



Banking Goes Digital: The Main Determinants of the Clients' Satisfaction and Trust toward Fintech-Based Services

Salma Rhanoui*

Department of Economics, Faculty of Law, Economics and Social Sciences, Cadi Ayyad University, Marrakech, Morocco.

*Email: salma.rhanoui@gmail.com

Received: 03 July 2022

Accepted: 23 August 2022

DOI: <https://doi.org/10.32479/ijefi.13358>

ABSTRACT

Financial technology, also known as Fintech, is changing banking for the better worldwide through companies with innovative business models, fresh products and services. Indeed, operators in this industry offer various financial services that were once the exclusive domain of banks; accordingly, Fintech can be an opportunity for both banks and customers. Therefore, this paper aims to identify the main features contributing to clients' satisfaction and trust when using Fintech-based services in their banking transactions. This study presents and interprets the results of a survey on clients' preferences and willingness to use the Fintech services offered by their banks. The scores were calculated based on analysis of variance (ANOVA) and Chi-square methods, using Python language. Even though there were minor differences in detail and other trivial variables, both methods identified the same main factors than lead to banking customers' satisfaction with Fintech and trust in the functioning of this industry.

Keywords: Bank, Clients, Financial Technology, Fintech, Satisfaction, Trust

JEL Classifications: G21, O30, O31

1. INTRODUCTION

Nowadays, banking sector clientele expects intelligent and practical financial services regardless of location and time with progressively decreasing fees. An improve Internet-based economy, novel practice designs of digital devices, broadcasting and the increasing willingness to use online channels to search and financial businesses are crucial operational changes driving this progress (Gomber et al., 2017). While digital finance challenges current financial service providers, such as reputable banks, due to competition from Fintech companies, it also presents different occasions for banks to appeal to their younger and more tech-savvy clients.

The term Fintech is a coinage created by combining the terms "financial" and "technology" and identifies Internet-based technologies associated with business activities in the banking sector (Gomber et al., 2017). The area has lately fascinated

the regulators, customers, industry participants, and scholars alike (Arner et al., 2015). In the past, information technology was typically viewed as an instrument in the financial business environment. Fintech-based services have gained ground in the financial and banking sector, reaching clients that traditional providers usually serve.

The reasons for this gain are threefold. First, the international financial crisis of 2008 confirmed to clients the inadequacies of the old-style banking system that caused the crisis (Anikina et al., 2016). Second, Fintech-based services offer new products and services that meet client needs that were inadequately or not at all addressed by incumbent financial service workers. One such example is the outline of a card-reader unit for smartphones and tablets that allows street traders and itinerant salespeople to accept cash cards and credit cards. Moreover, Fintech companies have produced innovative opportunities for selling products and services using fresh technologies and models. Small and medium-sized

companies, for instance, can use Market Invoice to vend their demands, which enables them to gain access to advanced working capital without relying on the final payment statements (Liu, 2019). Third, Fintech has strongly wedged the intermediate operations of commercial banks and the enticements inside organizations (Bouyala, 2016). Payment settlement has consistently been one of the most fundamental and traditional middle dealings of commercial banks.

Classic banks, as financial mediators, help ease information asymmetry to a certain degree (Kelly et al., 2016). Their information-related benefit and the subsequent domination position have yielded long-term and sole gains for classic banks. Fintech, which allows third-party and mobile payments, has diminished these benefits. Third-party and mobile payments have far lower fees than those charged by banking institutions. Most computing sustenance and other technologies can competently supply and manage customer data, thereby reducing information asymmetry and facilitating payment and settlement more effectively and efficiently than outdated procedures (Baker and Wurgler, 2015).

On the one hand, Fintech is a relatively new area of research that requires further study. There is a limited number of studies, in part due to a lack of data (Jagtiani and Lemieux, 2017). Fintech is a wide-ranging topic that can be applied in a number of areas related to banking. On the other hand, Fintech in banking can offer researchers insights into the theoretical and practical aspects of technology applications within global financing. Such applications provide a strong framework for implementing Fintech initiatives and programs to refine banking processes, financial, organizational learning, and performance excellence.

Fintech and numerical use have grown exponentially during the COVID-19 pandemic, as it is vital to access reasonable financial services under the social distancing regulation and limit face-to-face contact when conducting economic activities (World Bank Group, 2020). The start of 2021 saw numerous banks shifting to digital banking (neobank)¹ or establishing a neobank as an innovative business unit, indicating a growing competition in the financial sector; it is also assumed that banks must get ready to enhance technology use. Typically, banks play a major role in the economy while Fintech encourages individual financial inclusion through effective financial services (Beck, 2020). The easier access to financial services allows individuals to manage their cash, which comprises revenue, spending, savings, and investments. Furthermore, traditional financial services are seen as a luxurious instrument to foster financial inclusion since they require substantial funds to demonstrate financial service in a region, whereas Fintech provides society with better access to financial services (Anikina et al., 2016).

This research seeks to fulfill the following objectives:

- Identify the substance of Fintech;
- Highlight the kind of services that are offered by this industry;
- Discover the main factors behind the banking customers' trust in and satisfaction with the Fintech industry, and compare the survey results with ANOVA and Chi-square.

¹ A bank whose services are mainly accessible online.

With these goals in mind, this work will answer the following research question: Which factors guide a customer's trust in and satisfaction with Fintech in their banking transactions?

This paper is organized as follows: Section 2 provides a literature review of the topic. Section 3 explains the research methodology and data. Section 4 discusses the results. Section 5 concludes the paper.

2. LITERATURE REVIEW

The Fintech sector is growing fast. However, even if investors agree about the essential meaning of the word, its substance has not been clearly defined (Varga, 2017). Views differ about whether only a recently developed technology-based financial corporation can be designated as Fintech or if appointees might also be seen as Fintech if they modernize a novel technology-based product or service. It is not distinct if there is a market capitalization verge, which can be used to differentiate Fintech from classic financial intermediaries. Despite these dissimilarities, it is generally agreed that Fintech denotes companies that improve financial services and products through considerably more powerful usage of information technology. Table 1 displays some of the definitions of the term Fintech.

Table 1: Definitions of Fintech

Year	Definitions	Source
2015	"Financial technology" or "Fintech" is technology-qualified financial solutions. The term not only refers to precise areas (e.g. financing) or business models (e.g. peer-to-peer lending) but also encompasses the whole scope of services and products usually offered by the financial services industry.	Arner, DW., Barberis, JN., and Buckley, RP
2015	Financial novelty is the act of generating and then spreading new financial tools alongside financial technologies, institutions, and markets.	Farha Hussain
2015	An economic industry consists of firms that operate with technology to make financial structures more proficient.	McAuley, D
2016	Fintech refers to a service sector that utilizes mobile-involved Information Technology (IT) to improve the effectiveness of the financial system.	Kim, Y., Park, YJ., and Choi, J
2016	Fintech identifies an area that purposes to deliver financial services by making use of modern technology and software.	Fintech Weekly
2016	Establishments merging advanced corporate models and technology to empower and develop financial services.	Ernst and Young

Source: (Varga, 2017)

From its beginning, Fintech has been fundamental to modernism in terms of financial services. In their article on the emergence of Fintech, Arner et al. (2015) claimed that Fintech entails a continuous procedure in which finance and technology progress side by side leading to many progressive novelties, such as digital banking, mobile payments, peer-to-peer lending, Robo-Advisory, and online identification (Arner et al., 2015). Likewise, Chishti and Barberis

(2016) presented multiple cases on how the combination of finance and technology has driven innovation in the financial services sector, whether that is through incumbent companies (Citi)² or supra organizations (SWIFT)³ (Chishti and Barberis, 2016). In each of these cases, Fintech has meaningfully encouraged modernization.

The increase of Fintech has had its strongest effect on the traditional transactions of commercial banks (Petralia et al., 2019). These banks have lost market share in crucial areas like residential loans to shadow banks and Fintech financiers, which are regulated differently and provide more technological benefits (Buchak et al., 2018). Fintech lenders deal with more creditworthy debtors than shadow banks but charge higher interest rates, indicating that clients are disposed to pay more for a better user experience and quicker loan decisions. Another difference between Fintech lenders and classic ones in the loan market is that the former processes applications 20% more rapidly, without snowballing loan risk (Fuster et al., 2019). Fintech lenders also reply more elastically to request shocks and have a higher tendency to refinance, particularly for borrowers who are likely to benefit from it. In this way, Fintech lenders have enhanced the productivity of financial intermediation in loan markets.

Misalignment of incentives within finance companies can cause prejudiced loaning conclusions (Dobbie et al., 2018). Fintech lenders might ease discrimination in loan markets; traditional lenders charge minorities more for buying and refinance loans, and Fintech algorithms discriminate 40% less than face-to-face lenders (Bartlett et al., 2018). New financial technologies and data may offer a larger ability for screening debtors (Berg et al., 2020). The prognostic power of the data collected by Fintech, built by users' digital footprints, equals or surpasses traditional credit bureau scores when it comes to predicting customer nonpayment.

Webster and Pizalla (2015) have stated that the rivalry between Fintech and classic banking services grows more powerful each year because of the progress of information technology (Webster and Pizalla, 2015). Additionally, Fintech has received increased attention in contemporary financial services from growing financial institutions that seek to preserve and reinforce their important role in the field and offer contemporary services of high quality in a suitable and operative form for their customers. Currently, the number of partnerships between traditional financial institutions and Fintech outlet is rising as both sides perceive potential avenues for more expansion.

According to Navaretti et al. (2017), the capability to fundamentally influence all the services typically offered by banks comes from cost decreases generated by numerical technology progressions, enhanced and original products for clients and partial regulatory encumbrance (Navaretti et al., 2017). Moreover, with high-tech developments, Fintech operatives profit from (i) lower search charges that allow for more efficient correspondence in financial markets, (ii) economies of scale in gathering and working huge

groups of data, (iii) inexpensive and safer communication of information, and iv) lower verification expenses.

In this respect, King (2014) has claimed that originators of Fintech firms are frequently former bank staffs who have been relieved of their occupations in the wake of the 2008 crisis. They have the pertinent skills and knowledge and have succeeded in linking financial services with novel technologies to introduce pioneering firms or generate new business models (King, 2014). Such specialists often specialize in precise tasks inside, for instance, a bank. Therefore, they make point resolutions for services that are lone minor parts of the entire range of services of large financial service providers. Consequently, they focus on enhancing these service areas. Dapp et al. (2014) has accentuated that Fintech typically does not grow from the classic banking segment but a technology context. The leaning towards Fintech appears to be preserved as the development and upgrading of mobile devices, big data analysis and data storage continues as well as innovative options of simplification and individualization keep growing (Dapp et al., 2014).

In summary, Fintech-based services continue to progress at the juncture of information and statement technology and finance. They emphasize business model modernizations and new keys for current challenges in the financial and banking sector.

3. DATA AND METHODOLOGY

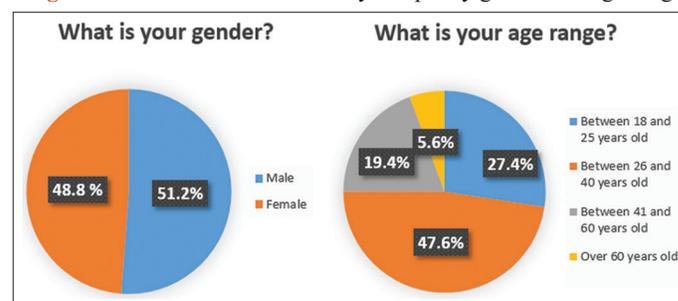
3.1. Data Collection

To answer the research question, this article used the survey method with an organized questionnaire as the data-gathering technique. The questionnaire contained 20 questions (Appendix A) for plotting the variables used for the data analysis.

The questionnaire included a presentation note that provided an overview of its goals and was circulated manually or by email to clients of local banks between August 2021 and April 2022. We obtained a total of 541 completed questionnaires, ensuring that all respondents had banking accounts. Supplementary qualifications and improvement processes included eliminating, editing, retelling, and expressing the inputs of derisive, unreliable, and unusual responses. These applies reduced the number of fit questionnaires used for more data analysis to 500.

Figure 1 illustrates the identification of respondents with regard to their sex and age, broken down into groups.

Figure 1: Identification of the study sample by gender and age range.



Source: Survey results

2 An American multinational investment bank and financial services company based in New York.

3 The Society for Worldwide Interbank Financial Telecommunication (SWIFT) is a cooperative society under Belgian law that was founded in 1973 and is owned by its member financial institutions with offices around the world.

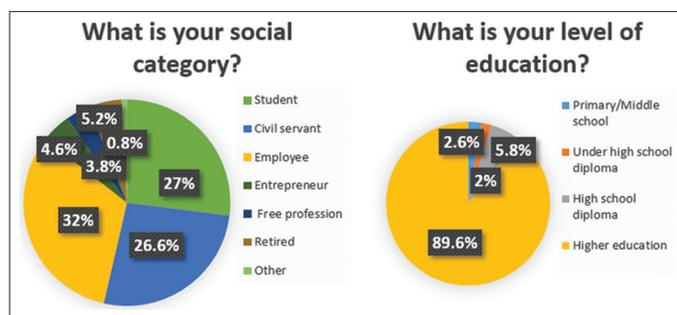
In terms of gender, the studied sample, which comprised 48.8% female respondents (244 bank customers) and 51.2% male respondents (256 bank customers), was relatively balanced.

Regarding age, the sample showed a dominance of the 26–40 age group with 47.6% of respondents belonging to this category. Customers aged 18 to 25 were the second largest age group, with 27.4% followed by 19.4% for the 41–60 bracket. The smallest age group was customers over 60 with only 5.6% of the sample.

Consequently, in addition to its balance by sex, the sample mainly comprised young people under 40 years of age.

Figure 2 illustrates respondents' identification in regard to their social category and education level.

Figure 2: Identification of the study sample by social category and education level.



Source: Survey results

For the social category, the sample was mainly composed of employees with 32%, followed by students with 27% and civil servants with 26.6% of the total. Retirees, entrepreneurs, and liberal civil servants only represented, respectively 5.2%, 4.6%, and 3.8% of the total. Finally, a percentage of 0.8% declared that they did not belong to any social category. The sample turned out, ultimately, to be quite varied socially.

For the level of education, the sample showed that an overwhelming majority of people had the level of higher education, with 89.6%. For the rest, 5.8%, 2.6%, and 2% were, respectively, respondents with a high school diploma, those with the level of secondary school (under high school diploma) and those whose level of education was limited to primary or middle school. The sample, therefore, was mostly educated.

3.2. Data Analysis Techniques

Two approaches were employed to conduct the necessary empirical analysis: Analysis of Variance (ANOVA) and Chi-square. The scores were calculated based on these two methods, using Python language.

4. RESULTS AND DISCUSSIONS

Figure 3 reproduces the ranking of variables influencing customer satisfaction with Fintech services according to the ANOVA method.

According to the results of the ANOVA test for the qualitative variable Satisfaction, the elements on which consumer satisfaction

with Fintech services depends have been classified, respectively, as follows:

- In the first position was whether one used online financial transactions and services, which had a score far exceeding those of the other variables (i.e., almost 40).
- In second place was the element of whether one was for or against more developments in Fintech products, with a score close to 20.
- In the third and fourth positions, the elements with modest scores that were still useful for the analysis were familiarity with the bank card as a Fintech instrument (score reaching almost 10) and familiarity with the electronic wallet as another instrument in this industry (score exceeding 5).
- From the fifth rank, it should be noted that the scores of the remaining elements of satisfaction lost much in terms of quantitative importance but retained a certain role in the satisfaction of bank customers with Fintech services.

These factors are, in descending order of importance:

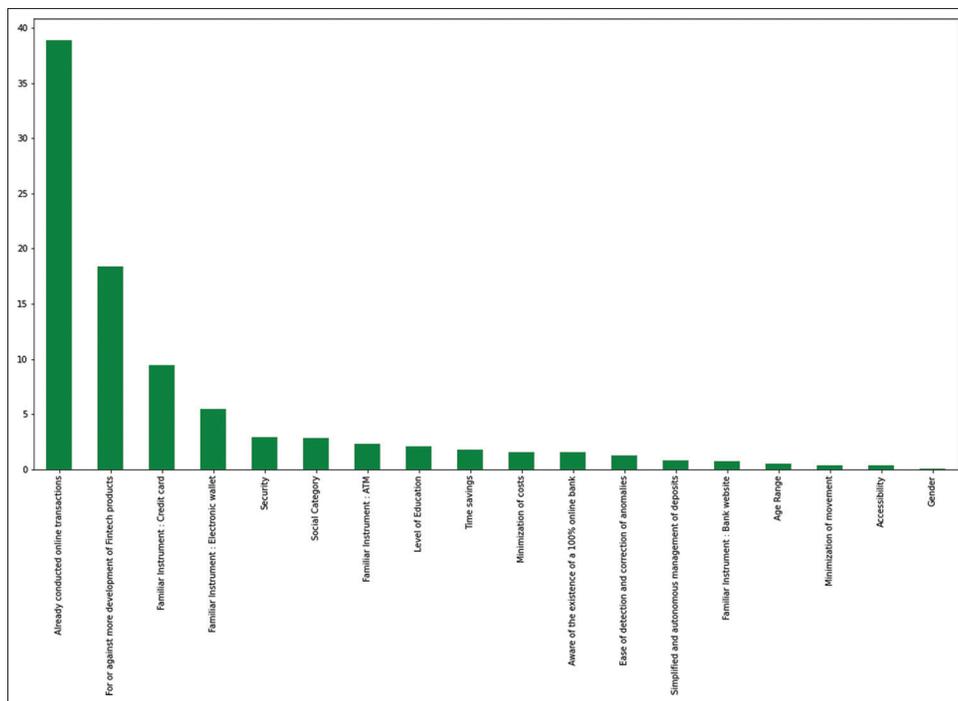
- Security, social category, familiarity with the Automatic Teller Machine (ATM) as a Fintech instrument, and the level of education of the respondents, with scores not reaching 5.
- Time savings, minimization of costs, awareness of the existence of 100% online banking, as well as the ease of detecting and correcting anomalies, all of which had low scores that did not reach 2.5. This ranking seems surprising because these factors should normally play an important role in the satisfaction of operators toward Fintech.
- Simplified and autonomous management of deposits, familiarity with the bank's site as a Fintech instrument, the age group of respondents, the reduction of physical trips to bank branches, and accessibility to services from the bank. All these elements displayed negligible scores because they were almost zero.
- Finally, the sex of the respondents occupied the last position with regard to the level of satisfaction that the respondents grant to these elements of appreciation.

Figure 4 below highlights the ranking of the variables that influence customer satisfaction with Fintech services according to the Chi-square analysis.

With regard to the results of Chi-square concerning the qualitative variable Satisfaction, the influential elements of this variable were much more pronounced. They can be classified into several segments:

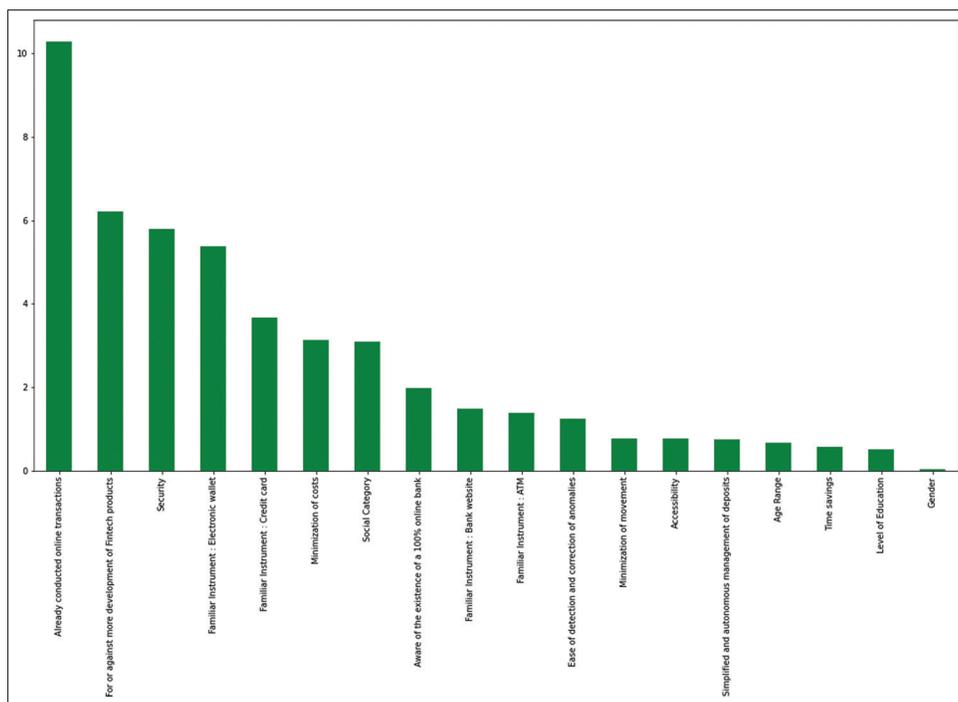
- The first is whether one used online financial transactions and services, which had a score far exceeding those of the other elements (score >10).
- The second is represented by factors such as being for or against more Fintech development, security, and familiarity with certain Fintech instruments (in this case, the electronic wallet). It should be noted that these factors are ranked in descending order, with scores varying from 10 to 6.
- The third position is occupied by factors relating to familiarity with another Fintech instrument (the bank card), cost minimization and the social category of respondents with scores ranging from 2 to 4.

Figure 3: Quantitative variables on which customer satisfaction with Fintech services depends according to ANOVA analysis.



Source: Python language calculations

Figure 4: Quantitative variables on which customer satisfaction with Fintech services depends according to the Chi-square approach.



Source: Python language calculations

- The fourth position goes to important factors that nevertheless displayed low scores barely equivalent to or <2. These factors are represented by one's awareness of the existence of the bank 100% online, familiarity with the bank's site as a Fintech instrument, level of familiarity with the ATM as another instrument of this industry, and finally, the ease of detecting and correcting anomalies what this industry allows.
- The fifth position includes factors such as the minimization of

physical trips to bank branches, accessibility to Fintech-based services, simplified and autonomous management of deposits, age group, time savings provided by the use of digital tools, and the level of education of the customers. The factors placed in this position had almost negligible scores, generally <1.

- Finally, in the last position appears the sex factor with a score close to 0.

To conclude this analysis of the qualitative variable Satisfaction, it should be noted that the two ANOVA and Chi-square approaches revealed that the level of this satisfaction depends on the pure and simple use of the industry of Fintech by the bank's customers through the use of online services and transactions, requiring neither the intervention of the bank employees nor travel to the bank.

Moreover, taking into account that the factors usually considered important by the analysts, have gotten modest scores, it becomes obvious that offering support to use Fintech services and their extension to banking operations can be important factors in encouraging customers to invest more in banking digitalization and Fintech. Similarly, another response to this situation would be to develop more advertising and information niches to publicize and facilitate digital practices and demonstrate their advantages for the bank's customers and the banking industry.

Moving on to the study of the Trust variable, Figure 5 below presents the ranking of the variables that influence customer trust in Fintech services according to the ANOVA analysis.

According to the results of the ANOVA test for the Trust qualitative variable, the elements on which consumer confidence in Fintech services depend are, in descending order of importance, as follows:

- With a score reaching almost 35, the opinion of respondents on the development (for or against) of banking services based on Fintech within their banks came in first place.
- In second place, with a score almost reaching 20, was whether one used online services or transactions.
- In third and fourth places came, respectively, the level of education of the respondents and their familiarity with the electronic wallet with scores that exceeded 5.

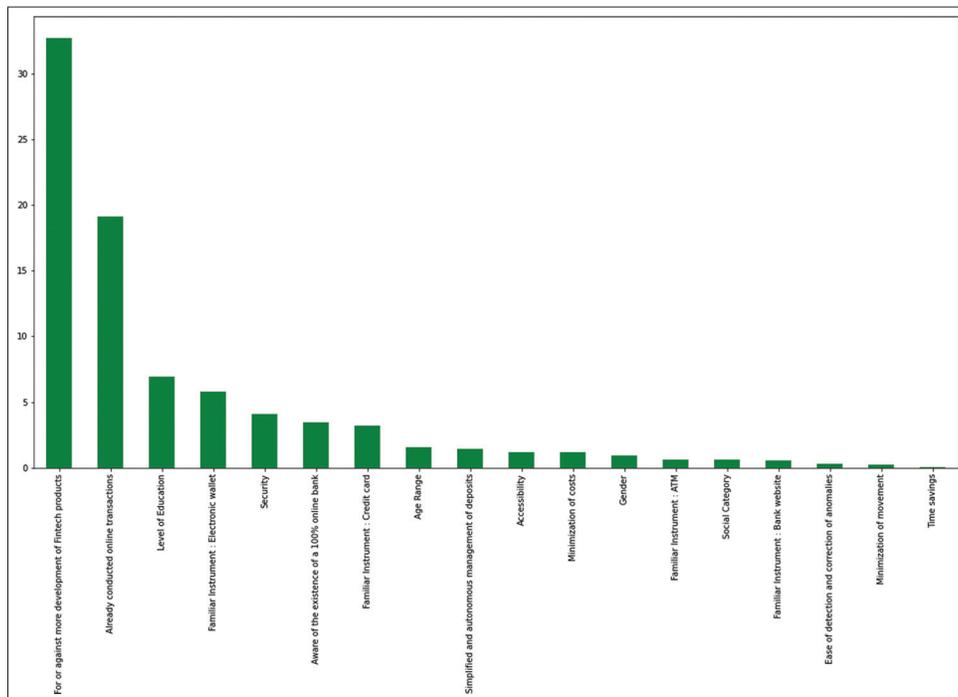
- The factors in the fifth, sixth, and seventh positions were security, awareness of the existence of 100% online banking, and familiarity with the bank card as an instrument of Fintech. These factors showed similar scores, none of which reached 5.
- From the eighth position, the scores continued to decrease for the elements age group, simplified and autonomous management of deposits, accessibility to services, minimization of costs and gender of respondents (scores below 2.5).
- Next came elements that were almost insignificant and whose score approached 0. These factors included familiarity with the ATM as a Fintech instrument, the social category of the respondents, familiarity with the bank site as another Fintech instrument, the ease of detecting and correcting anomalies, and the minimization of physical trips to the bank.
- Although it constitutes an undeniable advantage of Fintech, the saving of time was nevertheless placed in the last position among the indices of confidence, indicating that it plays no role in this area.

Figure 6 below reproduces the ranking of the variables that guide customer confidence in Fintech services according to the Chi-square analysis.

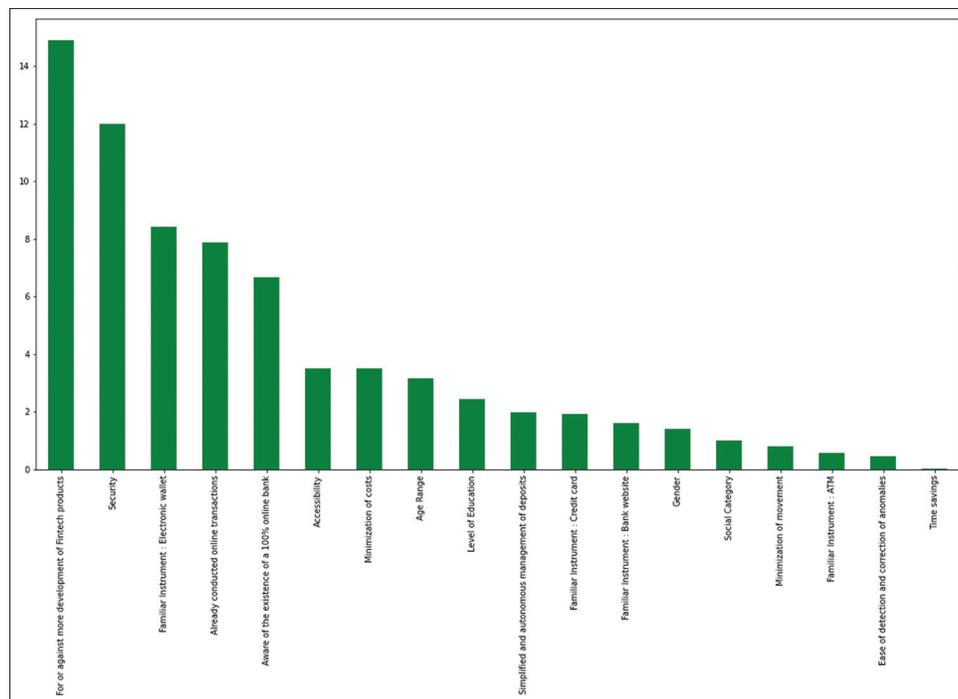
The results provided by Chi-square concerning the Trust qualitative variable, revealed that the most influential elements of this variable could be cataloged as follows:

- The first is the opinion expressed by operators as to whether there is a need to develop more Fintech-based products within their banks, with a score exceeding 14.
- The security element ranks second, with a score reaching 12.
- Familiarity with the electronic wallet as a Fintech instrument, the use of online transactions and services, and awareness of the existence of 100% online banking hold the third, fourth and fifth

Figure 5: Quantitative variables on which customer trust in Fintech services depends according to ANOVA analysis.



Source: Python language calculations

Figure 6: Quantitative variables on which customer trust in Fintech services depends according to the Chi-square method.

Source: Python language calculations

positions in this ranking, with scores exceeding 8 for the third place and approaching this quantum for fourth and fifth place.

- The elements accessibility to services, minimization of costs, and age group then appear, with relatively similar scores (i.e., between 3 and 4) for accessibility and minimization of costs and between 2 and 3 for age range.
- The level of education, simplified and autonomous management of deposits, familiarity with the bank card, familiarity with the bank website and the sex of the respondents appear as rather notable factors even though they had scores that were between slightly above 2 and slightly below 2.
- For the Chi-square approach, the social category of the respondents, the reduction in travel, familiarity with the bank counter (ATM), and the ease of detecting and correcting anomalies were quantifiable elements of little significance, with scores between 0 and 2.
- Finally, time savings, which comes last in this ranking with a score of almost zero, was not privileged by operators as a factor that can influence the trust placed in Fintech-based operations and services.

To conclude it should be noted that, similar to the satisfaction variable, the two approaches ANOVA and Chi-square based their results for the Trust variable on another main factor, namely the favorable or unfavorable opinion of the respondents toward the development of more Fintech products from their banks.

Thus, those who are in favor of the development of Fintech products and services were interested in the advantages of digital tools (e.g., security against computer hacking or double charging of transactions carried out by bank card), reduction of travel time, facilitation of detection and correction of anomalies and above all the saving of time.

5. CONCLUSION

Recently, Fintech has been growing quickly worldwide, inspired by technological progress, financial excavation, and alterations in client bases (Lee and Shin, 2018). It has created a noteworthy effect on traditional financial products, businesses, services, and organizational structures.

The existence of Fintech has affected the financial sector, particularly the banking industry. However, Fintech services' capacity to offer financial services is limited and banking institutions still play a significant role as intermediary institutions in the economy (Lestari and Rahmanto, 2021). Fintech's impact on the banking sector is still extensively discussed and will ultimately depend on how banks plan to reply to Fintech's strategy and regulatory procedures.

This work focused on the main factors that affect customers' satisfaction with and trust in the Fintech industry. It provided an in-depth inquiry into the features that drive operators to use this industry and made corresponding deductions to promote Fintech and its services for banking.

Based on the ANOVA and Chi-square analyses, this study found that the factors most responsible for customer satisfaction with Fintech services lie in the use of the services of this industry. Thus, the most satisfied customers are operators who use Fintech services and seem comfortable with digital practices. When it comes to banking operators' confidence in Fintech, the ANOVA and Chi-square analyses revealed that bank customers' confidence in Fintech-enabled services lies in the opinion of these consumers about further development of Fintech products at their banks. Therefore, a customer will have more confidence in Fintech

and digital tools if they are in favor of more development in this industry if the banking sector is active in reinforcing the advantages and fighting against the risks of financial technology, namely by expressing pioneering strategies to compete in the digital era and remaining open to the challenges posed by other innovative companies.

Furthermore, by covering on an important topic namely artificial intelligence and customer attitudes toward and expectations of financial technology within banks, this paper encourages the management of the financial industry to take a proactive attitude toward Fintech. In so doing, they can ensure a better decision-making ability that will help banks in their journey to becoming Fintech-based establishments without frustrating their operations. This paper is ideally designed for financial analysts, banking professionals, IT consultants, researchers, academics and practitioners. Indeed, banks are still solid in their structure, but they must quickly comprehend the requirement in order to compete with new technologies. Many banks are investing in Fintech companies or buying them to digitize their services and to suggest novel solutions (Vasiljeva and Lukanova, 2016). The business areas they are most interested in are payments, big data, and trading.

The results of this paper also correspond to the works on financial literacy and client dis-/satisfaction regarding the value of retail banking services as elements of retail banking clients' inclination to use Fintech based-services. The standardization of financial products has made it difficult for banks to distinguish themselves from their peers (Lundahl et al., 2009). Consequently, confidence in and transparency of financial services procedures offers banks an opportunity to distinguish themselves from Fintech. For example, households with low levels of trust, high levels of financial schooling, and a penchant for transparency have a greater swapping likelihood (Jünger and Mietzner, 2020).

However, innovations touch diverse kinds of Fintech substances (Puschmann, 2017). One such example is mobile bank services. Nevertheless, since Fintech resolutions are still in their initial stages of progress, it remains unclear how clients will embrace them. Future researchers might emphasize their works on novelty designs in Fintech with respect to the sole product, service, or processes and the interrelations among them (interrelations of new schemes and new business models). Another future research area could be the microeconomic issues encompassed by the innovation scope. The microeconomic standpoint might lead to a conversion of banking institutions into more devolved, schmoosed units, each of them concentrating on lone tasks. This progress has lately been labeled hyper-specialization (Malone et al., 2011). Thus, the business and technology stages allow multilateral relations between every related stakeholders (Kauffman and Ma, 2015).

The labeled growths permitted by Fintech have previously had a steady influence and will have an even sturdier one on the banking industry in the future, driven to a vital restructuring of the entire industry. Even though several instances of this fruition can already be perceived, more of them are expected to appear in the future. The information systems field might help with

its solid interdisciplinary method by conducting investigations from numerous perspectives and involving computer science, marketing, and other fields.

To conclude, even though banks could continue to do their business activities the outdated way, they face the main menace in the long haul. The danger comes from the likely evolution of these new Fintech companies, which are growing more rapidly each year. As an alternative to waiting and seeing what happens, banks could collaborate with them instead of undervaluing the disruptive power of Fintech companies. There was previously a trend where banks were partnering up with Fintech firms. Therefore, only the active banks will be standing in the end, while the sensitive banks will fall behind and lose their market share, customer base, and revenue.

REFERENCES

- Anikina, I.D., Gukova, A.V., Golodova, A.A., Chekalkina, A.A. (2016), Methodological aspects of prioritization of financial tools for stimulation of innovative activities. *European Research Studies*, 19(2), 100-112.
- Arner, D.W., Barberis, J., Buckley, R.P. (2015), The evolution of Fintech: A new post-crisis paradigm. *Georgetown Journal of International Law*, 47, 1-45.
- Baker, M., Wurgler, J. (2015), Do strict capital requirements raise the cost of capital? Bank regulation, capital structure, and the low-risk anomaly. *American Economic Review*, 105(5), 315-320.
- Bartlett, R., Morse, A., Stanton, R., Wallace, N. (2018), Consumer-lending Discrimination in the Era of Fintech Working Paper. Berkeley: University of California.
- Beck, T. (2020), Fintech and Financial Inclusion: Opportunities and Pitfalls. ADBI Working Paper Series.
- Berg, T., Burg, V., Gombović, A., Puri, M. (2020), On the rise of fintechs: Credit scoring using digital footprints. *The Review of Financial Studies*, 33(7), 2845-2897.
- Bouyala, R. (2016), La Révolution FinTech. RB édition.
- Buchak, G., Matvos, G., Piskorski, T., Seru, A. (2018), Fintech, regulatory arbitrage, and the rise of shadow banks. *Journal of Financial Economics*, 130(3), 453-483.
- Chishti, S., Barberis, J. (2016), *The Fintech Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries*. New York: John Wiley and Sons.
- Dapp, T.F., Slomka, L., Hoffmann, R. (2014), Fintech-Die digitale (R) evolution im Finanzsektor. Algorithmenbasiertes Banking Mit Human Touch. Frankfurt Am Main: Deutsche Bank Research.
- Dobbie, W., Liberman, A., Paravisini, D., Pathania, V. (2018), Measuring Bias in Consumer Lending. Cambridge, Massachusetts: National Bureau of Economic Research.
- Fuster, A., Plosser, M., Schnabl, P., Vickery, J. (2019), The role of technology in mortgage lending. *The Review of Financial Studies*, 32(5), 1854-1899.
- Gomber, P., Koch, J.A., Siering, M. (2017), Digital Finance and FinTech: Current research and future research directions. *Journal of Business Economics*, 87(5), 537-580.
- Jagtiani, J., Lemieux, C. (2017), Fintech Lending: Financial Inclusion, Risk Pricing, and Alternative Information Working Paper. FRB of Philadelphia.
- Jünger, M., Mietzner, M. (2020), Banking goes digital: The adoption of FinTech services by German households. *Finance Research Letters*, 34, 1-8.
- Kauffman, R.J., Ma, D. (2015), Contemporary research on payments and

- cards in the global fintech revolution. *Electronic Commerce Research and Applications*, 14(5), 261-264.
- Kelly, B., Lustig, H., Van Nieuwerburgh, S. (2016), Too-systemic-to-fail: What option markets imply about sector-wide government guarantees. *American Economic Review*, 106(6), 1278-1319.
- King, A. (2014), Fintech: Throwing down the gauntlet to financial services. *Unquote Analysis*, 21, 12.
- Lee, I., Shin, Y.J. (2018), Fintech: Ecosystem, business models, investment decisions, and challenges. *Business Horizons*, 61(1), 35-46.
- Lestari, D., Rahmanto, B.T. (2021), Fintech and its challenge for banking sector. *The Management Journal of BINANIAGA*, 6(1), 55-69.
- Liu, C. (2019), Finance strategies for medium-sized enterprises: Fintech as the game changer. In: *Strategic Optimization of Medium-Sized Enterprises in the Global Market*. Pennsylvania, United States: IGI Global. p162-184.
- Lundahl, N., Vegholm, F., Silver, L. (2009), Technical and functional determinants of customer satisfaction in the bank-SME relationship. *Managing Service Quality: An International Journal*, 19(5), 581-594.
- Malone, T.W., Laubacher, R., Tammy, J. (2011), *The Big Idea: The Age of Hyperspecialization*. Harvard Business Review, July-August.
- Navaretti, G.B., Calzolari, G., Mansilla-Fernandez, J.M., Pozzolo, A.F. (2017), Fintech and Banking. Friends or Foes? *European Economy*, 3(2), 9-30.
- Petralia, K., Philippon, T., Rice, T., Veron, N. (2019), *Banking Disrupted? Financial Intermediation in an Era of Transformational Technology*. Genève: ICMB International Center for Monetary and Banking Studies.
- Puschmann, T. (2017), Fintech. *Business and Information Systems Engineering*, 59(1), 69-76.
- Varga, D. (2017), Fintech, the new era of financial services. *Vezetéstudomány-Budapest Management Review*, 48(11), 22-32.
- Vasiljeva, T., Lukanova, K. (2016), Commercial banks and Fintech companies in the digital transformation: Challenges for the future. *Journal of Business Management*, 11, 25-33.
- Webster, I., Pizalla, J. (2015), *Fintech: Are Banks Responding Appropriately*. EY Publication.
- World Bank Group. (2020), *The Global Covid-19 FinTech Market Rapid Assessment Study*. World Bank Group, Washington, DC.

APPENDIX

Appendix A: The Survey's Questionnaire

Presentation Note

Thank you for taking a few minutes of your time to answer this questionnaire. This survey focuses on financial technology (Fintech) and the factors behind the clients' choice of using Fintech-based services. Responses are anonymous and will be used for academic research purposes only.

A. RESPONDENT'S IDENTIFICATION

1. What is your gender?

- Male
 Female

2. What is your age range?

- Between 18 and 25-years-old
 Between 26 and 40-years-old
 Between 41 and 60-years-old
 Over 60-years-old

3. What is your social category?

- Student
 Civil servant
 Employee
 Entrepreneur
 Free profession
 Retired
 Other

4. What is your level of education?

- None
 Primary/Middle school
 Under high school diploma
 High school diploma
 Higher education

B. RESPONDENT'S ATTITUDE TOWARDS FINTECH SERVICES

5. Do you trust the computer security of internet banking services?

- Absolutely
 Mostly yes
 Mostly no
 Not at all

6. Which Fintech instrument(s) are you most familiar with?

- Bank website
 Credit card
 ATM
 Electronic wallet (mobile phone, smartphone, or tablet)
 Other

7. Have you already conducted online transactions/consulted online services?

- Yes
 No

8. If YES, which ones?

- Account consultations
 Request for checkbooks
 Portfolio management
 Purchases
 Payments
 Transfers
 Other

9. If NO, for what reasons?

- High costs
 Absence of certain operations
 Transactions not instantly visible
 Complexity of use
 Loss of human contact
 Other

10. What is the approximate frequency of using Fintech for your banking operations?

- More than once a week
 Once a week
 Once every 10 days
 Once every 2 weeks
 Once a month
 More than once a month
 I have never used it

11. Are you satisfied with the quality of the digital services offered by your bank?

- Very satisfied
 Partly satisfied
 Not satisfied

12. If NOT SATISFIED, what do you desire as (an) alternative solution(s)?

- Exclusive use of traditional banking services
 Reduction of account maintenance fees for all services
 Greater simplification of service access techniques
 Other

13. Are you aware of the existence of a 100% online bank in the country?

- Yes
 No

14. If YES, have you already used it?

- No, and I do not intend to use it
 No, but I plan to use it soon
 Yes, one time
 Yes, more than once

15. How would you generally qualify a 100% online bank, regardless of whether or not you use its services?

- Advantageous
 Secure
 Risky
 Useless

- No opinion
- Other

C. RESPONDENT'S EXPECTATIONS REGARDING FINTECH SERVICES

16. Given the current state of online services, are you for or against more development of Fintech products at your bank?

- For
- Against
- Neutral
- No opinion

17. If you are FOR, what would you hope to see in the digitization of your banking services in the near future?

- Establishment of online links between different banking services
- More adequate equipment for Fintech services
- Global restructuring of the bank with a view to establishing a culture and organization specific to Fintech services
- Other.....

18. What are the main advantages of Fintech services that you would like to see reinforced?

- Time savings
- Simplified and autonomous management of deposits
- Ease of detection and correction of anomalies
- Other.....

19. What are the risks associated with Fintech services that you fear the most and that you would like to see mitigated?

- Computer hacking
- Charging for withdrawals without services truly rendered
- Double card payment charging
- Retention of the card after closure of the bank branch
- Other

20. Would you be ready to give up physical trips to your bank branch totally or partially if the online services meet all your expectations?

- Yes, totally
- Yes, partially
- No