INFORMATION SYSTEM ANALYSIS OF SMALL-MEDIUM INDUSTRY MANAGEMENT (SME) IN BANDUNG INDONESIA

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Abstract - This study aims to identify and analyze the problems and weaknesses of the Information Systems of Small and Medium Enterprises in Bandung, and then provide the best solution. This study uses thedescriptiveanalytical method with FAST methodology approach (Framework for the Application of System Technique) and JAD techniques (Joint Application Development). The results show that there are weaknesses in general management of the company, that is the obscurity of the organizational structure and job description of each function, such as the procedures of inventory management, production process, purchasing, and the sale of goods. The results of the study are expected to provide discourse and improvement for SMEs in Bandung Indonesia, specifically in improving the quality of products and services to consumers.

Keywords: Information Systems, Inventory Information Systems, Sales Information Systems, Information Systems, Purchases, Production Information Systems, Information Systems Analysis, Small and Medium Enterprises.

I. INTRODUCTION

In the current era of globalization, the development of technology and information systems play an important role to improve the performance of a good company in small, medium, or large scale, so that the information can be expected to facilitate the work and goals can be achieved optimally. The current economic development requires entrepreneurs to compete more competitively with a relatively fast punctuality. Almost all areas of the economy today have used information systems to make decisions, improve the effectiveness of performance and service. Companies that have long applied information technology even still many who experience barriers or failures in carrying out its business because the information system applied is still inadequate and need to be regularly developedin accordance with the needs. To achieve its objectives, a company should pay attention to how to maximize profits for the continuity of business activity that is being undertaken; this can also be done by optimizing purchasing and selling activities because these two transactions will be directly related to cash expenditures and receipts. Accounting information systems can be done manually without computer aids, can also fully utilize computer technology, or utilize both. Accounting information system is a supporting activity that can be used to carry out the main activities efficiently and effectively. (Krismiaji, 2015: 2). In the beginning, the use of accounting information system requires aninvestment that is not cheap, but there are advantages gained from the use of accounting information systems, such as can perform calculations with high speed and accuracy, can continuously process various transactions, both simple and complex transactions. Small and medium enterprises are aprivate business, private business entities, and cooperatives with total assets of Rp. 60 million (sixty million rupiahs) excluding land or houses occupied as stated in the Circular Letter of Bank Indonesia No.26/I/UKK dated May 29, 1993.

The Ministry of Industry and Trade explained that small and medium entrepreneurs are a group of modern industries, traditional industries, and handicraft industries, which have investments, capital for machinery and equipment of Rp. 70 million down and businesses owned by Indonesian citizens.

In addition, the Central Bureau of Statistics states that medium enterprises are divided into sections, namely: (i) Household Enterprises has 1-5 workers, (ii) Small medium enterprises: 6-19 workers, (iii) 20-29 workers.

From some of the above statement can be concluded that Small and Medium Enterprises (SMEs) is an industry group that has total assets below Rp.70 million excluding land or house occupied and has a maximum labor force of 19 people. According to Central Bureau of Statistics (BPS) 2014, the number of MSMEs in Indonesia has 57.89 million units or 99.99 percent of the total number of national business actors. Based on data from the Ministry of Cooperatives and SMEs, the number of entrepreneurs in Indonesia also jumped sharply from 0.24 percent to 1.56 percent of the total population. Even so, the number is still far from the target of Indonesian entrepreneurs should ideally be at least 2 percent of the total population.

Although still minimal, a survey conducted by Global Entrepreneurship Monitor (GEM) in 2013, shows that the desire of entrepreneurship of Indonesian society is the second highest in ASEAN after the Philippines. According to the World Bank, livelihoods in Indonesia are highly dependent on the SME sector. Most of these small businesses are concentrated in the sectors of trade, food, processed foods, textiles and garments, timber and wood products, as well as non-metallic mineral production.

ASEAN Economic Community started at the end of last year, but it turns out that SMEs in Indonesia are

still unable to face the competition. So far to face competition among local SMEs and local companies are still difficult because of many challenges that must be faced by our SMEs in improving the competitiveness of the national economy, especially in terms of business management that have not been fully effective and efficient. Efficient and effective business management can be achieved if the SME has an adequate and well-controlled information system. According to COSO (1992): "The internal control elements that can support an adequate information system are:organizational structure, authority and responsibility methods, policies, control procedures, design and use of documents and records, and monitoring (monitoring) ."

Based on the results of surveys that have been done in some SMEs are on Devana Taylor (convection), KinantiMitraMandiri (Muslim fashion), PD Suci Segar (beverage packaging), CV. TirtaMandiri (leather tanning), Black print (printing), and Ramopro (helmet) in general problems that appear on SMEs have an equation that is often the difference between the design of products manufactured with the ordered consumer. In addition, the problems associated with increased productivity is the difficulty of the company to get information inventory that quickly, precisely, and accurately. Problems found in the sales department are sometimes unable to know the exact amount of sales that have been made during a given period. In purchasing activity, it is sometimes difficult to control the cash flow of cash used for purchasing activities. So also with the production activities, often the goods produced do not match the specifications desired by consumers. Also, it often gets complaints from consumers so that the order goods are returned. Based on the conditions obtained based on the survey of several SMEs that have been mentioned above it is necessary to analyze the SME management information system.

II. LITERATURE REVIEW

A. Information System

Information system is a unity of elements that interact in a systematic and orderly manner to create and form a flow of information that will support decision-making and control the way the company.

According toJogianto (2005:11), information systems are: "A system within the organization that brings daily transaction processing needs, operational support, managerial and strategic activities of an organization and provide outside party's necessary reports." As for Gordon B. Davis (1991: 91), the information system is, "A system that receives input data and instructions, processes the data by the instructions and outputs the results." Based on the expert opinion above, it can be concluded that the information system is a set of elements that are integrated with each other from inputs, processes to the resulting output.

B.Inventory Management Information System

The inventory management information system is a set of procedures involving several related sections, aiming to carry out inventory management activities as stated by ZakiBaridwan (149: 2000) that "Inventory Management Information System is a procedure that includes receipt of goods, recording of goods, and the release of goods ." The management of this inventory is not too late for purchase transactions and sales transactions.

C.Purchase Information System

Purchase information system is a set of recording methods and procedures involving several parts related to each other, aims to carry out the activities of purchasing activities to meet the needs of the company's operating activities that include the ordering of goods until the goods are accepted for later owned by the company. Mulyadi (2001: 301) argues that "Purchasing Information System is a procedure that includes from purchase request, offer, purchase order, receipt of goods, recording of goods, recording of money, and distribution of purchase."

D.Sales Information System

Sales information system is a set of recording methods and procedures involving several parts relating to each other that aims to carry out activities of sales activities ranging from sales orders to goods received by consumers. Similarly, as proposed by La Midjan and Susanto Azhar (2006: 30) who stated that, "Sales information system is a framework in human resources, tools, methods and all of them are coordinated to process sales data into useful sales information for those who need it".

E.Production Information System

Production information system is a set of recording methods and procedures used to support production functions that include planning activities and control processes to produce goods or services. Romney and Paul (2004: 138) argue that, "Production Information System is a management information system framework that emphasizes more on the production process, from raw material input to finished goods output, taking into account all the processes that occur."

F. Internal Control System

Internal control systems include the organizational structure and all coordinated ordinances used in the company to maintain the security of company property, checking the accuracy and correctness of accounting data, and assisting in maintaining the predetermined management policies. Krismiaji (2010: 218) states that "Internal control is an organizational plan and method used to maintain or protect assets, produce accurate and reliable information, improve efficiency and encourage compliance with policies."

G.Information Systems Analysis

Stage of system analysis is an early stage of information system development activities. The methodology used to develop information systems is the FAST Method (Framework for the Application of System Technique). Analysis of information systems is done through three activities as described by Jeffrey Whitten in his book,Systems Analysis & Design Methods (2008:121).Jeffrey stated that "Systems analysis is: (1) the survey and planning of the system and project, (2) the study and analysis of the existing business and information system, (3) define and prioritize the business requirement".

1.Survey and planning of the system and project

This stage aims to obtain information and identify the problems that occur

2.Study and analysis of the existing business and information system

At this stage, from the problems identified, studied and analyzed more deeply about the causes of the occurrence of those problems related to the input, process, and output elements of each business process activity.

3.Define and prioritize the business requirement

This stage is a follow-up activity after analyzing the problems that occur that is providing alternative solutions or improvements that must be done to solve the problems that occur.

III. RESEARCH METHODOLOGY

The research method used in this research is descriptive method of analysis by using FAST methodology (Framework for the Application of System Technique).Data collection in this research use Fact-finding and Interpersonal Skill technique with JAD approach (Joint Application Development).

IV. RESULT

Based on the survey conducted obtained the analysis of the condition of information systems of several SMEs in Bandung as follows:

NO	PROBLEMS	IMPACT
1	There is no clear job description of each function	Some employees do duplicate tasks, so it is prone to cheating
2	There is no standard operating procedure (SOP)	Employees will work without direction because there are no standard rules that aregoverning the company's business activities
Inventory Management Information System		
3	Not separated storage between supplies Raw material and finished goods inventory in the warehouse.	The mixing of raw material inventory and finished goods inventory in the warehouse causing each inventory cannot be controlled by amount.
4	After finished goods are produced, some goods are not direct saved to the warehouse, but directly transported and sent to the customer.	Goods that have been finishedare not producedrecorded Ina number
5	There is no recording of goods entering and leaving the warehouse	Not known how much inventory is is in the warehouse
6	Less supervision and control of goods In inventory warehouse.	Quality and quantity goods in the warehouse Inventory cannotbe known every time.
7	No control and accountability Answers to the quality and quantity of goods already received In the warehouse.	The goods receipt cycle in the warehouse cannot be known.
8	The recording of the quantity of goods coming out of the warehouse is unknown and under control.	Control of goods coming out of the warehouse becomes unmonitored.
Purchase Information System		
9	Booking goods to the supplier is done via phone	There is no evidence that Thepurchasing department has done its job to buy the goods from the supplier.
10	The owner can not know the conditionscash disbursement of purchasing activity for one periodcertain.	Cash disbursement from purchase activity becomes un-monitored
Sales Information System		
11	The ordering of goods from consumers made orally and not recorded.	The possibility of employees forgetting the information ordered goods from consumers and the order information cannotbe accountedfor.
12	No sales reports	It is not known how many sales transactions have occurred so that it is difficult for the owner to make a decision

Production Information System		
13	No standard and written product specifications are made.	The occurrence of errors or differences between products desired by consumers and the production.
14	Lack of inspection/control of production process.	Often the occurrence of a product fails or defects.
15	There are no production reports in writing	It is difficult to detect how much it costs to do the production process so it can not be known the cost of production accurately which also will cause difficulties in determining the cost of production and the selling price of the product is accurate

DISCUSSION

After conducting a survey of information systems applied to several SMEs in Bandung obtained survey results that describe the problems or weaknesses contained in the information system. Further analyses of these weaknesses in order to provide repair solutions for the information system. The results of survey and improvement solutions can be described as follows:

NO	PROBLEMS	REPAIR SOLUTIONS
1	lack of a clear job description of each function	Make the job description in writing and clear so that employees will work in accordance with its function and will not work out of responsibility.
2	There is no standard operating procedure (SOP)	Make SOP in writing so that employees know the rules that exist in the company so that employees can work by the rules.
	Sistem Informasi Pengelolaan Persediaan	
3	No separation of storage between the supply of raw materials and finished goods inventory in the warehouse.	Separate the supply of raw materials and finished goods inventory so that both supplies can be controlled in number.
4	After finished goods are produced, some items are not directly stored in the warehouse but are directly transported and shipped to the customer.	After finished goods produced should be stored first in the warehouse. If there are goods to be shipped, you should take the items that have been recorded previously
5	No logging of goods entered and out warehouse	- Record the incoming goods and goods coming out of the warehouse. - Make a document receipt of goods and documents the release of goods.
6	Lack of supervision and control of goods in inventory warehouse.	The Periodic stock should be done regularly. For the quality and quantity of goods in the warehouse inventory can be monitored.
7	There is no control and responsibility for the quality and quantity of goods already received in the warehouse.	Must be made reports receipt of goods, so that the activity of receiving goods in the warehouse can be effective and controlled.
8	The recording of the quantity of goods coming out of the warehouse is unknown and under control.	Reports on the release of goods that can be used for control in the warehouse inventory.
	Purchase Information System	
9	Booking goods to the supplier is done by phone	-Record for each purchase order that made - Create purchase order document
10	The owner can not know the condition of cash disbursement for the purchase activity for a certain period.	Purchase report needs to be made every certain period; this report will provide information about the condition of cash expenditure on purchasing activity.
	Sales Information System	
11	Ordering goods from oral consumers are not recorded.	-Recording should be done into the document for each order from consumers to order goods from consumers can be known -A sales order document must be made to record each transaction.
12	No sales reports	Must generate sales report.
	Production Information System	
13	No standard and written product specifications are made	Should be made product design/product specifications are standard and written according to consumer desires.
14	Lack of	-Should be inspected/

	inspection/control of production process.	quality control for each production process so that the resulting product can be accounted for its quality. -Assign employees as a function to perform inspection/quality control at every stage of the production process.
15	There are no production reports in writing	Production reports should be produced for each production process undertaken.

CONCLUSION

Based on the results of the analysis that has been done, it can be concluded that the SME information system, in general, there are still weaknesses, namely: no clear job description of each function and the absence of a clear and written SOP, the lack of control of the storage of goods in the warehouse, the absence of documents that record receipts and expenditures in warehouses. Furthermore, not making inventory status reports, the frequent transactions of oral and unrecorded purchases and sales, not the preparation of reports of purchases and sales periodically still often do not make the design/product specifications written, still lack of supervision/ inspection of every stage of production process.

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