Agribusiness Information System of Dragon Fruit Planation

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Abstract. The purpose of this study is to examine e-commerce information systems in agriculture. This system is useful for distributing information about seed purchases online in the local area and can increase investment funds to overcome the problem of buying in trade. The research method used consisted of data collection methods (observation, interviews and literature studies) and FGD (Focus Group Discussion). The research results show the establishment of an e-commerce system that can help horticultural seed shops in several regions or communities to introduce and sell horticultural seeds online with a transaction system or COD. Besides, product, customer, and sales data can be used in this system. The use of information systems (SI) by Small and Medium Enterprises (SMEs) in developed countries increases the number of SI applications and still low compared to large companies. Meanwhile, in developing countries, the use of SI by SMEs is still relatively low. The use of SI by SMEs is an interesting thing to know. Big companies have to stay competitive because they have adequate resources in a better position.

1. Introduction

The definition of Small and Medium Enterprises (SMEs) itself is a form of business that is seen from the scale of household and small businesses, only have several employees between 1-19 people. While the medium-sized businesses have employees between 20-99 people [1]. SMEs are one of the fields that make a significant contribution to spurring economic growth in Indonesia [2]. Dragon fruit commodity has prospects in the agricultural sector. Entrepreneurship has a good development of the demand for the increase, both inside and outside the city. Potential natural resources in the country still provide opportunities to increase the production of various types of fruits. The need for dragon fruit in Indonesia reaches 200-400 tons per year. The demand for world dragon fruit commodities is indeed very large, especially the red fleshy dragon fruit. The business environment certainly is always the role of managers and members [3]. Therefore, managers must make decisions quickly regarding management issues related to their calculations. SMEs are often faced with planning, regulatory and financial problems.

As a result, the information system that is less supportive in making decisions makes everything hampered. Besides, consider and record every transaction relating to purchases, sales, preparations, and cash. This is certainly necessary for the SME as an important source of information in supporting entrepreneurial success. The design, implementation, and Information System (SI) design are not easy. Especially from the small and medium entrepreneurs. SI is a collection of components in a company or organization that is related to the processes involved and the flow of information [4]. Information systems are also systems in organizations that meet the needs of daily transaction processing, support operations, managerial, and strategic activities of an organization as well as providing external reports that are needed to certain external parties [5]. Generally, it still uses a standard information system in decision making. This...
resulting in a potential bankruptcy loss. The purpose of an information system is to present information for decision making in the process where the data obtained in the input is then processed and produces output data [6].

It will be difficult if a small and medium business activity does not use an information system because SI is used to support operations, management, and decision making in an organization that uses a computer-based system for several users with the same needs. This IS constraint is due to the limitations of information technology obtained. Several factors make SI increasingly necessary, one of which is that managers must deal with an increasingly complex business environment [7]. One reason for this complexity is that it is increasing and the emergence of government regulations. The application of information systems to SMEs by many businesses can improve competitiveness through the added value of products and services produced and depends on aspects of human resource capabilities. The application of information systems is a must so that SMEs can compete and improve their business. The use of SI by SMEs in developed countries continues to increase even though the number of SI applications being developed is still low compared to larger companies. Whereas, in developing countries, the use of SI by SMEs is still relatively low. The use of information systems (SI) by small and medium businesses (SMEs) is an interesting thing to know. Large companies are in a better position because they have adequate resources. SMEs require IT to obtain sources of information at a level appropriate to the size of the company [8]. It is believed that SMEs will remain weak without it, compared to large companies in terms of marketing, trade, managerial skills, and so on.

Information Technology (IT) is used to obtain or gather information, one of which is using E-commerce. IT is a very important role in collecting or managing information systems that are collected or obtained in an SME. Electronic Commerce is part of the Electronic business or business conducted using electronic transmission [9]. The benefits and advantages of using e-commerce are for promotional media to increase sales volume, both for online and conventional sales [10]. The development of the internet has become an efficient means of opening information systems, especially in terms of marketing a new model for SME products. In addition to the relatively low cost, utilizing the internet will spread information faster and have a wider reach [11]. Trial application on the Kopma Antik STT Dharma Iswara Madiun was conducted to determine the level of usefulness to the needs of users. The existence of this application can increase marketing products Kopma Antik STT by 15%. The results are according to the theoretical framework prepared using three aspects of effectiveness measures and based on things that have been studied in the field related to the effectiveness of the application of e-commerce in the development of the Wedoro sandals and shoes industry center. It can be concluded that the application of e-commerce affects the development of businesses in Wedoro ranging from productivity to the survival of these sandals and shoe businesses that are needed by fulfilling two of the three aspects of effectiveness.

The e-commerce system that was built can help the Mahkota Banana shop to introduce an e-commerce website to promote to all customers. It can also manage product, customer, and order data. Based on the results of black-box testing, the e-commerce system that was built followed what was expected and could function well [13]. The purpose of this research is to design an e-commerce information system in agriculture. This system is useful for disseminating information related to buying and selling seeds online in the local area and can improve performance to minimize the risk of errors in managing sales transactions. The research method used consisted of data collection methods (observation, interviews and literature studies) and FGD (Focus Group Discussion).

2. Method
The method used in the design of the horticultural seed e-commerce system is the steps used are observation, interviews, and literature study. Meanwhile, the system development method used the FGD by sharing or correcting the system when or after the system runs. The goal is that later can be improved in every progress [14, 15]. The detailed step is to collect data. In this study, we used several data collection methods. The methods used in the design of the horticultural seed e-commerce system are observation, interviews, and literature study. Observations made with direct observation of the work process at the dragon fruit selling
store to know the extent to which e-commerce systems can help in this business to market the products being sold. The results obtained are getting requests from customers to view products online. The results of the interview are the initial activities carried out to obtain information about horticulture seed shops. We hold a question and answer process directly with the owner of this business. The results obtained are information about how e-commerce works to market or introduce these seeds. The documentation that has been obtained is collecting data by searching and recording relevant data, documents, archives, and references. Promotions and applications are carried out for the first or first time introducing the website to customers regarding ordering seedlings without having to walk consumers to find seed sellers and order them offline. After that, the observed variables are product data, customer data and order data.

3. Results and Discussion

3.1. Architecture
The results of this study show the establishment of an e-commerce system that can help shops sell horticultural seedlings in all regions or communities to introduce and sell horticultural seeds online with a transaction system or COD, which can also provide a product, customer, and sales data. The picture above is a series of stages in the marketing of products on the website through e-commerce. There are three use case diagrams (Figures 1 - 3).

Figure 1 shows the system interaction with the admin as the user in the product and customer data collection process.

![Figure 1. Use Case diagram based on the data collection process](image)

Figure 2 shows the system's interaction with customers in the electronic sales transaction process.
3.2. Data Representative

The documentation that has been obtained is data collection by searching and recording relevant data, documents, archives, and references. Promotions and applications are carried out for the first or first time by introducing a website to customers regarding the ordering seeds without having the customer to buy...
seeds before ordering it offline. After that, the selection variable is product data, customer data and order data.

The advantages of using e-commerce are for media promotion to increase sales volume, both for online and conventional sales. The method used in the design of the horticultural seed e-commerce system is the step used for observation, interviews, and literature study. While the system development method used is the FGD with a sharing or correction system when system one is completed.

3.3. Technical Embedding

The technique used in this research is by collecting data. We have to observe the work process in a shop that specializes in selling dragon fruit so that it can determine the extent to which e-commerce systems can help in the dragon fruit business to market the products sold. Besides, the technique used in this research is to conduct interviews and the results of the interview are getting requests from customers to view products online. The results obtained are information about how e-commerce works to market or introduce these seeds. Information systems as a driver of development that plays an important role in the sustainable growth of a business organization. Increased investment in the field of SI and the strategic role played them implements SI an important issue in the discipline of Management Information Systems.

After designing the database following the needs of the web-based system, the next step is designing the display interface of the page with the web. The web page interface shows the screen design of the main page of the website where after designing the database according to the needs of the web-based system. The main display on the website shows the order entry screen design where after customer registration and login with an account that has been registered, then the next stage is the interface display for order processing. The design of this ordering interface consists of three related interfaces namely select the product you want to buy into the shopping basket, after that, the customer can press the shopping cart button and all items of items that have been selected will be displayed. The customer will get information about the total shopping and the customer can press the checkout button so that all information about the transaction appears including payment options through several related banks as shown in the interface design.

The next draft is the payment confirmation entry screen design after the customer makes an order. The next step is to make a payment. Considering the needs and desires of the dragon fruit shop owner who prefers payment methods via ATM transfer, the interface design emphasizes payment confirmation as seen in the interface design, where after making payment and payment confirmation. After that, the admin prints the proof of order customer, proof of this order, as well as the address where the goods will be sent to the customer. The design of the process of printing the order proof print and where the customer order is then sent to the destination address that has been listed on the proof of order. Delivery of customer orders is carried out by shipping service companies that have collaborated with dragon fruit shops. Therefore, the following interface design functions to input delivery receipts obtained from the shipping service company. The input process of this shipping receipt is information to the customer that the order has been sent. The next design is the sales report print interface design. The print interface of this sales report can be accessed by the owner making it easier for the owner to know the results of his sales accurately.

The most influential strategy in SMEs is marketing. Generally, managers do their business with sales manually. Moreover, this web system will make it easier for some consumers to place orders online. The available data will also be organized in e-commerce, making it easier for managers to carry out their management systems.

4. Conclusion

The e-commerce system that was built can help the online dragon fruit shop to introduce the dragon fruit e-commerce website which is sold to all customers to market the dragon fruit for sale, also can manage product data, customer data and order data. Based on the results of black-box testing, this system has been as expected and can function properly.
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