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The analysis of using an IPOS 4.0 Accounting Information System (AIS) on Micro, Small and Medium Enterprises (MSMEs) in Jember Indonesia

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Abstract. This study aimed to analyze the practice of the use of Accounting Information Systems (AIS) using IPOS 4.0 application on Micro, Small and Medium Enterprises (MSMEs) in Jember. It can be seen from the aspect of business, scale of business, company age, education owner or manager of the company, lead times, and accounting training followed by the owner of the company. This research is a descriptive using qualitative approach. This research was conducted by asking questions to the owner of company by distributing questionnaires. The primary research subject sampling method used is purposive sampling. Questionnaires were distributed to 40 owners MSMEs in Jember. The results showed that the some of MSMEs in Jember have been using A.I.S using IPOS 4.0 application in its operational activities. Manufacturing companies, medium-sized companies, the company that is older than 10 years, the owners of companies whose educational background Senior High School led the company for more than 10 years, the owner or manager of a company and get an accounting training the majority of use accounting information more intensively.

1. Introduction

Financial recording is something that needs to be done by business owners. These activities will produce accounting information which is the main basis in economic decision making, such as pricing, market development and other financial-related needs. As Bhattacharya, et al said [1], that accounting information has an important role to achieve business success, including for small business owners, such as micro, small and medium enterprises (MSMEs).

The existence of MSMEs in Indonesia is still a mainstay of the government sector because it plays a large role in economic growth both in providing alternative productive business activities, alternative lending as well as employment. The development of MSMEs in Indonesia in 5 (five) years from 2014 to 2018 showed a fairly rapid increase. According to data from the National Development Planning Agency, the Central Statistics Agency, and the United Nations Population Fund show that in 2014 the number of MSMEs as many as 57.89 million units continued to increase to 58.97 million units in 2018 [2].

The development of the number of MSMEs in Indonesia is a form of resilience of the business unit to survive the wave of crisis that often occurs. This resilience has been proven - when many large companies have collapsed and are forced to terminate their employees, but MSMEs can absorb more workforce than other business entities. Istifadah et al [3] proved that MSMEs have a significant role in absorbing the workforce by 96% of the total workforce in East Java.

The extraordinary achievement and great potential of MSMEs certainly require an injection of funds in order to develop an increasingly competitive business. The phenomenon that occurs in the field, the MSMEs, especially in Jember still faces major obstacles in finding additional capital. Based on Bank Indonesia data, the amount of credit extended to MSMEs shows an upward trend every year. In 2010, the amount of MSMEs loans extended was Rp394.3 trillion and increased by 21.71 percent to Rp479.89 trillion in 2011. The value of loans to MSMEs that were channeled continued to increase until 2016 loans reached Rp900.4 trillion. These obstacles certainly become an obstacle for MSMEs to be able to develop their business. According to Haryadi [4], in addition to capital and market access that can make it difficult for Micro, Small and Medium Enterprises (MSMEs) to develop, many MSMEs cannot afford to become large because they do not have an accounting system that is



in line with applicable regulations, consequently there are no differences clear between personal money and company money.

The era of the industrial revolution 4.0 that is happening now, competition in the world of work is inevitable. The period in which the development of digitalization, artificial intelligence, internet of things, advance robotting and crypto currency occurs so fast must be faced and followed by business actors, including micro, small and medium business units (MSMEs) [5]. MSMEs are expected to show each ability to gain a competitive advantage from its competitors. According to Edison, G [6], that in order to increase competitive advantage, MSMEs must be able to keep abreast of information technology developments which were previously only accessible by large companies. The main problem in developing MSMEs is about financial management in the business, because good management requires a good accounting information system.

Accounting information system is needed by business units engaged in any field, because it contains a process to report the company's financial condition accurately and correctly for all parties in need. The process is related to information technology to advance the business or business. The IPOS 4.0 program is a retail and wholesale trading program for medium scale businesses, where companies need more sophisticated computerized media than before. The IPOS 4.0 program is able to handle and process quite a lot of data because it uses the Database Client Server system, so the program is able to process data in a fast LAN/WiFi network even if it is used together at the same time. The IPOS 4.0 program includes Trading Company Accounting making it easier for businesses to manage stock and finance so that they are able to prepare good financial reports. With a good accounting information system will enable owners to obtain data and information that are arranged systematically [7].

Previous studies conducted by Wahyudi [8] showed that the level of education of owners / managers and business scale influenced the use of accounting information at MSMEs with a sample of MSMEs located in Yogyakarta, Other studies conducted by Murniati [9] showed that the educational background of managers, age of the company, business scale influences the use of accounting information at MSMEs and according to Research conducted by Grace, J., & Kenny, C. [10] showed that the Length of Business and Formal Education influences the presentation and use of Accounting information. Based on the background of the study, it is interesting for researchers to conduct research on how the use of accounting information systems with the IPOS 4.0 program at MSMEs Jember, whether the level of education, educational background, company size and length of business can influence the use of accounting information with the application of IPOS 4.0 program by MSMEs.

2. Methods

This research is a descriptive study with a qualitative approach conducted MSMEs Jember. Variables in this study include the education of MSME owners or leaders, type of business, length of business, business scale, accounting training attended, and use of accounting information systems. The type of data used is primary data and secondary data. Data collection techniques used were questionnaires, interviews and observations.

The object of this research is the MSMEs in Jember. The subjects of the study were Jember. MSMEs who used AIS with IPOS 4.0 program that were selected by purposive sampling with some criterias: (1) MSMEs that were still actively operating, (2) MSMEs that were still led by owners, (3) MSMEs that used A.I.S with IPOS 4.0 program. The process of data analysis begins by examining all available data from various sources, namely interviews, observations, which have been written in field notes, personal documents, official documents, photographic images, and so on. The data is a lot, after being read, studied, and analyzed, the next step is to carry out data reduction by making abstractions. Accounting information system with the IPOS 4.0 program is the arrangement of various forms of records, equipment, including computers and equipment as well as communication tools for its implementers, and closely coordinated reports designed to transform financial data into financial information.

3. Results and Discussion

From the research subjects as many as 40 people who have used A.I.S it is known that 25 people

have done it manually, and 15 people have used A.I.S with IPOS 4.0 program is a combination of computerized and manual accounting information systems. From the results of the analysis, of the 15 people who have used A.I.S with IPOS 4.0 program as many as 10 people while 5 people use the application that they are used to using, namely Excel. Most of the others still use still using A.I.S manually.

The Use of A.I.S with IPOS 4.0 program at MSMEs in Jember seen from the Aspects of Business Type

1. Business people engaged in trade as many as 6 people have used A.I.S with IPOS 4.0 program. The system is used to record sales, namely for transactions and production price records for determining the selling price. It is very necessary they can see the amount of sales that have been made every day. They can also monitor the product purchase price record, determine the selling price of goods which of course has been considered profit and other costs. In this case, MSME actors have not used the record of debt that has been done, so that all debt payment transactions are still recorded manually.
2. The owner of MSMEs engaged in manufacturing are generally still small-scale [a home industry, using A.I.S with IPOS 4.0 program to manage their operational activities, but it is almost the same as MSMEs from the trade sector, namely not using accounts receivable books and cash receipts so they recording accounts receivable manually.

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3. From the above data, trading companies using A.I.S with IPOS 4.0 program have differences in use depending on the type of business being run.

The Use of A.I.S with IPOS 4.0 program at MSMEs in Jember viewed from the Aspect of Business Scale

1. For small business units, the majority use A.I.S with IPOS 4.0 program for recording sales transactions. It is important to know the level of their daily sales. Because the scale of their business is still limited, they have not yet provided and used debt assistance books in managing their business debts.
2. For medium scale business units, the use of A.I.S with IPOS 4.0 program is mainly to record operational activities, such as the use of production price records in determining the selling price of goods. They use the purchase price record of goods in determining the selling price of their products so they are not wrong in determining the selling price.
3. Medium scale business units tend to use A.I.S with IPOS 4.0 program carried out more intensively than small companies considering the activities carried out are also more complex.

The Use of A.I.S with IPOS program at MSMEs Jember Regency viewed from the Aspect of Business Age

1. The owner of MSMEs who have been in business for more than 10 years, have not used A.I.S with IPOS 4.0 program intensively. Business actors prioritize the use of sales books to see the company's daily sales transactions. They have not done a debt recording transaction, because more transactions are done in cash so that more debt transactions are done manually.

2. The owner of MSME entrepreneurs who have been in business for more than 10 years tend to use A.I.S with IPOS 4.0 program to record sales activities in sales books and employee performance reports. This is important because the sales book illustrates the ability of the business unit to run its business, especially the achievement of revenues and profits, so that its performance can be seen. Because they have been operating for more than 10 years, they also use company debt records that reflect obligations that must be fulfilled immediately.

The use of A.I.S with IPOS 4.0 program of MSMEs is seen from the Educational Aspects of the Owner of MSMEs

1. The owner of MSMEs who have educational background of junior high school education background use A.I.S with IPOS 4.0 program primarily for sales records or books, they have not used debt records because they also do not understand the recording with the application so that the debt recording is done manually.
2. The owner of MSMEs who have educational background Senior High school/vocational education background have used A.I.S with IPOS 4.0 program to record the purchase price of goods. They already understand the SIA even though it's only a basics. They understand that recording with an AIS primarily with IPOS 4.0 program is important for recording the purchase price of goods used to determine the selling price of the product.

The use of AIS with IPOS 4.0 program of MSMEs, from the Aspects of Accounting Training

1. The owner of MSMEs who have received accounting training prefer to use A.I.S with IPOS 4.0 program to record sales, even though recording debt is still done manually. Those who use SIA with IPOS 4.0 program also have an average educational background, namely high school / vocational school and business scale including the middle category. Thus, accounting training will greatly help them to be able to make financial statements more fully and better. Whereas business education entrepreneurs only reach junior high, and small-scale businesses, they also use A.I.S with IPOS 4.0 program although not intensively.
2. For MSMEs who did not receive majority accounting training, they have also used A.I.S with IPOS 4.0 program for recording cash receipts, whereas for recording corporate debt has not been done. Although they did not receive accounting training, they already had a basic knowledge of accounting from their previous education bench and had understood the basics of accounting.

It's can be concluded that from the observations to the field show that it turns out that A.I.S the simple accounting done by MSMEs in Jember is still lacking. The owner of MSMEs did not know the progress of their business. They only measured the ability of the business from the capital that can be collected again from the sale of the previous day. The design of Accounting Information System with IPOS 4.0 program can provide information about sales, cash receipts, cash disbursements, inventories, cost of goods sold and gross profit for each period. It turns out that the application of A.I.S with IPOS 4.0 program was influenced by perception, MSMEs consider accounting to be complicated, troublesome, and not too important. The perception of the owner of MSMEs was influenced by several factors, including educational background, age, unavailability of workers who have accounting expertise.

4. Conclusions

Based on the results and discussion, it can be concluded that some owner of MSME in Jember use A.I.S with IPOS 4.0 program. In addition, based on an analysis of the use of SIA with IPOS 4.0 program on the owner of MSME viewed from aspects of business type, business scale, company age, owner education or manager, the company's leadership period, and accounting training, can be concluded as follows:

1. For the owner of MSMEs who are engaged in trade are less intensive when compared to those who produce goods
2. The owner of MSMEs with medium scale use A.I.S with IPOS 4.0 program more intensively than small-scale MSMEs.

3. The owner MSMEs that have been operating for > 10 years using A.I.S with IPOS 4.0 program are more intensive than companies less than 10 years old.
4. The owner of MSMEs with a high school / vocational education background used accounting information more intensively than MSMEs who have a junior high school education background. Sufficient education from the owner of MSMEs will focus more on business management to achieve long- term goals.
5. The owner of MSMEs who received majority accounting training use accounting information more intensively than MSMEs who do not receive accounting training. The owner MSMEs already had a basic knowledge of accounting from previous education.

Advice can be given in connection with research conducted: Increasing knowledge and accounting training outside formal education is very much needed for MSME entrepreneurs to manage business more intensively. It is expected that interested parties such as the Department of Industry, Trade, Cooperatives and SMEs, the Government of Jember will give serious attention to the owner of MSMEs as a buffer for the regional economy to undermine the country's economy. By using A.I.S with IPOS 4.0 program, the owner of MSMEs in Jember can build a system that is easy to use, adapted to the conditions of users who are not very common, so they can use the system anywhere. In addition, this application is a contribution of researchers to Jember MSMEs so that it can be utilized as well as possible and the results of using this application can increase the productivity and effort of MSMEs in Jember

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