

The Influence of Expert Systems on Customer Satisfaction of Islamic Banks

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ABSTRACT

This study discusses the Islamic banking industry, especially in Muslim countries, especially in Indonesia in order to improve the quality of Islamic banks by using an expert system. The use of expert systems in Islamic banks is a new thing so that it can be an innovation and a positive impact on the quality of Islamic banks. The development of Islamic banks is increasing along with the community's need for products, systems and services from Islamic banks, especially expert systems. An expert system is an information system from the knowledge of an expert that is used to assist non-experts in a particular field. Expert systems that can be used in Islamic banking such as the Decision Support System (DSS). Expert systems are useful for making decisions accurately and quickly compared to conventional systems. Expert systems in Islamic banking are new and have not been implemented. This refers to several conventional banks that use expert systems in their operations. The method used in this study is a quantitative approach and descriptive method with data collection techniques and data analysis techniques. The use of expert systems in banking greatly affects the level of efficiency of the information systems used, such as supporting decision-making to improve information systems in Islamic banks. Therefore, the use of expert systems in Islamic banking needs to be developed to improve the quality of transactions and reduce the error rate in the existing information systems in Islamic banking.

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1. INTRODUCTION

The development of the sharia industry is increasing. Likewise with the banking sector, especially Islamic banking which is now quite in demand by the public. Islamic banking is one of the financial institutions whose activities or operations use Islamic sharia or provisions. Islamic banking is enough to give a broad influence on the community in the awareness of adopting Islamic financial institutions that exist around the community and efforts to improve the people's economy.

This study expects to talk about and look at the impact of master frameworks on the nature of Islamic banking. Since the increment of Islamic banks in Muslim nations has been expanding and there is an absence of

value improvement frameworks. Working on the nature of Islamic banks, particularly in decision-makers in sharia-based banking, is required in light of the fact that all gatherings are expected to move rapidly and exactly to make a move or choices [15].

In operations, Islamic banks concentrate on service quality for customers because the products and services obtained by customers have a high quality of religiosity because they are based on the concept of Islamic law [7]. Quality and customer satisfaction are interrelated things. The quality of customer service is important because it relates to customer satisfaction and is a driver in the quality of marketing banking products. Thus, Islamic banking needs to maximize customer satisfaction with peasant customer service and minimize unpleasant things [1]. Therefore, Islamic banks are required to plan, implement and control the quality system so that their services can satisfy customers. Quality improvement efforts can use an expert system. Expert systems are useful in improving quality as well as in decision-making.

The development of Islamic banks is still slow when compared to conventional banks. Therefore, there is a need for a socialization strategy for Islamic banks [9] namely with formal education, business institutions, Islamic scholars, and higher education [13]. Islamic banks have two goals, namely being competitive with conventional banks and trying to be socialized to be close to customers [10]. In the socialization of Islamic banks, several factors are needed, namely people who are sources of information in the community, and Islamic scholars who have many followers [12]. For the improvement of Islamic banks, factors in financial performance are also needed such as leverage, independent commissioners, institutional ownership, and company size [11].

Islamic banks have weaknesses in making decisions where this decision is based on the bank's profits and losses. In this way, the utilization of a specialist framework is proposed to defeat the issues and keep up with applicable information to be utilized in comparative cases for settling on a choice.

An expert system is a man-made reasoning device that is valuable for catching the mastery of information laborers and giving guidance to non-specialists in a specific area. An expert system is used to store related knowledge and is used as a decision support system. This expert system represents knowledge and expertise as data or rules in a computer. Many research and applications in the field of financial planning and credit use expert systems as a tool to solve problems. One of them is an artificial neural network that was introduced to develop an objective expert system in credit risk. There is the Decision Support System (DSS), which is a system to support decision making and this can help solve certain problems and use good judgment on issues that may change rapidly [15].

Expert systems are needed in the banking sector, especially Islamic banking. This expert system will make decisions more quickly and precisely and can save the decisions taken until they are taken back when needed. Therefore, this greatly affects the effectiveness of banking operations and improves the quality of service to customers to achieve certain satisfaction.

2. RESEARCH METHOD

This research method uses descriptive qualitative methods, and data collected from library research. The qualitative method approach is a method that describes and analyzes research findings. The qualitative data in this study relates to the description of the expert system data used in banking and applied in Islamic banks.

3. RESULT AND DISCUSS

The researcher has observed that monetary issues in Islamic banks are because by shortcomings in the choice to fund where this choice depends on the bank's benefit or misfortune. This issue happens as a result of the enormous number of solicitations for subsidizing and furthermore the absence of experts in the financial area to beat these issues. Hence, the development of a specialist framework is proposed to keep up with significant information to be utilized in comparable cases to help decision-makers on the grounds that the principal motivation behind building a framework [5].

The expert system can supplant the job of human specialists during the time spent assessing financing solicitations to clients and is additionally ready to stop or restrict demand methods. Expert systems can likewise settle on ideal choices very much like human specialists since they can to data sets recover past arrangements. This is challenging for human specialists. One might say that the master framework is important data about past arrangements in the participatory money process. A specialist monetary framework will altogether affect participatory choices.

The expert systems gathers the information from a few human specialists which gives a more extensive framework that is feasible to accomplish by individual, it decreases the gamble of carrying on with work, bank credit investigation and approval relies upon many variables, and the greater part of the choices are made in risk and dubious climate, Like, many financial constructions are worked in full scale monetary flimsiness, political vulnerability, they work with various sorts of customers.

Information on issues in banking, for example, the time expected to simply decide, the presence of many activities, the absence of profoundly qualified staff to pursue evaluation choices, and the, or failure to take a ton

of data can positively fabricate a specialist framework in the bank to lessen the time expected to settle on financing choices. , restricting systems, and proficiency of choices. The framework comprises of five phases, these stages are the customers persona customers monetary position, the assurance gave, and the kind of supporting [8].

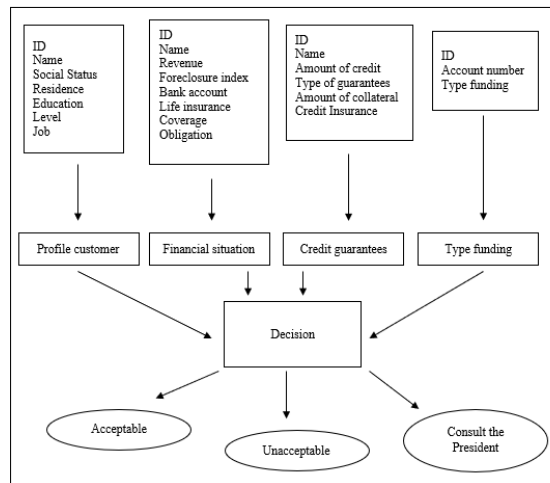


Figure 1. Expert System Framework

The proposed system in the Islamic bank expert system is as follows [8]:

- Propose participatory funding and decide if it tends to be acknowledged, dismissed, or counseled.
- Assess customer information appropriately.
- Knowing and assessing the customer financial condition.
- Information on the assurances gave and assessed.
- Search the data set to track down an answer.
- Save the choice after assessment in the data set

Therefore, the application of an expert system in Islamic banks is easy and provides good benefits for the existing information systems in Islamic banks and improves the quality of customer satisfaction. The application of an expert system in a decision support system, for example, is to determine the feasibility of customer data who will receive credit, one of which is to use the SAW calculation process.

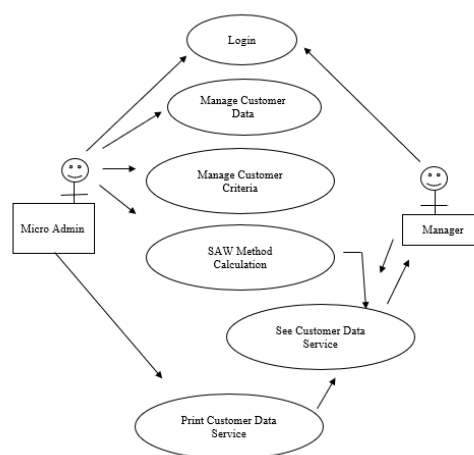


Figure 2. User Case Diagram

This system has two users, namely the manager and micro admin. Admin has access rights to log in, manage customer data, manage customer criteria, process SAW calculations, view customer data reports, and print customer data reports. Managers do not have access rights to log in, view customer data reports, and print

customer data reports. Admin provides criteria for customers who deserve credit. Then provide parameters for each of the existing criteria and the value for each criterion. Next, the admin enters the data of customers who have applied for credit at the bank. The admin enters the criteria for each customer who has applied for credit, then the system decides the feasibility of granting credit using the SAW method by attaching the results of customer data that are eligible for credit [17].

4. CONCLUSION

From the results obtained from this study, it can be concluded that the expert system is a useful system for Islamic banks. This is supported by the many benefits of expert systems, one of which is decision-making for bank credit authorization, and other transactions that require a lot of information from customers. Expert systems in Islamic banks can grow the economy because it can improve the quality of Islamic banks which causes national economic growth to increase.

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