

E-Business Services Strategy with Financial Technology: Evidence from Indonesia

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Abstract

This paper will explain the financial technology business in electronic business services offered by one of the Fintech companies in Indonesia. This paper try to analyze the existence and strategy of services offered by the company. This is important because the digital payment sector is increasingly using fintech services in daily life. In analysis of this research paper, the authors use Stata application version 15. This paper is the result of a survey that aims to clarify how well the impact of fintech services, benefits and security on their preferences in transacting on line. The hypothesis tested is ready to use the services provided by fintech especially those who are millennial. The results of this study prove the hypothesis: they show that respondents are generally happy about fintech services in Jakarta area of new digital financial products. This paper also provides information about the strategies used.

Keywords: E-Business, Fintec, digital Services Strategy, Indonesia

1. Introduction

Payment system financial technology (fintech) services are now also developing in Indonesia. There are two giant players like GoPay and OVO who now control the market in Indonesia. These two services are favored by people who want to facilitate payment transactions (Purba,). Due to the Indonesia's economy has been increasing in the last two decades. Its financial industry has shifted due to the fast technology advancement and development. The financial sector in a country play the important role in the economy and continues to experience continuous development in accordance with community needs. Innovations in the financial sector will change the foundations of the central bank and bring revolution to every user of financial services both banknotes and digital money (Carney 2016, Tan, et al, 2018). Recently the people of Indonesia have started the technology readiness in

transactional systems to switch to digital services as their financial solutions. In Indonesia itself the circulation of cash is also very high due to the population and economics growth of Indonesia has also begun to use server-based electronic money to replace cash. However, debit and credit cards also still show growth (Kamaludin & Purba, 2015; Budiono and Purba, 2019).

It is happened because the Financial Services Authority [Otoritas Jasa Keuangan-OJK] is officially designated is committed to support the development of the fintech ecosystem in this country. Innovative services through various educational and training programs that are carried out routinely as agent of change to the society. And for millennial they usually self-study through on line descriptions (Gunadi,2018; Indra, Regita & Purba, 2019) see the topic of digital transformation and personal data security as a very important issue that has a wide impact on the entire fintech ecosystem. Below figure describe the model of fintech in Indonesia:

New Business Model in FinTech and Digital Payment

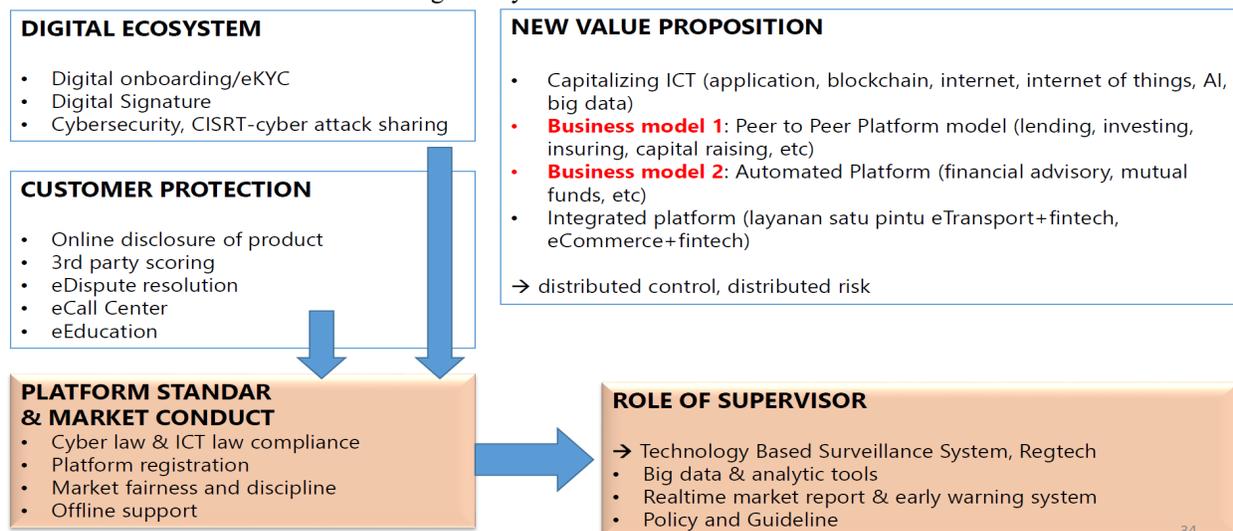


Fig. 1. New Business Model in FinTech and Digital Payment. Source from Widyo Gunadi (Grup Inovasi Keuangan Digital dan Pengembangan Keuangan Mikro, OJK, 2018)

The new model business in Fintech and digital payment as fig.1 display will contribute new ecosystem, platform that need customers' protection. As Jeremy Jurgens said that technology has an important role to play in overcoming every important challenge facing society, however, it poses an economic and social risk that must not be underestimated. Currently entering the Industrial Revolution 4.0, we need to develop common norms and protocols to ensure that the technology serves humanity and contributes to a better and sustainable future (Cann, 2016). With regard of Cann's report, the starting of the fintech increasingly widespread development of financial technology services in Indonesia, so that the security of personal data is demanded to be improved continuously for contributes the better life style (Purba, 2016, 2017). For example, Mastercard Indonesia, as the supporter of the event of security of banking system, shared their experiences and views regarding this matter. Broadly speaking, in addition to the variety of existing security systems, customer awareness in limiting the spread of the customers data is the most fundamental and crucial thing in maintaining the confidentiality of personal data. Furthermore, nowadays, more and more digital services are offering easy transactions by connecting personal information, such as mobile banking, so that the people especially millennial's generations trend use digital transformation which able to change the organizations perspectives (Purba, 2014, 2015)

FinTech Penetration in Indonesia

In a study conducted by Google and Temasek (2018) on six countries in Southeast Asia, namely Indonesia, Singapore, Malaysia, the Philippines, Thailand and Vietnam. They found that Business group-affiliated firms in Indonesia which have a high cash holding level also play or invest in this fintech business (Kim, Haryanto and

Purba, 2019). Because, in Southeast Asia there were 260 million people connected to the internet and this region was made as the fourth largest internet market share in the world. Southeast Asia is expected to become the fastest growing internet market in the world in 2020 which is estimated to reach 480 million internet users and Indonesia is the country with the fastest internet user growth among other Southeast Asian countries.

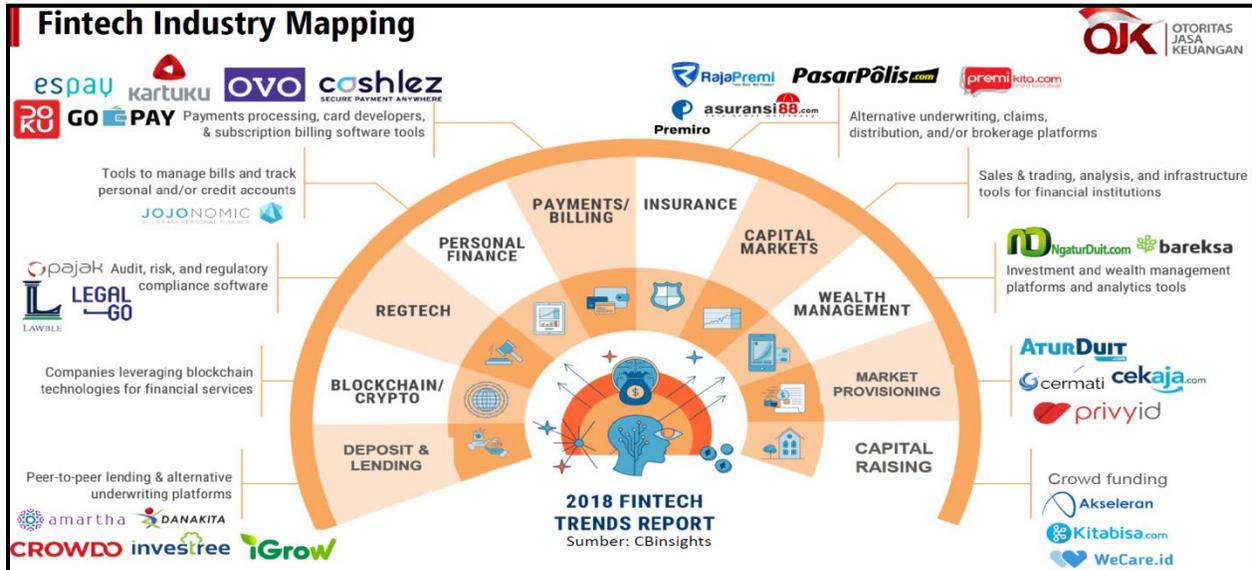


Fig. 2. Fintech Industry Mapping

With innovations in the financial sector by applying the principles of consumer protection and risk management and prudence in order to maintain monetary stability, financial system stability, and payment systems that are efficient, smooth, safe and reliable, Bank Indonesia as a central bank and has the authority regulating the payment system has issued a Bank Indonesia Regulation (PBI) concerning Financial Technology and Regulatory Sandbox. Bank Indonesia (Central Bank of Indonesia) make the regulation No.19 / 12 / PBI / 2017 concerning Implementation of Financial Technology. Through regulation of PBI No.19 / 12 / PBI / 2017 concerning the Implementation of Financial Technology, Bank Indonesia regulates the registration requirements at Bank Indonesia for Financial Technology Providers conducting payment system activities.

2. Literature Review

Information and communication technology brings a new paradigm in the field of finance that has succeeded in driving innovation in the financial industry. Fintech has been declared a game of change, disruptive innovation that is able to shake the traditional financial markets. Financial technology already recognized as one of the most important innovations in the financial industry and growing rapidly, partly driven by shared economics, favorable regulation, and information technology. Digital technology development, one of which Fintech promises to reshape the financial industry by cutting costs, improving the quality of financial services, and creating a more diverse and stable financial land-scape (The FinTech Revolution, 2015, Lee & Shin, 2018, Tan, et al. 2018).

Fintech is one of the payment segments (payments) is a general term that applies to fintech whose applications and services involve national and international payment transactions. Under this umbrella include the blockchain and cryptocurrency subscriptions which include fintechs which offer virtual currencies (cryptocurrency) as an alternative to ordinary fiat money, such as legal payment methods that are possible to store, use and exchange crypto (BaFin, 2016).

Carney's opinion (2016) technological innovation in the financial sector will change the foundation of the central bank and bring revolution to every user of financial services. In line with this, the definition of fintech according to McKinsey digital finance as an innovation in financial services delivered and used by customers and producers through digital infrastructure - including cell phones and the use of internet technology (McKinsey, 2016);

Purba and Panday 2015). McKinsey (2016) defines fintech or digital finance as financial services delivered through digital infrastructure - including cell phones and the internet - with minimal use of cash and traditional bank branches. Cell phones, computers, or cards used through point-of-sale (POS) devices connect individuals and businesses to a digital national payment infrastructure that allows unlimited transactions between all parties. The definition broadly includes: 1. all types of financial services, including payment, savings, credit, insurance, and all financial products; 2. all types of users, including individuals at all income levels, business actors at all business scales, and government; and 3. all types of financial service providers, including banks, payment service providers, other financial institutions, telecommunications companies, fintech start-ups, retailers, and other businesses (Harahap, et al, 2017; Tan, et al, 2018).

Benefit and Security

The presence of information and communication provides new opportunities to empower people by increasing transparency, reducing costs or cutting out intermediaries, and producing accessible information (Zavolokina, et al. 2016, Purba, et al, 2015, 2016.). In line with the Fintech companies currently expanding the scope of their business beyond ordinary online technology to the presence of digital technology on cellular devices. Payment systems and cellular remittances and from fintech providers including online banking where these financial services are innovative breakthroughs made by non-financial providers (Purba, 2018; Purba, Hery and Lestari, 2019.).

With more and more devices such as mobile phones equipped with biometric sensors (eg. fingerprint scanners) being used to provide authentication and authorization services. The use of mobile phones as authentication devices, through the use of biometrics, disposable passwords (OTP) and code-generating applications. Providers of reputable Fintech service providers have basically prepared adequate online transaction security technology to protect their customers (Pwc, 2017). Responding to security issues and restrictions on personal data information, which has complemented its users with the Digital Security Enablement Service, where this service will replace the customer's original card credentials with a unique tokenization, allowing customers to hide card data, even from the merchant in which the customer transacts. This is ultimately expected to help customers feel more secure and comfortable when making transactions at their favorite digital merchants.

1. Methodological Approach

Cross section Data for this study is primary one which derived from respondents in Jakarta, Bogor, Depok, Tangerang and Bekasi. In this case the authors use a linear regression model, the robust least square estimation method is considered the best method for estimating regression parameters when the assumptions are met. Model and Framework of this study is as following;

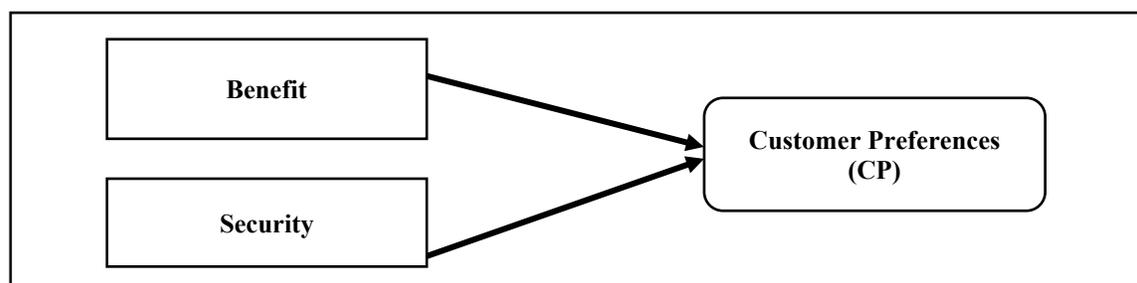


Figure 4. Model and Framework of this study

Assuming constant variance for linear regression where the estimator is squared. Therefore an appropriate regression method is needed to deal with the problem of outliers in the data. However, this study will use the least robust quadratic technique to estimate the parameters of the regression coefficient when assuming the data obtained by the researcher. In this study the researchers used the statistical application of Stata version 15, but the authors first sought and determined the exact mathematical equation according to (Greene, 2018) as follows;

Next, the analysis tools used are the econometrics and statistics methods to test the models and their respective parameters.

The generalized regression model in (9-1) drops assumption A.4. In the formula below if ε_i , the disturbances may be heteroscedastic or autocorrelated or both of them. The least squares estimator is

$$b = \beta + (X'X)^{-1} \sum_{i=1}^n X_i \varepsilon_i$$

X is a matrix of independent variable data, namely benefits and security with 238 respondents observed. And n is the number observed.

$$Q_* = \text{plim}(1/n) \sum_{i=1}^n \sigma_i^2 X_i X_i'$$

We seek an estimator of $*$ = $\text{plim}(1/n) \frac{1}{n} \sum_{i=1}^n \sigma_i^2 X_i X_i'$. White (1980, 2001) stated in Greene (2018) shows that, under very general conditions, the estimator

$$S_0 = \frac{1}{n} \sum_{i=1}^n e_i^2 X_i X_i'$$

has $\text{plim } S_0 = Q_*$. The end result is that White heteroscedasticity consistent estimator.

$$\begin{aligned} \text{Est. Asy. Var}[b] &= \frac{1}{n} \left(\frac{1}{n} X'X \right)^{-1} \left(\sum_{i=1}^n e_i^2 X_i X_i' \right) \left(\frac{1}{n} X'X \right)^{-1} \\ &= n(X'X)^{-1} S_0 (X'X)^{-1} \end{aligned}$$

In accordance with the Robust Least Squares Estimation methodology, the researchers calculate the above parameters.

Discussion and Findings

The Fintech application which surveyed in this study is Gopay, which is owned by PT. Gojek Indonesia, which is headquartered in Jakarta. became the most used digital wallet this year. In the results of a study conducted by DailySocial Research with the title Fintech Report 2019, showed that out of a total of 651 respondents surveyed, 83.3% of them used Gopay. The results obtained by Gopay exceeded its competitor, OVO, which was ranked second with a percentage of 81.4%. Dana, LinkAja, and DOKU followed with percentages of 68.2%, 53% and 19.7, respectively. That is the reason researchers chose GoPay Fintec which is managed by PT. Gojek Indonesia.

Source	SS	df	MS	Number of obs	=	238
Model	896.975517	2	448.487759	F(2, 235)	=	196.05
Residual	537.595911	235	2.28764218	Prob > F	=	0.0000
Total	1434.57143	237	6.053044	R-squared	=	0.6253
				Adj R-squared	=	0.6221
				Root MSE	=	1.5125

CP	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
Benefit	.5297602	.0395121	13.41	0.000	.451917 .6076034
Security	.2756795	.0441409	6.25	0.000	.1887171 .3626419
_cons	1.660268	.7953475	2.09	0.038	.0933455 3.22719

Thus, Customer Preference will increase benefits by 0.53 per cent and security by 0.28 per cent with a constant of 1.66. It means the benefit and security contribution significant impact toward Customer Preference. It appears that consumers tend to choose to pay attention to the benefits and security that they think is in accordance with their

personal needs. With this choice each consumer on an individual basis will try to reflect their own identity through the benefits and safety choices. When part of the security needs and benefits are getting bigger, consumer choices tend to merge with this particular pattern so as to form the basis of the need to transact individuals in fintech digital payment.

Iteration 0: log pseudolikelihood = -435.25261						
Iteration 1: log pseudolikelihood = -434.67416						
Iteration 2: log pseudolikelihood = -434.67292						
Iteration 3: log pseudolikelihood = -434.67292						
Heteroskedastic linear regression			Number of obs		=	238
ML estimation						
Log pseudolikelihood = -434.6729			Wald chi2(2)		=	699.75
			Prob > chi2		=	0.0000
CP	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
Benefit	.5297602	.041735	12.69	0.000	.447961	.6115593
Security	.2756795	.0495417	5.56	0.000	.1785796	.3727793
_cons	1.660268	.6238023	2.66	0.008	.4376377	2.882898
lnsigma2						
_cons	.8148365	.1033896	7.88	0.000	.6121967	1.017476

Variable CP is the customer preference which is the dependent variable whereas, the Benefit variable is the benefit of using financial technology and is an independent variable. Security is using security is also a free variable. From the table above the Wald-test results are 699.75 and probability = 0.0000, which means that the goof of fitness [GoF] model meets the requirements.

Based on the results of partial testing the Benefit variable is Z-test = 12.00 and probability value Z = 0.00 states that we reject null hypothesis and accept alternative hypotheses. It is clear that Benefit significantly influences customer preference. Based on the results of partial testing of the Security variable is Z-test = 5.56 and probability value Z = 0.00 states that we reject null hypothesis and accept alternative hypotheses. It is clear that Benefit significantly influences customer preference.

Next, the researcher compiles the equation of the econometric model in this study to test the results of the impact between the independent variables and the dependent variable as follows.

$$CP = 1.66 + 0.53 \text{ Benefit} + 0.28 \text{ Security}$$

From the results equation it is clear that the existence of Benefit and Security affects Real CP. Thus Customer Preference will increase benefits by 0.53 per cent and security by 0.28 per cent with a constant of 1.66. From the results of these calculations it can be seen that the magnitude of the parameter coefficient values reflects the magnitude of the impact of the independent variable on the dependent variable. Benefit parameter coefficient value of 0.529 shows that each increase in the benefit level of the use of digital payment Go pay results in an increase in consumer preference levels of 0.53 in the Greater Jakarta area. Likewise, the value of the security parameter coefficient of 0.275 shows that each increase indicates that each level of feeling of security in Go Pay digital application users results in an increase in consumer preference levels of 0.28 in the Greater Jakarta area.

Proposed Strategy

The vertical and horizontal strategy is to integrate a framework together with other organizational activities that will ensure the smooth spread and integration of digital technology into companies engaged in Fintech. This framework

together enables companies to: First apply integrated methods that add value to customers or users; the second sets priorities for achieving strategic goals and objectives for the future; thirdly follow digital technology trends to remain effective and relevant in line with expectations with customers; fourth, integrate technology that emerges quickly and quickly into their infrastructure; and the fifth is lower costs through the entire value chain.

4. Conclusions and Recommendations

This paper provides an overview of trends in the development of the fintech industry. The development of fintech is caused by globalization which gives small but sophisticated companies the opportunity to develop financial services without the help of banks, by combining finance with IT, and offering consumers faster implementation of a typical banking process. Its development in Indonesia can be said to be very fast. This paper proposes the hypothesis that young people in Indonesia are ready to use fintech services instead of choosing digital payment services. In 2017, penetration of e-wallet usage was still 18% or the third lowest of other payment methods. The highest is by using cards, both credit, debit and prepaid by 38% and bank transfers by 28%. In 2018 payments using e-wallet succeeded in shifting the bank transfer method, namely by 27% while bank transfers by 25%. Card payments still dominated the year, at 33%. For strategy growth and sustain as having discussed in the previous chapter it is valuable to follow and to implement the Proposed Strategy as stipulated in end of discussion and findings above.

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Acknowledgements

The researchers would like to thank to Office of Research and Publication (ORP) of Faculty of Economics and Business and Research and Community Development (CRCD) Universitas Pelita Harapan, Karawaci, Tangerang Indonesia for financially supporting the research.

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