FACTORS AFFECTING THE ADOPTION OF FINANCIAL TECHNOLOGY AMONG THE BANKING CUSTOMERS IN EMERGING ECONOMIES

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Abstract

Financial Technology has shifted the way consumers use banking. Implementing new technology like big data, analytics, cloud computing and deep learning, banks can significantly improve accessibility, inclusivity, and increase profitability for banks. This article looks at the possible effect of Fintech and Big data Analytics on the efficiency of banking business. The study gathers data from clients of 53 banks across Asia and Latin America from May 2022 to July 2022 with 5436 observations. We conducted several regressions to gather statistical insights. The outcome of the study suggests that certain factors can significantly affect the adoption of FinTech more than others. Further studies should be conducted based on demographic characteristics of the customers as it may significantly affect the findings.

Keywords: Fintech, credit institutions, developing countries, clients' preferences

JEL Classification: G20; G21; G23

1. Introduction

With the fast advancement of internet, innovative developments in conventional industries are growing rapidly. Since 2016, Financial Technology of FinTech started getting attention of researchers and executives alike to address certain needs of customers in the financial services sectors. Broadly, fintech consists of implementation of various

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solutions to improve financial businesses. Associated areas include big data, blockchain, cloud computing, artificial intelligence, machine learning and quantum computing. Fintech is a tool that is currently hard to apply. Fintech entails both digital innovative developments and technology enabled innovative developments in the financial segment. This type of innovative development can disrupt pre-existing business structure, blur business borders, facilitate strategic disintermediation, alter how current companies provide services and products, offer novel gateways for entrepreneurship, and democratize access to banking services (Delgosha, et al., 2020).

Fintech consists of parts of financial firms whereby technology is ubiquitous, for example front-end customer solutions, and revolutionary blockchain tools, and cryptocurrencies including bitcoin and Ethereum. Examples of innovative developments in fintech nowadays include different uses of blockchain solutions, digital trading methods, artificial intelligence and machine learning, equity crowdfunding, and peer-to-peer lending (Amakobe, 2015). The advancement of fintech has improved the competitiveness of consumer banks, as digital solutions have played a tremendous role in enhancing the effectiveness of solutions provided by banks and other monetary institutions to both retail customers and small businesses. Banks and other monetary institutions are trying to find ways to lessen the expense of client acquisition and risk management, bring down operating expenses and additionally boost performance and improve the end user experience for a wider variety of customers, resulting in a more and better need for fintech implementation (Indriasari, et al., 2019).

Fintech has been broadly applied in a lot of countries today, especially in those with a strong economic background in the areas of information technology as well as finance, such as Finland, the United Kingdom, Korea, as well as China (Srivastava, et al., 2017). Fintech is still relatively young in developing nations across Asian and Latin American continents like Colombia, India, and Pakistan etc., but it promises to become a major industry soon. Fintech received a lot of attention from decision makers, scientists as well as particularly regulators in the financial sector. In addition, fintech is also a hot topic at conferences and forums. There has been little empirical research carried out to find out about fintech as well as fintech uses in the financial industry.

While FinTech is well established in developed countries, the developing countries are still struggling with application of big data in fintech even though it has enormous potential (Hassani, et al., 2018). Not a lot of research has been conducted in respect to developing countries to understand how big data and FinTech can transform the banking industry (Keskar, et al., 2021). The problem is necessary to address because of the impacts it can have on hundreds of millions of banking customers, by getting personalized services, thus making their lives easier. Banks and financial institutions can provide better services at lower expenses, resulting in higher profit and customer loyalty. The gap does not exist in one or two countries but across developing nations in the whole world (Mungai & & Bayat, 2018). Here in the research paper, we target it towards Asia and Latin America since their infrastructure is in developing phase which can be greatly leveraged for implementation of big data enabled fintech application. The research questions will be addressed in the next section.

The research paper attempts to address the gap to give bank executives, policy makers some reasons to rethink their application of big data in fintech. Thus, it is a fascinating research subject and there's still a great deal of room for exploration in the developing countries. The authors acknowledge this and are going to undertake this research to find out about fintech as well as fintech use in the banking industry. The authors also look at the elements that impact the Willingness of customers to make use of fintech services. Using the research data gathered from bank clients throughout the questionnaire procedure. The findings are going to be crucial for banking industry decision makers, regulators, and researchers.

The remaining of the paper is structured as follows: in section 2 a review of the literature is carried out; in the next section it is described the research methodology and data used; in section 4 the empirical results are displayed; in the final section conclusions summarizing the research are presented.

2. Literature review

2.1 Theoretical background

The rise of fintech has had a significant impact on the standard businesses of consumer banks. In crucial areas like consumer mortgages, banks have lost market share to shadow banks and fintech lenders, who are subject to different regulations and relish technical

advantages (Bedeley & Iyer, 2014). One distinction between traditional lenders and fintech lenders in the mortgage sector is that the fintech firms provide lending to more creditworthy customers than shadow banks, and hence can charge a higher interest rate (Shakya & Smys, 2021). Another difference is that the former's approval happens twenty percent more quickly, without raising mortgage risks (Gupta, et al., 2019). Fintech lenders additionally answer more elastically to insist on recessions and have a better propensity to refinance, particularly for borrowers prone to gain from it. This way, fintech lenders have increased the effectiveness of fiscal intermediation of mortgage marketplaces (Boumlik & Bahaj, 2017). The creation of fintech is usually regarded as a promising method for minimizing unequal entry to recognition. Imbalance of rewards in financial companies can lead to partial lending choices (Yu & Song, 2021). Fintech lenders might relieve discrimination in mortgage markets. Traditional lenders charge minorities more for buying and refinancing mortgages, and fintech algorithms discriminate forty percent lower than face-to-face lenders (Statista, 2022). Innovative monetary data and technologies might provide exceptional ability for screening borrowers. The predictive power of information gathered by fintech, grounded on consumers' digital footprints, equates, or perhaps surpasses regular evaluation bureau scores with regards to forecasting customer default rates (Sun, et al., 2014).

Banks will expand their service to customers by using fintech. Fintech is thus not really a basic blend of financial services and information technology, but a technology application for conventional services to widen the scope (Gupta, et al., 2019). Fintech opens numerous new experiences for customers and makes it easier to transact. Fintech could help mobile phone customers enjoy banking solutions on their tablets and smartphones. Thus, customers are now able to use banking services from any location instead of needing to drive to the grocery store (Shakya & Smys, 2021). Thus, in the financial industry, fintech products play an extremely crucial role, and simultaneously carry several advantages. To boost the quality of fintech products in the financial industry, it is essential to think about factors that impact the willingness of customers to make use of fintech services (Al-Dmour, et al., 2021). Banks will increase market share and enhance operational efficiency when increasing their willingness to make use of fintech services from their customers. This could be read as a readiness of the service down the road for the aim of the customer.

Hajiheydari et at., (2021) found that willingness could explain 72% of real customer service (Hajiheydari, et al., 2021). There are four factors that influence the willingness of customers to make use of fintech services: Considered utility (UTI), convenience of use (SIM), customer trust (TST) and network (NET).

In the current literature there are five widely used techniques for determining bank inputs: the generation technique, the intermediary technique, the advantage technique, the end user expense technique, and the additional benefit technique (Munar, et al., 2014). The primary distinction between the options will be the presence of a rationality on the bank, and another comprehension of the role of the bank, and the subsequent selection of inputs. As discussed previously, the output banks are calculated based on the generation technique, which is the deposit and mortgage profiles. A bank's inputs are often capital and fixed labor expenses. In contrast, the intermediary technique, as discussed previously, considers banks pool nonproductive money, and send them to the people who want them, acting as an intermediary between fund providers and demanders. The advantage technique additionally considers banks as intermediaries between money providers and demanders and describes the result of a bank as asset on its balance sheet, primarily which includes loans (Munar, et al., 2014). Based on this technique, deposits are considered debts compared to outputs. In this process, it is considered that the asset should be viewed as an output if the opportunity cost of the bank is lower compared to the return on the asset. Deposits may also be considered debts (liabilities) if the opportunity cost of the bank is higher than the valuation of the liability.

To conclude, fintech influences the effectiveness of consumer banks to come down with many methods. By this research, we implement a nonparametric technique for information evaluation to assess the multi-input and multi-output results with the banking business and compute the willingness to use Fintech (WFT) of consumer banks, and simply evaluate the effect of fintech on the effectiveness of consumer banks.

2.2 Research Questions

2.2.1 Utility (UTI) and willingness to use FinTech (WFT)

The willingness of the customer to make use of fintech services can be significantly affected by the utility of the service. This service is extremely useful as well as will enhance the quality of service and the

effectiveness of the user because of it (Wong & Wong, 2020). Furthermore, fintech services are able to enhance the overall experience of customers and overcome the limits of conventional banking.

Banking is a service. Hence, opinion of utility could certainly influence customer willingness to make use of fintech services. Additionally in a lot of empirical studies, including the one by Wong et al (2020) which found that utility might drive the willingness to adopt fintech services (Wong & Wong, 2020), this effect is found. On this basis, the study offers these research hypotheses:

H1: The view of utility (UTI) influences the motive to make use of fintech services (WFT).

2.2.2 Simplicity (SIM) as well as wiliness to use Fintech (WFT) services

Perception of convenience of use could be identified as the level to which users feel at ease and effortless fintech services. If the fintech service is used correctly, it can provide customers with unique experiences that will satisfy their needs (Radmehr & Bazmara, 2017). Customers will probably be more prone to make mistakes when working with fintech services, which can result in financial losses for business owners. So, one of the main factors that influence customer behavior will be the simplicity of use of the service. To put it another way, viewed simplicity of utilize can influence the decision of a consumer to make use of fintech services. Also, this effect is seen in empirical research by Sprovieor (2020) that simplicity can lead to greater willingness to use new technology (Sproviero, 2020). The authors' research hypothesis is therefore as follows:

H2: Perception of the ease of utilize (SIM) influences the willingness to use fintech (WFT) services.

2.2.3 The Trust of clients (TST) as well as Willingness to use Fintech (WFT) Services

One factor that makes a big difference with fintech services is trust. Radmehr et al., (2017) suggests that user trust could have a considerable effect on their actions (Radmehr & Bazmara, 2017). The research conducted by Indriasari et al., (2019) found that trust has a significant impact on the Willingness of customers to make use of fintech solutions (Indriasari, et al., 2019). The authors therefore suggest the next research hypotheses:

H3: The customer trust (TST) influences the willingness to make use of fintech services (WFT) expertise.

2.2.4 Network (NET) as well as Willingness to use Fintech (WFT) Services

It can be thought of as Network effect when customers find out that individuals who are crucial to them within their circle of friends. Society (friends, colleagues, relatives) trusts the services. Clients generally use fintech solutions when they find out how they can help the society at large (Hassani, et al., 2018). So, Network effect could influence the Willingness of customers to make use of a service. Additionally in a lot of empirical studies, this effect is found. Based on this point, the authors' research concept can be as follows:

H4: Network (NET) influences the motive to make use of fintech (WFT) services.

3. Data and methodology

This article looks at the perception of fintech as well as its application in the banking industry. In order to address this research objective, the authors analyze fintech development trends, particularly fintech application of banking sector. The authors carried out an analysis of factors impacting customers 'willingness to utilize fintech services to enhance the quality of fintech products at banks. For this particular purpose, they collected data from a poll of 5436 clients of financial institutions across Asia and Latin America. The banks were selected purposefully to include only those that have more than $100m worth of assets and have been in the industry for more than 10 years at least. We did so to ensure that we only include the banks that have enough capital to pursue fintech. The customers were selected randomly via invitations in social medias, mostly LinkedIn, and Facebook. The countries included in the survey from Asia were India, Pakistan, Sri Lanka, Bangladesh, Cambodia, and Philippines while the countries included from Latin America were Colombia, Costa Rica, Guatemala, Argentina and Bolivia. As outlined before, we used questionnaire, and the questionnaire collected data from May 2022 to July 2022. The questionnaire had a seven-point scale, with 1 being the lowest, and 7 being the highest important for any specific factor.

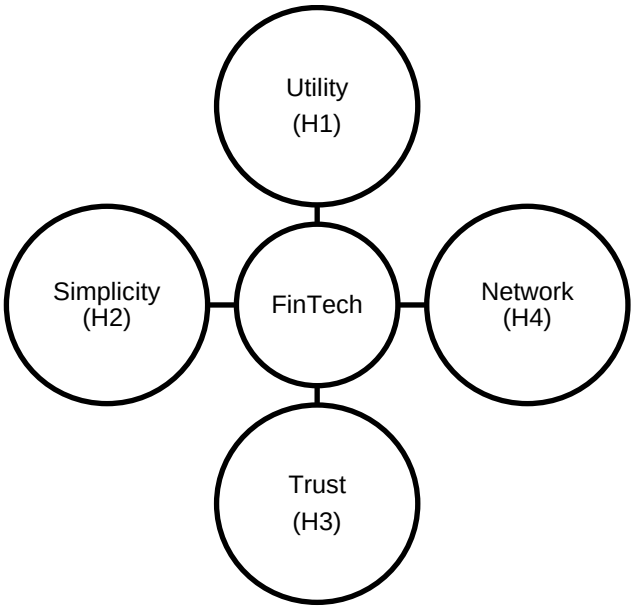
The authors used multivariate regression for the quantitative technique to calculate re-search model. The authors ran Cronbach's Alpha before they did the regression analysis. To figure out the correct

factors to place into the research model, use the test as well as exploratory factor analysis.

The research formula is designed on previous studies' results as well as the analysis hypotheses proposed by the authors. As a result, the dependent variable is the willingness to make use of fintech (WFT) service. The independent variables include the perception of worthiness (UTI), simplicity of use (SIM), user trust (TST) and network (NET).

Figure 1

The proposed research models



Source: authors

Table 1 illustrates those 4 independent variables, such as utility (UTI), Network effect (NET), trust (TST) and simplicity of make use of (SIM), could influence the willingness to utilize fintech (WFT) services. That is an important foundation for authors to carry out multiple regression analyses in the following phase to evaluate the research type.

Table 1

Variable	Explanation		Source
Utility (UTI)	UTI1	Buyers are able to be using fintech offerings in order to meet their desires.	(Bedeley & Iyer, 2014)
	UTI2	Utilizing fintech offerings are going to save clients a massive amount period.	
	UTI3	Buyer labor effectiveness improves through the use of fintech expertise.	
	UTI4	When working with fintech program, buyers are able to use numerous utilities.	
Simplicity (SIM)	SIM1	Clients consider the businesses of fintech expertise very easy.	(Gupta, et al., 2019)
	SIM2	The fintech program method guidance is clear and simple to comprehend.	
	SIM3	The buyers are able to have interaction together with the fintech program structure all over.	
Trust (TST)	TST1	Facts protection will work within fintech expertise.	(Hajiheydari, et al., 2021)
	TST2	Exclusively established fintech businesses offer fintech expertise.	
	TST3	Fintech businesses wish to generate loyalty with their clients.	
Network Effect (NET)	NET1	Buddies, colleagues, relatives, etc.) frequently make use of fintech providers.	(Keskar, et al., 2021)
	NET2	The analysis or job atmosphere on the consumer supports fintech expertise.	
	NET3	While technologies developments, therefore, does the fintech program.	
Willingness to use Fintech (WFT)	WFT1	Buyers are going to use fintech program shortly if it is not utilized.	(Shakya & Smys, 2021)
	WFT2	Clients wish to keep on utilizing fintech products in case they're utilized.	
	WFT3	The fintech solutions they normally use is going to be suggested for their relatives or neighbors.	

Source: authors

In order to identify appropriate elements to be added in the research model, it has been carried out a Cronbach Alpha test as well as exploratory factor analysis.

4. Results

Table 2 shows the results of the Cronbach Alpha test and researching factor analysis as follows:

Table 2

Results of the testing research model

Variables	Code	Cronbach's Alpha	Component			
			1	2	3	4
Utility (UTI)	UTI	0.791	0.711	0.000	0.000	0.000
Network (NET)	NET	0.818	0.000	0.827	0.000	0.000
Trust (TST)	TST	0.790	0.000	0.000	0.823	0.000
Simplicity (SIM)	SIM	0.724	0.000	0.000	0.000	0.741

Source: authors

The ANOVA test confirms that the results of estimation of the research model at 1 % significance are significant (see Table 3). Furthermore, since the R Square is 76.8 %, this implies that 76.8% of the variant in fintech customer willingness to make use of fintech services will likely be discussed by the independent variables in the model.

Hence, at a significance degree of 1%, the willingness of the consumer to make use of fintech solutions is positively impacted by 4 independent variables: utility (UTI), social impact (NET), trust (TST) and interpreted user friendliness (SIM). On this basis, the effects of evaluating the research design include the following equation:

$$WFT = 0.512*UTI + 0.343*NET + 0.312*TST + 0.212*SIM \quad (1)$$

Table 3

Results of the coefficient estimation

Dependent Variable: Willingness to adopt FinTech (WFT)		
Variable	**Beta**	**Sig.**
Utility (UTI)	0.512	0.000
Network effect (NET)	0.343	0.000
Trust (TST)	0.312	0.000
Simplicity (SIM)	0.212	0.000
N	5436	
ANOVA (sig.)	0.000	
R Square	76.8%	

Source: authors

Impact of seen practical use (UTI) on the willingness to make use of fintech (WFT) expertise: Re-search results indicate that the notion of convenience (UTI) positively impacts the willingness to make use of fintech (WFT) expertise. This particular outcome is in line with the prior research (Delgosha, et al., 2020). This shows that the convenience of fintech services will add substantially to enhancing the quality of bank account services, and can substantially enhance the effectiveness of users' operate. Thus, customers tend to make use of fintech products with many helpful functions that are understandable. In developing countries, fintech solutions continue to be rather new. Thus, utility is a situation of great concern to clients just before they plan make use of fintech services.

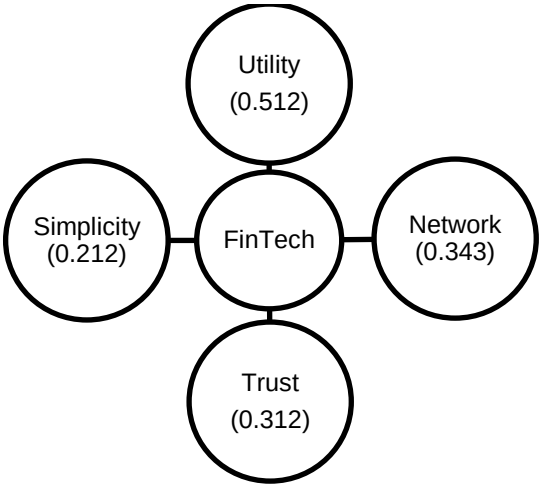
The effect of social impact (NET) on the willingness to make use of fintech (WFT) expertise: The authors discovered the good effect of social impact (NET) as well as on the willingness to make use of fintech (WFT) expertise. Appropriately, when clients notice neighbors (such as family, buddies, colleagues) utilizing fintech services, buyers will tend to wear it. This's extremely applicable because individuals are usually worried about some other individuals in society, therefore the effect of society typically has a terrific effect on the willingness to work with the program of the buyer. Thus, it could be said that social impact is among the key elements which have a good effect on the customer's goal to make use of fintech services. This influence can also be discovered around (Boumlik & Bahaj, 2017).

The effect of confidence (TST) on the willingness to make use of fintech (WFT) expertise: Research results indicate that client loyalty (TST) positively impacts the willingness to make use of fintech (WFT) expertise. This influence is additionally in line with earlier research outcomes (Al-Dmour, et al., 2021). In Asia and Latin America, you will find numerous banks providing fintech products with very similar features. Thus, trust is usually a crucial priority for customers that intend to work with fintech services. Appropriately, the banks which are often traded by clients as well as the esteemed banks would be the areas which produce the trust of people, as well as the buyers also often give priority to utilizing fintech solutions of this banks.

Impact of simplicity of use (SIM) on the willingness to make use of fintech (WFT) expertise: The writers have discovered the good effect of the seen simplicity of use (SIM) on the willingness to make use of fintech (WFT) expertise. This's additionally very in line with the qualities of a relatively young service like fintech. Because, when planning to utilize a service, customers frequently consult the issue including "Is it so easy to utilize or not?". Appropriately, if the fintech program is easy and comfortable to use, buyers won't wait when making a willingness to use this particular program. The good effect of the simplicity of use on fintech willingness can also be in line with earlier observations (Keskar, et al., 2021).

Figure 2

Results of the coefficient estimation



Source: authors

5. Conclusions

Study results demonstrate that fintech service is important for the banking industry in Asia and Latin America. Using multivariate regression, we identify factors that influence customers' willingness to make use of fintech services. Appropriately, the willingness to make use of fintech (WFT) solutions is positively impacted by the notion of convenience (UTI), cultural influence (NET), buyer loyalty (TST), plus simplicity of use (SIM). So, to enhance customers' goal to use fintech providers, banks must consider components of the service 's qualities including ease and usability of use. At the same time, Network effect and customer trust are also problems that banks must be worried about (Gupta, et al., 2019). These are policy implications that are important for regulators at banks. Moreover, the outcomes of this research are beneficial for researchers and policymakers.

Based on the results of this research, several policy implications for the improvement of fintech products in the banking industry of Asian and Latin American countries can be noted, as follows:

- Banks should further enhance the functions of fintech services, whose focus mainly on enhancing the utility of the service to fit each consumer sections. At the same time, the transaction procedure through fintech services must be created conveniently and easily for buyers (Yu & Song, 2021). Banks must use a method to improve the picture as well as track record of banks in the industry. At the same period, banks also have to definitely market as well as disseminate information about services and products to the community to grow market share as well as limit chances in transactions (Shakya & Smys, 2021).

- Banks should improve the cooperation of theirs with fintech to make use of the companies' present technical benefits, therefore aiming to enhance the quality of high-tech program services and take the greater experiences to the buyers. With this particular synergy, banks can diversify services and products implementing excessive technology, improving use of clients at cost that is low. At the same period, the banks themselves must boost purchase, upgrade know-how infrastructure, as well as improve program security.

- Banks should enhance the instruction of top-quality human resources. This human aid is not just effective at specialized understanding but additionally must understand applications dependent on today's technology in financial services. Also, the authorities must augment as well as finish the authorized framework, mechanism, as well as policies for fintech pursuits. At the same time, building fintech advancement policies must be connected to economic and monetary policies.

The study makes several contributions to the fintech literature. Firstly, it enriches the literature in the field by addressing this problem at the level of emerging economies. Secondly, it identified several important factors that contributed to the adoption of fintech services among consumers.

Although the objective of the paper was achieved, the study suffers from certain restrictions and limits by not taking into account several other things that could influence the support for fintech customers, such as the information technology platform, the monetary capacity of the customers, potential risks of using the service. Further research would be useful to have a longer-term understanding of the significance of the factors.

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