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Development of the Latest Technology Based Accounting Information System to Increase Company Efficiency

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ABSTRACT

This research explores the impact of developing Accounting Information Systems (AIS) based on cutting-edge technology on company efficiency. We gathered data from questionnaires distributed to companies that have adopted state-of-the-art technology in their AIS. The research results indicate that the use of artificial intelligence (AI) significantly enhances operational efficiency in companies. Companies adopting blockchain technology also achieve higher levels of user satisfaction. User training and company size also have a positive impact on efficiency and better decision-making.In the discussion, we highlight the importance of investing in user training and maintaining state-of-the-art technology. We also acknowledge that implementation costs can be a constraint, particularly for smaller companies. This research has certain limitations, including a sample that may not cover the entire spectrum of industries and company sizes. However, further research can delve deeper through case studies. In the continually evolving business world, the development of AIS based on cutting-edge technology is a key factor in achieving efficiency, better decision-making, and user satisfaction. Companies must understand and address these challenges to attain a competitive edge and long-term success.

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INTRODUCTION

In the modern era which continues to develop, businesses and organizations are faced with rapid technological changes. Digital transformation has changed the business landscape significantly, and one of the aspects most impacted is the accounting information system (AIS). Yerdavletova & Farida, 2015). AIS not only functions as a financial recording and reporting tool, but is also the core of decision making and resource management within the company. Therefore, developing AIS based on the latest technology is very important to increase company efficiency. (Albuquerque & Dos Santos, 2023).Implementing an effective and efficient accounting information system will lead to: the quality of the financial and non-financial information produced which is then used bystakeholders. Some of these things refer to the benefits of AIS on effectivenessplanning, controlling, analyzing, decision making, presenting financial reports, so onAIS is very useful for effective financial performance and good management performance will ultimately show the overall performance of the organization (Edi & Wahyuningrum, 2017) Effective use of accounting information systems, both for individuals and organization, has an impact on the resulting organizational performance and can be improved in future (Rachmawati et al., 2021). Performance is a description of the achievements achieved company in its operational activities both regarding financial aspects, marketing aspects, aspects of collecting funds and distributing funds, technological aspects, and resource aspects humans (Jumingan, 2006). Accounting information systems are one of the media provide the information needed by managers to evaluate performance company in the past period and helps managers to make future plans (Helen et al., 2016).

Several cases of failure to implement accounting information systems were found ERP, there are also many notes containing difficulties in following developments ERP both when implementing ERP and updating ERP that has been implemented (Shaul & Tauber, 2012). Based on a study conducted by Chang (2004), as many as 90% were implemented ERP experiences problems such as budgets that exceed allocated limits and exceeded the specified time limit, and showed a failure rate of up to 67%.Studies regarding AIS and company performance have been widely carried out and provided diversity of results. The differences in results that occur are caused by differences in abilities interpreting the relationship between AIS and company performance. With the diversity of results from various articles led several researchers to conduct systematic literature reviews. As done by Ganyam & Ivungu (2019) who stated that information systems accounting (AIS) is positively related to company financial performance.

In today's business context, efficiency is one of the key factors in achieving long-term success. Businesses that are able to manage resources more efficiently have a clear competitive advantage. (Schiff & Lavine, 2001). However, to achieve the desired level of efficiency, companies must adopt the latest technology in their AIS. This includes the use of smarter systems, process automation, advanced data analysis, and integration with other technologies such as artificial intelligence (AI), blockchain technology, and cloud computing.(Monteiro & Cepêda, 2021)..

A strong and up-to-date Accounting Information System is not only about recording financial transactions, but also about providing in-depth insight to company management (Minanurohman & Fitriani, 2023). By using the latest technology, AIS can produce more accurate and real-time reports, enabling managers to make better and faster decisions. For example, through sophisticated data analysis, companies can identify market trends, inefficient spending patterns, and cost savings opportunities. (Chenjie, Xia Fang, 2011)

Apart from that, AIS which is based on the latest technology can also increase the level of security of company data. Data security is an important aspect of business today, especially considering the increasing threat of cyber security. A strong system can encrypt sensitive data, identify potential threats, and take necessary precautions to protect company information. (Victoria, Liu, 2019)

In this context, this research aims to explore the development of AIS based on the latest technology and its impact on company efficiency. Resource-Based View Theory This theory has the view that when a company wants to achieve excellence sustainable competitiveness, then companies must obtain and manage resources and competencies that are valuable, difficult to obtain or rare, cannot be duplicated, and cannot be replaced (VRIN) and there must be a company or organization that can mobilize it as well make good use of it (Barney, 1991). Then according to Barney (1991), for To gain sustainable competitive advantage companies must use methods that utilize the company's internal strengths, through responding to external opportunities along with neutralizing incoming threats and ignoring internal weaknesses. Company resources are all assets owned by the company including itcompetencies, organizational processes, company characteristics, understanding, information, and others those under the company's control can then be utilized in strategy implementation(Barney, 1991).In connection with this study, the RBV theory is commonly used in the research that examines itabout the use of information systems. Researchers use RBV theory to help defines firm resources as a firm's information technology capabilities and explains the business value of information technology (Mabert et al., 2001). Furthermore, the RBV theory creating value for the company based on the resources owned by the company such asERP, where ERP is an information system that has economic value, is relatively rare, difficult to findimitated or imitated, and tied to the company (Barney, 1991; Hedman & Kalling, 2003). This mattersupported by Fosser et al. (2008); Hedman & Kalling (2003), which states that ERPis part of information technology resources that can create advantages competitive We will analyze case studies from various industrial sectors that have adopted the latest technologies in their AIS and record the results

that have been achieved. The goal is to understand how companies can utilize the latest technology to increase their operational efficiency and gain a competitive advantage in an increasingly competitive market. (Herlianti, Tawami, 2019) In the following chapters, we will explain the research methodology used, analyze our findings, and provide practical recommendations for companies wishing to adopt the latest technologies in their AIS. It is hoped that this research can provide valuable guidance for business stakeholders, software developers and researchers who are interested in increasing company efficiency through the development of AIS based on the latest technology.

RESEARCH METHODS

This research uses a quantitative approach to collect and analyze data. This approach allows us to numerically measure the impact of the development of the latest technology-based Accounting Information Systems (AIS) on company efficiency. (Melchor, et al, 2015)

Population and Sample

The population in this research is local scale companies in the city of Palembang that have adopted the latest technology in their AIS. So far the data we have obtained is 50 companies that make up the research population. We selected a sample consisting of a number of companies from a variety of industry sectors that represent variations in scale, industry type, and level of technology adoption. This sample was chosen randomly to ensure better representation. In this case, the research sample was 50 in palembang city and grouped into management, service and retail types of business.

Research Instrument

Data was collected through a specially designed questionnaire-based survey. This questionnaire includes structured questions that aim to measure the company's operational efficiency, the impact of the latest technology-based AIS on decision making, and the level of satisfaction of AIS users. The questionnaire also includes questions related to company demographics, such as size, industry sector, and level of technology adoption.

Data Collection Procedures

Questionnaires were sent online to respondents who had sufficient knowledge about AIS and company operations. Respondents were asked to fill out a questionnaire according to their experience in using AIS. The data collected will be anonymized and analyzed to answer the research questions.

Data analysis

The variable measurement is using a questionnaire about the use of SIA technology using AI and Blockchain methods, using elements of company type, distributed to 50 local companies inPalembang with 3 types of business, namely, retail, industrial and service, with small, large and medium scale. The survey was carried out to management. company.

RESULTS AND DISCUSSION

this research is local scale companies in the city of Palembang that have adopted the latest technology in their AIS. So far the data we have obtained is 50 companies that make up the research population. We selected a sample consisting of a number of companies from a variety of industry sectors that represent variations in scale, industry type, and level of technology adoption. This sample was chosen randomly to ensure better representation. In this case, the research sample was 50 in palembang city and grouped into management, service and retail types of businessThe results of this research include data analysis from questionnaires that we distributed to companies that have adopted the latest technology in accounting information systems (AIS). Respondents in this study had diverse backgrounds and experiences in using AIS.

Tabel 1. Company Sample Table

No.	Variabel Profil Company Variable	Persentase Sampel
1	Industri Sector	
	- Industri	40%
	- Service	30%
	- Ritel	30%
2	Company Size	
	- Intermidiate	50%
	- Big	30%
	- Small	20%
3	Penggunaan Teknologi Terkini di AIS	
	- AI	60%
	- Teknologi Blockchain	40%

Sumber: Analysis Result (2023)

Before we start analyzing the results, let's look at the related profiles first. In the sample of companies in our study, the majority of companies can be placed in industry (40%), followed by the service sector (30%) and retail (30%). Most companies are medium-sized companies (50%), followed by large companies (30%) and small companies (20%). In terms of current technology usage, around 60% of companies have implemented AI in AIS, while 40% of companies are using blockchain technology.

One of the most important aspects we study is the company's operational efficiency. Respondents were asked to rate the effectiveness of their operations before and after implementing the latest AIS technology. The results show that around 75% of companies reported increased operational efficiency after implementing the latest technology. These results reflect the significant positive impact of the development of AIS based on the latest technology on increasing company efficiency. Next we assess the impact of current AIS techniques on decision making. Survey results show that around 80% of respondents said that the latest technology has helped them make better decisions. With more sophisticated data analysis and more detailed reporting, business leaders have better access to relevant information, enabling them to make more timely and data-driven decisions.AIS user satisfaction is also an important focus of this research. The results show that around 70% of respondents are very satisfied with their AIS after implementing the latest technology. Factors such as ease of use, data accuracy, and system responsiveness increase satisfaction. This shows that the development of AIS based on the latest technology not only increases efficiency but also provides a better user experience for users.

Table 2. Impact of Recent Ais

No.	Variabel	Responden Persentation
1	Increased Operational Efficiency	75%
2	Helps Make Better Decisions	80%
3	AIS User Satisfaction 70% Source	70%

Sumber: Analysis Results (2023)

We dug deeper and performed advanced data analysis to clarify factors that may influence operational efficiency, decision making, and user satisfaction in the context of today's technology-based AIS. The results of the regression analysis show several significant results:Impact of Artificial Intelligence Technology: The use of artificial intelligence (AI) in AIS is significantly related to

operational efficiency. Companies that use AI tend to be more efficient than companies that don't. Blockchain adoption costs: Although the use of blockchain technology is not yet standard in AIS, companies that adopt it tend to have higher user satisfaction. Blockchain also offers a higher level of data security.User training: Training users to use advanced AIS has a positive impact on better decision making. Companies that train their employees adequately tend to exploit the potential of AIS more effectively.Company size: Larger companies tend to have more resources and budget to implement the latest technology. Therefore, company size also has a positive relationship with higher operational efficiency The results of this research clearly show how important the development of AIS based on the latest technology is for company efficiency. The significant improvements in operational efficiency reported by the majority of respondents show that investing in the latest technology brings real benefits. The use of artificial intelligence and blockchain in AIS has been proven to increase efficiency and security.

Additionally, the positive impact on decision making and user satisfaction cannot be ignored. With the latest technology, business leaders have better access to the information they need to make better, faster decisions. High user satisfaction reflects that more advanced AIS are not only functionally useful but also provide a more positive user experience. However, there are several challenges that must be overcome in the development of AIS based on current technology. Companies need to pay attention to user training so they can optimize the potential of AIS. Additionally, the costs of implementing and maintaining the latest technology can also be an obstacle for smaller companies In the context of this research, there are several limitations that must be acknowledged. The sample we used may not cover the entire spectrum of industries and company sizes. In addition, the results of this study are based on respondents' perceptions and responses, which can be influenced by various subjective factors.

In order to develop this research further, future research could involve in-depth case studies of companies that have successfully implemented the latest technology in their AIS. This can provide deeper insight into best practices and barriers that may be encountered in AIS development.

The results of this research support the theory and explore the development of AIS based on the latest technology and its impact on company efficiency. Based on the Resource-Based View Theory, this theory holds that when a company wants to achieve sustainable competitive advantage, the company must acquire and manage resources and competencies that are valuable, difficult to obtain or rare, cannot be duplicated, and cannot be replaced (VRIN). and there must be a company or organization that can mobilize and utilize it well (Barney, 1991). Then, according to Barney (1991), to obtain a sustainable competitive advantage, companies must use methods that utilize the company's internal strengths, by responding to external opportunities and neutralizing incoming threats and ignoring internal weaknesses. Company resources are all assets owned by the company including competencies, organizational processes, company characteristics, understanding, information, etc. that are under the control of the company which can then be utilized in implementing strategy (Barney, 1991). In connection with this research, the RBV theory is commonly used in research that examines the use of information systems. Researchers use RBV theory to help define corporate resources as a company's information technology capabilities and explain the business value of information technology (Mabert et al., 2001). Furthermore, the RBV theory creates value for the company based on the resources owned by the company such as ERP, where ERP is an information system that has economic value, is relatively rare, difficult to imitate or copy, and is tied to the company (Barney, 1991; Hedman & Kalling, 2003). This is supported by Fosser et al. (2008); Hedman & Kalling (2003) state that ERP is part of an information technology

resource that can create competitive advantages. We will analyze case studies from various industrial sectors that have adopted the latest technologies in their AIS and record the results that have been achieved. The goal is to understand how companies can leverage the latest technology to improve operational efficiency and gain a competitive advantage in an increasingly competitive marketplace. Various kinds of research were conducted to review the role of accounting information systems

on the performance of MSMEs. The study conducted by Latifah et al. (2021) using MSMEs as a research sample, and gave results that SIA acts as a mediator between strategies business and organizational performance, then AIS also contributes positively to organizational performance.Another study on MSMEs was also conducted by Bi et al. (2017) and gives the result that development of e-business capabilities and business process competencies has a positive impact on the performance of MSMEs. The use of AIS also not only plays a role in general company performance, but also affects employee performance. Using AIS in the form of ERP helps manufacturing company employees in solving problems, management visibility, description work, authority and overall organizational performance (Wickramasinghe & Karunasekara, 2012). Then in a study conducted by Hwang et al. (2015) by using sample manufacturing companies, in facing the company's business environment, application ERP systems require strategic adaptation, reorganization, merger or integration, as well education and training for users. The use of accounting information systems is also used by audit firms or practices accountant. One form of this information system is cloud-based client accounting.The impact of using a cloud-based client accounting system is an increase in service consultation after the system is implemented. Other information systems used in audit firms are computer-assisted audit tools and techniques (CAATTs). Application

CAATTs are influenced by environmental factors, the complexity of the client's accounting information system (AIS)and the perceived level of support from professional accounting bodies (PABs) (Siew et al., 2020

CONCLUSIONS AND RECOMMENDATION

This research highlights the importance of developing an Accounting Information System (AIS) based on the latest technology in increasing company efficiency. The research results show that the adoption of the latest technology in AIS contributes to increased operational efficiency, better decision making, and higher levels of user satisfaction.However, companies need to pay attention to factors such as user training and implementation costs on the road to a more sophisticated AIS. By understanding and addressing these challenges, companies can harness the full potential of the latest technologies in their AIS to achieve competitive advantage and long-term success. This research serves as a starting guide for companies looking to adopt the latest technology in their AIS. In an ever-evolving business world, improving AIS can be a determining factor in achieving company goals and meeting increasingly stringent market demands.

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