Design of Cloud-based Marketing Information System on D'banjar Barbershop as an Effort to Increase Revenue

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Abstract: This research is to recommend a cloud-based marketing information system (MKIS) to help companies maximize their revenue by providing useful information for business development. Analysis of data from the owners, employees, and customers of D'Banjar Barbershop support the hypothesis that good information systems are important for the barbershop. Based on those findings, technologies such as cloud computing can help barbershops in its business developments with low cost, high flexibility, and high scalability.

1 INTRODUCTION

The rapid development of barbershop business today, especially in big cities, make decisions in the marketing process becomes an important thing for the company. A strong information system is needed by the company to obtain relevant data inputs in making those decisions (Salvador and Ikeda, 2014) so that the company gets a good and effective decision. The need for flexibility and quality of the system and the information gained is also a factor affecting many companies developing marketing information systems (Khodakarami and Chan, 2013)

Processing information through cloud service helps companies meet customer needs (Lin and Chen, 2012; Luftman et al., 2015; Vasiljeva et al., 2017). The information-processing technology in the cloud service can feature a dynamic business ecosystem where everyone can use information technology resources anytime and anywhere (Kim and Lee, 2015). The advantages of cloud technology also make it easier for companies to collect the latest data quickly from various sources making it more effective in decision-making (Alafeef, 2015). With good information distribution, decision-making will become more relevant so that the company is able to retain its customers (Dyantina et al., 2012). Research gap in this research are subject focus in Small Medium Enterprise and its product is clothing retail.

Referring to the description, this research will discuss about how the design of cloud-based information system that can be applied in D'Banjar Barbershop in Denpasar, in order to increase their income.

2 METHODS

To ensure the value of validity, this study used a triangulation process. The subject of this research is D'Banjar Barbershop located in Denpasar, while the object of this research is how the design of cloud-based information system on D'Banjar Barbershop. The design of the marketing information system from previous research became a reference in the initial design. Based on the results of interviews and observations, researchers can identify the weaknesses and problems that exist for then designing a cloud-based marketing information system on D'Banjar Barbershop. In the final stages of the study, the researcher concludes the recommendations in a flowchart, data flow diagrams, and entity relationship diagrams. Bungin (2007) states that the thing to be achieved in qualitative data analysis is to analyze the process and get an overview of the marketing information system in D'Banjar Barbershop.

For primary data and secondary data, respondents interviewed in this research are the owner of D'Banjar Barbershop, employees and customers. Secondary data in the form of literature review and written documentation of the company, among others: Reports/records Organizational activities, Organizational Structure, etc.

Design of marketing information system design, the first thing to do is to determine the research

question relevant to the social phenomena studied. Furthermore, researchers conducted a literature review to develop interview guidelines that will be used as a tool to extract data to some respondents ie owners, employees and customers D'Banjar Barbershop. The interview process is recorded in the form of interview transcript, which is then processed through the process of tagging (coding) to obtain a picture of continuity of data among respondents research. By doing the coding process will get a picture of the trend pattern of relationships between various dominant factors.

In the early stages, the researchers conducted a current system analysis to identify the weaknesses of marketing information systems that run in D'Banjar Barbershop today. Required information obtained through interview and observation process and supported by company documents. Here is a summary of the identification of weaknesses in marketing information systems that run in D'Banjar Barbershop today.

1. Based on observations and interviews conducted, it can be concluded that the accounting system or financial administration that runs still done manually so that time and cost are quite large.
2. D'Banjar Barbershop does not have an integrated database yet. This leads to sales and marketing decisions often inappropriate. Incorrect business development decisions cause uneven revenue earned on every barbershop branch. So there is a barbershop branch that has negative profit growth.
3. The existing marketing system is still limited and has not maximized the existing technology. Most customers have less or do not get information related to the marketing activities of D'Banjar Barbershop. This causes the marketing mix made by the company is not up to the maximum to the customer. The marketing does not yield useful information in decision-making

and does not result in significant revenue increases.
4. Many competitors or competitors in an area around the branch cause not maximal income earned. Many competitors are more attractive in terms of comfort of place and service.
5. In terms of internal controls, the organizational structure of D'Banjar Barbershop is quite simple, causing a department that doubles various functions at once. Examples such as the service or barber who should serve only to carry out the service also doubles as a cashier and daily record. The explanation obtained from the interviews concluded that the existing human resources are limited. The owner entrusted to one employee or cashier to perform his duties on all branches of D'Banjar Barbershop. In addition, there is often a long queue due to the absence of available capster resources. This causes the customer to leave and not to do services in D'Banjar Barbershop.
6. Existing franchises and branches are not well controlled by the company. The existing operational standards are not done well. This results in different reporting from each branch.

3 RESULTS AND DISCUSSION

From the result of the described weakness analysis, marketing information system become important to be developed in order to produce supporting information in the business development of D'Banjar Barbershop. The development of a marketing information system model in the sales process will make small to medium-sized businesses provide the best possible service to their customers (Hakhu et al., 2012). By integrating cloud computing technology, enterprise sales and marketing systems can maximize the information gained from the sales process to increase revenue.
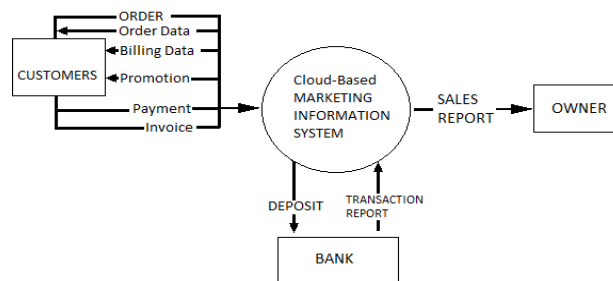

Figure 1: Context Diagram.

From the diagram above, transaction processing system can be explained in a flow diagram (data flow diagram) in figure 2 to 4.
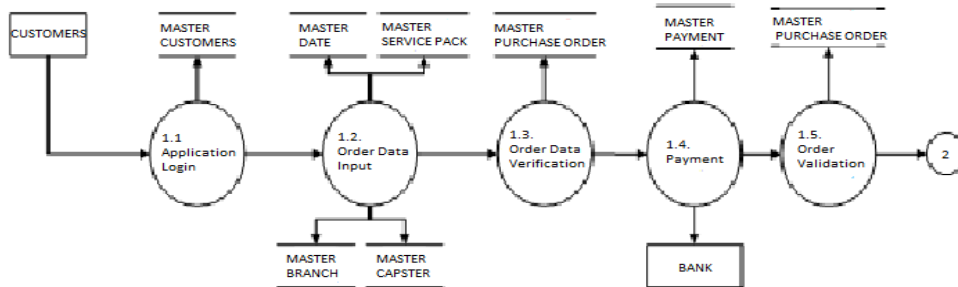

Figure 2: Data Flow Diagram Level 1 Process 1.

Figure 2 explain that service order begin with application login by customer. Than, customer fill order data and get verification. Customer will pay through Bank and get validation order.
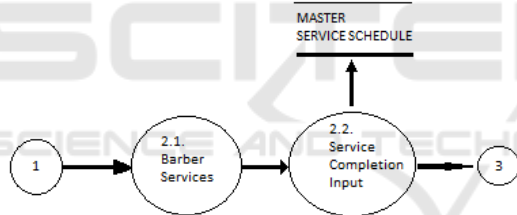

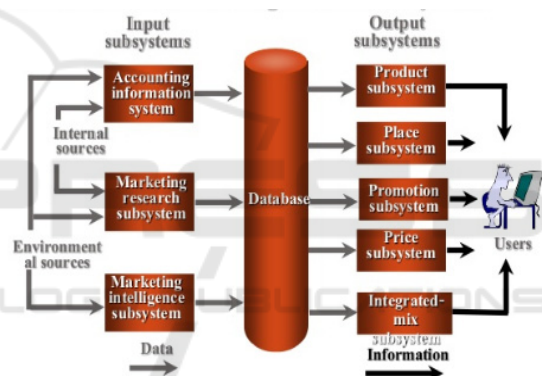Figure 3: Data Flow Diagram Level 1 Process 2.

Figure 4. Marketing Information System Model.

The transaction processing system is an important input subsystem in this marketing information system model because it generates useful internal information in the development of the marketing mix. The transaction processing system starts from the online ordering process through platform as a service developed by D'Banjar Barbershop. The superiority of the Platform as a Service is its modeling and usage according to company needs to support flexibility towards environmental change (Council, 2015). The modeling of this marketing information system is described in Figure 8.

The input subsystems will be processed and produce information in the form of report reports such as cash receipts, schedule reports, customer density reports, promotional reports, customer analysis reports, and competitor analysis reports. The marketing research subsystem will help management to analyze based on data obtained from internal transactions and external data to analyze its customers. While the marketing intelligence subsystem will assist management in analyzing the external environment such as competitors.

Table 1: Cash Receipts Statement.

D'Banjar Barbershop **Cash Receipts Statement** August Period								
Date	ID Purchase Order	ID Customer	ID Service	ID Branch	ID Capster	ID Promotion	Price	Total
Total								

This statement is used to management knowing total revenue every period.

Table 2: Schedule Statement.

D'Banjar Barbershop **Schedule Statement** August Period						
ID Purchase Order	ID Customer	ID Capster	ID Branch	Date	Time Start	Time End

This statement is used to improve customer service.

Table 3: Analysis of Customer Satisfaction Statement.

D'Banjar Barbershop **Analysis of Customer Satisfaction Statement**					
ID Purchase Order	ID Customer	ID Capster	Date	Customer Satisfaction	Suggestion & Critical
PO080003	C201603	B01	05/08/2017	4	
PO090002	C201701	B03	07/09/2017	2	

This statement is used to know the potential of branches and obtain information for regional development.

Table 4: Competitor Comparation Criteria.

D'Banjar Barbershop Competitor Comparation Criteria				
Category	D'Banjar Barbershop	Barbershop A	Barbershop B	Barbershop C
ease of transactions	5	3	5	4
service facilities	3	2	5	4
service from capster	4	3	5	3
service quality	5	4	4	3
cleanliness	4	1	3	3
duration of service	3	2	2	4

The competitor's analysis report is the output of the marketing intelligence subsystem. This subsystemproduces information in the form of a comparison between service, price and promotion mix from other barbershop competitors. In analyzing competitors, researchers compare competitors with several comparative criteria such as ease of transactions, service facilities, service quality, cleanliness and duration of service that will be assessed by the customer.

From this data, management can further analyze the advantages and disadvantages of D'Banjar Barbershop than its competitors and know the real-time market situation so as to predict the development of barbershop industry. With a high level of competition, innovation and the development of service performance is the key to the success of barber shop.

4 CONCLUSION

The use of a marketing information system model can produce a product preference report that is a comparison of services favored by the customer both in terms of price and quality of service, schedule reports that contain data on service schedule density both based on location and hours of service. The marketing information system model also produces a promotional report as the basis of management to analyze the promotion that has been done. In addition, customer analysis reports also help management analyze customer behavior on services, prices, places and promotions that have been done while competitor analysis reports help to analyze the advantages and disadvantages of the company compared with competitors.

Cloud computing technology helps management to focus on decision-making to increase revenue. Cloud computing technology can reduce the costs of procurement and maintenance of hardware that is quite expensive. Flexible cloud computing technology also helps management to always respond to changes in the marketplace.

Based on the conclusion that has been made, the researchers suggest that D'Banjar Barbershop should apply the information system of cloud computing based marketing and socialize to the customer immediately to assist management in analyzing the market development and also assist management in the decision-making process related to marketing so that able to increase income services. Continuous application development is also important so that existing information can be communicated to customers to give customers more satisfaction and add competitive value to competitors.

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