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Financial Technology and Disruptive Innovation in Business:

Concept and Application

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ABSTRACT

Financial technology (FinTech) expands financial services to many people that are currently lacking access where customers enjoy using banking products and services provided by non-banking providers. FinTech changes the way people pay, send money, borrow, lend, and invest. FinTech enables financial solutions and innovative business models resulting the fusion of finance and smart mobile technology. The emergence of FinTech-related products causes major disruptions in financial services. Though it is yet far from replacing current financial services, it offers financial products and services by non-financial sectors into automation, user-friendly, efficient, and transparent just like banking and financial sectors. The paper discusses its concept, characteristics, and some case studies of local FinTech in Indonesia. In addition, the study deployed text mining analysis to find out the correlation and patterns of FinTech's characteristics. Then the case analysis highlights a comparative assessment between local FinTech in Indonesia versus global FinTech players within local market-based completion. The findings suggest that local FinTech organizations can be resilient competing with an international FinTech players.

KEYWORDS

Disruptive Innovation, E-Commerce, FinTech, Indonesia

1. INTRODUCTION

Information communication technology (ICT) has driven the creation of many disruptive innovations in many sectors, including in financial services. In many cases, ICT is creatively used to alter business processes and to generate new business models including in financial service industry. The emerging ICT-based business models in financial services such as digital crowdfunding, digital payment systems, and cryptocurrencies are categorized as Financial Technology (FinTech). FinTech is technologically enabled financial innovation that could result in new business models, applications, processes, products, or services with an associated material effect on financial markets and institutions (Schindler, 2017).

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FinTech starts creating impact on our daily lives, from facilitating payments for goods and services to providing the infrastructure essential to the operation of financial institutions. It streamlines financial services and at the same time offers efficiency and convenience to customers that can access efficient services through their smartphones. In general, FinTech refers to the tools and concepts of delivering financial services through internet connectivity and massive global adoption of smart mobile technology applied in financial sectors in helping business managing the financial aspects of their operations (Kim et. al, 2015). It is also defined as a financial sector innovations involving technology enabled business models that can facilitate disintermediation, revolutionize how existing firms create and deliver products and services, address privacy, regulatory and law-enforcement challenges, provide new gateways for entrepreneurship, and seed opportunities for inclusive growth (Dhar &Stein, 2017).

The phenomenon of FinTech has widespread across continents and become popular both in developed and developing countries as the success comes from the integration between ICT and finance to address real-life needs. For instance, Scotland's financial services industry adopted FinTech, and has proven to be successful whereas the investment rate and its business organization generates £8bn revenue and employs 95,000 people, which is about 13% of all banking employment in the UK (Broby & Karkkainen, 2016). Even in developing country like Kenya, Kenyan telecom network provider launched M-Pesa that is an innovative payment service where public can easily move their money quickly and securely across distance easily through their mobile phones (Hughes, & Lonie, 2007; Mbiti & Weil, 2011).

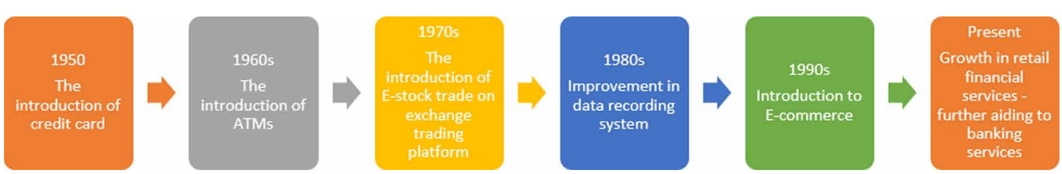
The aim of the paper is to highlight FinTech's business models and systematically examine its concept, characteristics, and applications from recent literatures. Based on the recent studies then we did comparative assessment of FinTech players between local startup companies versus international based FinTech organizations. The study is expected to contribute to business sectors in observing the adoption of FinTech especially within local context and market segmentation.

2. LITERATURE REVIEWS

Financial technology (Fintech) is known for its services in finance, to help with any technological needs. It is widely used in in different range of field – either in big cooperation like banking sector to an independent small start-up business. Currently, there is no concurrence in defining what Fintech exactly is. But many different authors have made attempts to define Fintech according to their own understandings drawn from their conveyed studies and surveys. The general description of financial technology is providing financial service by making use of software and modern technology where it initially applies to consumer trade.

Figure 1 shows tracking history of FinTech. Despite the rapid growth of financial technology as we see now, FinTech is not new in financial industry. It could be traced back all the way in 1865, where the invention of pantelegraphy started making a breakthrough in the world of banking. Followed by in the 1800s where consumers started using charge plates and credit coins to exchange goods with merchants. Throughout 1950s and 1960s, modern-day credit card and Automated Teller Machines (ATMs) were introduced – slowly developing the progress of financial services from analogue to digital. Then

Figure 1. Tracking history of FinTech



came along the establishment of the Society of Worldwide Interbank Financial Telecommunications (SWIFT) in the 1973 that has helped to resolve problem relating to international transaction with the means of telecommunication. Furthermore, there has been improvements in record management and financial operation in 1980s. It was noted too this time around there was an increase in online banking as well as E-commerce all through 1990s (Arner, Barberis, & Bukley, 2016). However, when the global financial crisis fallen on 2007 to 2008, years after came along new innovation in fintech. This includes the introduction of cryptocurrency like Bitcoin in 2009. Moreover, now in the present serves booming increase in retail financial sectors where online banking could be easily done on mobile phones (Desai, 2015).

2.1. Definitions and Scope

Financial industry has been recognized as the industry that heavily uses ICT. In fact, financial industry is in the front line in using ICT to provide excellent services to their customers. However, the recent development in integrating of ICT and finance and the wide spread of the high-speed internet connection, which can be easily access through smartphones, has led to the development of innovative financial technology that provide people to many financial products that addressing their needs. Many of these financial products are offered by non-financial organizations, changing the playing field competition in the financial sector.

Originally, the term financial technology applied to ICT based technologies at the back end and front end financial institutions. The usage of Automatic Teller Machine or better known as ATM in 1967 by Barclays Bank was perhaps the onset of one of the most modern advancement of today's FinTech (Arner et al., 2015). Since the end of the first decade of the 21st century, the term has expanded to include any technological innovation in the financial sector, including innovations in financial literacy and education, retail banking, investment and even crypto-currencies like bitcoin (Wigglesworth, 2016).

There is no agreed definition on FinTech although the term is getting very popular lately and we witness many innovative FinTech products offered and adopted by customers as these products address people's need and easily accessible through smartphones. Chishti and Barberis (2016) state that an entire nexus of cases on how the integration between finance and technology has led to the creation of many innovations in the financial services sector.

There are many FinTech business models implemented by the growing number of FinTech startups like payment, wealth management, crowdfunding, lending, capital market, and insurance services (Lee & Shin, 2017). They use innovative business models in delivering financial solutions encompassing all technical processes and functionalities related with financial services ranging from finance and investment, operations and risk management, mobile payments and infrastructure, data security and monetization, and customer interface (Figure 2).

Some FinTech business models could be disruptive innovations for the traditional and established financial players as they can offer financial products or services excluding or minimizing the role of traditional financial players. Customers see these FinTech companies provide alternative ways to access financial services that they need, from payment, money transfers to financial planning (Chiu, 2016).

The emergence FinTech was also triggered by a massive adoption of smart mobile devices. It can serve mobile payment, digital cash transfer services, and the peer-to-peer lending platforms (Schindler, 2017) covering very broad online transaction from simple transaction to get the songs from ITunes to buying products at Zalora or FashionValet where customers have to enter their credit or debit cards details to make online payment. While, it relates to activities involved on financial transactions eventually has some impacts on the financial regulators. The success of businesses using the FinTech platform would greatly be affected by financial regulation within each country.

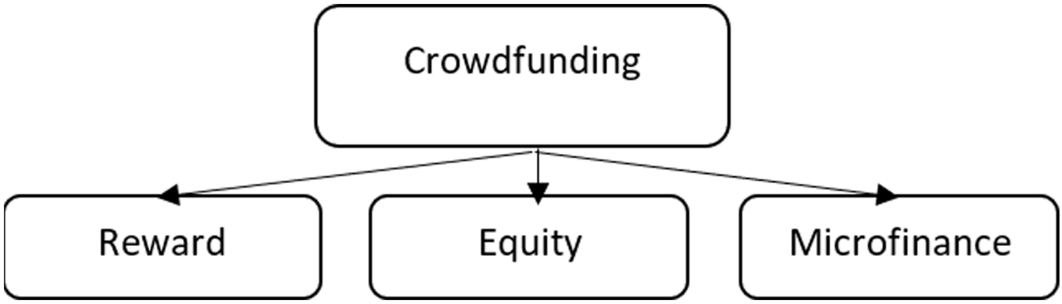
Figure 2. Scope of Fintech (Source: Authors' Compilation, 2017)

2.2. Finance and Investment

One of the best example for FinTech in investment is crowdfunding. Crowdfunding provides different sources of investment for individuals who want to start a business and raise fund from people who cooperatively fund projects as investors. Typically crowdfunding scheme offers more attractive returns than benefits people can get either from saving or deposit though banking institutions. Crowdfunding schemes becomes competitors for established banking products on finance and investment (Freedman & Nutting, 2015).

Crowdfunding are classified into reward based, equity based, and microfinance (Castrataro, 2012; Figure 3). Reward based crowdfunding provides tangible or intangible rewards to those who participate (such as give donations). Equity based crowdfunding is a method whereas project initiators define a time period and a target amount of expected funding. Then the target amounts are divided into equal equity shared at fixed price. People could make a profit on the investment phase. While microfinance targets for low income people who get limited access to banking and financial services. The funding is gathered from crowd of people through an intermediary. For instance, peer-to-peer

Figure 3. FinTech type in Crowdfunding (Source: Castrataro, 2012)



lending mechanism where a crowd of people borrow money from the intermediary that managing funding from other people or members.

FinTech facilitates investment for trading by brokers, managing client databases, reporting systems to the supervisory authorities or to compliance, data security, and market analysis (Micu & Micu, 2016). Online based finance and investment services challenge traditional financial services as they provide efficient, low-cost, attractive products and and user-friendly platforms. Companies such as Wealthfront, Betterment, and Acorns, for example, are creating automated financial advisory platforms targeting millennials in a new approach to wealth management. Peer-to-peer lenders, such as Lending Club, Prosper, and SoFi are lending billions of dollars annually to individuals. Online marketplace lenders such as Funding Circle, OnDeck, and Kabbage provide small-business loans as traditional banks retreat from the space (Boot, 2016).

2.3. Payment and Infrastructure

FinTech also offers digital payment systems through digital or electronic currencies for online finance platforms such as online investments and also data analytics (Brummer, & Gorfine, 2014). For instance, Apple pay transfers money from one device to another device. It gives customers easy access for purchasing, selling, and transferring money by just using Apple brand devices such as IPhone, Ipad and others. PayPal provides service for making fast payment in a cashless system and Transferwise offers money transfer services of difference currencies easily. While, digital wallets shows that new players are able to make certain services and products available to customers more rapidly and more efficiently, lowering transaction costs on both the supply side and the demand side (Dapp, 2014).

Some countries encourage banks to adopt FinTech. For instance, in Taiwan, banks were encouraged to invest in FinTech for collaboration. The Finance Supervisory Commission in Taiwan (TFSB) initiated the Digital Finance Environment 3.0 Project that aims to relax restrictions on online banking especially in online applications (Hung & Luo, 2016). FinTech helps TFSB to assist the business development of financial institutions to gather, process, analyses or supply data, using information to improve the security of financial services and developing innovative financial services based on information. Among these actions, some banks or other financial institutions are allow to offer online banking and insurance, allow securities firms to run equity crowdfunding and allow banks and non-financial companies with third-party payment licenses to offer e-payment business (Hung & Luo, 2016).

As Alibaba spread out globally and into logistics and infrastructure, Alipay can be carried on its growing network and expand into financial services using technology and the Internet. Nowadays, Alipay could offer variety of services such as buy movie or plane tickets, order takeaways, pay utility bills and even lottery tickets (Lee & Teo, 2015). Alipay was founded in 2004 in order to deal with the issue of trust between buyers and sellers online for Alibaba. It offers escrow services for customer who transact within Alibaba ecommerce business. Similarly, Samsung Pay which is a payment system offered by Samsung Electronics provides secured transactions via NFC (Near-field communication) and magnetic stripes (Moon & Kim, 2016). While, PayPal operates in 25 countries worldwide. It allows both private individuals and businesses to accept payments over the Internet. Stripe was once a small company, serving small customers. However, it successfully raised income about $150 million in 2016. It successfully embraces big companies such as Target, NFL and SAP to include Stripe in their payment systems (Helft, 2016).

2.4. Data Security and Monetarization

FinTech is expected to improve the security problems of the conventional banking system (Park & Jin, 2015). Innovative FinTech currencies or cybercurrencies such as Bitcoins, Ripple, Ethereum and LiteCoin utilize the blockchain concept developed by Nakamoto, which threaten the role of the central bank as the sole currency issuer (Broby & Karkkainen, 2016).

A blockchain is secure, anonymous, tamper proof & unchangeable public record store in an open and distibuted ledger. As such we may no longer need a bank to transfer money or keep our account records. The potential impact of blockchain are considered so revolutionary. As such, it has been compared to major technological advances like the printing press, telephones, computers and the Internet (Lee & Kim, 2015).

In term of currency exchange and remittances, remittance and exchanging money internationally is often painful and expensive process. But new currency exchange and remittance companies are developing innovative platforms that make this process simpler, faster and less expensive. From peer to peer currency exchanges that reduce the cost of exchanging currencies to mobile phone based money transfers and remittance platforms that provide a cost effective way for people to transfer small amounts of money overseas. For example, Transferwise, Xoom, We Swap, World Remit and mPesa. For instance, WeSwap works as a currency exchange allows people from different countries to interact and exchange local currency at a pre-determined local rate, far cheaper than the commission traditional money exchange businesses place on exchanges (Brando, 2016).

Currency Cloud is also an example of company that take advantage on how new technology is changing currency markets. Currency Cloud provides its clients with total transparency about what their transfer will actually cost them. The advanced technology allows currency transfers to be priced at a wholesale rate that would not be available to most customers, and also to fully disclose what they are really paying. Currency Cloud is the power inside some of the most exciting businesses in the financial services and FinTech sector. It has over 150 clients who directly use its Payments Engine. In turn, its Payments Engine serves 500,000 end-users who are customers of the clients (Laven & Bruggink, 2016).

2.5. Operation and Risk Management

In term of operation and risk management, FinTech is an advanced service which offers differentiated financial services using smart mobile devices. FinTech's operation leverages technology to better financial services for both customers and businesses to the situation where a non-financial business uses advanced technology to provide services, such as payment and settlement, and investment, without working with a financial company. For instance, Apple pay is basically a wallet but an electronic one, apple pay gives you the option of making payments digitally and has been used in America since October 2014 (Lee & Lee, 2015). Furthermore, Alibaba and Tencent are two giants internet industry that provides banking services with branchless banks. Not only that these technologies help to upgrade the financial services, but it also offers a wider access to banking and financial services (Lee & Teo, 2015).

PayPal which provide payment cashless service for customers to purchase their goods and services online. Customers only requires to use a simple authentication procedure using credit card account. It also gives a virtual account between a consumer and a seller respectively which payment is not made directly from a credit card, debit card or bank account under one's own name, but withdrawal is made from the virtual account, whenever payment is needed, after a user puts money in the virtual account provided by PayPal (Lee & Lee, 2016).

FinTech have cut down the costs of moving money overseas and they allow more ***transparency***. Banks charge fees when you pay and receive payments, especially for international payments. One of the example is EverSafe. As mentioned by Augustine (2017), EverSafe claims that it is the first service that uses technology to protect the older Americans from being financial exploited. It checks in EverSafe users' account daily and alerts to trusted family members or friends if there is any suspicious activity.

2.6. Customer Interface

Customer interface is predominant feature of FinTech that almost all finance activities are being empowered to customers. FinTech's landscape is based on mobile Apps / Web challenging traditional financial sectors and traditional businesses to the mobile finance and e-commerce platforms to offer convenience, better, and easy financial services to the costumers. Almost financial transactions are viable using smartphones for fund transfers and also cashless payments (Dapp, 2014; Anshari et;. al, 2016).

Customer interface and its innovation are the core of the FinTech services because it operates via smart mobile devices as a platform either Micro Web or Apps. User friendly customer interface enables online purchases with the objective to provide secure online transactions for consumer-to-consumer sales and ease of use in relation to its consumers (buyers and sellers) (Schindler, 2017).

2.7. Study Context

FinTech is fast growing business in Asia including Indonesia. Indonesia with 261 million population is a big e-market. As the largest country in ASEAN, Indonesia has 80.1 million active mobile broadband subscriptions or 32% of the population. There were 52 million active social media users accessing social media on mobile devices, or 21% penetration of the mobile social sector (US Census Bureau, 2015; InternetWorldStats, 2015; Facebook, 2015; ITU, 2014). Though, the large population benefits are challenged with its ability for financial accessibility. According to Tech in Asia 2017, Indonesian FinTech startups enjoyed US$ 56 million of funding between 2013 to 2017 (Teh, 2018) and Go-Jek is one of the local leading FinTech in Indonesia. It covers activities for lending, payments, business services, digital currencies and investing.

3. METHODS

This study builds on recent reviews of FinTech. We employed thematic literature analysis of discussions that most importantly linked papers and articles. We chose only academic articles written in English that published in peer-reviewed journals. After removing duplicates and articles beyond the scope of this study, we reviewed and extracted each conceptual framework and characteristics to gain perspective on FinTech. In order to examine the challenges of local FinTech versus international FinTech Corporation, we also performed comparative data analysis between local FinTech players and international FinTech players in Indonesian' market. We did comparison among FinTech that have similar product line. Google Trend was used to compare between the FinTech players by measuring the popularity for each player. Google Trend uses the search quantity as criteria to come up with the trends. Keywords used for this study were major FinTech industries either in Indonesia or in the region during 2017. Indonesia was chosen because it is the biggest market population in Southeast Asia that represents developing countries in Asia. In addition, the chosen samples for this research are major players in digital marketplace that adopting FinTech as a business strategies. The, the study also deployed text mining analysis from seventeen definitions given from literatures. The results could indicates the characteristics of FinTech.

4. DISCUSSIONS

FinTech is the phenomenon where a non-financial business uses innovative technology to provide services, such as remittance, payment and settlement, and investment, without working with a financial company (Young-Ju, Jeongil & Jiyoung, 2016). It brings a positive impact to the business and financial sectors and has an enormous influence on customer finance and finance market (Lee and Kim, 2015). However, the study mainly focuses on online finance and investment platforms. Since Internet connection is easier to be accessed nowadays, businesses can do their financial business online to stimulate innovation with automated fast and efficient (Schueffel, 2017). FinTech is applied when technology plays a vital role in any kind of financial services. This usually applies to entrepreneurs or companies that use technology to manage all of the financial aspects of their business (Boot, 2016). Apart from that the development of FinTech, the main reason on the highly increasing acceptance of FinTech is easy to use, cheaper to set up, and accessed anywhere and anytime. In this section, we focus on the FinTech as a new business model, disruptive innovation, and prevalence of local FinTech players.

4.1. New Business Model

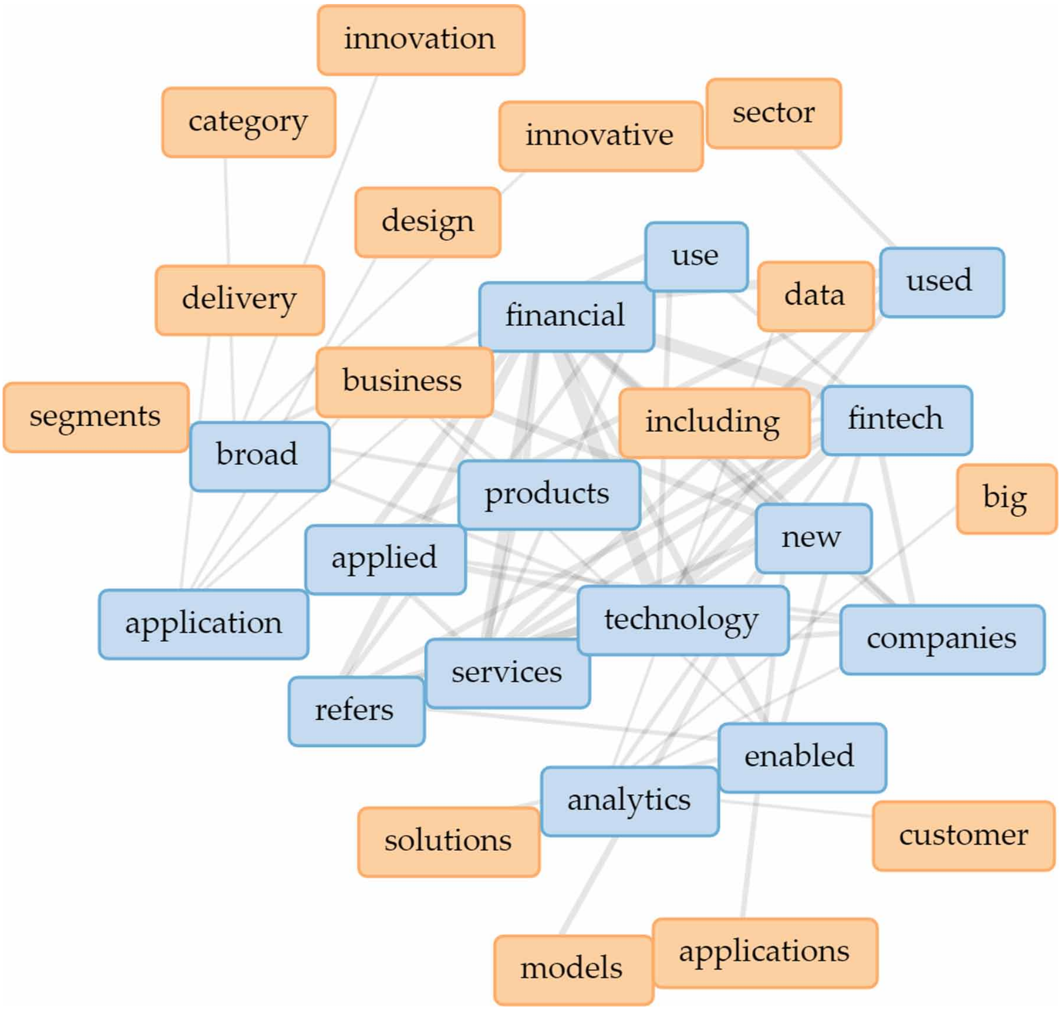
FinTech redesigns on how markets are structured, how investors receive and use information, how customers receive and use financial services, and also on how companies access and deploy capital to online investment and finance platforms. It is not only a new type of financial service based on ICT but it is also a new business model which can affect a whole process of finance service like remittance, payment, asset management and so on. FinTech is technologically enabled financial innovation that could result in new business models, applications, processes, products, or services with an associated material effect on financial markets and institutions and the provision of financial services (Schindler, 2017).

FinTech's model becomes so attractive for any businesses because FinTech uses technology to deliver financial services more efficient, better experience, their focus on the customers' needs cost savings and have wide accessibility (Yeoh, 2016). As the financial information and processing is readily available, which allows for a business to handle important matters quickly, providing customers with a means to conduct instant, digital transactions at an unprecedented speed (Kim et al., 2015). Figure 4 shows the results of text mining from correlation analysis and the most important keywords from the definition of FinTech. The figures indicates that FinTech affects financial business and services by using technology. The figure also indicates some of important characteristics and scope of FinTech based on the definition given from literatures.

FinTech companies as new entrants can be competitors for banking and financial businesses. Similarly, conventional retailers can face challenges from online retailers because they can be more efficient and responsive than banks since they are not burdened by obsolete technologies or expensive distribution networks (Gonzales, 2015). For example proprietary credit risk models have dramatically reduced the amount of time individuals and small businesses have to wait to access credit, and have expanded the range of potential peer-to-peer investment opportunities, including through Lending Club and Prosper. Similar technologies are enabling the unbanked to access capital. Additionally, algorithmic trading tactics rely on complex data aggregation and analytics. The rising role and importance of data are creating new challenges for government or central bank to regulate and at the same time facilitate market participants including security and privacy compliance for all actors.

It refers to the phenomenon where a non-financial sector uses innovative technology to provide services such as remittance, payment and settlement, and investment, without working with a financial company. The *digital currencies* offer new peer-to-peer channel for payment. For instance, *Mobile Money* provides alternative access to financial services for unbanked and underbanked people through smartphone. Roughly 47% of the Nigerian population are unbanked while 78% of the population own a mobile phone (Ericsson, 2015).

Figure 4a. Text mining correlations from FinTech's definition



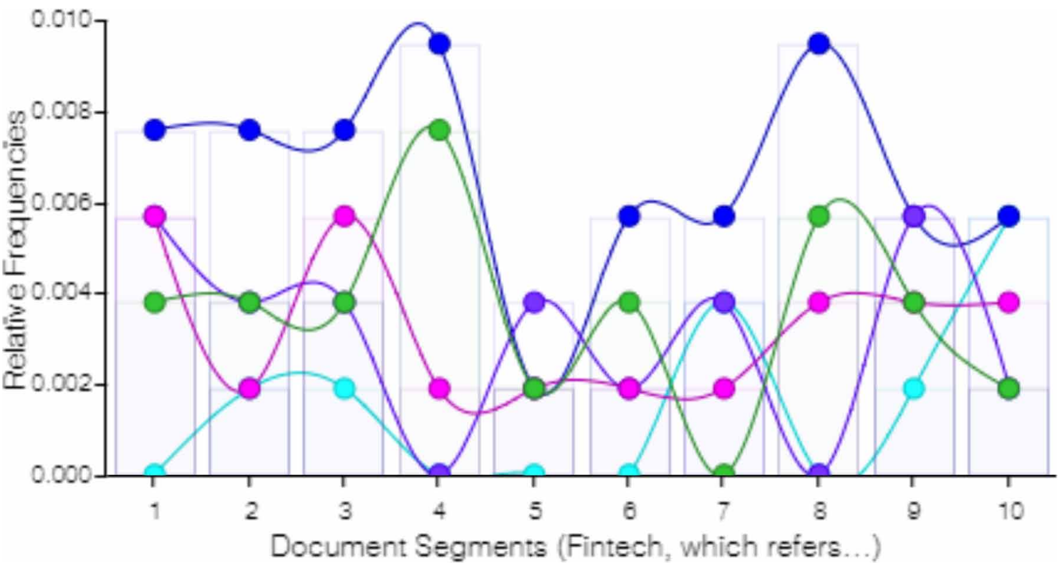
4.2. Disruptive Innovation

Then financial innovation results a new business models associated on financial markets and the provision of financial services can improve the performance of financial services and spread the finance service combined with mobile environment leading to a sustainable economic development as FinTech offers the efficiency of the financial activities (Schueffel, 2017).

In the country that financial regulator encourages for non-financial companies can start develop simple, easy, and various financial services using Internet technology. Those companies enter into financial market and this can be a big threat to traditional financial services (see Table 1). Therefore, many businesses examine the rising FinTech industry and analyze how much it will have an influence on their business. Indeed, it disrupts conventional financial systems and corporations that rely less on mobile technology (Sharma, 2016).

FinTech's users are mostly customers who have grown up with the Internet (Millennial) that they are comfortable using banking products and services provided by nonbanking companies. FinTech has challenged traditional market due to the abilities to provide efficiency, low-cost, transparency with no hidden cost, easy customers' review facilities, and user-friendly platforms thru online transactions such

Figure 4b. Text mining correlations from FinTech's definition



as booking, paying, tracking delivery, comparing products, and so on. It revolutionizes how existing firms create and deliver products and services; address privacy, regulatory and law-enforcement challenges; provide new gateways for entrepreneurship; and seed opportunities for inclusive growth (Dhar & Stein, 2017).

FinTech is also able to make certain services and products available to customers more rapidly and more efficiently by lowering transaction costs on both the supply side and the demand side. Business mode is online transaction making fast payment in a cashless system. Financing sources in traditional business mostly are originated from banking or other financial institution. While, FinTech open the possibilities for introducing peer-to-peer platforms from lenders/investors to business owners or customers. Peer-to-peer lenders, such as Lending Club, Prosper, and SoFi are lending billions of dollars annually to individuals; and online marketplace lenders, including Funding Circle, OnDeck, and Kabbage, are stepping in to provide small-business loans as traditional banks retreat from the space (Brummer & Gorfine, 2014).

In addition, things that makes FinTech prevalence over conventional business model is the usage of big data analytics by utilizing massive data aggregation and analytics to offer innovative and

Table 1. Comparative Business Process Traditional vs FinTech (Source: Authors' Compilation)

Comparative Features	Traditional	FinTech
Business mode	Mostly through physical interaction	Mostly thru online activities (Web/Apps) from booking, paying, tracking, reviewing, etc.
Business Operation	Mostly require specific space and operational time	Anywhere and anytime
Quality control	Physically must examine the product/ service directly	Reviews and comments from other customers who use the service/product
Financing	Banking and other financial institution	Platform Peer-to-Peer from lenders / investors to business owners or customers

low-cost products and services. The other examples of FinTech's effectiveness is their achievement on European policy objectives through their use of increasing access by small medium enterprises to trade credit and other forms of external finance and competing the banking and capital market unions (Milne, 2015).

4.3. FinTech: Local vs International

Interesting fact revealed from literature reviews and data analysis when it comes to the polarization and competition of FinTech based companies between local businesses versus International players. It strongly indicates that the local or country based FinTech prevails in terms of market sharing and its popularity within the country. Referring the case in Indonesian transport FinTech based business among Go-Jek, Grab and Uber. Grab, Uber, or Go-Jek revolutionize business model because of flexible and easily distributed even it is possibly self-employed business model. Go-Jek is a local Indonesian non-financial business uses innovative technology that enables customers to order ride or delivery via motorbike. Then, from its Apps extends the services for other mobile commerce transactions such as payment, investment, delivery, etc. While Grab is the Southeast Asian player with headquarter in Singapore and it is close competitor for Go-Jek because Grab offers the same services of Go-Jek offering to the customers. Finally, Uber is global taxi Technology Company headquartered in USA.

Go-Jek, Grab, and Uber are is disrupting sectors in Indonesian public transportation because it relies on smartphone in delivering the services. Figure 5 shows market popularity among the three players in Indonesia. Go-Jek leads the trend since January 2017. Similarly, we did data analysis for the giant Alibaba Corporation and Indonesian based e-commerce BukaLapak. BukaLapak is similar business type like Alibaba but it is primarily to serve customers in Indonesia. Alibaba established Alipay in 2004 to address the trust issue between buyers and sellers. It helps to provides escrow services for all who transact within Alibaba e-commerce. Therefore, Alibaba increase worldwide and into logistics and infrastructure, Alipay can ride on its rising system and expand into financial services using technology and the internet. The e-payment service called Apple Pay which is launched by Apple. In which payment is made automatically when a user touches his or her finger at a touch ID after a user contacts iPhone with the payment terminal (Lee & Lee, 2016). Apple Pay made payment automatically when user uses a fingerprint sensor at Touch ID. Alipay from Alibaba is a financial service used in PC and mobile devices allowing customers to pay almost everything such as buying goods and services, paying taxes & dues and transportation fares, and offline shopping using an Alipay account, after a customer charges the account with cash, debit card or credit card. While, BukaLapak also offers a smartphone base payment namely BukaDompet currently it is one of the most popular online payment and transaction in Indonesian. Figure 4 highlights comparison between Alibaba and BukaLapak in Indonesian market during September 2017 to January 2018.

Both (Figures 5 and 6) indicates that local players can acquire significant market share compare to the regional and international corporation. Any FinTech offers their customers the convenience and

Figure 5. Comparison trend in Indonesia between Go-Jek (Indonesian), Grab (Regional) and Uber (International) (Source: Google Trend, 2018)

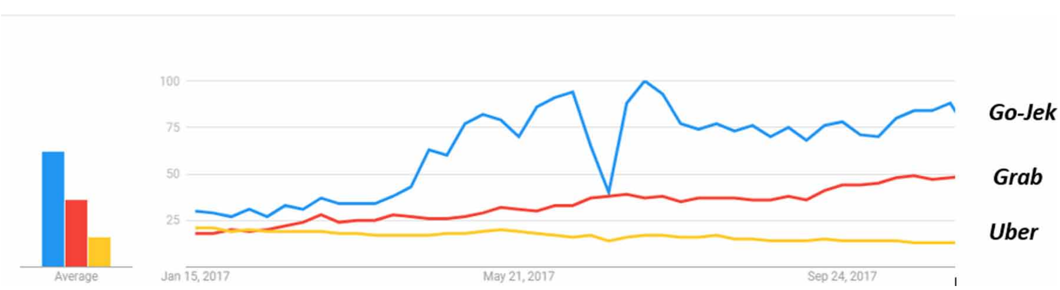
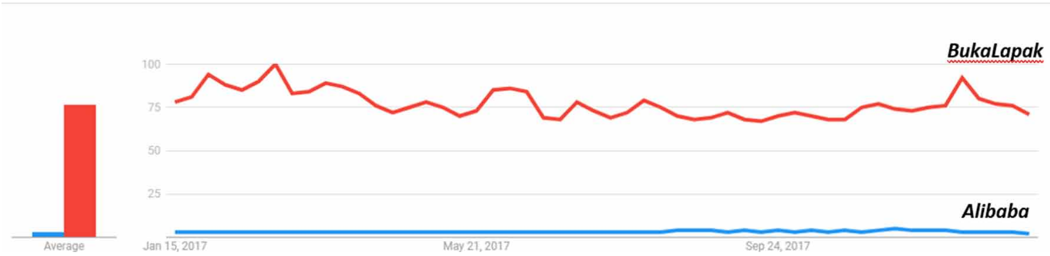


Figure 6. Comparison market trend in Indonesia between BukaLapak (Indonesian business) vs Alibaba (International Corporation) (Source: Google Trend, 2018)



ease whereas the payments can be made and received with technologies like BukaDompet or Alipay providing easier, more available services to this sector of the workforce such as mobile payments and billing, micro-funding.

FinTech defines an innovations at a financial industry involving technologies that change business models that can ease disintermediation. Its most recent one poses challenges for regulators and market participants alike, particularly in balancing the potential benefits of innovation with the possible risks of new approaches (Arner et al., 2015). However, the study revealed that FinTech is not only disruptive innovation for conventional business practices but also ***local based content of FinTech*** can prevail over international players. FinTech with its core principle is business anywhere any time with peer-to-peer platform should be aware with the local contents in delivering the services. Since the platform and technologies are similar across the globe, therefore it is not the technological factor rather a contextualization of business nature that fits to the local people's needs and interests.

5. CONCLUSION

FinTech involves in ICT based innovation in the financial zone. It emerged to fulfill increasingly customer expectations on innovative financial services due to advancements in technology like smartphone and high speed internet connectivity with global widespread adoption. In conclusion, technological innovation in the financial sector, including innovations in financial literacy and education, retail banking, and investment. As the new marriage of financial services and information technology. It is not only limited to certain sectors such as financing or business however, it concludes the whole area of services and products that provided by the existing financial services industry. FinTech includes five major areas which are finance and investment, operations and risk management, payments and infrastructure, data security and monetization, and customer interface. In regard to the competitiveness, FinTech industry should consider local contents for customer acceptance.

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