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Analysis of Accounting Information System Using Hot Fit Model Method in Indonesia Islamic Micro Financial Institutions

Chaidir Iswanaji[1]

[1] Faculty of Economics, Tidar University, Indonesia

Correspondence: Chaidir Iswanaji, Faculty of Economics, Tidar University, Indonesia.

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Abstract

Financial institutions need to provide technology-based services that facilitate access to information for communities in remote areas. This research aims first, reviewing the use of mobile banking in improving the quality of reporting and expanding the reach of financial services; second, the practice of utilizing mobile banking for Islamic microfinance institutions in Indonesia; third, evaluating the implementation of the Islamic microfinance information system in Indonesia. The research method used in this study is descriptive quantitative, with a sample of 100 accountants. Descriptive analysis was aided by SPSS 21.0 software for Windows. The results of this study indicate that; first, Mobile banking is the right mechanism to improve the quality of reporting and make the services of Islamic microfinance institutions accessible to the poor in remote areas of Indonesia. Second, the practice of utilizing accounting information systems in Islamic microfinance institutions is already good. Third, Overall, the application of accounting information systems at Islamic microfinance institutions in Indonesia can have a positive effect on improving the services of Islamic microfinance institutions both individually accountants and organizations.

Keywords: accounting information systems, hot fit models, Islamic microfinance institutions

1. Introduction

After the crisis in 1997, the Indonesian economy continued to experience growth which also affected poverty. The poverty trend shifted from 24% in 1999 to 11.4% at the beginning of 2013. However, the decline in poverty since 2013 began to slow down in the range of 0.5% each year, so there are still many people who fall into the poor category. In 2018, around 25.95 million 9.82 people live below the poverty line (https://www.bps.go.id/).

Research on poverty and poverty alleviation such as social assistance, social security, community-based programs, and job creation have become more prevalent in the last five years. The results of the study are expected to be able to provide input to the Indonesian government regarding policies in overcoming poverty.

Several previous studies have proven the role of social responsibility in poverty alleviation. The form of responsibility for financial institutions is to expand the range of loans to remote areas where the majority of the population is in the poverty line, without collateral, small loan costs and using simple bureaucracy. For the poor in rural areas, access to financial institutions is also determined by the quality of infrastructure such as roads and bridges and the availability of public transportation. For this reason, financial institutions need to provide technology-based services that facilitate access to information for rural communities.

One way to measure the performance of Islamic financial institutions is to look at the application of Accounting Information Systems (AIS) in loan disbursement and loan repayments (Kauffman and Riggins, 2012). Research on the use of accounting information systems in Indonesia has been carried out. One of them is Pramuka et al (2010) research which concluded that accounting information systems have an important role in carrying out management functions and assessing one's performance. This study also shows the significance of the effect of accounting information systems on the performance of rural credit bank managers in Banyumas Regency.

Based on the e-Marketer report, active smartphone users in Indonesia grew from 27 million people in 2013 to 103 million people in 2018. The following is smartphone usage data for the 2013-2018 period.

Figure 1. Smartphone Users for the 2013-2018 Period

Smartphone users in Indonesia have even surpassed Brazil from 2013 to 2018, following the comparison.

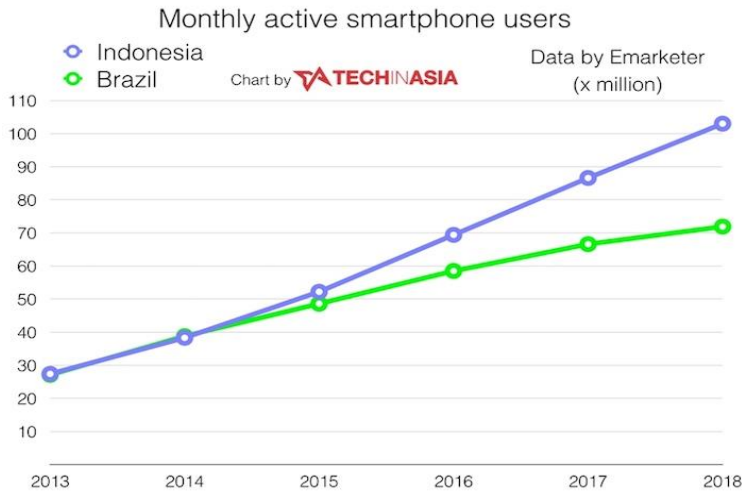

Figure 2. Comparison of Smartphone Users Between Indonesia and Brazil

Based on the graph 2 above, it can be seen that smartphone use in Indonesia starts from 2015-2018 more than smartphone use in Brazil. To achieve maximum service performance, innovation needs to be based on the latest technologies such as the use of internet banking and mobile banking. This mobile-based innovation is very reasonable. A breakthrough innovation that is very realistic and certainly provides convenience for customers in all regions of Indonesia.

One method for evaluating accounting information systems is the Human Organization Technology (HOT) Fit Model. According to Yusof et al. (2006) This model places an important component in the information system, namely Humans, Organizations and Technology. and the relationship between them. Human Components (Human) assess information systems in terms of system usage (system use) at the frequency and extent of functions and information system investigations. System use also relates to who uses it (who use it), the level of users (level of user), knowledge, expectations and attitudes of acceptance or rejecting the system. This component also evaluates the system from aspects of user satisfaction. User satisfaction is the overall evaluation of user experience in using information systems and the potential impact of information systems. User satisfaction can be associated with the perception of usefulness and user attitudes towards information systems that are influenced by personal characteristics.

Researchers chose to use HOT Fit because researchers assessed the HOT Fit method to be more comprehensive than other information systems analysis methods. This opinion arose after researchers compared and reviewed HOT Fit components,

namely human, organization, and technology.

The aim of this study; first, assessing the use of information technology in improving the quality of reporting and expanding the reach of financial services; second, the practice of utilizing accounting information systems for Islamic microfinance institutions in Indonesia; third, evaluating the implementation of the Islamic microfinance information system in Indonesia.

2. Literature Review

2.1 Islamic Microfinance Institutions

The popular Islamic microfinance institutions in Indonesia include the Islamic People's Financing Bank (BPRS) and the Baitul Maal Waat Tamwil (BMT). The number of BPRS and BMT has experienced significant growth every year. The idea of microfinance was pioneered by Dr. Muhamad Yunus, founder of Bangladesh's Grameen Bank and recipient of the Nobel Peace Prize in 2006. Microfinance is a financing model aimed at helping disadvantaged communities to become economically independent and self-employed. Economically disadvantaged people will get financing in running a business. On the other hand, microfinance can be considered as an alternative solution to social problems for disadvantaged people (Abdul Rahman, 2013).

The microfinance model can be replicated in any country because it has a high degree of flexibility, but the application process needs to be adjusted by considering socio-economic and cultural characteristics (Segrado, 2005). In Indonesia, this initiative has been started since the early 90s through BMT. Poverty alleviation and social sustainability can be successfully achieved through the application of Islamic (Islamic law) and is the best solution through the establishment of Islamic financial systems because Islamic socio-economic goals include social justice, and economic growth, efficiency and stability will be achieved through Islamic finance (Md Saad and Abdul Razak, 2013). From the evidence obtained, Islamic microfinance institutions have provided a system of support to the poor by upholding ethical, moral and social values to promote equality and justice for people's prosperity (Alhuda CIBE, 2013). Thus, Islamic microfinance is seen as a better financing tool compared to conventional systems. Until now Islamic microfinance institutions are increasingly popular as providers of Islamic financial products and services (Said, et. Al, 2012).

2.2 Accounting Information Systems

Accounting information systems (AIS) were developed with the aim of supporting management or stewardship functions, in order to optimize the regulation and use of resources to achieve organizational goals (Hall, 2009). SIA is a subsystem of management information systems that provide information on accounting, financial, and other information obtained from routine processing of accounting transactions (Rama and Jones, 2008). SIA is a system that collects, records, stores and processes data, which then produces information in making decisions (Sarosa, 2009).

Rama and Jones (2008) and Mahatmyo (2014) explain that the use of accounting information systems is intended as, 1) Creating external reports, namely special reports to meet the information needs of investors, creditors, government institutions, and others who follow the standards of Financial Accounting Standards Board (FASB), Securities and Exchange Commission (SEC), and Internal Revenue Service (IRS), and other regulators. The form and content of the report is relatively fixed, so that existing SIAs can produce reports faster and easier. 2) Supporting routine activities during operations throughout the cycle of the organization concerned, such as receiving orders, sending goods and services, making invoices, and collecting cash to customers. 3) Supporting organizational decision making in order to plan new strategies or new products. 4) Support planning and control, to reveal long-term trends and relationship patterns of data obtained. 5) Implement internal controls, namely to protect organizational assets from loss or corruption, and to maintain the accuracy of financial data. 6) Fulfill obligations related to corporate responsibility, such as payment of taxes, and preparation of financial statements, especially for companies that go public. 7) Helping to manage the company's business activities as a whole. SIA as a result of technological development, in various companies is very important, so that accounting procedures must move to more sophisticated methods. This aims to make the decision-making process and asset management more effective and efficient.

2.3 Human Organization Technology (HOT) Fit Model

Yusof et al. (2006) provides a new framework that can be used to evaluate information systems called Human Organization-Technology (HOT) Fit Models. This model places important components in the information system, namely Humans, Organizations and Technology. and the relationship between them.

Human components (Human) assess information systems in terms of system usage (system use) at the frequency and extent of functions and information system investigations. System use also relates to who uses it (who use it), the level of users (level of user), knowledge, expectations and attitudes of acceptance or rejecting the system. This component also evaluates the system from aspects of user satisfaction. User satisfaction is the overall evaluation of user experience in using information systems and the potential impact of information systems. User satisfaction can be associated with

the perception of usefulness and user attitudes towards information systems that are influenced by personal characteristics.

The organizational component assesses the system from the organizational structure and organizational aspects. The organizational structure consists of types, culture, politics, hierarchy, planning and controlling systems, strategy, management and communication. Leadership, support from top management and staff support are important parts of measuring system success. Whereas the organizational environment consists of funding sources, government, politics, competition, inter-organizational relations and communication.

The technology component consists of system quality, information quality and service quality. The quality of the system in information systems in Islamic microfinance institutions concerns the interrelation of features in the system including system performance and user interfaces. Ease of use, ease of learning, response time, usefulness, availability, flexibility, and securities are variables or factors that can be assessed from the quality of the system. Quality information focuses on information generated by information systems. Criteria that can be used to assess the quality of information include completeness, accuracy, timeliness, availability, relevance, consistency, and data entry. While service quality focuses on the overall support received by system service providers or technology. Service quality can be assessed with speed of response, assurance can be used, and follow-up services.

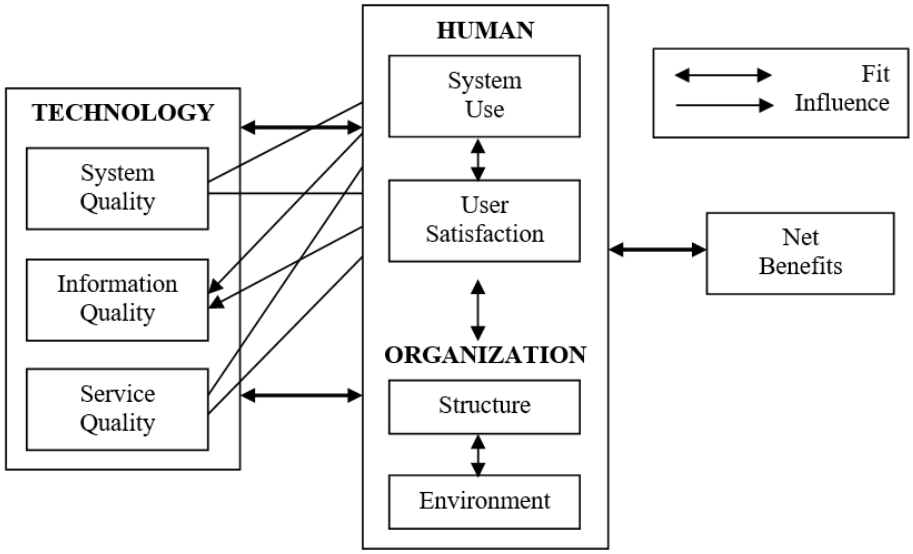

Figure 3. Human -Organization -Technology (HOT) Fit Model

Source: Yusof,et.al (2006)

3. Methodology

The method used in this study is a survey method using a quantitative approach. The data collection technique uses questionnaire media (Questionnaire), which are a number of questions in writing using the Likert scale as a quantitative measure for the judgment of accountants. The population in this study is accounting staff who work in Islamic microfinance institutions. The number of research samples is 100 accountants of Islamic microfinance institutions in Indonesia. Research respondents were asked to fill out a questionnaire consisting of 30 questions related to knowledge about accounting information systems. The data analysis method used was descriptive statistics which were assisted by SPSS 21.0 for Windows software.

4. Data and Analysis

4.1 Utilization of Accounting Information Systems in Islamic Microfinance Institutions

To find out the use of information technology in accounting information systems, the respondents were asked to provide answers to the types of services used.

Table 1. Use of Accounting Information Systems

No	Use of Accounting Information Systems	Yes	No
1	Purchase	90	10
2	Accounts receivable	91	9
3	Cash Transactions	92	8
4	Booking	93	7
5	Debt	77	23
6	Salary	88	12

Based on table 1 above shows that most respondents use information technology to make online purchases, record accounts receivable, cash, debt, receive orders from customers and to record payroll systems. Based on the results in table 1, it can be concluded that respondents are familiar with the use of information technology in accounting.

Furthermore, respondents were asked to assess the extent of the impact of the use of accounting information systems in the company. The results can be seen in the following table 2.

Table 2. Impact of Using Accounting Information Systems

No	Impact of Using Accounting Information Systems	Strongly Agree	Agree	Disagree
1	The poor financial performance of the company is caused by the use of an inappropriate accounting information system	75	18	7
2	Poor network information systems lead to reduced profits	93	6	1
3	Lack of staff expertise in utilizing accounting information systems	82	16	2
4	All business operational activities have a good database system	94	5	1
5	The computer security system is very good	86	11	3

Based on table 2 above, it can be seen that the utilization of an inaccurate accounting information system can lead to poor company performance, which can reduce corporate profits. One of the causes of poor corporate performance is the lack of staff expertise in utilizing accounting information systems. Even though all business operational activities have a good database system. With the information system, computer security support is getting better too. The majority of respondents agree that the use of accounting information systems will have a good impact on the company's financial performance.

4.2 Perception of Online Banking (m-banking)

The mobile banking facility makes it easy for customers to make transactions without having to be blocked by distance and time. Islamic microfinance institutions need to ensure the confidentiality of customer data to avoid the possibility of misuse of customer accounts. The mobile banking facility has a fairly strict security system through verification of the customer's identity before being able to use m-banking services.

Users can access the facility for 24 hours without having to depend on the internet, therefore m-banking is considered more popular than internet banking. The fact that the number of smartphones in Indonesia reaches 100 million causes this service to be very easy and interesting to use.

On the other hand, Islamic microfinance institutions are required to make adequate efforts to test the authenticity of identity and authority of Islamic microfinance institutions to customers who make transactions from mobile banking. In mobile banking, testing a transaction must also be proven authentic and guaranteed that transactions carried out by the customer cannot be denied, so that every transaction made can be accounted for.

It is also known that with the increasing number of smartphone users which means increasing the likelihood of the population using m-banking, the number of poor people in Indonesia is decreasing. Following is the development of the number of smartphone users and the rate of decline in poverty in Indonesia.

Table 3. Number of Poor Population in Indonesia 2013-2018 (in million)

No	Year	Smartphone Users	Poor People
1	2013	27,4	28,17
2	2014	38,3	28,28
3	2015	52,2	28,59
4	2016	69,4	28,01
5	2017	86,6	27,77
6	2018	103	25,95

Source: processed from several sources

From table 3 above, it is known that the number of poor people in Indonesia has gradually declined along with the increase in the number of smartphone users in the past five years. Due to the limitations of the research time, researchers cannot know for certain whether smartphone users use the m-banking application or not. However, researchers have a strong assumption that smartphones have a role in increasing the economy of the population, which in turn can reduce the number of poor people in a country. This is because smartphone users can use m-banking, internet banking and other online-based transactions.

4.3 Evaluation of the Application of Accounting Information Systems by Islamic Microfinance Institutions

The application of accounting information systems is given to employees in the management of Islamic microfinance institutions, it is necessary to assess their performance to determine the feasibility of applying information systems based on the user's perspective. Evaluation is carried out by referring to three main aspects, namely system quality, information quality and service quality. Evaluation on the quality of the system is divided into four aspects, namely, the ease of use of system features, response time, usefulness, and securities. The evaluation results are described as follows.

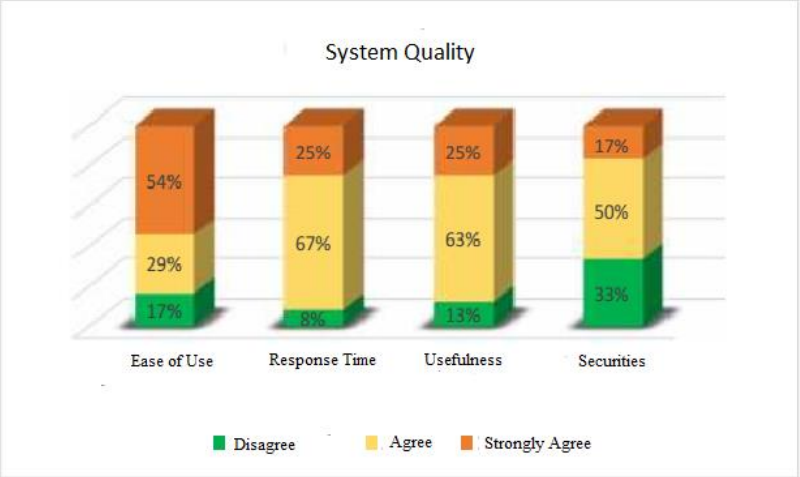

Figure 4. Evaluation of System Quality

Based on Figure 4 above, the ease of use aspect of the accounting information system is easy to use, and can be accessed by all management, especially by the leaders of Islamic microfinance institutions in real time. This is evidenced by the dominance of the opinions of respondents as much as 54 percent stated strongly agree that the accounting information system is easy to use.

The response time aspect of the accounting information system according to respondents was considered fast, this was evidenced by the dominance of respondents as much as 67 percent agreeing that the response time in accounting information systems runs quickly, although it depends on server or computer performance, but overall it runs smoothly.

Perceptions of the features of the accounting information system (usefulness) according to respondents are considered complete and the placement of various menus is considered to be in accordance with what is expected, this is evidenced by the dominance of respondents' opinions as much as 63 percent stated that the accounting information system features are complete and easy to use.

On the securities aspect, many Islamic microfinance institutions already have a high security system, this is evidenced by the dominance of the opinions of respondents as much as 50 percent stated that the security of accounting

information systems is good. But in the aspect of securities there are still 30 percent of opinions stating that the security of accounting information systems is still poor. Of course this must get serious attention from the Islamic microfinance institutions.

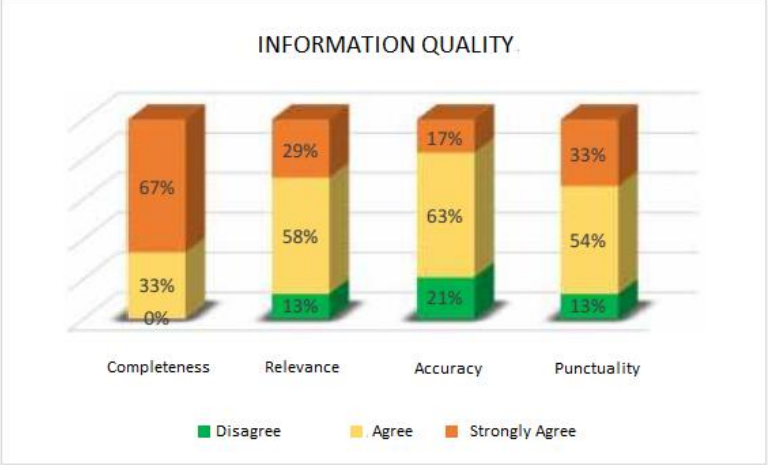

Figure 5. Evaluation of Information Quality

Based on Figure 5 above, it is known that the completeness aspect was dominated by respondents' opinions as much as 67 percent who stated strongly agree that the completeness of the accounting information system was in accordance with the needs. The relevance aspect is dominated by the opinions of respondents as much as 58 percent who agree that the accounting information system is in accordance with the format of the report on the overall activities of the Islamic microfinance institutions. The accuracy of the accounting information system output is considered to be well proven by the dominance of the opinions of respondents as much as 63 percent agreed, so that with the accounting information system the accuracy of each calculation is higher. The timeliness of accounting information systems in producing output has been in line with expectations of respondents with opinion domination as much as 54 percent stated agree, because accounting information systems in real time produce information according to internal and external needs.

Figure 6. Evaluation of Service Quality

Based on figure 6 above, the response speed of sharia microfinance institutions is considered good, this is evidenced by the dominance of the opinions of respondents as much as 67 percent stated strongly agree. In the guarantee work aspect, respondents believed that all mobile banking features could work well, with evidence of dominance of respondents' answers as much as 63 percent agreeing strongly. In the follow-up aspect, all respondents actively perform maintenance if there are customers who find an error system or other disturbances, this is evidenced by the dominance of the opinions of respondents as much as 58 percent who agree.

5. Conclusion

Mobile banking is an appropriate mechanism to improve the quality of reporting at Islamic microfinance institutions in

Indonesia. In addition, Mobile banking makes the services of Islamic microfinance institutions accessible to the poor in remote areas. Islamic microfinance institutions have proven to be a powerful tool for fighting poverty in Indonesia.

The practice of using mobile banking in Islamic microfinance institutions in Indonesia is seen from the quality of the system, the quality of information, and the quality of services that are classified as good. Although the accounting information system is running well, it also has the risk of a criminal act of burglary the system through cyber crime. As many as 33 percent of respondents stated that there are several Islamic microfinance institutions in Indonesia that do not yet have a high security system. Therefore the online banking accounting information system service model needs to be followed by a high-standard security system to provide security to customers.

The results of this study are in accordance with the results of research conducted by Muslimin, et al (2017) which states that the model evaluation using perceived user technology organization fit variables for evaluating the success of information system has been conducted. The proposed model with quantitative research with case studies of information systems in organizations.

The application of accounting information systems is one of the right solutions to improve the services of Islamic microfinance institutions in Indonesia. Overall, the application of accounting information systems to Islamic microfinance institutions in Indonesia can have a positive effect on improving the services of Islamic microfinance institutions both individually accountants and organizations. Nevertheless the Islamic microfinance institutions need to adjust to technological developments, especially those that support the operations of Islamic microfinance institutions. The growing development of accounting information system information technology plus the willingness of high Islamic microfinance institutions to implement it, is expected to have a more positive impact on the performance of Islamic microfinance institutions in Indonesia.

The results of this study can be used as reference or evaluation material for Islamic microfinance institutions about the importance of accounting information systems, especially mobile banking services. This is because there are still very many Islamic microfinance institutions that do not yet have mobile banking services.

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