THE ADOPTION OF SELF ORDERING MACHINE TECHNOLOGY BY CUSTOMERS AND THE INFLUENCE ON CUSTOMER SATISFACTION

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ABSTRACT

Increased competition among fast food restaurants, causing the restaurant to innovate. In accordance with developments in the current digital era, restaurants innovate by providing self-ordering machines. This study aims to determine the customer's willingness to adopt the machine and its effect on customer satisfaction based on the theory "Technology Acceptance Model (TAM)". This research is a correlational research with the research sample is customers at fast food restaurants. Data analysis used regression analysis. The results of the study indicate that customers are willing to adopt self-ordering machines because these machines provide convenience and benefits in their use, so that customers feel satisfied. Ordering through machines can save ordering time and customers can order food according to their tastes.

Keywords*: Self ordering machine, Technology Acceptance Model, Customer satisfaction, fast food restaurant.*

INTRODUCTION

According to the Deputy Chairperson of the Indonesian Hotel and Restaurant Association Restaurant, Sudrajat, fast food restaurants are one of the sub-sectors of the culinary industry with a fairly stable performance. The business experienced a 15% growth due to the growing trend of out-of-home dining. Despite experiencing rapid growth, the restaurant business competition in densely populated areas is very strong (Richard, 2019). To be able to win the competition, companies must be able to innovate. In this digital era, companies must focus more on developing digital-based innovations. In a fast food restaurant, a tool called a self-ordering machine has been developed.

Figure 1. Self Ordering Machine
Source:
https://www.marketwatch.com/story/mcdonalds-is-making-a-big-bet-on-self-service-kiosks-2018-06-04

Self Ordering Machine is a modern digital-based machine that provides services to customers to order food independently and make payments on the machine, as shown in Figure 1. This innovation can provide added value for customers, namely reducing time and ordering errors so that customers will satisfied.

However, in its implementation the self-ordering system can cause failure because there are customers who are reluctant to change. They have doubts about using self-ordering machine. The customer argues that using the machine often provides confusing navigation and less flexible service options (Lawton, 2019). Therefore, the main factor in implementing self-ordering machines in companies is the readiness of customers to accept the technology. If the customer has confidence that the machine can provide what he expects then the customer will be satisfied.

This study aims to examine the relationship between customer readiness in adopting a self-ordering machine and its effect on customer satisfaction. The results of this study are expected to provide input for company managers in making decisions in implementing self-ordering machines.

LITERATURE REVIEW

BENEFITS OF SELF-ORDERING MACHINE

Self Ordering Machine is a technological innovation that makes it easy for customers to order and pay for food orders independently without going through a cashier or restaurant waiter. This innovation provides benefits for customers and for company owners.

With this machine, customers do not need to queue or wait long to get the food they ordered because customers do not depend on cashiers or restaurant waiters. Another benefit of this machine is to minimize the occurrence of misrepresentation of orders. If orders are made traditionally without going through a machine, waiters often make mistakes such as writing down the wrong menu and delivering it to the

wrong person. Self-ordering machine provides an opportunity for customers to have full control over the orders they choose, no longer based on records made by restaurant waiter [1].

The benefit of self-ordering machine for company owners is the savings in the employee's salary budget, because this technology offers independent ordering, so the company can reduce the number of employees in its restaurant. In addition, the existence of this machine can reduce fraud committed by cashiers, because there is a possibility that the cashier does not record the transactions that occur. If the order is made through a self-ordering machine, the transaction will be recorded automatically based on the customer's order [2]

SELF ORERING MACHINE AND COMPANY PERFORMANCE

Company performance is defined as the result of the company's operating activities that can be used as a benchmark in assessing the success of the company's management.

To assess the success of the company, it is necessary to measure performance. The approach that is widely used to measure performance is to use the concept of the Balanced Scorecard. This concept measures performance based on two interrelated criteria, namely financial criteria and non-financial criteria.

The concept of the Balanced Scorecard measures performance based on four perspectives[3]:

- Financial perspective; perspective of the company's shareholders
- Customer perspective; perspective on how the customer feels
- Internal business perspective: perspective relates to the processes within the company that are used to meet customer and shareholder needs
- Learning and growth perspective: a perspective related to continuous change and continuous improvement in the company.

The implementation of self-ordering machine in the company is expected to improve the company's performance. Self ordering machine is an innovation that can create continuous change in meeting customer needs. This machine provides an opportunity for customers to order food independently so that food orders can be made faster because the process does not go through cashiers or waiters. In addition, the machine is also able to reduce ordering errors. This machine is expected to increase customer satisfaction. Customers will feel that the services provided by the company are as expected. Customer satisfaction will have an impact on improving the company's financial performance.

ADOPTION OF SELF ORDERING MACHINE TECHNOLOGY BY CUSTOMERS

In implementing a new innovation in the form of a Self Ordering Machine, the first step that needs to be done is to determine the customer's readiness to adopt the new technology. The approach used is "Technology Acceptance Model" developed by Davis in 1986. According to Davis, individual attitudes toward technology use are influenced by two factors, namely perceived ease of use and perceived usefulness .[4]

A technology can be easily used if the customer has the perception that using the machine does not require effort to achieve the expected goals. If viewed from the aspect of usefulness, this means that the machine can improve the performance of its users

CUSTOMER SATISFACTION

Customer satisfaction is defined as the customer's attitude towards goods and services after the customer uses the product or service by comparing what the customer receives and what the customer expects. Customers will be satisfied if what they receive matches or even exceeds their expectations [5]

Customer satisfaction can be seen from two aspects, namely functional satisfaction and psychological satisfaction. Functional satisfaction is satisfaction based on the function of the product or service used. Psychological satisfaction is the satisfaction obtained from the intangible attributes of a product or service. An example of customer pride if a customer uses a particular product or service [6]

THE RELATIONSHIP BETWEEN TECHNOLOGY ADOPTION AND CUSTOMER SATISFACTION

The self-ordering machine was developed in the 1980s by the shoe retailer "Florshein Shoe Co" in California. When the machine was implemented only 25% of the customers used the machine. This happens because customers doubt to use the machine. Therefore, if the company is going to implement a self-ordering machine, the first thing the company does is to prepare its customers in advance to be able to adopt the new technology[7].

In order for customers to adopt the system, the company must provide confidence that the machine can be used in an easy way and the machine can provide benefits to its users. With this machine, customers can easily place orders because the instructions are complete, accurate and easy to understand, through an attractive visual display accompanied by pictures and menu descriptions, so that customers can easily make purchasing decisions. In addition, customers can get benefits such as customers will get what they want in a fast time. Ordering food through machines can also reduce ordering errors.

With the convenience and benefits received by customers in using self-ordering machines, it is hoped that customers will feel satisfied. Customers will feel comfortable and happy in making transactions because the machine will provide quality service.

RESEARCH METHODS

This research is a correlational study. This research is to determine the relationship between the adoption of self-ordering machine technology by customers and customer satisfaction. The indicators used to determine the level of adoption of self-ordering machines include the convenience and usefulness received by customers, while indicators of customer satisfaction are the feelings of comfort and pleasure felt by customers when using self-ordering machines so that customers believe they have received quality service. The research framework is shown in Figure 2.

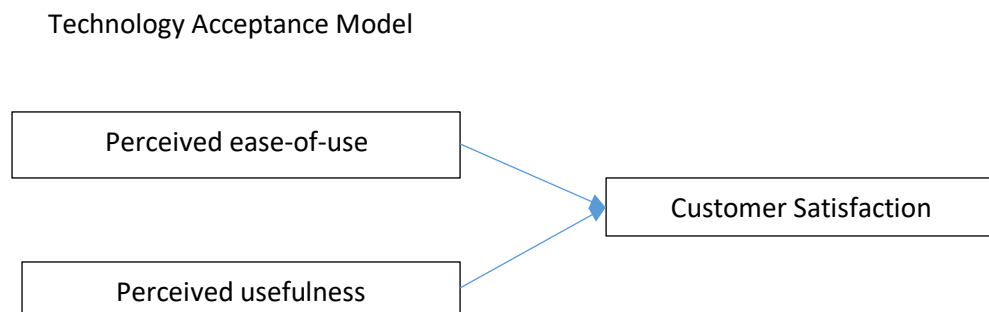Technology Acceptance Model

Figure 2. Research Framework

To obtain data related to the adoption of self-ordering machine technology by customers and customer satisfaction, the researcher used a questionnaire addressed to respondents who are customers of McDonald's fast food restaurants in Bandung. The questionnaire contains statements about the ease and usefulness of adopting a

self-ordering machine and satisfaction in using the machine. Each statement is given a score of 1-5. A score of 1 indicates that the respondent strongly disagrees with the statement. A score of 5 indicates that the respondents strongly agree with the statement. Data analysis used regression analysis based on respondents' answers to the questionnaire,

RESULTS AND DISCUSSION

The results of the study using the t test are presented in table 1 and the F test is presented in table 2

Table 1

t test results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2,994	2,599		-1.152	.257
	usefulness	.320	.084	.383	3.816	.001
	ease	.622	.104	.598	5,962	.000
a. Dependent Variable: Satisfaction						

Table 2

test results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1029,930	2	514,965	103,215	.000b
	Residual	174.623	35	4.989		
	Total	1204.553	37			
a. Dependent Variable: Satisfaction						
b. Predictors: (Constant), ease, usefulness						

Based on the results of the analysis using the t test and F test, the two factors in adopting self ordering machine technology can provide satisfaction to customers. Customers are willing to adopt the machine because the machine can make it easy for customers to place an order with clear instructions and use an attractive visual display. Customers can easily make purchasing decisions. In addition, self-ordering machines can provide significant benefits for customers. Customers can place orders according to their tastes, because with this machine, customers can create new menus. In the traditional ordering system, it is difficult for customers to create new menu creations, because there are often misunderstandings with the clerk.

The customer's willingness to adopt self-ordering machine because the customer has the perception that the machine can be easily used and can provide benefits to its users. For this reason, customers are satisfied using the machine, because ordering using a machine makes customers feel comfortable in placing orders because orders can be carried out effectively and efficiently.

CONCLUSIONS AND SUGGESTIONS

The results of the study indicate that customers are willing to adopt self-ordering machines because customers have the perception that the machine is easy to use and can provide benefits for its users. Customers think that by using the machine, they can save ordering time and can order food as expected. With the convenience and usefulness of the machine, customers are satisfied. Therefore, the

implementation of self-ordering machines carried out by fast food restaurants can be maintained.

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