

Cloud Accounting Application Program Analysis in Micro, Small, and Medium Business in Indonesia

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Abstract. The purposes of this research is to determine the benefit of the cloud accounting system in Micro, Small, and Medium (MSME), evaluate security system standards and policies on cloud accounting software in MSME, the changing roles of accountants in cloud accounting environment and find out the opportunities obtained from implementing cloud accounting systems for MSME and their future needs for MSME actors and accountants. The objects in this study are representative from MSME who use cloud accounting to assist their operational accounting processes and cloud accounting system provider. This research is a descriptive qualitative study in the form of case study, which uses primary data from observation and interviews. The result showed that efficiency, reliability, ease of use and the security of cloud accounting have significant effect towards business performance.

1 Introduction

Currently, business processes are changing, from product-based to platform-based. As business changes, accounting needs also change. To answer the needs and demands for accounting, there have been several revolutions in the accounting process. One of them is the development of cloud accounting. Cloud accounting is considered one of the innovations that created the market. Cloud accounting offers a new market opportunity that remodels sophisticated and expensive products, such as ERP, into more cost-effective and accessible ones so that multiple individuals can acquire and use the service. Global organizations are actively looking for effective methods to increase the efficiency and profitability of their businesses. With the existence of non-cash transactions, business actors are required to provide and understand information and financial transaction systems to be able to monitor and record financial flows that occur in every non-cash transaction in real time. To be able to continue to update business activity information and MSME financial information, MSME actors use an accounting system a lot, but this is limited if the accounting system used is desktop-based because it cannot be monitored directly from anywhere and anytime and if there is damage to the data storage computer, the data are at risk of being damaged or lost. With cloud accounting, it is expected to reduce costs and minimize damage that can result in the loss of important company data because cloud accounting data is stored in the cloud so that it can be accessed from a computer anywhere and anytime using an internet connection.

Cloud accounting is still relatively new among MSME, MSME still need education and socialization regarding

the importance of using cloud accounting to be able to support MSME activities. The large number of cloud accounting options available today make MSME actors need to compare several cloud accounting providers to be able to determine which cloud accounting suits the needs of each MSME. In this case, technology can play a role in helping MSME to analyze and decide on future strategies. That way, MSME no longer need to buy servers and software that reach tens of millions. In addition, MSME business players can easily manage their big data. The breadth of its network makes it easy for MSME business players to reach, access, and interact with customers so that customer needs can be facilitated. MSME businesspeople can also analyze market activity and design the right strategy to achieve the target.

The results of previous studies by Rittinghouse and Ransum, [1] with the title "Cloud computing: implementation, management, and security." address the lack of understanding currently preventing faster adoption of cloud computing, and with important guidance for making smart and strategic decisions about cloud initiatives.

This research is descriptive qualitative research in the form of a case study, which uses primary data from observations and interviews with MSME. The interview material obtained was transcribed and analyzed. The results show that efficiency, reliability, ease of use and security of cloud accounting have a significant effect on business performance.

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1.1 Objectives

The objectives that can be achieved in this study are as follows:

1. To find out the factors that can provide benefits related to the implementation of cloud accounting systems in small and medium-sized businesses.
2. To evaluate security system standards and policies used in cloud accounting software.
3. To explain the change in the role of accountants after the implementation of the cloud accounting system.
4. To find out the opportunities obtained from the implementation of a cloud accounting system.

2 Literature Review

Cloud Accounting, which is part of the transformation of an accounting information system (AIS) as stated by Romney and Steinbart [2], is a system that collects, records, stores, and processes data into useful information in assisting the decision-making process. In today's AIS is something that is needed by a business entity engaged in any field. The reason is because it contains a process to report the company's financial condition accurately and correctly to all parties who need it. The process is related to information technology to advance the business. AIS is very effective in helping the development of the company in the long term to a better direction, especially the AIS has adopted cloud computing or cloud computing that is easily accessible anywhere and anytime without having to use a centralized server.

In its research by interviewing sources, information was obtained that by using cloud accounting which has been integrated directly in real time with the POS system at business locations, financial recording is very easy. The use of cloud accounting for MSME is considered capable of reducing the use of human resources, especially in the process of recording sales and inventory of merchandise and/or production materials. The recording of sales and merchandise inventory at MSME previously used manual recording which took a lot of time and effort so that sales reports could not be presented quickly and had the risk of being inaccurate. With cloud accounting, every merchandise inventory and raw material data will always be updated automatically and periodically when there is a sale, production process, or purchase of raw materials or a production process that has been completed thereby increasing the amount of merchandise inventory.

There are three main accounting activities according to Weygandt et al. (2013) [3], as follows:

1. Identification activities

This activity has a function to identify transactions or financial flows that occur within the company. This identification is important to be able to produce comprehensive data.

2. Activities

After the transactions are identified, they are recorded in the form of financial statements.

3. Communication activities

After the transactions are identified and recorded, the next step is to communicate the results of the records to parties who need communication information reports, either from internal or external parties of the company.

According to the Law of the Republic of Indonesia No. 20 of 2008 chapter I article 3 which states that, Micro, Small and Medium Enterprises are productive economic businesses that stand alone, which are carried out by individuals or business entities that are not subsidiaries or branches of companies that are owned, controlled, or become part of either directly or indirectly. or indirectly with small businesses or large businesses that meet the criteria for small businesses as referred to in the law. Criteria for micro, small and medium enterprises:

a. The criteria for micro-enterprises are having a net worth of a maximum of IDR 50,000,000 (fifty million rupiahs) excluding land and buildings/business premises and having annual sales results of a maximum of IDR 300,000,000 (three hundred million rupiahs).

b. Small business criteria, namely having a net worth of more than Rp 50,000,000 (fifty million rupiah) up to a maximum of Rp 500,000,000 (five hundred million rupiah) excluding land and buildings/business premises and having annual sales of more than Rp 300,000,000 (three hundred million rupiah) up to a maximum of Rp. 2,500,000,000 (two billion five hundred million rupiah).

c. The criteria for a medium-sized business are having a net worth of more than Rp. 500,000,000 (five hundred million rupiah) up to a maximum of Rp. 10,000,000,000 (ten billion rupiah) excluding land and buildings/business premises and having annual sales of more than Rp. 2,500,000,000 (two billion five hundred million rupiah) up to a maximum of Rp. 50,000,000,000 (fifty billion rupiah).

The Financial Accounting Standards for Micro, Small and Medium Entities (SAK MSME) are intended to be used by micro, small and medium entities. Micro, Small and Medium Entities (MSME) are Entities without significant public accountability, as defined in SAK ETAP, which meet the definition and criteria of micro, small and medium enterprises as stipulated in the legislation in force in Indonesia, at least as long as 2 years in a row. And SAK MSME can be used by entities that do not meet the definitions and criteria, if the authority allows the entity to prepare financial statements based on SAK MSME.

The first stage of technology development that affected the practice of corporate organizations and accountants began between 1960-1970 when the application of computer-based information systems was introduced, at this stage accountants began to input data more neatly and orderly so that they could provide much more accurate analysis. regarding the company's financial condition [4-6]. The second phase began in the late 1990s and early 2000s, marked by developments in the internet and the use of Enterprise Resource Planning (ERP) software that allows accountants to generate and obtain information from all divisions of the company more effectively and efficient [5]. The third stage is

currently underway, this era is called “digitalization”. The era in which the development and combination of various technologies has influenced how the company's operational processes and including the way accountants work [5, 7].

One of the products resulting from the digitization process in the accounting field is cloud accounting. Traditional accounting software is usually used by being installed into the user's computer device (users), while cloud accounting is a service and not a product. User companies purchase accounting software services provided by service providers (providers) with licenses and other necessary additional devices, and can be accessed through computers or other technological devices connected to the internet network. By using this service, the user company pays the hosting fee to the provider on a monthly or yearly basis. The provider company will periodically update the system, perform data backups, and aid if there are technical problems experienced by users [8]. Accounting software that uses a mobile application platform (mobile apps) from Google PlayStore or AppStore, web-based (web-based), or other online accounting software is included in the form of cloud accounting services.

There are several reasons why a company chooses to use cloud-based services according to Khanom [9], including:

1. Keeping the company's business focus: By choosing cloud services, companies can focus more on growing their core business, instead of having to think about their software development and data security. Companies can run their businesses more efficiently, so that the excess funds they have can be invested in developing the company's business.
2. Business Agility: In summary, business agility is the company's ability to develop dynamically following the times, technology, business competition, and the latest conditions in the business field that the company is engaged in. With the use of cloud technology, companies that have limitations in technology can keep up with the latest technological developments through updates made by providers at a much lower cost.
3. Reducing capital costs: The capital costs that must be incurred to create a company data center or purchase traditional software are replaced by monthly fees for subscribing to cloud services which are much cheaper and affordable for small companies or MSME.
4. Business Scale: User companies can choose the cloud services they need, tailored to their business conditions and business scale.
5. Ease of Access: Able to do business without limitation of space and time. User companies can access company data anytime and anywhere as long as there is an adequate internet connection.
6. Workforce Efficiency: Companies can reduce the workforce in the IT department.

The accounting process carried out through the cloud is an innovative solution for small and medium-sized companies because it can save funds for the development of accounting software [10]. In the MSME sphere, technological developments such as e-

commerce are generally defined as the use of IT and applications to support business activities. In addition, the adoption of Information Technology among MSME is still quite low. For MSME, adopting information technology is not an easy matter. One of the causes of the low adoption of information technology, among others, is the lack of financial support caused by the high cost of infrastructure and information technology applications, both desktop-based and network-based. On the other hand, the use of information technology is seen as having a large enough role for the development of MSME. IT is used to improve business transformation, accuracy and efficiency of information exchange to realize the competitiveness of MSME.

By utilizing Information Technology, MSME can match the acceleration of large-scale business growth. But on the other hand, investment in information technology for MSME does feel very heavy because it requires large costs to buy hardware, software, applications and so on. And IT experts are quite expensive. Some MSME who are already interested in implementing information technology still have concerns. Examples include the unavailability of sufficient human resources to operate, maintain and secure their own information system. This large investment value is still a fear or scourge for most MSME to adopt or apply information technology for business development.

Previous Study:

1. Rittinghouse and Ransome [1] Cloud computing: implementation, management, and security. Research addresses the importance of security in cloud computing environments, particularly with regard to Software-as-a-Service (SaaS) environments and the security challenges and best practices associated with them. It focuses on why and how these resources should be protected in SaaS, Platform-as-a-Service, and Infrastructure-as-a-Service environments and offers security “best practices” for service providers and companies that are or are contemplating moving to cloud computing space. The results of this study address the lack of understanding preventing faster adoption of cloud computing, and with important guidance for making smart and strategic decisions about cloud initiatives.
2. Khanom, Tahmina [9] Cloud Accounting: A Theoretical Overview Research is focused on providing a theoretical explanation of cloud accounting software. The research is focused on providing a theoretical explanation of cloud accounting software. The results show the advantages and disadvantages of cloud accounting software. This study provides some information that can be developed as research on cloud accounting software implementation in the field.
3. Ciger and Kinay: A Field Work to Determine Effectiveness of Cloud Based Accounting on Accounting Professionals [11]. The purpose of this study was to measure the level of awareness and adoption of cloud-based accounting applications by accounting professionals. The results show that MSME who prefer to use web-based accounting programs are young and middle-aged. In order for MSME to be more familiar with and familiar with web-based accounting

programs, service providers must inform about the services offered by cloud-based programs and their use.

4. Musyaffi [12]. Critical Perspectives on the Success of Cloud Accounting Implementation for Prospective Accountants: A Study of the Utaut and Is Success Model. This study aims to explore what are the important parts that have an impact on the acceptance and success of implementing Cloud Accounting for prospective accountants by combining the success model of information systems and UTAUT. The research results show that Performance Expectancy and Effort Expectancy do not have a significant impact on the intention to continue using Cloud Accounting.

After reviewing and understanding the previous studies, the author interested in doing research to find out what is the factors that can provide benefits related to the implementation of cloud accounting systems in small and medium-sized businesses specifically since MSME is now booming and trying to be more efficient and getting closer to the customer by implementing technology to support their business. By doing so, there will be challenges in security system, role of accountants and to see what is the opportunities that can be obtained from the implementation of a cloud accounting system.

This research will focus on exploring cloud accounting implementation systems and the changes it brings to accounting practices in MSME companies. This research will focus on Cloud Accounting from the perspective of users and developers. It aims to gain a better understanding of the entire operation of Cloud Accounting and understand the companies involved with Cloud Accounting.

3 Methods

This research was conducted using a case study method. Case studies focus on gathering information about objects, events, activities, or situations that the researcher is interested in, to get a clear picture of a problem focused on Cloud Accounting from the perspective of users and developers. This is intended to provide a better understanding of all Cloud Accounting operations and to understand the companies involved with Cloud Accounting. This research is qualitative research with descriptive method. Qualitative research is a process of investigating understanding based on different traditions of inquiry methodology that explores or human problems. Descriptive studies are often designed to collect data that describe characteristics of people, events, or situations.

4 Data Collection

There are two types of data collected for this study. The first is primary data. that is, one in which data are collected directly by the authors for a particular research purpose or project multiple interviews with representatives of each company. The second is observation which is a qualitative research technique

that involves direct observation of phenomena in their natural setting. Observational research is described as being a method of systematic observation, which implies that the observation technique is plausible and procedurally replicable so that the research can be reproduced.

The research process continued with data analysis. Data analysis is a fundamental part of qualitative research. Data analysis in qualitative research will go hand in hand with other parts of qualitative study development, namely, data collection and writing of findings. For this study, the analytical technique will follow the Miles and Huberman (2014) technique [13]. The technique is to divide the analysis process into several steps. First, after completing the data collection method, the writer will prepare the interview transcript. Interview transcripts are tools that help qualitative researchers understand and understand the experiences and perceptions of the interviewees and through the structure, they can influence the analysis process. Second, the writer will read and interpret the data to find the keywords of each interviewee's answer. In this process, the writer will personally assess the opinion, intent, or purpose of the interviewee in answering the interview questions.

The research focused on two main application accounting developer in Indonesia, PT. Majoo Teknologi Indonesia and Jurnal ID. From those two main application accounting developers, the author choose sample of five company that use the whole application features, Kopistock Cafe & Roastery, Fumidai Coffee, Relung Kopi, Nasi Kulit Sambal Mede, NARA Kitchen.

The Interview conducted in several days while observing the use of the application by the MSME. Observations were made without disturbing, influencing or changing the environment or participants in any way. To avoid errors in the data that has been collected, it is necessary to check the validity of the data. Checking the validity of the data is based on the criteria for the degree of confidence (credibility) with triangulation techniques and persistence of observation.

5 Results and Discussion

5.1 Result

According to the MSME actors who were interviewed, nowadays the use of digital payments is starting to be widely used by the community, especially in Jakarta and its supporting cities as the term known, the JABODETABEK area.

In its application, from the results of research by interviewing sources, the author concluded that:

1. By using cloud accounting which has been integrated directly in real time with the POS system at business locations, financial recording is very easy. The use of cloud accounting for MSME is considered to be able to reduce the use of human resources, especially in the sales recording process. Sales records at MSME previously used a lot of manual recording which took a

lot of time and effort so that sales reports could not be presented quickly and had the risk of being inaccurate. The use of cloud accounting is also considered to be able to reduce the process of recording merchandise inventory and or production raw materials which were previously recorded and manually updated and checked every time there is a daily, weekly, monthly, and annual production or sales activity.

2. Based on the results of interviews with MSME actors regarding system security issues used by various developers, there is still a need for strengthening cloud accounting from developers to further improve the performance of MSME. In addition, there are also difficulties in making cancellation authorizations which are still experienced by some cloud accounting users. Therefore, MSME also argue that system security is something that needs to be improved to prevent the actions of employees who intend to cheat in the field, also because of business data security issues such as confidential financial reports and banking data so that only certain accounts comply with the choice of the owner or leader of the MSME who can access it. The need for guarantees for this security from developers to MSME because cloud accounting is a system that uses the web as its operating base, thus MSME actors' data becomes vulnerable to being hacked by irresponsible parties, this raises concerns in the event of data leakage such as raw material data, financial report data, and customer data stored in the system.

3. With cloud accounting, every merchandise inventory and raw material data will always be updated automatically and periodically when there is a sale, production process, or purchase of raw materials or a production process that has been completed thereby increasing the amount of merchandise inventory. The impact of financial records that are directly carried out on the cloud accounting system provides many positive results for MSME business activities. The results of the study prove that the good impact on the company's financial statements when using cloud accounting is the neatness of financial reports, the accuracy of sales data with inventory data and also a record of cash receipts for the sale of goods whose payments are made using various methods when payments are made directly at the location using physical money, electronic money, bank transfer, or using a credit card. This certainly makes it easier for accountants to make cash receipts reports, because it doesn't take a long time to recapitulate one by one payment method when they want to make income reports that match sales data.

4. Based on the results of the author's interviews with the informants, the speed of making and accuracy of financial report data is a perceived opportunity for MSME actors to produce timely financial reports. With the affordable cost of cloud accounting services and in terms of cost suppression, several interviewees felt that using cloud accounting provided an opportunity to reduce HR which would reduce employee salary costs. The advantage of cloud accounting that can be accessed from anywhere and anytime using an internet

connection is an advantage that is felt directly by MSME actors because it can help make reports from anywhere, especially if you are working from home during the current pandemic. Financial reports that are in accordance with SAK standards are also an advantage for MSME actors because they can help describe business conditions, as a work evaluation and planning, show business credibility, as well as a form of business accountability to investors or can also assist in applying for additional funding to investors. investors or creditors to increase business scale.

5.2 Proposed Improvements

After carrying out the process of analysis and discussion of the data, the authors conclude the research in accordance with the problems identified, namely:

1. Cloud accounting is one of the work tools that has been very supportive of MSME actors in advancing their business, it is recommended for the government, especially the ministry of cooperatives and MSME to create a program that provides education for MSME actors to use cloud accounting as a work tool in managing their business, with the hope can further advance MSME activities. So that it has a work organization that is increasingly digitized and able to compete with business actors abroad and is able to penetrate the international market. As well as the need for supervision for developers in providing provisions to customers so that customers are not harmed in the event of data leakage, both personal data of MSME actors and customer data of MSME actors.

2. It is recommended for MSME actors to explore and update information more, especially in terms of cloud accounting, because in an increasingly digitalized era, MSME actors need to keep up with changing market demands and the ease of exchanging information is getting faster. So that MSME actors can always compete and can increasingly follow regulations that continue to transform to be more digital and can continue to adapt to market demands.

3. Developers are advised to integrate cloud accounting with various banking and electronic wallet features and provide cashier system facilities that have been integrated to make it easier for MSME to process sales and inventory data and can harmonize the three into cloud accounting. Developers are also advised to improve system security for customers, in order to provide a sense of security and trust to customers of cloud accounting service customers, such as in the case of transaction cancellation authorization which if too easily accessed by irresponsible employees, can cause differences in actual inventory in the field. with inventory records in the system as well as providing audit facilities on every crucial feature that can affect sales reports and expense reports so that it has an impact on the financial balance report. Developers are also advised that there is a black and white agreement related to data protection and data confidentiality guarantees accompanied by a guarantee of compensation in the event of data leakage caused by the negligence of the

developer company and to ensure this the developer is expected to include the results of a system audit from an information security certification body.

4. Suggestions for the next research is to conduct research that focuses on security analysis, policy, and cloud accounting compliance. Then compare several cloud accounting products, especially cloud accounting products developed by companies in Indonesia with the variables mentioned above.

6 Conclusion

From the results of interviews and observations, it is concluded first, the factors that make cloud accounting systems suitable to be applied to small and medium-sized businesses (MSME), namely, the ease of operating cloud accounting which has been integrated with various supporting MSME activities, especially from the cashier system then the payment system uses an electronic wallet that is synchronized well with the cloud accounting system in real-time so as to produce fast and accurate financial information. Second, the security policy standards developed by cloud accounting software developers still find several weaknesses that can have a negative impact on the survival of MSME, especially on data security guarantees that are still unsatisfactory from developers. This is based on the results of observations that refer to indicators that have been determined by previous research. Security is one of the strengths of MSME to be able to compete with competitors starting from the security of raw material data to the security of customer data stored on internet-based systems and it was found that there is still a great opportunity to be hacked so there needs to be increased security and guarantees from the developers in writing. to give more trust to users, especially MSME. Third, cloud accounting nowadays has become more friendly with MSME actors, especially in accounting activities where it is sufficient for developers to provide cloud accounting facilities that are easy to understand and operate both for young accountants and ordinary people, so that MSME actors do not have to employ accountants. who are experienced with wages that are above the average ability of MSME actors and lower costs in procuring cloud accounting systems compared to using traditional accounting work processes which will be very time consuming, work place, and higher costs. Fourth, related to the opportunities obtained in the development of accounting practices from the changes brought about by the current cloud accounting system, namely integration with the cashier or POS system, banking system or Internet Banking, and electronic wallet facilities that can be accessed only in one cloud accounting system, with Thus the results of the integration can harmonize every digital financial instrument related to the accounting work process. Although the implementation process will take a lot of time due to banking regulations and regulations related to data security that must be met first by developers, if this can be achieved then the development of accounting practices will further simplify the work process of

accountants and provide financial report results that are in accordance with standards. SAK ETAP and the credibility of financial reports are guaranteed because they are equipped with supervisory features that are recorded automatically in cloud accounting. This can help MSME actors who want to increase their business scale because they can attach financial reports according to SAK ETAP and other report notes as a reference for investors in analyzing financial information presented by MSME actors.

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