

DIFFUSION INNOVATION AT FINANCIAL TECHNOLOGY AND CYBER LAW IN INDONESIA

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ABSTRACT

Technologies come in various way nowadays in finance sector and become a disruption in banking with all the good things to offer. Positive impact can be recognize when taking a look at ATM machine from the operational cost which always consume 16 billion each month. By using the financial technology it can be eliminated. The government runs its role by conducting non-cash transaction campaign in many public sectors.

The second pillar of development which is private sector also conducting the movement by provide the services of fintech, e-commerce, adtech, and big data. One of the private sector that is campaigning is AMARTHA, a financial technology platform that serves as a bank many various of transaction.

This research shows how an inovation happen and diffused in society –in this case AMARTHA’s diffusion inovation; an also the role of law in protecting the consumer from the possible impact of financial technology implementation.

Keywords: AMARTHA, Fintech, Divusion Inovation, Cyber Law

1. INTRODUCTION

The presence of technology inevitably changes many field in life, such as marketing and financing. Financial industry was shocked by the existance of several financial technologies that offer a very innovative service yet they are simple and cheap. This is something that conventional banking can not do. The combination between information technology, marketing, and financing are being work in many countries in the world right now.

When it comes to financial literacy, Indonesia face a very heavy situation because only 60 million of people out of 200 million (the sum of Indonesia population) has bank account. In the context of microfinancing credit, there are 49 million micro bussines who has not access the financial service yet. It creates 900 rupiah trilliun of cracking zone in Indonesia development. Peer to peer lending also below 150 billion (Statistik Simpanan Bank Umum, 2015)

Niki Luhur, the Head of Fintech Indonesia Association, feels very optimistic that financial technology has an important role to solve those financial problem in Indonesia. He said, "Financial technology may help Indonesian people to open the access of financial service, thus the financial inclusion can be happen and give a great impact in Indonesia economic."

In order to obtain the most benefit from the financial technology, the cashless movement should be supported by the law and the law should be able to protect the Indonesian consumers. In 2008, Indonesia has enacted Law no. 11 year of 2008 concerning Information and Electronic Transaction. However, the question remains on whether or not the Indonesian Law and all the associated mechanisms are sufficient to protect the consumers from the massive growing of financial technology innovation.

The purpose of this research is to show the level of acceptance people in Indonesia on adopting the financial technology innovation. This reserach also observe the development of Indonesian electronic transaction law to deal with the possible issues that may emerge form the Indonesian cashless movement.

2. LITERATURE REVIEW

Diffusion Innovation

Rogers defines adoption as a decision to fully and fully utilize an innovation. In this study, adoption means using Amarta as a financial technology in financing its business.¹ Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. It is a special type of communication, in that the messages are concerned with new ideas. Communication is a process in which participants create and share information with one another in order to reach a mutual understanding.²

The innovation-decision process is the process through which an individual (or other decision-making unit) passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to

¹ Rogers, Everet. (1983). *Diffusion of Innovations*. 3rd edition. New York: The Free Press

² Ibid. Page 5

confirmation of this decision. This process consists of a series of actions and choices over time through which an individual or an organization evaluates a new idea and decides whether or not to incorporate the new idea into ongoing practice. This behavior consists essentially of dealing with the uncertainty that is inherently involved in deciding about a *new* alternative to those previously in existence. It is the perceived newness of the innovation, and the uncertainty associated with this newness, that is a distinctive aspect of innovation decision making³

Financial Technology

FinTech products — financial services products developed by non-bank, non-insurance, online companies — offer alternative ways of accessing a variety of services, from money transfers to financial planning. Adoption is relatively high for such a new category – with 15.5% of digitally active consumers using FinTech products. The projected growth is dramatic: the adoption levels could potentially double in 12 months. FinTech adoption peaks above 40% among digitally active users with high incomes — which means that some of the most economically valuable customers for banks and insurers are already FinTech customers. FinTechs as firms that are combining innovative business models and technology to enable, enhance and disrupt financial services. Last year \$12 billion of private capital was invested into FinTechs, helping thousands of new companies form, win customers and scale up their operations. The most promising FinTech companies have a laser-like specific customer proposition — generally one that is poorly served, if at all, by traditional financial services companies — and serve up a seamless and intuitive user experience.⁴

Banks and other financial services companies have watched nervously as more and more FinTechs have brought significant innovations to the market. Some of these more traditional companies have begun to engage with FinTechs through partnerships, incubator programs and outright acquisitions. The EY FinTech Adoption Index attempts to capture the level of FinTech adoption among digitally active consumers. FinTech adopted in Australia 13%, Canada 8,2%, Hong Kong 29,1%, Singapore 14,7%, UK 14,3%, US 16,5%. In each of these market, there are 10 FinTech services which categorized into four broad categories: saving and investment, money transfer and payment, borrowing, and insurance.⁵

³ Ibid. Page 91

⁴ Gulamhuseinwala. Imran. Thomas Bull. Steven Lewis. (2015). *Fintech Is Gaining Traction And Young, High Income Users Are The Early Adopters*. The Journal of Financial Perspective. Winter 2015 FinTech. Page 17

⁵ Ibid

Table 1: Types of FinTech adopters

Saving and Investment	Money transfer and payment	Borrowing	Insurance
1. Peer-to-peer (marketplace) platforms for investments	6. Online foreign exchange	9. Borrowing using peer-to-peer platforms	10. Health premium aggregators or car insurance using telematics intended to lower premium
2. Equity or rewards crowdfunding	7. Overseas remittances		
3. Online investment advice and investment	8. Non-banks to transfer money		
4. Online budgeting and financial planning			
5. Online stockbroking or spread betting			

(Source: Gulamhuseinwala, 2015: 18)

Cyber Law in Indonesia

Law no. 11 of 2008 on Information and Electronic Transactions authorized in Jakarta on 21 April 2008 by the President of the Republic of Indonesia and enacted in the nation's capital on the same date by the Minister of Law and Human Rights in the State Gazette of the Republic of Indonesia Year 2008 Number 58 indicates that the Information and Electronic Transactions have entered the realm of law, whether by state, civil, or criminal administration.

The birth of this law can be listened from *konsideransnya* (the reason for the issuance of this Act) as follows:

First, national development is an ongoing process that must be constantly responsive to the various dynamics that occur in society;

Second, information globalization has placed Indonesia as part of the world's information society, requiring the establishment of arrangements on the management of information and electronic transactions at the national level;

Third, the rapid development and advancement of Information Technology has led to changes in human life activities in various fields that have directly affected the birth of new forms of legal acts;

Fourth, the use and utilization of Information Technology should be continuously developed to maintain, maintain and strengthen national unity and integrity based on the Laws and Regulations for the sake of the national interest;

Fifth, the utilization of Information Technology plays an important role in trade and growth of national economy to realize the welfare of society;

Sixth, the government needs to support the development of Information Technology through legal infrastructure and its arrangement so that the utilization of Information Technology is done safely to prevent its misuse by taking into account the religious and socio-cultural values of Indonesian society.

The advancement of science and technology has driven the development of society towards a more modern life, because the use of technology always influences people's mindset and lifestyle. A technology is basically created to improve the quality of life and facilitate human activities to be more effective and efficient. But it is undeniable that technology also has a negative side, the attitude of dependence, negligence, lack of understanding or deliberate in its use will cause a negative impact, if not balanced with mental attitude and positive action.⁶

The rapid development of the Internet is possible because of the progress achieved in the field of telecommunication technology and computer technology. The development of information technology that combined with media and computers that then gave birth to the internet. The presence of the internet has changed the lives of people from the real (real) to the virtual reality that is more often described as cyber space.⁷ Abuse of advances in information technology through computer systems and Internet networks is then known as cyber crime.⁸

⁶ Widyopramono. 1994. *Kejahatan di Bidang Komputer*. Jakarta: Pustaka Sinar Harapan. Hal 28

⁷ Wahid, Abdul dan Mohammad Labib. 2005. *Kejahatan Mayantara (Cyber Crime)*. Jakarta: PT. Refika Aditama. Hal 103

⁸ Arief, Barda Nawawi. 2006. *Tindak Pidana Mayantara "Perkembangan Kajian Cyber Crime di Indonesia"*. Jakarta: Raja Grafindo Persada. Hal 172

3. METHODOLOGY

Methodology that will be used is qualitative. In depth interview will be used to collect the primary data, then observation and analyze the secondary data will complete the finding.

Finally, the result will tell us how much the disruption happen and contribute to the private sector and government how to do the next step to improve the performance of Amarthas financial technology in Indonesia.

Description and justification of the research methods used. Normally, the methods will be selected from known and proven examples. In special cases the development of a method may be a key part of the research, but then this will have been described in Introduction section and reviewed in first one.

Research Question

There are at least two outcomes from this writing; firstly this paper is expected to draw conclusion on whether or not people in Indonesia adopt the financial technology innovation. Secondly, it aims to observe on the development of Indonesian electronic transaction law in response to the Indonesian cashless movement. Thirdly, this paper will describe why it is necessary to figure out the criminalization of information technology and how the policy in Indonesia handle it.

4. CASE STUDIES

Peer to Peer Lending in Financial Technology by Amarthas

Amarthas is one of the peer-to-peer lending technology companies in Indonesia. The company provides a website that connects investors to find investment opportunities on micro and small business financing in Indonesia. Amarthas was founded by Andi Taufan Garuda Putra in April 2010 as a Micro Finance Institution (LKM) with the legal entity of Amarthas Indonesia Cooperative, the goal is to provide financial access for rural communities not reached by banks in order to expand their business.⁹

Amarthas's business partner is the owner of micro and small businesses in rural areas. In providing financing, Amarthas did not ask for collateral but emphasized the formation of the group. The amount of capital that can be submitted to Amarthas, starting from 500 thousand. In addition to utilizing group financing, Amarthas also implements a system known as joint liability so that when a member of a business partner fails to pay the loan, another member can join the

⁹ Primary Data, Interview Result with Aria Widyanto, VP of Product of Amarthas

joint. To search for Borrower Partners, Amartha conducts a structured selection and education before providing capital.¹⁰

Investors in Amartha make a full registration online. Begin by registering and completing personal data, then transferring funds of 3 million rupiah. Investors can choose their own micro business that they want to fund based on the information provided on the Amartha website, ie business type, loan amount, tenor, and profit sharing. Amartha is also actively developing on proprietary technology this platform will build analytical tools to ensure the borrower or investor has complete information in making decisions and assessing the portfolio.¹¹

Difusion Inovation in Society in Indonesia

Economic progress continues to be greatly influenced by the development and adoption of innovations¹² FinTech refers to innovative financial services or products delivered via new technology. With advancements in technology (such as mobile and internet) coupled with their global widespread adoption, consumer expectations are changing. Many companies or start-ups are working on FinTech-related products and major disruptions in financial services are looming. In the West, we saw developments in decentralized internet protocols for money with cryptocurrencies, which allow for low transaction costs and cheap international transfers.¹³

In Indonesia, Andi Taufan Garuda Putra started a pilot project in Ciseeng District, Bogor District. He started Amartha with his personal money of 10 million rupiah. The financing of Amartha is given in groups of 15 to 25 housewives. By 2015, Amartha is officially transformed into a P2P lending marketplace service. The transformation enables individuals or groups to invest for SMEs seeking loans. At the start of the financing, Amartha gave 500 thousand rupiah per person. The amount will increase annually if the member manages to pay the installment on time, is present every week, and never borne jointly. The joint liability is the collective bargaining for members who fail to pay the installments.¹⁴

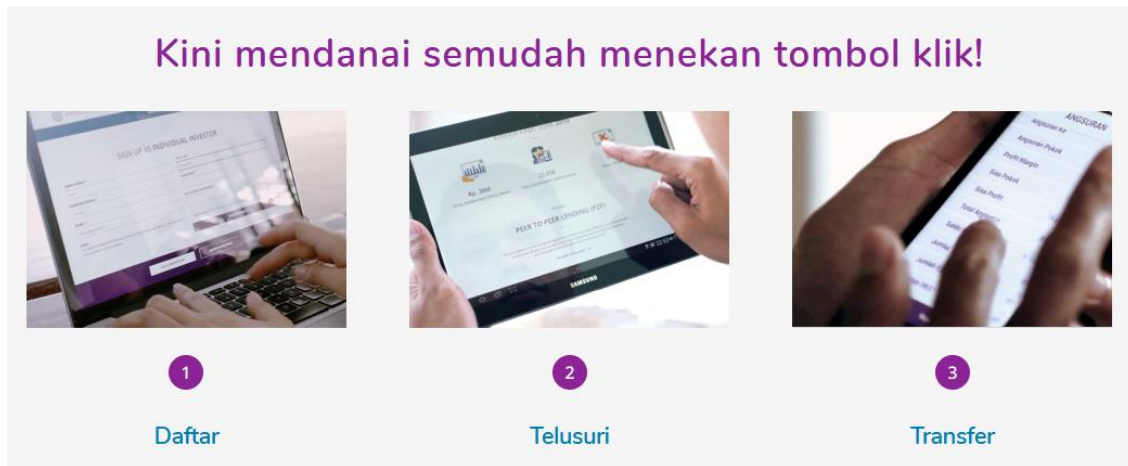
¹⁰ Ibid

¹¹ Ibid

¹² Drury, D.H. and A. Farhooman. *Innovation Diffusion And Implementation*. International Journal Of Innovation Management, Vol 03, No 02. World Scientific

¹³ Chuen , David Lee Kuo. Ernie G.S. Teo. (2015). *Emergence of FinTech and the LASIC principles*. The Journal of Financial Perspective. Winter 2015 FinTech. Page 26

¹⁴ Primary Data, Interview Result with Aria Widyanto, VP of Product of Amartha



(Source: https://Amartha.com/id_ID/cara-kerja/ accessed 07 January 2018 15.13)

Amartha transforms into peer-to-peer lending by 2015, the goal of the transformation is to empower businesses in the informal economy, enabling people to invest directly into SMEs. The transformation enables individuals and groups to invest in micro businesses and SMEs seeking loans. Up to now, 80% of the buys are used for productive sectors. Until 2016, Amarnya claims to have invested up to 45 billion rupiah to more than 25,000 small and micro enterprises in the countryside.¹⁵

Criminalization of Information Technology

Criminalization of information crime and electronic transactions is required to regulate the issue of electronic information and transactions, so that this field is efficient and its deviations can be addressed. The prohibited act is contained in Chapter VII in Articles 27 to Article 37 and the Criminal provisions in Chapter IX Articles 45 to 52 of Law Number 11 of 2008 on Information and Electronic Transactions, with details:

- a) Indecent Material / Illegal Content (Illegal Content). Sanctions: imprisonment of 6 - 12 years and / or a fine between 1M - 2M IDR (Article 45 of the ITE Law)
- b) Illegal Access. Sanctions: A maximum imprisonment of 6 - 8 years and / or a fine between 600 million - 700 million IDR (Article 46 of the ITE Law)
- c) Illegal Interception (Illegal Tapping). Sanctions: A maximum imprisonment of 10 years and / or a maximum fine of 800 million IDR (Article 47 of the ITE Law)
- d) Data Interference. Sanctions: A maximum imprisonment of 8 - 10 years and / or a fine between 1M - 5M IDR (Article 48 of the ITE Law)

¹⁵ Ibid

- e) System Interference. Sanctions: A maximum imprisonment of 10 years and / or a maximum fine of 10M IDR (Article 49 of the ITE Law)
- f) Misuse of devices. Sanctions: A maximum imprisonment of 10 years and / or a maximum fine of 10M IDR (Article 50 of the ITE Law)
- g) Computer related fraud and forgery (computer fraud and forgery). Sanctions: A maximum imprisonment of 12 years and / or a maximum fine of 12M IDR (Article 51 of the ITE Law)

CONCLUSIONS

Amartha is an official P2P lending marketplace service which enables individuals or groups to invest for SMEs seeking loans. Amartha succeeded in becoming part of the diffusion of financial technological innovation, as evidenced by the public reporting of 232 billion rupiahs channeled to empower 78,900 micro entrepreneurs with 99.73% timely payments.



Considering the possibility of cyber crime, Amartha also proved her compliance by registering to run the business under the supervision of OJK

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