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Is It Necessary To Implement ERP In Mechanical Electrical Contractor Companies?

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Abstract- This study investigates the challenges and solutions in managing cash expenditure reporting within Mechanical and Electrical contractor construction services companies, focusing on the role of Accounting Information Systems (AIS). Through a qualitative case study approach, data was collected via interviews, observations, and documentation from company employees, and analyzed using Kaoru Ishikawa's Fishbone Diagram to identify root causes of inefficiencies. Key issues identified include delays in data submission, inconsistencies in financial records, reliance on manual processes, over-dependence on individual staff, and lack of integrated technological systems. These challenges compromise the accuracy, accountability, and timeliness of financial reporting, raising risks of errors and potential fraud. The analysis highlights the absence of standardized procedures, specialized accounting personnel, and automated tools as critical barriers to effective AIS implementation. Proposed solutions include redesigning business processes, developing detailed flowcharts for reporting procedures, integrating centralized databases, enhancing staff competencies through training, and deploying web-based applications to automate data entry and reporting. The study emphasizes the potential of Enterprise Resource Planning (ERP) systems to streamline financial processes, reduce manual errors, and improve transparency. By addressing these gaps, the research underscores the importance of robust AIS frameworks in enhancing decision-making, cost control, and project management efficiency in construction firms. These findings contribute to broader discussions on optimizing AIS in resource-intensive industries, advocating for strategic investments in technology and human capital to align financial practices with organizational objectives.

Keywords: **Accounting Information System, Cash Expenditure Reporting, ERP, Construction Services, Business Process Improvement.**

I. INTRODUCTION

Accounting information system as handling financial and non-financial transactions that directly affect the financial transaction process [1]. These changes provide users with important information for future data processing AIS is also a popular model because it describes all information systems, regardless of their technological architecture. AIS is required to collect, input, process, store, and communicate information and data regardless of the approach used [2, p. 11].

Accounting information is important data that must be known by users or interested parties to obtain information about the financial reporting process, so the information system describes several categories that prove that a company has run financial reports properly or not [3]. Accounting information systems become a special part of management information systems in providing information about accounting and finance, so that the support of an integrated accounting information system is expected to be able to control several transactions such as sales, receivables, and effective cash receipts in order to improve company performance [4]. In addition, Supriyati & Bahri [5] state that accounting information systems are recognised as effective tools in minimising losses and maximising profits which must also be followed by proper management planning for the efficiency of accounting information systems.

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This study aims to analyse the business process of preparing cash expenditure reports in Mechanical and Electrical contractor construction services companies. Supervision of cash expenditure has a very important role for construction service companies. Cash expenditure is important because it is related to the cost of goods sold in a project. In addition, cash expenditures in each project must also be in accordance with the cost budget plan for a project that is being worked on. This suitability can reduce the risk of investing in unnecessary projects [6]. According to Ervianto [7], cost control is one of the important aspects in ensuring the success of construction projects. An effective Accounting Information System (AIS) can assist in recording and managing cash expenditures accurately, so that the resulting financial statements can be trusted and support appropriate decision making [8]. In addition, quality and time control also need to be considered to ensure the project is completed on time and in accordance with the specifications set.

There is no continuous application with the current database not yet integrated. This causes changes in figures for previous period reports if comparisons are to be made in the current period. The change in numbers causes inconsistencies in the information provided when reporting. This inconsistent information is feared to trigger fraud in the future.

II. METHODOLGY

This research is a type of qualitative research and describes the existing problems. Qualitative research understands human or social phenomena by creating a complex picture presented in words & conducted in a natural setting [9, p. 77]. Qualitative research is based on post-positivism, focuses on natural objects (not experiments), researchers as key instruments, samples are taken purposively and snowball, combined collection techniques (triangulation), inductive / qualitative data analysis, results emphasize meaning rather than generalization [10] Qualitative research involves the process of collecting data in a scientific context with the aim of explaining the phenomena observed [11, p. 8]. The main objective in qualitative research is to make facts/phenomena understandable and allow according to the model to generate new hypotheses[12, p. 29]. This research uses a case study approach by conducting in-depth analysis of phenomena in the field.

Primary data or primary sources also refer to data sources that provide data directly to researchers [10]. The research requires primary data in the form of information from employees at the company. Interview data was analyzed using thematic analysis to find patterns and themes related to challenges in revenue cycle management and financial risk. With this method, it is expected to gain a deeper understanding of the factors that influence revenue cycle management and its impact on corporate financial management. Secondary data or secondary sources are sources that indirectly provide the information needed for data collectors or researchers [10]. While the secondary data needed from the research is in the form of cash expenditure reports and purchases from the company. The data collection techniques used in this research are observation, interviews and documentation.

III. DISCUSSION

This research uses Kaoru Ishikawa's Fishbone Diagram analysis which has several basic types of analysis. A fishbone diagram is a tool used to explore the inputs that explain the outputs. It is also referred to as a cause-and-effect or Ishikawa diagram. Kaoru Ishikawa, a Japanese quality control specialist, pioneered the use of fishbone diagrams in the 1960s. This diagram consists of a fish-bottom structure that represents the root cause of the problem and a fish head that displays the effect or output. Cause categories: 6 M (machine, labor, material, method, maintenance, mother nature, measurement [13]. However, there is no limitation to define causal categories on this chart. Users can explore different perspectives according to their needs.

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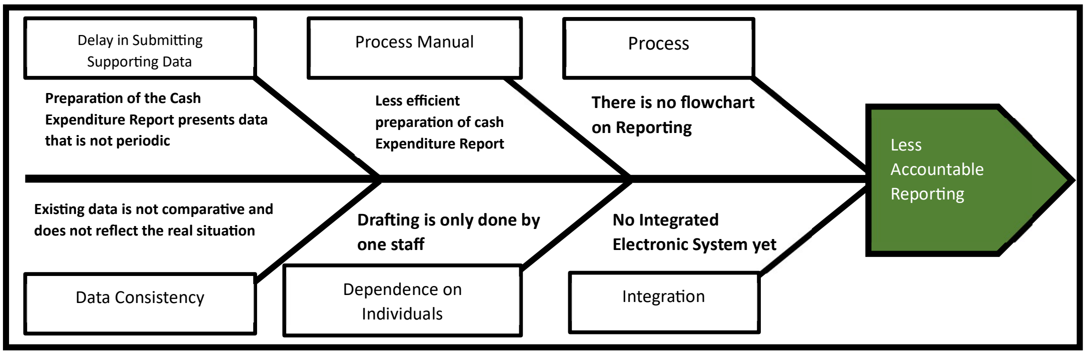
Figure 1 Fishbone Diagram



Based on the fishbone diagram analysis, it shows that the reports presented are less accountable due to several factors. Some of these factors include delays in submitting supporting data, Data Consistency, Process Manuals, Dependence on Individuals, No specialized staff in Accounting, and Integration.

Delays in Submitting Supporting Data cause the preparation of cash expenditure reports to present data that is not periodic. Based on observations in the field and secondary data analysis, the supporting data submitted are often transactions that have passed the monthly period. Based on interviews with admin staff, this is due to the absence of regulations that strictly regulate the deadline for submitting reports, so that the contents of the expense reports presented cannot be recorded periodically.

Data Consistency causes data to also become one of the crucial problems. This causes the existing data to be less comparative and does not reflect the actual expenditure. This is a complaint from the company director who has difficulty in evaluating cash expenditures on each project.

Manual process causes less efficiency in preparing cash expenditure reports. Based on observations in the field, the preparation of reports is done manually, the supporting data submitted is written using handwriting. Based on the results of interviews with the admin in charge, there have been multiple expense reports, to the detriment of the company. The company director hopes that there is a system or application that can help the process of preparing this report so that it is more effective and efficient. Automation in the business activities of a company can increase effectiveness and efficiency [14].

The problem of dependence on individuals is also a problem that is highlighted in the company. This is because currently there is only one admin on duty, so sometimes the reports provided are not in accordance with applicable accounting standards. In addition, the admin is also in charge of billing for the company's receivables. So that sometimes there are also recording errors on the cash expenditure report. Based on interviews with company admins, it is stated that additional admins or staff who have an accounting background are needed.

The process of preparing cash expenditure reports in the contractor company is only outlined in the form of manual work sheets and briefings from the company director. There is still no flowchart that explains the various stages and milestones of reporting. While flowchart is a tool to explain the stages of a process in a simple, organized, detailed, and clear manner because it uses a variety of symbols that have their own standards [15]. o it is necessary to make a flowchart to describe the flow of the report preparation process to facilitate understanding for other employees.

Continuing with the various previous problems, no less important problems regarding Integration. This problem is caused by the absence of systems and applications that help prepare the report. This makes the process of preparing reports done manually, even the supporting data for this report is written using a pen on physical work paper. Based on the results of interviews with the admin in charge, it is recommended that in order to be accessed by other employees who are on duty at the project site, a web-based application is needed, so that supporting data can be inputted directly into the application. This statement is in line with research conducted by Widiati and Anggraini [16] stating that computerized applications can reduce the occurrence of errors and can produce effective and efficient reports. Enterprise Resources Planing (ERP) implementation is needed to overcome these problems. ERP helps companies to reduce errors, increase transparency of financial reporting, and simplify the flow of financial information ERP also saves time and money by automating financial processes such as reporting and bookkeeping. ERP ultimately helps companies make more strategic and informed decisions by improving their financial assessment and management. ERP not only simplifies finansial processes, but also helps businesses expand and function more efficiently[17] .

IV. Conclusion

Based on the analysis carried out, it was found that there were various causes of reports that were less accountable. This research also found solutions that can increase the accountability of the report presentation. The following are suggestions and solutions for contractor companies:

1. A review is required for business process improvement.
2. Need to make a flowchart of the procedure for preparing cash expenditure reports
3. An integrated database is required
4. Reorganizing employee competencies and adding employees to compile cash disbursement reports.
5. It is necessary to create an application to help compile cash expenditure reports.

V. Unknowledge

This research is only limited to analyzing business processes for preparing cash expenditure reports in construction service companies. This research does not discuss more deeply the process flow of preparing cash expenditure reports. Further research is needed if the suggestions from this research are carried out by the Contractor Company.

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