJEMEN ADMINISTRASI KEUANGAN. *Jurnal Vokasi*. https://doi.org/10.30811/vokasi.v3i2.1305

Nur'aini, R. D. (2020). PENERAPAN METODE STUDI KASUS YIN DALAM PENELITIAN ARSITEKTUR DAN PERILAKU. *INERSIA: LNformasi Dan Ekspose Hasil Riset Teknik SIpil Dan Arsitektur*. https://doi.org/10.21831/inersia.v16i1.31319

Ogwu, S., Sice, P., Keogh, S., & Goodlet, C. (2020). An exploratory study of the application of mindsight in email communication. *Heliyon*. https://doi.org/10.1016/j.heliyon.2020.e04305

Pratama, B. B., Eltivia, N., & Ekasari, K. (2021). Revolusi akuntan 4.0. *Jurnal Akuntansi Multiparadigma*, *12*(2), 388–400. https://doi.org/https://doi. org/10.21776/ub.jamal. 2021.12.3.31

Pratama, B. B., Muwidha, M., & Kamayanti, A. (2021). The Influence of Sharia Supervisory Board, Leverage, and Equitable Distribution Ratio on Earnings Management Practices in Islamic Banking. *Proceedings of 2nd Annual Management, Business and Economic Conference (AMBEC 2020)*, *183*(Ambec 2020), 60–64. https://doi.org/10.2991/aebmr.k.210717.013

Prokopenko, O., Shmorgun, L., Kushniruk, V., Prokopenko, M., Slatvinska, M., & Huliaieva, L. (2020). Business process efficiency in a digital economy. *International Journal of Management*. https://doi.org/10.34218/IJM.11.3.2020.014

Sudjiman, P. E., & Sudjiman, L. S. (2020). ANALISIS SISTEM INFORMASI MANAJEMEN BERBASIS KOMPUTER DALAM PROSES PENGAMBILAN KEPUTUSAN. *TeIKa*. https://doi.org/10.36342/teika.v8i2.2327

Sugiyama, H., & Schmidt, R. (2014). Business process model of continuous improvement in pharmaceutical manufacturing. *Kagaku Kogaku Ronbunshu*. https://doi.org/10.1252/kakoronbunshu.40.201

T., M.-K., A., S., S., F., R., K., & A., K. (2012). An electronic management system for quality management. *Transfusion Medicine and Hemotherapy*.

Wahyudi, T., Astuti, K. D., & Kinasih, I. P. (2022). Accounts Receivable Information System at PT . Latinusa , Tbk. *Journal of Applied Business , Taxation and Economics Research (JABTER)*, *1*(4), 401–409. https://doi.org/10.54408/jabter.v1i4.82

Yazan, B. (2015). Three Approaches to Case Study Methods in Education: Yin, Merriam, and Stake. *The Qualitative Report*. https://doi.org/10.46743/2160-3715/2015.2102

Zuhaira, B., & Ahmad, N. (2021). Business process modeling, implementation, analysis, and management: the case of business process management tools. *Business Process Management Journal*. https://doi.org/10.1108/BPMJ-06-2018-0168