THE INFLUENCE OF INFORMATION SYSTEMS AND KNOWLEDGE ON THE IMPLEMENTATION EFFECTIVENESS OF LIVIN' BY MANDIRI APPLICATION

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ABSTRACT

This study aimed to analyze the effect of information systems and user knowledge on the implementation effectiveness of Livin' by Mandiri application. The research population is Bank Mandiri KCP Semarang MT Haryono customers who have used Livin' by Mandiri as many as 466,856 customers. The number of samples used was 100 people who were taken using simple random sampling. The data collected were analyzed using multiple linear regression. The results showed that the information system and knowledge had a positive and significant effect on the implementation effectiveness of Livin's by Mandiri application. The results of the study concluded that customer knowledge about the application system has a more dominant influence on the implementation effectiveness compared to knowledge. According to this result, service providers of Livin by Mandiri application should update their information systems, provide good complaint services, and educate consumers through social media channels.

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INTRODUCTION

Technological developments that are happening now, have grown rapidly compared to before (Gelista, 2021). The most rapid technological development now is in the banking technology sector. The emergence of various types of banking applications such as OVO, BNI mobile, DANA and Livin's by Mandiri is a form of technological advancement in the banking sector that has an impact on the business sector as a vital sector in economic life. Managing technology that supports today's modern business processes is a big challenge for business managers and business practitioners (Prihanto & Yuniati, 2021).

A survey conducted by the Association of Indonesian Internet Service Providers from 2021 to 2022 shows the number of people connected to the internet in Indonesia as many as 210,026,769 people out of a total population of 272,682,600 people (APJII, 2022). Based on survey data on internet content that is frequently accessed, it shows that the use of banking applications is only 1.37%, which is the lowest order than others, such as the use of social media reaching 89.15%, online chatting 73.86% and online games 14.23%, From these data it can be seen that the effectiveness of the application of mobile banking has not been fully understood by

the public at large, therefore we need a banking information system that is easy to understand and understand by the public so that it will increase the use of the application.

Masruri (2014) argues that effectiveness is how well the work is done, the extent to which people produce outputs as expected. This means that if a job can be completed with planning, both in time, cost and quality, it can be said to be effective. Tika (2008) provides a definition of effectiveness as the level of organizational achievement in the short and long term. The point is that effectiveness is a measurement standard to describe the level of success of an organization in achieving predetermined targets. Prihanto & Yuniati, (2021) stated that the effectiveness of the implementation of mobile banking can be influenced by Information Systems, and knowledge. The findings of Abdulhadi and Ahmad (2021) reveal that the need for mobile banking continues to increase to expand the effectiveness and efficiency of banking services and reduce related operating costs.

The system is a collection/group of any sub-systems/parts/components, both physical and non-physical that are interconnected with each other and work together in harmony to achieve a certain goal (Susanto, 2013). Then the system functions to receive input (input), process input, and produce output (output). Inputs and outputs come from outside the system, or come from the environment the system is in. Accounting information systems are components that are interconnected and work together to collect, process, store information to support decision making, coordination, control, and to provide an overview of activities within the company.

Knowledge is the result of human sensing, or the result of someone knowing about objects through their senses such as eyes, nose, ears, and so on (Notoatmodjo, 2017). Knowledge or cognitive is a very important domain for the formation of one's actions. From experience and research, it turns out that behavior based on knowledge will be more lasting than behavior that is not based on knowledge. There are six levels of knowledge, namely, know, understand, application, analysis, synthesis and evaluation.

Bank Mandiri is one of the banks in Indonesia that has provided real time online services in transactions through its mobile application, namely Livin by Mandiri. The usefulness of the Livin by Mandiri mobile application is that customers can get better services, for example, simplifying payment transactions for electricity, water, and installments as well as transferring money to other users. The Livin by Mandiri application by customers can be downloaded via smartphones, Android, IOS and Windows phones. Livin by Mandiri application users based on Google Playstore data (2022) were recorded at 10 million users. However, there are still problems related to using the Livin by Mandiri application based on user reviews (Table 1).

Based on Table 1, it can be seen that Livin' by Mandiri users feel that the application has not been effective in implementing an information system that is easy to understand and understand by users, it can be seen from this review that users mention that the payment process and features are too difficult, system errors often occur, making it difficult for users. for new transactions and virtual account payments are difficult. Seeing these reviews, it is necessary to update the information system by considering the level of public knowledge so that it will be more effective in implementing the Livin' by Mandiri application.

The purpose of this study was to analyze the effect of information and knowledge systems on the effectiveness of the application of the Livin' by Mandiri application (Study on Customers of Bank Mandiri KCP MT Haryono Semarang). The study is expected to provide learning media to deepen understanding of theories, concepts, and practices, especially those related to the issue of the effectiveness of the application of accounting information systems.

Table 1. Livin' by Mandiri User Reviews Data

No	Review	User
1	The payment process and features are too difficult	@Kartini P. Sari
2	Making it difficult for users to make new transactions	@ Andy 42
3	System errors often occur	@ M. Wildhan Aryoga
4	Virtual account payments are difficult	@cholis bontot

Source: Google Playstore, 2022

LITERATURE REVIEW
Implementation Effectiveness

Bungkaes (2013) argues that effectiveness is the relationship between output and goals. In terms of effectiveness is a measure of how far the level of output, policies and procedures of the organization to achieve the goals set. Effectiveness comes from the root word effective which means there is an effect, namely the effect, consequently, the impression is: efficacious, efficacious and effective; and the use of methods/methods, facilities/tools in carrying out activities so as to achieve optimal results. The level of effectiveness can be measured by comparing the plans that have been determined with the real results that have been realized. However, if the efforts or results of the work and actions taken are not appropriate so that the goals are not achieved or the expected goals, then it is said to be ineffective. Arini et al (2018) mention indicators of effectiveness, namely productivity, work adaptability, job satisfaction, profitability, and search for resources.

Information Systems

The system is a collection/group of any sub-systems/parts/components, both physical and non-physical that are interconnected with each other and work together in harmony to achieve a certain goal (Susanto, 2013). Then the system functions to receive input (input), process input, and produce output (output). Inputs and outputs come from outside the system, or come from the environment the system is in. Accounting information systems are components that are interconnected and work together to collect, process, store information to support decision making, coordination, control, and to provide an overview of activities within the company.

The goals of information systems consist of usability, economy, reliability, subscription service, simplicity, and flexibility (Linus, 2022). Usability means that the system must produce information that is accurate, timely, and relevant for decision making by management and operating personnel within the organization. Economics means that all component parts of the system including reports, controls, and machines must contribute a value of benefit at least as much as the required cost. Reliability is The system output must have a high degree of accuracy and the system itself must be able to operate effectively even when human components are absent or when machine components are temporarily inoperative. Subscription service means that the system must provide good or friendly service to customers. So that the system can be of interest to its customers. Simplicity means that the system must be simple enough so that it is structured and its operations can be easily understood and the procedures are easy to follow. And flexibility, namely the system must be flexible enough to handle the changes that occur, its importance is quite reasonable in the conditions in which the system operates or in the requirements required by the organization.

Knowledge

Knowledge is a result of curiosity through sensory processes, especially in the eyes and ears of certain objects. Knowledge is an important domain in the formation of open behavior (Saffana, 2021). Knowledge is the result of human sensing or the result of knowing someone about an object through their five senses. The five human senses for sensing objects are sight, hearing, smell, taste and touch. At the time of sensing to produce knowledge is influenced by the intensity of attention and perception of the object. The indicator used by Sari & Ak (2019) to measure knowledge is Awareness, where the person is aware in the sense of knowing in advance the stimulus or object. Interest, stimulus or object where the attitude of the subject has begun to arise. Evaluation of whether or not the stimulus is good for him. Trial, the attitude in which the subject begins to try to do something in accordance with what is desired by the stimulus. Adaption, where the subject has behaved in a new way according to his knowledge, awareness and attitude towards the stimulus.

Relationship of Information Systems with Implementation Effectiveness

Accounting information systems are components that are interconnected and work together to collect, process, store information to support decision making, coordination, control, and to provide an overview of activities within the company. According to the findings of Bokhari (2005), there is a significant positive relationship between system use and user satisfaction. Research by Prihanto & Yuniati, (2021) states that Information Systems have a significant positive effect on the effectiveness of the application of mobile banking, this means that a good information system can increase the effectiveness of application implementation. The research hypothesis,

H_1: Information systems have a positive and significant effect on the implementation effectiveness of Livin' by Mandiri application.

Relationship between Knowledge and Implementation Effectiveness

Knowledge or cognitive is a very important domain for the formation of one's actions. From experience and research, it turns out that behavior based on knowledge will be more lasting than behavior that is not based on knowledge. Masruri (2014) states that effectiveness is how well the work is done, the extent to which people produce outputs as expected. According to Ammar and Ahmed (2021), mobile banking (m-banking) technology is the latest innovation in providing convenient and efficient financial services. M-banking promises to increase efficiency and reach of financial services. The higher a person's knowledge, the application will run effectively. The second hypothesis of this research is:

H_2: Knowledge have a positive and significant effect on the implementation effectiveness of Livin' by Mandiri application.

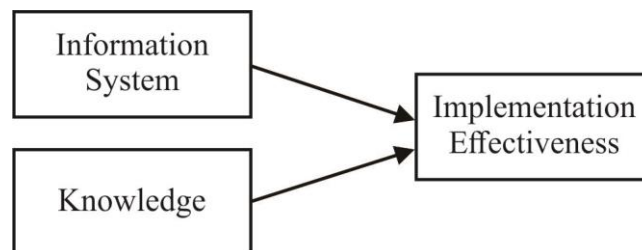Schematically, this research model can be depicted in Figure 1.

Figure 1. Model Research Framework

RESEARCH METHODS

Population and Sample

The population in this study were all Mandiri bank customers who used the Livin By Mandiri application and made an account at KCP Semarang MT Haryono, amounting to 466,856 customers. The sampling technique used in this research is simple random sampling. Simple random sampling technique is a method of taking samples randomly without regard to the existing strata in the population (Sugiyono, 2016) as many as 100 customers. The samples was taked from August toward September 2022.

Measurements and Collecting Data Method

The information system variable is measured by tree indicators, namely system quality, information quality, and informasion use (Petter et al, 2008; Petter et al., 2013). In this study, knowledge is operationalized through indicators, including knowledge identification, knowledge integration, and knowledge use (Nurdin and Yusuf, 2020). An indicator of effectiveness is user satisfaction, individual impact, and organizational impact (Bokhari, 2005).

Sources of data used in this study are primary data and secondary data. Primary data sources are data sources that directly provide data to data collectors (Sugiyono, 2016). The data collection method is carried out using a survey method through a questionnaire filled out by respondents. Secondary data is a data source that does not directly provide data to data collectors (Sugiyono, 2016). The secondary data used in this study are literature studies, journals, which can be retrieved through the on-line system (internet), and data from Bank Mandiri in the form of data on the number of customers.

Data Analysis

The data collected were analyzed using multiple linear regression. All calculation used IBM SPSS version 22.

RESULTS AND DISCUSSION

Result

Based on the validity test in Table 2, it is known that r-count of all variables> r-table, then all indicator items are valid. Based on Table 3, it can be seen that the variables between information systems, knowledge, and effectiveness obtained>0.60 so that all statement items are reliable (Ghozali, 2016).

To test the hypothesis, a multiple linear regression analysis was performed using the Enter method, the results are shown in Table 4. Based on the regression results, it is known that the value of the regression coefficient for information and knowledge systems is positive, meaning that if the information system and knowledge variables are increased, then the effectiveness of implementing the Livin By Mandiri application will also increase.

Furthermore, the results of the normality test show that the Kolmogorov - Smirnov value is 0.772 and the p-value significant level (asymp.sig) is 0.590 which means more than 0.05, then the data is normally distributed and deserves to be tested for parametric testing (multiple linear regression). The test results show that there is no multicollinearity because all the resulting VIF numbers have values below 10 and tolerance values above 0.10. The test results show that the

significant value of the Information System, and Knowledge more than 0.05 thus there is no heteroscedasticity problem in this regression model. Therefore, the equations in this study deserve to be tested.

The test results show that the adjusted R^2 obtained is 0.711 that the information system and knowledge variables contribute 71.1% of the effect on the implementation effectiveness of the Livin By Mandiri application. Other results obtained F-count of 122.834 and a significance value of 0.000 so it can be concluded that the regression model is declared feasible.

H test results an _ the effect of the information system on the effectiveness of the obtained t value of 5.145 and p -value of 0.000 < 0.05. This value explains that the first hypothesis is acceptable. Other results show the effect of knowledge on effectiveness, the t-value is 11.032 and the p-value is 0.000<0.05. This means that the second hypothesis can be accepted.

Table 2. Validity Test

Variable	Indicator	r-Count	r-Table	Information
Effectiveness	Y.1.1	0.829	0.1966	Valid
	Y.1.2	0.811	0.1966	Valid
	Y.1.3	0.882	0.1966	Valid
Information Systems	X.1.1	0.765	0.1966	Valid
	X.1.2	0.840	0.1966	Valid
	X.1.3	0.849	0.1966	Valid
Knowledge	X.2.1	0.911	0.1966	Valid
	X.2.2	0.805	0.1966	Valid
	X.2.3	0.815	0.1966	Valid

Table 3. Reliability Test

Variable	Cronbach's Alpha	Information
Effectiveness	0.79	Reliable
Information Systems	0.75	Reliable
Knowledge	0.80	Reliable

Table 4. Multiple Linear Regression Analysis Results

	Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Information Systems	0.309	0.060	0.310	5.145	0.000*	0.806	1.240
	Knowledge	0.643	0.058	0.664	11.032	0.000*	0.806	1.240
Dependent Variable: Effectiveness; Adjusted R-square: 0.711; F : 122. 834*								

* sig<0.05

Discussion

The results of the study found that the information system has a positive effect on the effectiveness of application implementation. These results are consistent with the findings of previous studies Dwitrayani et al. (2017), which states that the sophistication of information technology has a positive effect on the effectiveness of a bank's information system. In addition, the study of Santoso et al, (2021) proves information systems as a significant predictor of effectiveness. These results are in accordance with the results obtained that the information system that is applied will always improve the effectiveness of implementing the application comprehensively. The finding inline with Anouze and Alamro (2020) revealed that several major factors, including perceived ease of use, perceived usefulness, security and reasonable price, stand out as the barriers to intention to use e-banking services in Jordan.

Based on the results of this study, it is known that knowledge has a positive effect on the effectiveness of the application. Knowledge identified as the domain of customer behavior formation is a predictor of the effectiveness of the application of information systems, in this case the Livin by Mandiri mobile application. This finding is consistent with what was obtained by Suharini (2011) that the effectiveness of a banking application system is determined by customer knowledge of the ease of application of the system. It supports the findings of Ghazali et al (2018) which found that trust, perceived ease of use, perceived usefulness, and attitude influence adoption of mobile technology.

CONCLUTION AND IMPLICATION

Based on the results and analysis in this study, the authors conclude that information and knowledge systems have a positive effect on the effectiveness of the Livin By Mandiri application. According to the findings of this study, customer knowledge about the application has a stronger effect on the effectiveness of the application compared to the application system.

Although this study has tried to comply with scientific principles and was carried out with caution, it certainly has some limitations. This limitation is due to the fact that this study is limited to exploring the effectiveness of applications in one bank with a limited scope. Based on these limitations, recommendations for future studies should be able to be replicated to other banking industries such as state banks and private banks. Thus the results can be generalized to the entire population of the national banking industry.

This study demonstrated the effect of information and knowledge systems on the effectiveness of mobile banking. For this reason, Livin By Mandiri service providers should always update the information system, provide good complaint services, and educate consumers through social media channels and the company website.

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