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DIGITAL BRANCH: A BUSINESS PROCESS REENGINEERING IN INDONESIAN BANKING

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Abstract

This research aims to redesign business process from conventional banking service system to digital branch service system. Banking industries in Indonesia are currently experiencing competition caused by swift changes due to technology and the digital economy. The method of the study was a descriptive qualitative method, focusing on conducting observation to Indonesian banking systems which have adopted digital branch service system. This study found that a business process reengineering for the process of opening a digital account is beneficial. In the previous transaction process that has been done conventionally, customers must follow the process of opening an account by coming to every bank office through customer services. Meanwhile, current account opening process can be done through digital branch of the bank. The process of changing digital business branch is shown in IDEF0 model framework. Digital account opening service to customers through digital branch in Indonesia is done using OMNI-Channel technology. Changes in business processes through digital branch conducted in Indonesian banking are a technological innovation in the field of information technology.

Keywords: Business process reengineering, Current account opening, IDEF0 Model framework.

1. Introduction

Changes in the digital economy have brought the world to a business transformation through the industrial revolution which is currently at the stage of 4.0 era (the Internet era), which focuses on employing digital technology to the current practice. In Indonesia, all banking industries adopt digital technology that is currently implemented through digital financial services. This strategy extends the form of banking services to customers through changes from conventional service to digital service through the emergence of digital banking [1]. The biggest digital banking service is mobile banking, followed by internet banking, ATM and digital payment platforms as shown in Fig. 1. The use of 3G and 4G Internet technology along with the increasing use of smart phones and tablets has increased the demand for digital services, particularly for the banking services.

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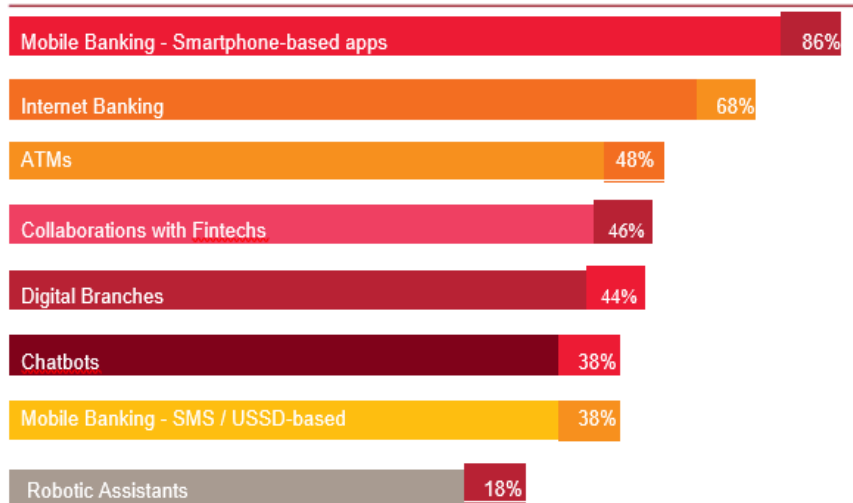
Source: PwC Survey [2], 2018

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Fig. 1. Percentage from the use of digital banking in Indonesia.

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Today's world has already entered the digital economy environment, proven by the facts that the digital economy has been able to increase the revenue growth of an organization. Popper states that "the world's largest bank has taken the first stages to shift onto block chains, the technology presented to the world by the virtual currency bitcoin [3]". In addition, another fact, according to Weill and Woerner, "corporations with 50% or more of their revenues from digital ecosystem achieve 32% higher revenue growth and 27% greater income margin" [4]. This suggests that currently, there is a change in the economic sector by utilizing the internet media that can increase the benefits on the organization through the digital economy. Furthermore, in the era of technology, globalization and rapid change in customer's need, it is essential to realize the importance of change [5]. Business process reengineering is an activity of radical change and rethinking the whole process to achieve overall performance in terms of cost, quality, service, and speed [6]. The change in the economic sector requires Indonesian banks to compete through the implementation of digital branch services [7]. Only seven banks have implemented digital branch in

Indonesia, which are BCA Bank, Mandiri Bank, BNI Bank, BRI Bank, BTN Bank, Commonwealth Bank, and BTPN Bank.

One of the research objectives in digital branch services established by the Financial Services Authority [8] in Indonesia is a digital account opening service. The phenomenon of digital services requires banks in Indonesia to conduct business process reengineering for service process of account opening digitally through digital branch service system. The existence of this system will make it easier for customers to carry out the account opening process. Considering the potential positive impacts of the adoption of digital branch, this study attempts to analyze the changes the local banks in Indonesia has done in adopting business process reengineering in digital banking services.

2.   Literature Review

2.1. Business process reengineering

Business Process Reengineering (BPR) is a series of management activities that break the traditional boundaries and establish reasonable business processes through organizational optimization, employee authorization, customer referrals and the application of information and communications. Business process reengineering breaks traditional labor-sharing systems and emphasizes action for the direction of work and process direction to provide a new kind of management principle for business firms [7]. The implementation of business process remaindering has a small percentage of failure, where 2 out of 35 companies failed to implement business process reengineering; yet companies that fail in running business process reengineering are successful in improving the company revenue [9]. Still, 50%-70% reengineering attempts failed in bringing dramatic changes [10].

Business process reengineering helps organizations in manufacturing and financial services to cope with process efficiency and operational performance. One of the programs to improve the quality of customer services in banking is business process reengineering which banks do. Business process reengineering is becoming a popular concept for organizations today to improve the way they do business with a central focus on the processes that run in organizations [11]. The business process reengineering is an important strategy for the national commercial banks in recent years, which not only promotes the customer satisfaction of the commercial banks, but also raises its operation performance [12].

2.2. OMNI-Channel

A number of banks begin to implement OMNI-Channel technology to provide integrated services in banking products [13]. SAP presents the SAP OMNI-Channel Banking solution. Relying on a single scalable platform and architecture based on open API, SAP OMNI-Channel banking can simplify the process of managing mobile and online applications for retail customers, customers in the form of small businesses as well as commercial enterprises. OMNI-Channel banking's solution brings modular architecture so that the banks can roll out new products and services as an addition, without 'nudging' the existing functions. Its deployment process can be performed on premise or in the cloud [14]. In addition to increasing productivity, availability of Eclipse plugins encourages the growth of partner and financial

technology ecosystems which in turn will further enrich SAP solutions. Furthermore, open architecture that supports business service integration from third parties and partners to create collaborative scenarios and accelerate innovation.

2.3. Framework IDEF0

IDEF0 Framework (Integration Definition Language 0), is a SADT-based (Structure Analysis and Design Technique) system modeling method developed by Ross and SofTech. In its original form, IDEF0 includes a definition language and graphical modeling (syntax and semantics) that describes a comprehensive methodology for model building. IDEF0 (Integration Definition Language 0) is a modeling language that uses images with a comprehensive explanation to explain the development stages or methodology of a system. The system is modeled as a group of functions that are interconnected with one another to form a major function. These functions describe what is done by the system, so anything that control, process, processed, and generated by the system can be known [15].

3. Methodology

Qualitative method was employed through observations conducted to six banks in Indonesia which have conducted a digital branch system. Observations were conducted at BRI Bank, Mandiri Bank, BNI Bank, BTN Bank, BCA Bank, and BTPN Bank. The result of the observation of the digital account opening service system is shown in the IDEF0 framework. The IDEF0 framework for the business process of a digital account opening will be shown in the form of building blocks activity as in Fig. 2. ICOM consists of input (an activity that transforms something), control (something that determines how an activity occurs but is not transformed by it), output (something that is generated by an activity), and mechanism (people, facilities, machines, or others that carry out activities).
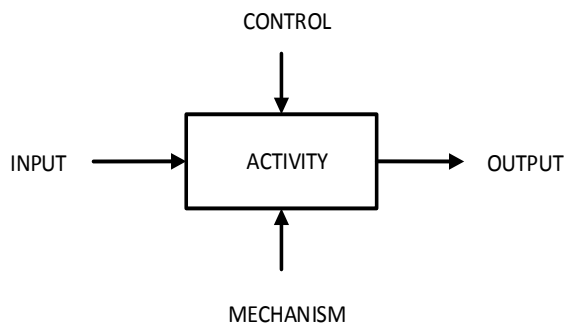
Fig. 2. Building blocks in IDEF0 [15].

IDEF0 refers to a system as a collection of activities that use ICOM (Input-Control-Output-Mechanism). Activity and ICOM is a constituent component of the system that must be identified in the formation of the model [16]. The depiction of the model in IDEF0 is done in a hierarchical manner, from general activities to the details activities. The activity at the highest level is called the Context Page, which contains an activity that shows the entire system as an activity and shows the system interface with its environment. In other words, the model of a system using the method of IDEF0 is a depiction of the activity and ICOM of a system as in Fig. 3.
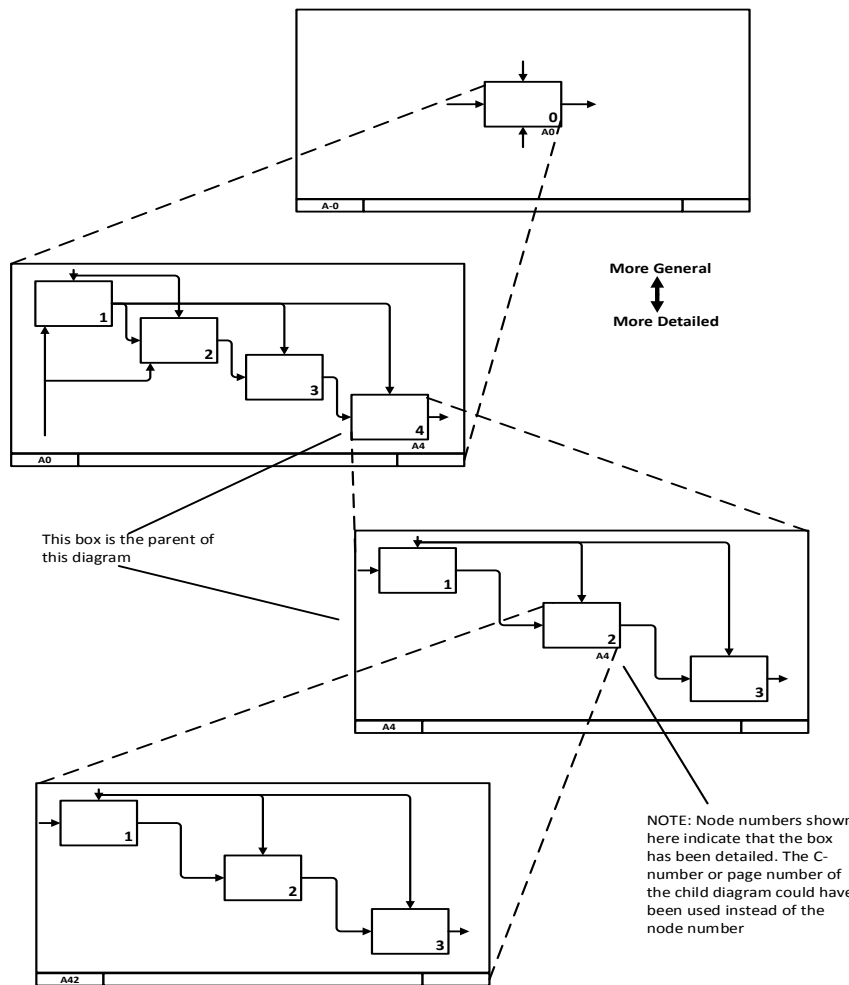
Fig. 3. Decomposition in IDEF0 [15].

Context Diagrams are also commonly called A0 Diagrams or Parent Diagrams. At the next level, Decomposition Page or Child Diagram is created which is further details of the system. Each description in the Decomposition Page is called the A1 diagram, A2 diagram, A3 diagram, and so on. As seen at Fig. 3, each ICOM that appears on a Parent Diagram will be specified on the child diagram. Child Diagram will continue to be formed up to the level of the process in the form of algorithms that work on the activity.

4. Results and Discussion

The sequence of steps of the conventional account opening process is by filling out the registration form manually, the whole process is shown in Fig. 4. The account opening service system is amended through business process reengineering using the IDEF0 framework.
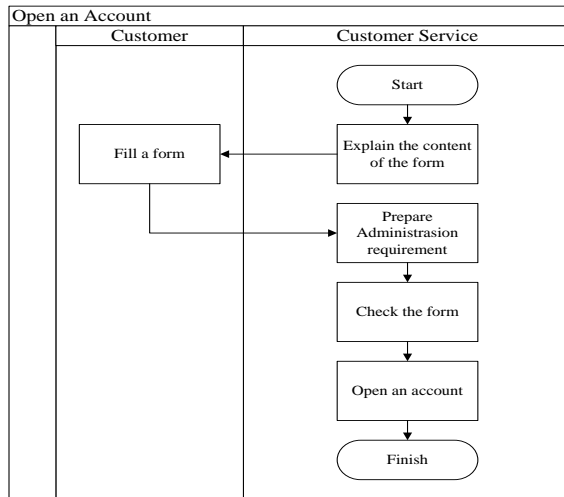
Fig. 4. Flowchart open an account.

4.1. Building blocks of digital branch

According to ICOM, the input of the digital branch is the online form. The control of the digital branch is how to fill the form. The output of the digital branch is the digital account opening, while the mechanism of the digital branch is a digital bank system. The ICOM analysis can be seen in Fig. 5.
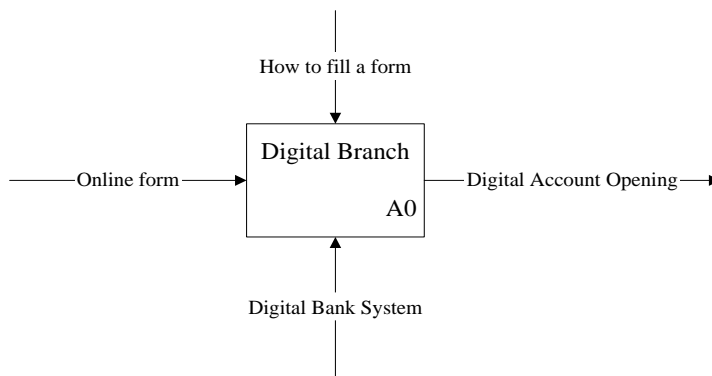

Fig. 5. Building blocks of digital branch.

4.2. Decomposition of digital account opening with frameworks IDEF0

4.2.1. Sub process - A1 digital account opening

The Input of the digital account opening is the online form. The control of the digital account opening is how to fill the form. The output of the digital account opening is the new account and the mechanism of the digital account opening is a digital bank system. The system can be seen in Fig. 6.
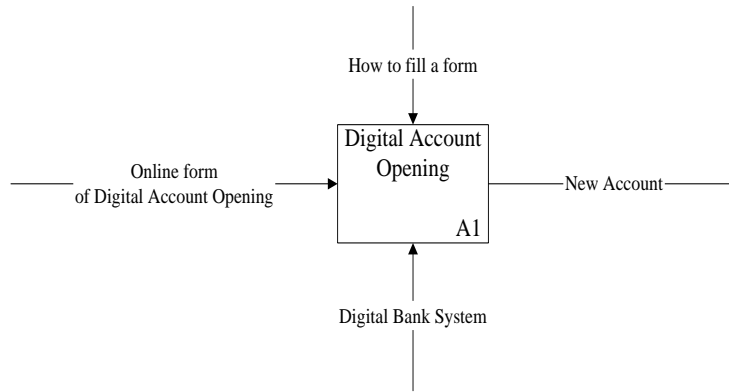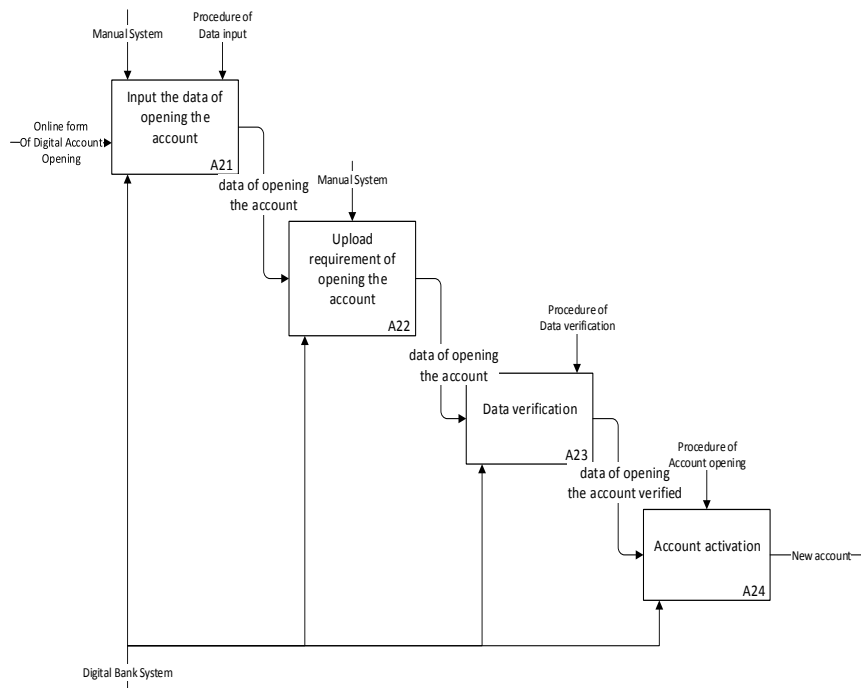
Fig. 6. Sub process - A1 digital account opening.

4.2.2. Sub process – A2 digital account opening

The Input of the digital account opening is the online form. The control of the digital account opening is procedure of data input (full name, alias name, gender, citizenship, id, number, valid until, Birthplace, birthdate, marital status, religion, last education, TAX number, mother's name, address, village, district, postal code, province, phone number and email). The output of the digital account opening is the new account. The mechanism of the digital account opening is a digital bank system. All these sub-processes are also known as child diagrams (Fig. 7).

Fig. 7. Sub process – A2 digital account opening.

A2 sub-process (digital account opening) consists of four sub-processes, namely A21 (data input of account opening), A22 (upload requirements of account opening), A23 (data verification), and A24 (account activation). The input for A21 (data input of account opening) is an account opening online form. The control in A21 process (data input of account opening) is a data input procedure. The output in the A21 process (data input of account opening) is account opening data. The mechanism in A21 process (data input of account opening) is a digital system run by commercial banks. Output in A21 process (data input of account opening) is input to the A22 process (upload requirements of account opening).

In A22 (upload requirements of account opening), the control is a bank manual system. The output is account opening data. The mechanism is a digital system run by commercial banks. The output is input to the A23 process (data verification). Lastly, the control is a data verification procedure.

The output in A23 process (data verification) is verified account opening data (by the bank). The mechanism is a digital system run by commercial banks. Subsequently, the output is input to the A24 process (account activation). The control of the A24 process is the procedure for opening an account. The output on the A24 process is a new account. The mechanism in A24 process is a digital system run by commercial banks.

The developments of digital services branch toward future services such as shown in Fig. 8 are caused by the rapid development of information and communication technology (ICT), the changes of lifestyle in the society in line to the development of information and communication technology (ICT), customer needs for effective, efficient, accessible services wherever and whenever, the current banking industry competition, and the needs of banking operation to be more efficient and integrated [17, 18].
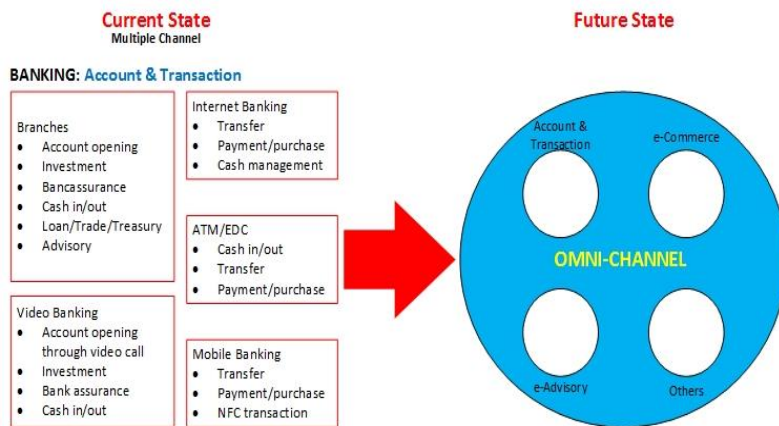

Fig. 8. The development of digital services branch for the future.

The current condition of most banking operational services is digital. Yet, all operations are still carried out separately and limited to the connection between banks. In the future, all banking operational services will be multifunctional [19]. The service is not only for financial services but is connected and integrated with other digital service systems. Consumers will be more practical and will be more satisfied in getting financial services because all activities are mutually integrated.

5. Conclusions

IDEF0 framework is one of the ways of doing business process reengineering on banking in Indonesia through the digital branch for digital account opening service system. The IDEF0 Framework of digital branch is able to decipher the digital process activity for the digital account opening that breaks down into five sub-process activities. The disadvantage from the implementation of the digital branch system in Indonesian banking are the security aspect of the customer identity validation system that should be the same with population data, the lack of socialization of digital services to customers and many customers who have not used digital technology often. However, the advantage that customers get is all activities of digital branch process are done with an online system so that customers no longer have to come to the bank office to perform the process but simply done on the media smartphone or computer media. The significance from the results of this study is the use of the IDEF0 framework model development in companies in services sector. These results support previous research that carried out the implementation of business process reengineering in manufacturing companies. IDEF0 framework model is able to support the implementation of business process reengineering in companies in manufacturing and services.

Acknowledgments

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