

Innovation Communication Of Financial Technology For Productivity Of Creative And Social Enterprises

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Abstract – Innovation communication of financial technology (fintech) has a strategic and crucial role in increasing the productivity of creative and social enterprises. However, there are assumptions that most of creative and social entrepreneurs do not understand and adapt to the fintech. Instead, adequate information intake and digital communication platforms are needed to make it easier for them to meet and attract investors. So, the main problem is how the impact of fintech innovation communication towards productivity of creative and social enterprises. This research used mixed methods, a sequential explanatory approach. The data collected through interview method with survey design and observation to describe how the innovation communication of fintech increases productivity among creative social enterprises. It identifies the factors that influence fintech innovation communication as well as how the fintech innovation communication strategy for the productivity of creative social enterprises through questionnaires involving 135 respondents and selected informants. This research uses Structural Equation Modeling (SEM) analysis to scrutinize the influence of internal and external factors with fintech innovation communication by creative social entrepreneurs. Through the diffusion of innovation theory approach, it seeks to see fintech technological innovations adopted by creative social entrepreneurs and changes in transaction patterns. The results of the study are quantitatively and qualitatively the measurement, show that there is an influence of fintech innovation communication towards creative social enterprises productivity significantly. Compatibility as the facilitating factor that relates to knowledge factor as the decisive factors bringing to adoption the fintech with considering the complexity and relative advantage.

Keywords – innovation communication, financial technology, social creative enterprise, productivity, diffusion of innovation.

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I. INTRODUCTION

Innovation communication of financial technology (fintech) have a strategic and crucial role in increasing the productivity of business entities, especially social and creative enterprises. In line with what Rogers's and scholars' thought who have concerned on innovation and its diffusion of the agriculture, health, education, and others, telling about the significant contribution of innovation diffused and adopted (Rogers, 2003)[1]. In this case, refers to fintech as part of ICT innovation and evolution. Where ICT in the context of fintech is believed to accelerate productivity growth in three ways; Technological progress, the combination of rapid technological advances and large-scale production can drive growth at the national level; Increased use of ICT increases labor productivity in ICT-using industries, several research shown that results (Zhai, 2012)[2]. Fuglie et. al (2020) scrutinized the large potential of technology as the innovation or invention to escalate productivity bringing to poverty reduction agenda[3]. An increase in the ratio of capital to labor increases labor productivity because each unit of labor has more capital to work with to produce output. Increased use of ICT can increase multifactor productivity, if the use of ICT enables the use of enterprises to introduce cost-effective and value-added innovations, multifactor productivity (MFP) in industrial use can increase.

The other hand MFP will be gained depending on the view that ICTs are general purpose of technologies that enable other innovations. Network effects depend on the diffusion of network-connected ICTs among companies that transact with each other and with consumers and government agencies. Innovation based on the use of ICT itself may be related to the volume and type of ICT used, as well as fintech. Fintech can become a national productivity benchmark with benefits depending on the significance of innovation, particularly innovation communication. Technological advances in hardware and software have provided significant and rapid forms of innovation and productivity growth in large-scale ICT producing countries. Additionally, the ability of ICT manufacturers to develop more powerful processors and micro-devices and better software, without a commensurate increase in inputs, has driven multifactor national productivity growth in several countries.

For this reason, communication is essential for fintech innovation to build understanding, stimulate creativity and broaden reach and impact widely. Meanwhile, opportunities for innovation may come from network effects or from the use of ICT by users themselves. Innovation can be in the form of products, processes, and organizational structures. Opportunities for MFPs are consistent with the view that ICTs enable innovation and network effects depend on the diffusion of networked ICTs among companies that transact with each other especially with consumers and government agencies. Besides that, innovation based on the use of ICT itself tends to be related to the volume and type of ICT used. especially financial innovation, which we usually call the innovation communication of financial technology (fintech).

However, there are assumptions that most of creative social entrepreneurs still do not understand and adapt to the fintech. It could because of many factors. On the other hand, ICT use or adequate information intake and digital communication platforms are needed to make it easier for them to meet and attract investors to invest in this sector. Meanwhile the opportunities for innovation communication also might come from network effects or from users' own use of ICTs. So that, looking at the research background portrayed above, the research question is formulated here is how the impact of fintech innovation communication for productivity of creative and social enterprises.

II. LITERATURE REVIEW

Innovation communication, as one of the company's cross-functional dynamic capabilities, is defined as a transactional procedure for transmitting information between an organization and its stakeholders in terms of: introducing ideas, concepts, prototypes, practices, objects, programs/initiatives, models, designs, issues, or a combination thereof, referred to as an innovation cluster, which is considered new by stakeholders; Generate and highlight context issues for innovations or innovation clusters; Present organizational and innovative capabilities; Consider interrelated, time-related and open-ended transactions that are used to enhance corporate value by building new stakeholder schemes or knowledge domains, modifying existing ones, intensifying an organization's reputation for innovation, and improving the management of strategic assets such as information, innovation, and reputation (Pfeffermann et al. 2008).

Rogers (2003) commenced his sketch of innovation idea that has very tight relation to diffusion by referring to communication understanding as another side of diffusion. The innovation even often bring the advantages considered not easy to be adopted by society. Briefly there are four elements of diffusion of innovation as the process, are an innovation, communication channels, time of diffusion, and social system where the diffusion is taking place. He identified that communication exists to reduce uncertain. And some time it aims to achieve goals or desired outcome [1].

Zerfaß et al. (2004; 2019) state that the innovation communication is the systematically planned, executed and evaluated communication of Innovation with the aim to create empathy and trust in the innovation [4]. Moreover, it is meant to position the organization itself as an Innovator. The link between innovation and communication has been established earlier though. In general, communication is regarded as a central success factor for innovations. For these reasons, corporate communication serves as an overarching function that needs to be considered throughout the whole innovation process. This regard, innovation communication of fintech has a strategic and crucial role in increasing the productivity of creative and social enterprises.

This framework is also useful for innovation networks in open innovation systems, as dynamic innovation communication capabilities include transactional procedures of information transmission between multiple organizations in collaborative settings or collaborative networks among stakeholders, leading to higher complexity. Hence innovation communication capabilities from a strategic management perspective and collaborative arrangements, such as research consortia, cross-border joint ventures, market information sharing agreements, co-development contracts, are typically used to provide flexibility and motivation in a risk-taking perspective.

Productivity on the other hand is defined as the ratio of the volume of output to the size of the volume of input use or in other words how much output is obtained from a set of inputs provided (Long & hi Mai Anh, 2017)[5] Meanwhile productivity also is a technical concept which measures the efficiency of the factors of production used higher productivity possible to increase profitability and increase the competitiveness of companies relative to its competitors (Syverson, 2010)[6]. Productivity has been proven to deliver simultaneous improvement in three dimensions: Positive (Engagement), Productivity (Process Efficiency) and Customer Satisfaction (Customer Experience). The important dimensions of productivity are; a. Reduction of waste b. Improved effectiveness. c. Improved time and resources management or management d. Improved standardized of processes (<https://positiveproductivity.eu/>).

However, why do companies differ so much in the ability to change inputs be output? According to production theory productivity basically is dependent on labor, capital and total factor productivity (TFP). Increased labor, capital input or TFP will cause an increase in output. As a result, the difference in Enterprise technology innovation will lead to changes in the ability to transform input to output. While the relationship between innovation and productivity according to Greenhalgh and Rogers (2010) [7], very closely in concept and in practice, where innovation is the application of new ideas to products, processes, or other aspects of company activities that lead to increase added value for the company and also benefits for consumers or other parties from company. There are two types of innovation in terms of productivity: product innovation and process innovation.

Product innovation is the introduction of a new product, type or design of a new product, service or product be a significant qualitative change in an existing product. While innovation processes are developed to introduce new processes, new techniques to create or give good to serve. An important effect of product and process innovation is the reduction of production costs, thus increase the company's competitiveness in the global market. This is understood as an innovation process. Process innovation usually starts from research and development activities such as market surveys, analysis requests, developing new ideas, testing them by appraisal, designing new products. Chudnovsky et. al. (2006)[8] consider a company to be innovative when the company introduce new or radically modified products and/or processes.

Löf and Heshmati (2006)[9] define an innovative company as an investment innovation and innovative positive sales. While Mohnen et al (2006)[13] consider innovation as a production function of innovation. At the micro level, innovation affects productivity companies with direct and indirect impacts.

Chudnovsky et al. (2006)[8] seriously suggest that innovators achieve higher levels of productivity than non-innovators, referring to research on the behavior of Argentine manufacturing firms during 1992-2001. In particular, the estimation results have suggested that labor productivity innovators are 14.1% higher than non-innovators, which is a direct impact significantly to the productivity of the company. The former performed the better of the group finally in terms of labor productivity. This framework presents a useful way to see the position of the innovation over time, after its implementation so far neglected in much of the literature.

III. RESEARCH METHODS

This research uses mixed methods with a sequential explanatory approach. This was done through interview method with survey design and observation to describe the communication innovation of fintech to increase productivity among creative social

enterprises. Identify the factors that influence fintech innovation communication, as well as how the fintech innovation communication strategy for the productivity of creative social enterprises through questionnaires involving with 135 respondents and selected informants. This research uses Structural Equation Modeling (SEM) analysis to find the answer from data [10,12]. The SEM analysis method is used to determine the influence of internal and external factors with fintech innovation communication by creative social entrepreneurs. Through the diffusion of innovation theory approach, it seeks to see fintech technological innovations adopted by creative social entrepreneurs and changes in transaction pattern. While, the qualitative data analysis used to indulge the data research focus that not be provided by quantitative data analysis [11,12,14]. Both data bring us to comprehend the information side-by-side, so that the whole picture will come from the explanation entirely, expectantly.

IV. RESULT AND DISCUSSION

A. Qualitative Approach

1. Creative Entrepreneurs in the field of Organic Agriculture – YUM Organic Farm

Communication is more than just the exchange of information between senders and recipients of messages. More than that communication is seen as an effort to reach each other understanding (mutually understanding) of the processes of social life and others. As Vina said from Noble Enterprises Foundation (YUM): *"Indeed, fintech has been used in operations and YUM's activities for the past two years. Previously, operational use a lot conventional communication by starting to use the internet. This innovation is certainly not for no reason, nothing but to facilitate the interests of society in transactions to meet the needs of each individual"*. The community-based programs like YUM aim to provide a better standard of living for families living in poverty.

2. Creative Social Enterprises in the Field of Daily Needs – Anesh.

Suci Rahayu from Anesh said related to the technology and creative social enterprises: *"The existence of online media gadgets such as smartphones and some digital-based devices, capable of penetrating all aspects of the field of work and also daily activities including supporting devices to meet needs everyday life...even though we haven't used this technology optimally, but we do sure our four resellers use it to support marketing and transaction"*.

According to the context, this modern buying approach is believed to erode the position of the incumbent and breaking down the boundaries of demarcation between industries. Many business people suspect that Industry convergence can be a major force that will affect business them for the next three to five years. After the customer has a sense of trust and confidence in one platform, which will be easy for digital service providers to offer other products and services. It could be said that the use of Fintech more intense and innovative ways can help public administration to modernize its structure overall performance improvement.

3. Rihanji Local Craft

Nurcahya, one of local craft entrepreneur told: *"Fintech has really helped launch our business, through Internet access and online information. Apart from being considered easy, fintech communication is easy using social media is more practical and doesn't take long access it and also easily get information, especially in fulfilling export needs to the Netherlands and Germany"*

Very broad information needs can be reached only through roles online technology. The presence of a technology platform is currently trying to be present in the climate competitive competition to obtain a wider market reach, as well as better market segmentation more diverse so that all forms of needs information can be obtained easily which is simpler and less complicated because of technology simplify everything including providing information about products from manufacturers.

Considering the importance of this technological innovation to be introduced to public and then adopted and used to modify all forms of payment or patterns of buying and selling transactions. Besides that, it is expected to be able to penetrate all layers of society in the pattern of daily transactions. Changes in the pattern of buying and selling transactions using fintech is very important and is expected by producers who produce it, fintech products. So, it is expected that these products can be adopted and adapted by the community so that there is a change in the pattern of buying and selling transactions, producer companies Fintech products often seek promotion through mass communication media such as via advertisements in television mass media, online news media portals, including aggressively promote their products on social media.

Even though this promotion has already been carried out, in this case Jak-Preneur, the Regional Government Program DKI is campaigning for the need to increase cashless transactions, but still many Indonesian citizens, especially creative social entrepreneurs or small businesses and medium-sized enterprises (MSMEs) rely on cash payments. This old habit is making manufacturers of fintech products still have to think hard and try to change patterns transactions with various offers proposed. On the one hand, most of the social enterprises creatives or small and medium enterprises are still hesitant to use fintech in the sense of innovation fintech is still in doubt whether or not it is accepted by creative social enterprises and businesses small and medium. On the other hand, the pattern of fintech transactions among social entrepreneurs creative or small and medium enterprises still have not increased. The urgency of this research is to see how far fintech innovation communication for business productivity of social creative. Additionally, the digital or technology literacy and the age aspect of users seems identified as another barrier that encounter of technological adoption.

B. Quantitative Approach

Validity Test

In checking whether a latent variable meets convergent validity, we can use the Average Variance Extracted (AVE) value. In order for a latent variable to be said to meet convergent validity, the AVE value must be > 0.5 (Bagozzi & Yi, 2012, Wright, Moutinho, Stone, and Bagozzi, 2021) [14]. The AVE value in this study can be seen in the following table:

TABLE 1. Value of Average Variance Extracted (AVE) Latent Variable

Variable	AVE	Result
Innovation communication of fintech	0,535	Valid
Productivity (Reduction of waste)	0,625	Valid
Productivity (Improved effectivity)	0,645	Valid
Productivity (Improved time and management source)	0,641	Valid
Productivity (Improved standardized process)	0,549	Valid

The results in the table show that each variable has an AVE above 0.50. So, it can be concluded that the research latent variable instrument is valid

Reliability Test

The reliability test was carried out by looking at the composite reliability and Cronbach's alpha values of each variable. The construct is declared reliable if the composite reliability value or the Cronbach's alpha value is greater than 0.70. The output results for composite reliability and Cronbach's alpha values can be seen in the following table:

TABLE 2. Result of Reliability of Research Variable

Variable	Cronbach Alpha	Composite Reliability
Innovation communication of fintech	0,922	0,925
Productivity (Reduction of waste)	0,798	0,799
Productivity (improved effectivity)	0,806	0,813
Productivity (Improved time and management source)	0,888	0,799
Productivity (Improved standardized process)	0,780	0,925

From the table above, it can be seen that all Cronbach's alpha values and composite reliability are > 0.7 , meaning that the established variables have been able to measure each latent variable (construct) properly or it can be said that the measurement model is reliable.

Path Coefficient Algoritma PLS

Next, the model is tested using the PLS algorithm available in the SmartPLS v. software. 3.2.8. The following is the path coefficients of the PLS algorithm for this research model. The structural model is created by combining all latent variables. Latent variables are divided into endogenous and exogenous variables. Exogenous variables are variables whose values are not influenced by other variables; therefore, exogenous variables are also called independent variables. The independent variables in the study are also referred to as factors. Endogenous variables are those whose values are influenced by other variables in the model. The following is the path coefficient of the PLS algorithm.

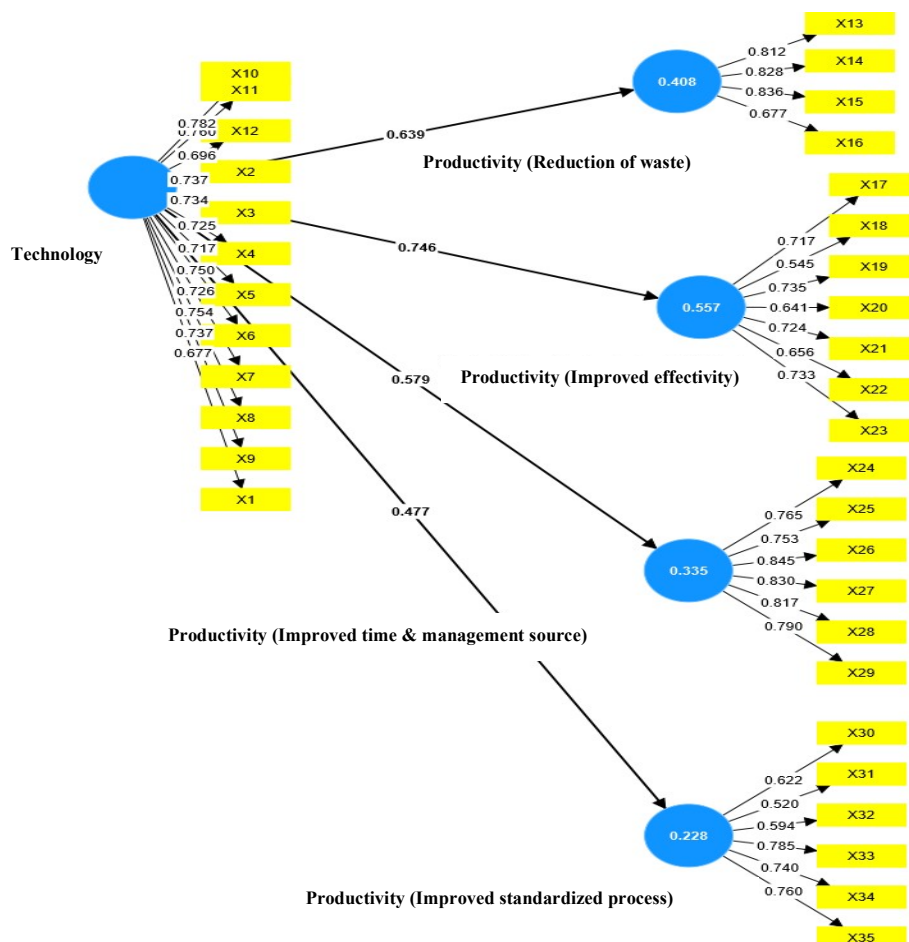


Figure.1 Path Model of Communication of Technology Innovation

Looking at the figure 1, we can find that communication of innovation technology, in this case is fintech, each aspect of productivity has the significant and positive relation with technology. The highest is improving the effectivity of enterprising activity (0,746). Based on the factual observation and logic reasoning, it makes sense that entrepreneur using or adopting technology to support and even escalating the result of the activity or productivity. And the model of path coefficient value in the results of PLS in the figure 1 can be shown on the table 3, and also the summary as follow:

TABLE 3. The path coefficient value of latent variable

Laten variable	Endogen variable Productivity (Reduction of waste)	Productivity (Improved effectivity)	Productivity (Improved time and management source)	Productivity (Improved standardized process)
Innovation communication of fintech	0.639	0.746	0.579	0.477

The path coefficient value in the results of the PLS algorithm in the image above (figure 1) can be summarized in the table 4, below:

TABLE 4. Summary of R2 Analysis Among Variable

	R Square	
Reduction of waste)	0.408	Moderate
Productivity Effectiveness	0.557	Moderate
Improved time and management source	0.335	Moderate
Improved standardized process	0.228	Moderate

Based on the quantitative analysis, the factors that determine the communication of fintech innovation in among creative social enterprise actors is productivity; reduction of waste, improvement effectiveness, improved time and management resources or management, as well as improved standardized processes. Where productivity is generally defined as the ratio of output to volume size a measure of the volume of input usage or in other words how much output is obtained from a given set of inputs (Long & hi Mai Anh, 2017)[5]. Productivity is a concept a technical measure of the efficiency of the factors of production used. More productivity may occur to increase profitability and increase the competitiveness of companies relative to its competitors (Syverson, 2010)[6].

This is proven in the hypothesis test, where fintech innovation communication has an effect on all productivity variables, namely reduction of waste, increased effectiveness, improved time and management resources or management, as well as improved standardized process where all of them can facilitate business actors to develop and give birth to innovative ideas related to their business. The research shows that fintech innovation communication the highest effect on increasing effectiveness. Business actors make good use of fintech innovation communications that can support the development of its creative social enterprise. After learning about fintech or financial technology, as well as its benefits and features, the respondents became interested in knowing all the uses it offers. The increase in effectiveness here is that entrepreneurs can market their products more broadly and increase their activities and activities, especially when they deal with consumers and run their business activities.

This is in accordance with the concepts and theories that explain that financial technology can replace the role of conventional banks in terms of payments. Benefit from innovation fintech in the payment system, among others; provides a market for business actors, becomes a tool assistance in payment, settlement or settlement and clearing, assisting in the implementation of investments more efficient, mitigation of conventional payment systems, helping those who need to save, borrow funds and invest capital. Financial technology brings other benefits to consumers and businesses. There is so many benefits obtained with the existence of financial technology has a good impact in the field economy, especially for small businesses such as MSMEs who need convenience transact with consumers. This result is also in line with what Mohnen et. al. told that innovatively can be viewed in two measurements, innovative performance and ignorance in innovation matters [13]. However, these two big things need to be elaborative explanation to identified clearly and comprehensively to fetch us the big idea, even it will carry to specific and unique indulgent for knowledge and practice stretching the advancing science of this.

V. CONCLUSION

Innovation communication of fintech among creative social enterprises is described as more than just the exchange of information between the sender and receiver of messages. More than at that communication is seen as an effort to achieve deep

mutual understanding process of social life. Fintech innovation communication has been running among creative social enterprise actors although still not optimal. compatibility as a facilitating factor is related to knowledge as a determinant factor of fintech adoption by considering factors of complexity and excellence relatively.

The results of quantitative and qualitative measurement research show that there is the influence of fintech innovation communication on the productivity of creative social enterprises. Quantitatively, the increase in effectiveness here is that entrepreneurs can market wider range of products and increase their activities and activities, especially when they dealing with consumers and running their business activities. A fintech innovation communication level approach is needed, which is a strategy adjusting needs as an effort to understand the communication patterns of social business actors proportionally creative.

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