Information System of "Laku Pandai": Achieving Financial Inclusion-Financial Technology SMEs Sector in Banyuwangi

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Indonesian Financial Inclusion level have increased each year. It is still slow compared to the level of Financial Inclusion in other ASEAN countries. Indonesia index rates in 2014 was 36%, while the index of Thailand was 78%, Malaysia 81%, and Singapore 96%. Several factors are slow to increase such as the distance of people's homes with financial services and the difficulty of public access to financial products. OJK through policies issued in Laku Pandai (Financial Technology – based) have been enacted to tackle the problem. Banyuwangi is the largest district in East Java, with 1,6 million residents in 2017, and 269.267 SMEs in 2015. The amount is deemed to represent the impact of Laku Pandai in East Java. Based on research data obtained through interviews, observations, and documentation, descriptive qualitative methods found problems accessing credit undertaken by SMEs through Laku Pandai. Therefore we need to redesign the credit system of Laku Pandai. The purpose of this research is to develop the credit system of Laku Pandai in order to increase effectiveness and efficiency in achieving financial inclusion, especially in the SME sector. Results from the study show the necessary capital to redesign the process credit system which can provide improve benefits to banks that organise Laku Pandai.

Key words: *Laku Pandai, Financial Technology, Financial Inclusion, Designing Credit System.*

Introduction

Accounting Information System (AIS) is a set of processes that transform financial transactions, and non-financial transactions directly affect the processing of financial

transactions into information that can help decision makers to improve transaction ability (Hall, 2011). Financial Technology is the implementation of financial services to bring lenders together in order to enter into a loan agreement in rupiah directly through an electronic system using an internet network (OJK, 2016). The use of financial technology is available as a method of achieving financial inclusion targets by targeting people who can not not yet afford financial products.

This study focuses on redesigning the credit system in Laku Pandai by maximising the role of agents from Laku Pandai as program managers. Several previous studies examined key words related to this research, but there is still no specific discussion about the credit system in the Laku Pandai. One of them, research conducted by K. Peterson Ozili in 2017 under the title, "impact of digital finance financial on Inclusion and stability" focused on digital finance through the development of fintech with the conclusion that fintech had an overall positive effect on financial inclusion in the economy going forward (Ozili, 2018).

Whereas in Indonesia, Laku Pandai has been carried out by several banks under the supervision of OJK. In this study, researchers used BRILink agents as Laku Pandai agents from BRI and MSME as a case study. The selection of BRILink agents is a case study because only BRI provides credit products in the Laku Pandai program. While the selection of Banyuwangi as a place to carry out research is because Banyuwangi has an area of 5,782.50km² and in 2017 it consisted of 25 sub-districts, 28 villages, and 189 villages which made Banyuwangi the largest district in East Java.

Table 1: Population of Banyuwangi (2015 – 2017)

Information	2015	2016	2017
Total population	1.594.811	1.599.811	1.692.324
Woman	798.158	803.835	841.899
Man	801.065	795.976	850.425

Source: BPS of Banyuwangi Regency and Departement of Population and Civil Registration 2017

Based on table 1, the population in Banyuwangi in 2017 was 1,692,324 people with a level of equity that was still low. The total area and population above can represent the impact of the Laku Pandai program in East Java.

Officeless Financial Services in the Framework of Inclusive Finance (Laku Pandai)

Based on the Laku Pandai pocketbook that was released by OJK in 2015, Laku Pandai is a program to provide banking services and/or other financial services through collaboration with other parties (bank agents) and supported by the use of information technology facilities

(OJK, 2015). The purpose of the Laku Pandai is to support efforts for economic growth and equitable development among regions, especially in villages and in eastern Indonesia, by providing access for small communities to be able to conduct financial transactions, especially banking wherever the community is located, and provide financial products that are simple, easy to understand, and in accordance with the needs of the people who have not been able to reach financial services at this time (OJK, 2016).

One product that can be provided by an organiser Laku Pandai bank is a savings account with the characteristics of a *Basic Savings Account* (BSA), which is savings for Indonesian citizens who are free of administration fees and certain transaction costs. By having a BSA savings account, the public can save their money in the bank without worrying that their savings balance will be reduced due to account administration fees, and even receive savings interest and are guaranteed by the Deposit Insurance Corporation. In addition, the community can also make transactions without having to go to the location of the bank office but simply visit the location of the Laku Pandai agent closer to where they live.

The following are the products available on the Laku Pandai:
1. Savings with the characteristics of a Basic Saving Account (BSA)
2. Credit / Financing to Micro Customers
3. Other Financial Products such as Micro Insurance

While what is meant by BRILink is based on the information found on www.bri.co.id/tentang-brilink is a form of expansion of BRI services where BRI cooperates with BRI customers who here act as agents who can serve banking transactions for the public in real-time online.

Research Method

This study uses descriptive qualitative methods. This approach can be used when describing a social phenomenon. Descriptive research presents a detailed description specifically of a situation, social settings, or relationships (Neuman, 2014).

The scope

Limitation of the scope of research is needed to prevent the widening of the discussion of the topic or focus raised. The following are the limitations of this study:
1. The research was carried out on BRILink agents, namely the designation for agents of the BRI Laku Pandai program in Banyuwangi
2. The research was conducted at BRI to find out the Laku Pandai program normatively

3. The research was carried out on MSMEs in one area (village / kelurahan) with BRILink agents, to find out how their financing system had been

4. The research also focused on the operational processes carried out by BRILink agents related to MSMEs

Data's Type and the Source

This study uses two types of data:

1. Primary data

Obtained directly from field research in the form of interviews and observations with several components that play an important role in the Laku Pandai program.

2. Secondary data

Secondary data consists of several related data that already exist, namely documents or regulatory archives relating to the implementation of Laku Pandai programs in achieving financial inclusion.

The Data Collection Procedure

This study uses 4 procedures (Creswell, 2014):

1. Qualitative observation

Conducting direct observation of the object of the research both involved directly or indirectly in various activities carried out

2. Qualitative interviews

The procedure for collecting data is done by conveying a series of questions to the informant. The interview model used in this study is unstructured interviews

3. Qualitative documents

The documents used in this study are articles, policies and government regulations, supporting journals from previous research to strengthen information in the current research

4. Qualitative audio and visual materials

In this section, the researcher uses documents derived from website information sourced from research objects

The Result

System Evaluation

This study uses two models to analyse the acceptance of the system from the agency and customer side. The model used is the technology acceptance model (TAM) and End-user computing satisfaction (EUCS).

1. Tam

The following is the evaluation results using the TAM method (Davis, 2013):

Table 2: Evaluation of the *TAM* Model System

Construction	Results
Perceived Usefulness	Based on the results of interviews, all speakers felt the benefits of the existence of Smart Practice. So from the side of *Perceived Usefulness it* can be concluded that the system that has been running is effective.
Perceived Ease to Use	All the speakers said that the system is quite easy to use, and makes it easier for them to do their daily needs. So that from the *Perceived Ease to Use side it* was said *to* be quite effective.

2. EUCS

The following is the evaluation results using the EUCS method (Doll, 2013)

Table 3: Evaluation of the *EUCS* Model System

Construction	Results
Content	All informants expressed satisfaction with the content in the Laku Pandai program. That way, from the *Content* side, it is considered good.
Accuracy	Of all the transactions that have been executed, they are right on target. So that on the *Accuracy* side, gets positive or good comments.
Format	Although there were slight differences of opinion, the researchers concluded that on the *Format* side it was considered quite good.
Ease to Use	On the *Ease to Use* side , researchers use the same data as the model , so that on the *Ease to Use* side it is considered good enough.
Timeliness	While on the *Timeliness* side, there are significant differences. From the results of interviews with informants, it can be concluded that the *Timeliness* side is considered to be poor and needs further development.

If it is concluded from the two evaluation results above, it can be summarised in the following table.

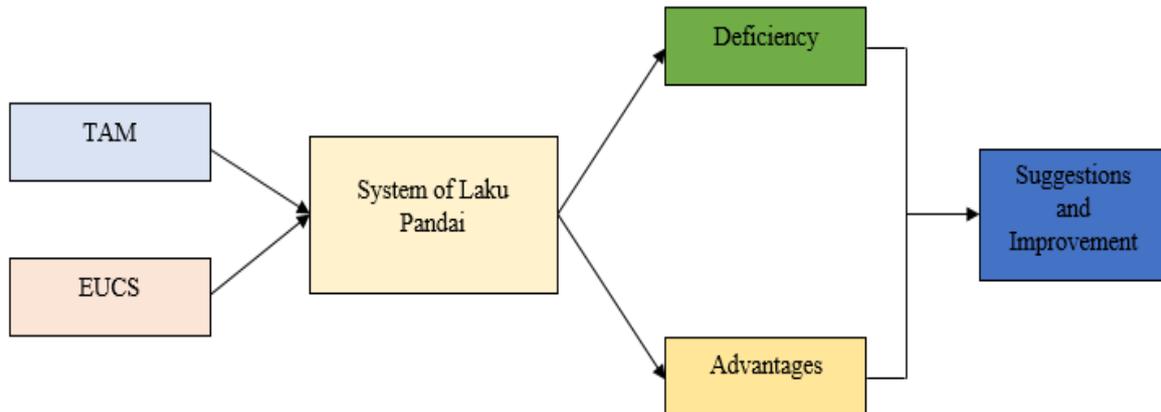**Figure 1.** System Analysis of Smart Action using *TAM* and EUCS Theory

**Table 4:** Analysis of Credit Submission Systems with a System Evaluation Model

Deficiency	Advantages	Suggestions and Improvements
The lack of good credit submission systems available to BRILink agents	Facilitate everyday transaction access	Integrate credit application systems with BRILink agents
Weak network		Strengthening network services at the organising bank
The format is a little complicated in the process of applying for credit	In the other process, it was considered quite good	Make an online credit submission system to facilitate credit applications
	Easy application of existing systems	
	The accuracy of the system is good	

System Design

System design is the advice given by researchers to complement existing systems and to achieve an efficient system. System improvement is carried out based on the results of the analysis carried out by the researcher, along with the suggestions expressed by the debtor and the Laku Pandai agent. System improvements provided by researchers are described in *Context Diagrams, Data Flow Diagrams (DFD), Entity Relationship Diagrams (ERD), and Business Processes* (Romney and Steinbart, 2018).

Context Diagram

Figure 2. Context diagram of Laku Pandai
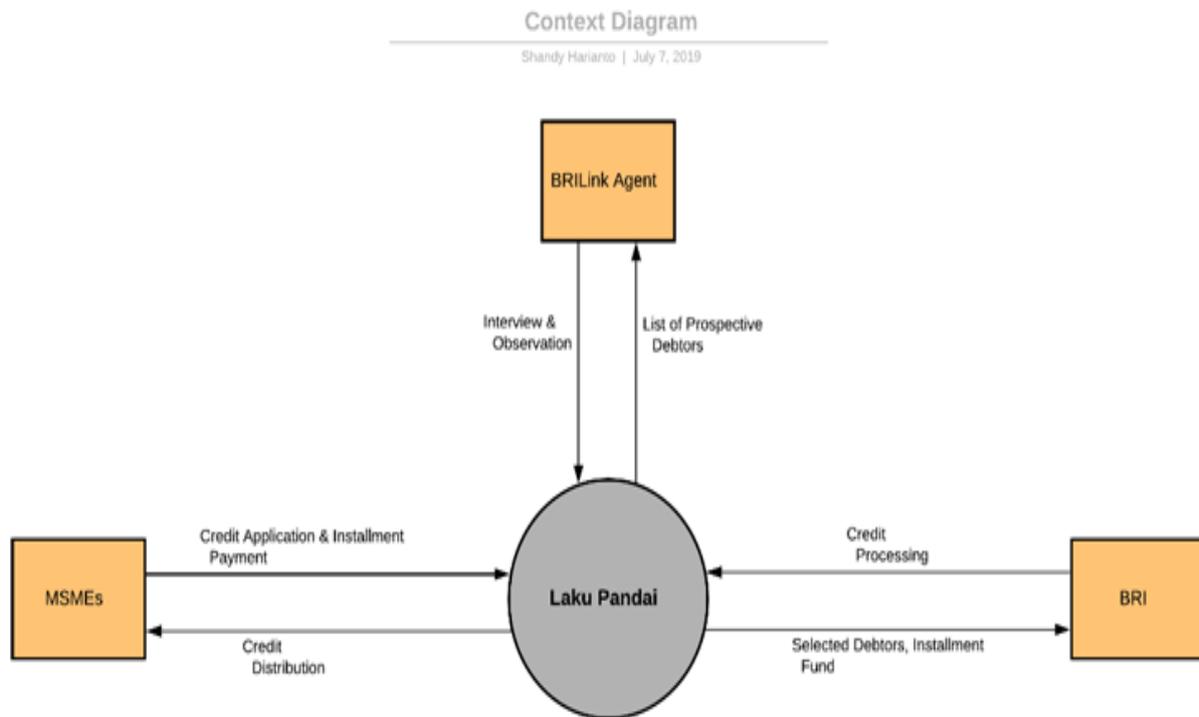
In the Laku Pandai system, the credit application cycle is repeated. The process starts from MSMEs who propose credit to BRI as the Laku Pandai program implementing bank. The submission was first made through a BRILink agent which was then forwarded to BRI. Optimising, the functions of these agents is needed to increase the efficiency and effectiveness of the program. From the previous one who only channelled funds, the role was now added to conducting interviews and observations to prospective debtors.

Data Flow Diagram (DFD) Level 1

Figure 3. Data Flow Diagram of Laku Pandai
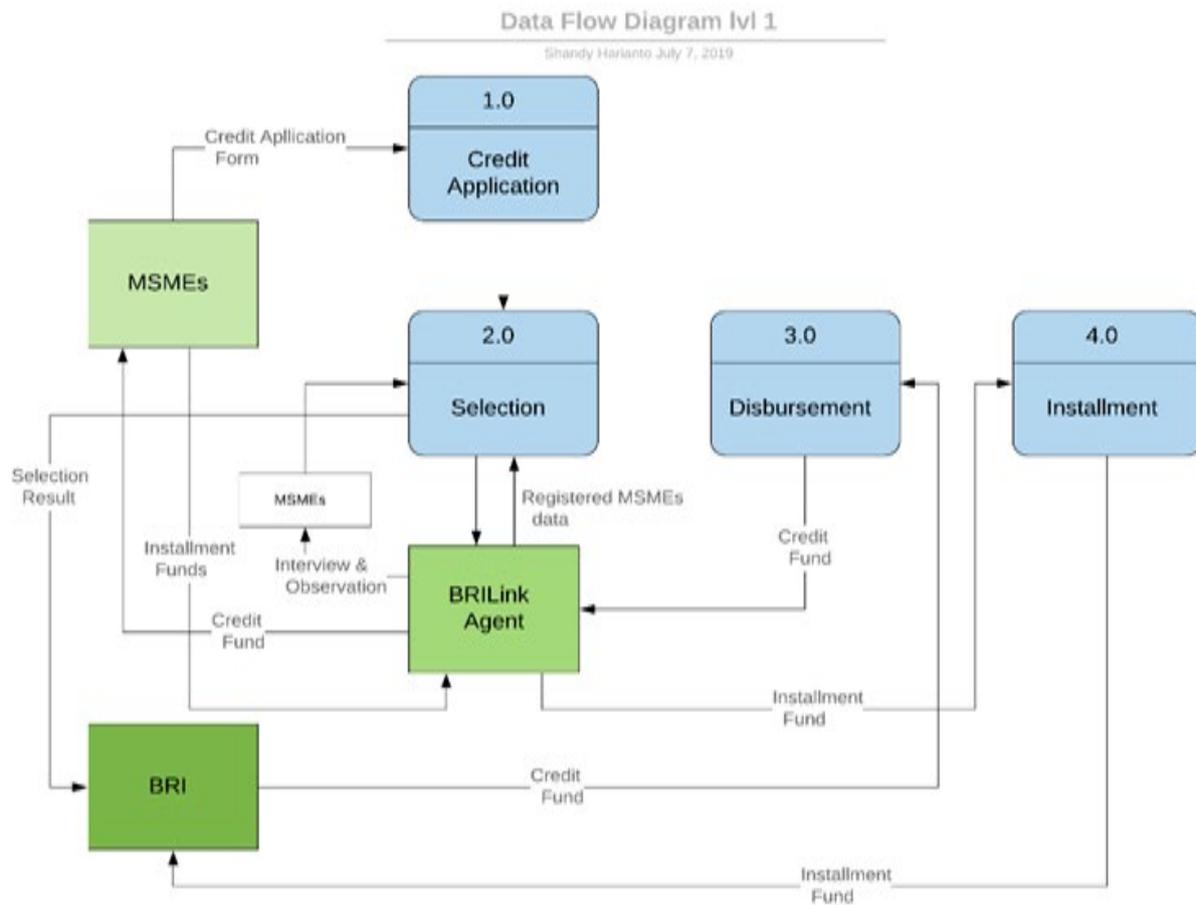
On Level 1 Data Flow Diagrams (DFD) presents all the processes that exist in the Laku Pandai credit system. There are four processes in the system, including the submission of credit, selection, disbursement, instalments.

Entity Relationship Diagram

**Figure 4.** Entity Relationship Diagram of Laku Pandai
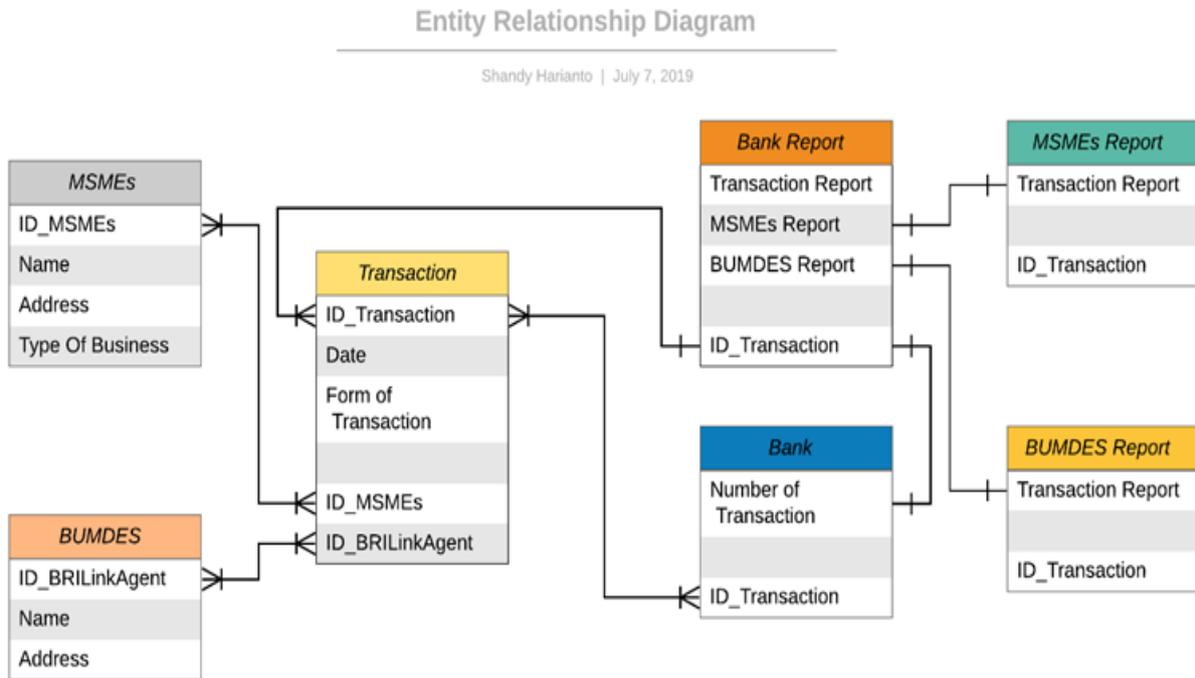
The picture above shows that in each transaction requires a database. The database is an MSME as a customer and BUMDes as BRILink agent. Each database is given each ID to distinguish from the same data. Every transaction that occurs is also given an ID, in order to distinguish transactions that are running on the system.

Business Process of Laku Pandai

All processes and activities depicted at each level of Data Flow Diagrams (DFD) can be summarised in the business process diagram of the Laku Pandai.

Figure 5. Business Process of Laku Pandai

Business Process of Laku Pandai
Shandy Harianto | July 7, 2019
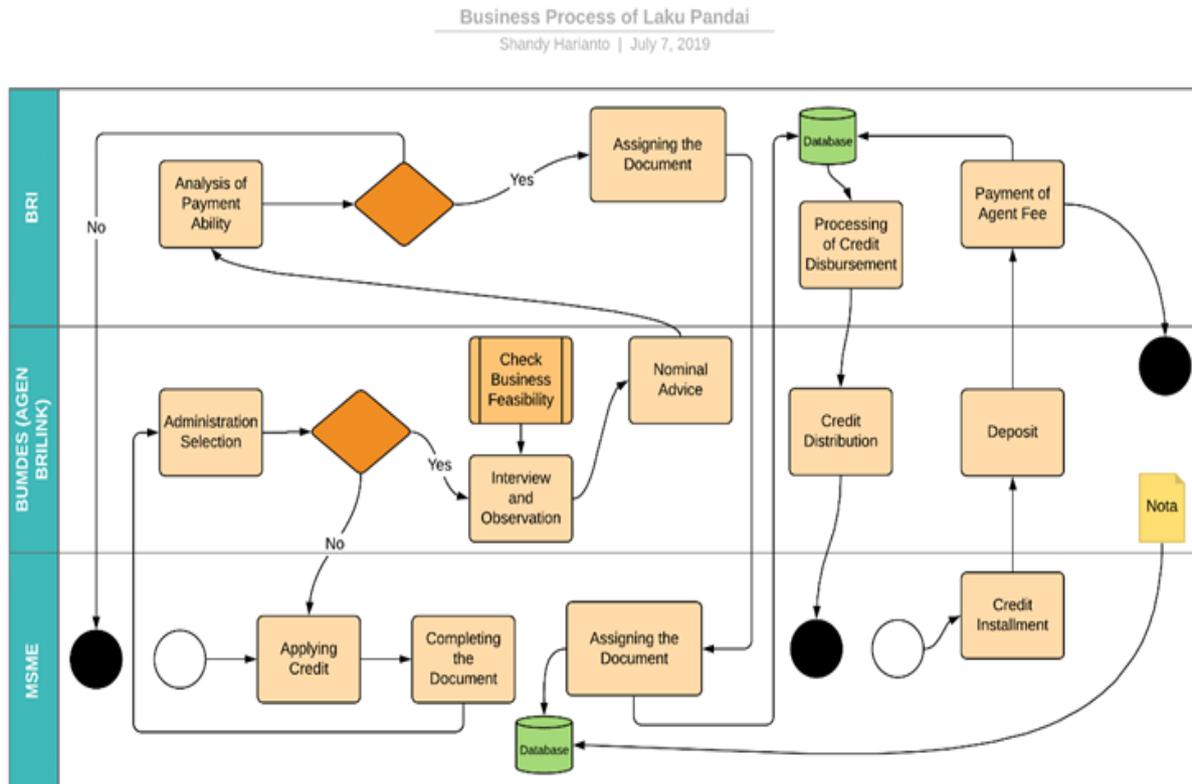
1. The MSMEs propose financing to BRI as the organising bank by filling out credit application forms both online and offline.
2. After completing the form, the MSMEs party is required to complete the documentation requirements specified by the organising bank.
3. Forms and document attachments are submitted to BUMDes as BRILink Agent for administrative selection processes. If the document is declared not to have passed the administrative selection, then it is returned to the MSMEs to carry out the process from the beginning again.
4. When documents are declared to have passed the administrative selection, observations and interviews were conducted with the Chair of the MSMEs which had previously carried out a business feasibility check through data on the proposed MSMEs that had been owned by the BUMDes.
5. The results of the business feasibility check through interviews and observations to MSMEs were used to provide suggestions for nominal lending to BRI.
6. Nominal suggestions were given by BUMDes as BRILink Agents were then re-analyzed by the bank to determine the ability to pay on credit through data included by BUMDes. If the results of the analysis show that the MSMEs does not pass, the credit will not be given, but when the MSMEs is passed, it will continue with the document signing process.

7. Documents that have been signed are then archived by MSMEs and BRI for processing the disbursement of funds.
8. Credit funds are channelled by BRI through BUMDes as BRILink agents to MSMEs.
9. In the instalment process, MSMEs are funding funds to BUMDes to be recorded and provide notes to MSMEs. The collected funds are then deposited with BRI.
10. After receiving instalment funds from MSMEs through BUMDes, BRI will provide a *fee* for services to BUMDes.

Conclusions and Recommendations

Conclusion

Based on evaluations that have been made on the Laku Pandai system, especially the credit system, the results are quite satisfactory. This is indicated by the high value of satisfaction from debtors and agents. Overall, the system currently running is quite good, with less optimal operation in the credit system. The improvements made are redesigning the credit system carried out by debtors, especially MSMEs, to increase their productivity. Optimising, the role of Laku Pandai agents, is one of the focuses of implementing this redesign. Through the implementation of the redesign proposal above, it is expected that the main objective of implementing the Laku Pandai system is inclusive finance that can be achieved through the provision of credit to MSMEs that also support their operational activities and improve the welfare of BUMDES members as Laku Pandai agents.

Recommendations

1. It is necessary to improve the credit system in the Laku Pandai by monitoring credit access to attract potential customers.
2. It is necessary to train agents on the application of the Laku Pandai system that has undergone changes so that agents can also provide explanations to prospective customers.
3. Future research is expected to be an evaluation of the Laku Pandai credit system by focusing on integrating the database of prospective debtors owned by BUMDes as agents with the database of host banks to accelerate the flow of transactions.

REFERENCES

Creswell, J. W. (2014). *Research design*, 4th ed. SAGE Publications Asia - Pasific Pte. Ltd.

Davis, F. D. (2013). Information technology introduction. MIS Quarterly, Vol. 13, No. 3, pp. 319–340.

Doll, B. W. J. (2013). The measurement of end-user computing satisfaction. MIS Quarterly, Vol. 12, No. 2, pp. 259–274.

Hall, J. A. (2011). *Accounting information systems Seventh Edition*.

Neuman, W. L. (2014). *Social research methods: Qualitative and quantitative approaches*, Seventh 7t. Pearson Education, Inc.

Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. Borsa Istanbul Review, Vol. 18, No. 4, pp. 329-340.

OJK. (2015). Seputar Informasi Mengenai Layanan Keuangan Tanpa Kantor dalam Rangka Keuangan Inklusif (Laku Pandai), *Res. Bank. Oper. Dep. Financ. Serv.*, pp. 1–36.

OJK. (2016). Buku Pedoman Tim Percepatan Akses Keuangan Daerah.

OJK. (2016). Peningkatan Literasi Dan Inklusi Keuangan Di Sektor Jasa Keuangan Bagi Konsumen Dan/Atau Masyarakat, pp. 1–29.

Romney, M. B. and Steinbart, P. J. (2018). *Accounting information systems*, 14th ed. New York: Pearson Education, Inc.