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**THE IMPACT OF THE DIGITALIZATION OF MOROCCAN BANKS ON THE
BEHAVIOR OF THEIR CUSTOMERS**

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Résumé

Au Maroc, les banques sont confrontées à une mutation complexe et rapide, favorisée par les nouvelles technologies et la crise sanitaire. Ces entreprises s'efforcent de répondre aux attentes d'une clientèle de plus en plus exigeante, hyper connectée, infidèle et en quête constante de la meilleure expérience client/utilisateur. Face à ces défis, le numérique apporte des réponses convaincantes. Cependant, il n'est pas sans risque pour les clients qui ne l'ont pas encore intégré à leurs attitudes et comportements. Notre recherche vise à comprendre les apports et les risques de la digitalisation, d'une part, et à analyser le comportement des clients des banques vis-à-vis des différents canaux digitaux, d'autre part. Pour ce faire, nous avons tenté de répondre à la question centrale suivante : quels sont les comportements des clients des banques marocaines vis-à-vis des services digitaux ?

Mots-clés : digitalisation, banques marocaines, comportements, âge.

Summary :

In Morocco, banks are facing a complex and rapid change encouraged by new technologies and the health crisis. These companies are striving to meet the expectations of increasingly demanding, hyper-connected, unloyal customers who are constantly looking for the best customer/user experience. Faced with these challenges, digital technology provides convincing answers. However, it is not without risk for customers who have not yet integrated it into their attitudes and behaviors. Our research aims to understand the contributions as well as the risks of digitalization, on the one hand, and on the other hand, to analyze the behavior of the bank's customers with regard to the different digital channels. To do this, we tried to answer the following central question: what are the behaviors of Moroccan bank customers with regard to digital services.

Keywords: digitalization, Moroccan banks, behaviors, age.

General introduction

The Moroccan banking sector has seen its environment change in recent years between health, economic and financial crises that have required an unprecedented development of new technologies. To remain competitive, banks must strengthen the geographical network of branches, mainly by reviewing their models and streamlining their locations. New tools are available to banks to adapt to this new environment: big data, mobile banking, etc. Openness to digitalization has become imperative for these organizations whose customers have become demanding and expect a certain

continuity of service, as well as more interactivity from banks. The first step taken by banks towards digitalization was first the creation of digital compensation and the digitalization of the banking IT system, which reduced the number of fraud errors and improved the speed of processing transactions. Then, call centers, which allow greater availability of advisors by telephone, became widespread, and more recently, mobile banking applications have appeared. These applications, commonly called mobile banking, allow banks to meet customer expectations. They give them the opportunity to carry out the most basic and simple operations electronically, without having to visit a branch. The evolution of customer profiles leads to a new problem for banks: personalization. To capture their interest and better retain customers, segmentation must be increasingly personalized and sophisticated. Through everything we have previously explained, we will try to answer the central question: What are the behaviors of Moroccan bank customers when it comes to digital services? We will also be required to answer the following questions:

- What are the challenges of digitalization for Moroccan banks?
- What are the benefits of banking digitalization?
- What are the risks of banking digitalization?
- What are customer behaviors towards digital services?
- What are the obstacles to using online services?
- How does age impact online transaction execution?

To do this we will start by presenting [theoretical framework](#) which will give a description of the existing knowledge on the subject followed by the Methodology which will allow us to explain in detail the main elements of the research, the stages of its realization. We will present in a third place the results of our research followed by a discussion which aims to analyze and give a scientific meaning to our results.

I. The challenges of digitalization for Moroccan banks

As mentioned above, digitalization has become an element whose presence is essential to preserve not only the sustainability of banks, but also to participate in their continued development and increase their profits. In this part, we will first start by recalling the stages of the digital revolution of banks, then we will explain, develop and elucidate the notion of customer experience. We will then analyze the different banking professions, by mentioning the new professions that have appeared and how digitalization has been able to influence this appearance. Finally, we will clarify the notion of big data by detailing its different areas of application.

1.1. The digital revolution in banks

Morocco has not been spared by these transformations. Indeed, the evolution of new information and communication technologies has allowed Moroccan banks to offer services similar to those of more developed countries. Also, the advent of the Internet and the appearance of new payment services has allowed new distribution channels to be accepted by bank customers, namely remote channels. Thanks to these channels, the notions of time and space have radically changed. We have entered the era of "anytime" and "anywhere". Indeed, complex operations, such as bank transfers and provision in a few seconds, can be carried out from home. These technologies have found their place in the daily life of Moroccan banks. They have pushed them to rethink their relationships with customers since new distribution channels have emerged, namely remote channels.

1.2. The development of online banks

New information and communication technologies have made human life easier, as new uses appear every day. The development of the banking sector follows the evolution of the uses of these new technologies by customers and the needs not met by traditional banks. The development of online banking takes two distinct forms: first, the creation and development of fully online operators called 100% online banks, and secondly the development of online services offered by traditional banks to expand their distribution channels in a multichannel or omnichannel approach. The creation of 100% online banks in Morocco still faces obstacles since Moroccan banks without branches cannot survive in a highly competitive environment where customers need reassuring factors. Indeed, human contact is a determining factor in the customer-bank relationship, since it helps to establish trust between the customer and his bank, especially when it comes to entrusting his assets.

1.3. The different digital services offered by banks

Today, consumers tend to take their smartphones wherever they go, to access online content and make purchases at any time. Banks have become aware of these changes since 76%¹ of them recognize the effectiveness of these new channels for selling banking products, and 63% say that they are a good way to attract new customers.

- Automated Teller Machines (ATMs): ATMs operate 24 hours a day, 7 days a week and are located next to all bank branches and in large shopping areas to save customers time and make them more independent. ATMs allow customers to access services such as withdrawals, balance inquiries and transfers.

¹Sandrine Medioni & Sarah Benmoyal Bouzaglo Digital Marketing - Dunod - Feb., 2018

- **Bank cards:**Each customer can subscribe to one or more payment methods when opening a bank account. Among these methods we find the bank card, the method most appreciated by customers and the most used because of its security and practicality. There are several types of bank cards depending on the bank and each has its specificities. For example, we find the classic withdrawal card intended only for withdrawals from the ATM, or the visa card, which allows customers to make withdrawals and payments nationally and internationally.
- **Banking applications:**A banking application allows you to check your account via a smartphone or tablet. It can be downloaded from app stores, such as Google Play or the App Store. To check your account remotely, the customer simply needs to register with the identifiers provided by their bank.
- **Banking sites:**The banking site refers to the platform that a bank's customer can access via the Internet to obtain information about the bank and its services or to access its online space to which it is entitled under the contract it signed when opening its account. This site allows customers to carry out banking transactions remotely such as checking the balance, making transfers, paying bills, etc.².

1.4. The contributions of banking digitalization

The digitalization of banks in France remains a lever for the development of the sector. Thanks to this phenomenon, institutions are closer to their customers. Mobile applications can be downloaded at any time and anywhere from smartphones. This makes exchanges between advisors and consumers less complex and faster. In addition, transactions on their account are done instantly. And above all, less time is spent on all these treatments.

- **Loyalty**

Customer loyalty should be the goal of any entity that wants to expand and retain its customer base, as it allows it better control of the activity. With the arrival of new entrants such as web giants and fintech that are disrupting the market with their innovations, customer acquisition and loyalty have become of paramount importance for Moroccan banks, given that they no longer hold a monopoly on certain operations. In addition to new entrants, the change in consumer behavior, including the desire for speed, transparency and independence, are at the origin of the emergence of another type of competition brought by the creation of comparison sites, where customers can compare and dissect banking offers and choose those that suit them.

²Béziade, Charlotte, and Serge Assayag. "The impact of digital technology on banking professions," sd, 27.

- **Profitability**

Banking institutions that succeed in this transition and manage this crucial shift well will benefit from many sustainable competitive advantages, since they will win the battle for proximity and relevance in managing their customers, an achievement in itself that is perceived as profitable for the bank and the customer. In addition, banks will be able to benefit from the internal improvements that the use of new technologies provides them, in terms of the products offered, the services provided, as well as the procedures and internal management of credit institutions. The complete overhaul of the banking sector's economic model is a long process and a phenomenon that mobilizes many resources, both inside and outside the company. The scale of implementing such a strategy is enormous, whether in terms of allocations and resources allocated, time or personnel mobilized. But persistence in this modernization battle is vital for the banking sector, which is currently facing attacks from all sides and of all kinds. Indeed, competition is increasingly fierce, and customers are increasingly informed and demanding. In light of recent studies, this digitalization seems inevitable in all sectors. Thus, the bank that would like to ensure its sustainability must transform itself into a competitive and sustainable model that integrates digitalization in all its aspects. All the more so since the profitability of digital is proven by numerous studies. Thus, according to a study carried out by the McKinsey firm, entitled "Accelerating the digital transformation of companies: a source of growth and competitiveness for France", and based on modeling of the typical bank (and supplemented by analyses of anonymous customers), it appears that hypothetically the digital transformation gives banks advantages that are greater than the risks. Indeed, this new policy could allow banks to increase their margins by around 40%. But this hypothesis will only come true if banking organizations manage to adopt relevant digital strategies in order to take full advantage of the opportunities offered by this transformation.

- **Resilience**

Fintechs, otherwise known as financial technologies, refer to a sector of activity that deploys technology to improve financial activities. By extension, the term "fintech" refers to a company, more generally a startup that has mastered information and communication technologies to perfection, and whose objectives are to absorb or take market share from companies that are often not very innovative or behind in terms of current technologies and digital development. The pressure that the banking sector feels because of digital is mainly linked to the players, because it reflects a change in the mentalities of bank users. The positioning of fintechs is not due to chance, on the contrary, it is a position drawn from a very in-depth study that has allowed them to both generate profits from the banking sector and remain protected from the pressure of banking regulations. Fintechs have

succeeded by positioning themselves mainly on front-office activities of the bank, which are less subject to regulation. In addition, they have adopted a different angle of attack than banks, known as a customer centric strategy, which not only takes the customer into consideration in its strategy, but also goes further by taking into account the impact of brand decisions on the customer by showing empathy.

1.5 The risks of digitalization

Digitalization presents several risks. In this research, we detail the most important ones, namely, computer hacking and fraud,

Computer hacking

Banks are currently experiencing an extraordinary digital revolution that provides them with new tools that allow them to make more money, profits and market share. But this same digital revolution can weaken their defenses against hackers. For financial police, hackers represent such a danger that their attacks are considered a systemic risk. The danger they represent is said to be just as significant for financial stability as the subprime crisis ten years ago. In 2018, the Indian bank Cosmos Bank was the victim of a cyberattack that caused it to lose \$13.5 million in just two hours. To carry out this operation, the hackers installed malware on the bank's cash distribution server. They were thus able to siphon off millions of dollars through more than 14,000 fraudulent withdrawal transactions at ATMs in 28 different countries. Incidentally, these hackers fraudulently used the Swift interbank transaction system, as revealed by the bank. What makes banks potentially more vulnerable today is the digital transformation they are experiencing, because "each banking application and even each version can become an entry point for a hacker. Similarly, pooling bank or cloud data also presents a risk of intrusion. This risk is reinforced by customer expectations, who are asking for uses close to what GAFA offers," explains Yves Le Floch.³

Fraud

Today, all companies are facing digital transformation, and therefore, the transformation of customer relations, with many opportunities for loyalty, customer satisfaction and cost reduction that present themselves to them.⁴ This digital revolution affects all sectors and particularly banking. Thus, 50% of managers believe that it is important to dematerialize end-to-end processes to accelerate their

³ Le Floch Yves, "For a systemic approach to cybersecurity [By Yves Le Floch, Sogeti]", FIC Observatory, consulted on July 8, 2020, <https://observatoire-fic.com/pour-une-approche-systemique-de-la-cybersecurite-par-yves-le-floch-sogeti/>.

⁴BENCHOUK Amina; "The digital transformation of banks: customer resistance factors. 2020

services.⁵ On the other hand, this transformation presents new challenges in terms of transaction security, the fight against fraud and authentication. These growing risks represent 40% of decision-makers' concerns.⁶ Protecting consumers from the dangers of fraud is no longer a question that arises, it has become a preponderant obligation that banks must take into account to maintain customer confidence, especially in these times when the imagination of fraudsters is overflowing and limitless, and where fraud tools have multiplied. According to the AFCE, losses related to fraud are estimated at 5% of turnover. However, at a time when banks are looking to improve their digitalization strategy, security should be a priority in order to gain the trust and support of their customers. This advent and democratization of digital has meant that the typologies and number of frauds have increased significantly. There are four types of fraud: identity theft, which does not only concern identity documents, but also any document necessary for a transaction (pay slip, employment contract, etc.), electronic fraud (phishing, spyware, etc.) linked to all operations that are carried out online and that require banking information, fraud linked to checks, as well as fraud involving bank cards, which is the most well-known and widespread in the world.⁷ Fighting fraudsters also means meeting regulatory constraints. The customer's journey within their bank is punctuated by processes that must be secured to prevent fraud and meet regulatory requirements. Credit institutions are subject to increased control and regulation (Basel 3, Basel 2, BAM circulars), which require them to implement documented and auditable controls to reduce the risk of fraud. However, these controls have the consequence of increasing management expenses.

II. Research methodology and analysis of results

In our research work, we chose a quantitative approach that allowed us to conduct an empirical study in the field. Thus, we were able to conduct a survey of 188 clients of private and public agencies. To obtain the best reliability of the results, we previously conducted an exploratory study through which we contacted agency managers and bank clients with whom we held exchanges of information to be able to quickly and efficiently collect information. These interviews, although quick and small in number, helped us in our research and allowed us to draw out the main factors that influence consumer behavior, which are: age, simplicity and time saving, and finally trust, which is an important

⁵Mieszala, Jean-Christophe. "The Technological Revolution of Financial Systems: The Example of Corporate and Investment Banking." *Revue d'économie financière* n° 118, no 2 (July 30, 2015): 53-66

⁶Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, Saniya Ansar, and Jake Hess. *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution*. The World Bank, 2018.

⁷Meister, Michael. Chapter 3. Money laundering. *The fight against corruption, money laundering, tax fraud*. Presses de Sciences Po, 2017.

influencing factor and which unfortunately is not fully there.

2.1 'sampling

For the survey we are conducting, the parent population is made up of customers of 5 Moroccan banks. We were therefore able to retain a sample composed of 188 customers of different banks and who all answered all the questions, i.e. a response rate of 100%.

2.2 Data Collection

Questionnaire survey: we designed and administered a structured questionnaire to collect quantitative data on customers' perceptions and behaviors towards digital banking services. Our investigation therefore began on 01/05/2023 for a period of three months. We administered the questionnaires directly and using online tools using Google Form.

2.3 Processing of results

In processing the results obtained from the responses to our questionnaire, we used SPSS software (26), which is the leading statistical tool, offering a wide variety of non-complex and easy-to-use analysis techniques.

For our part, we used 2 treatment methods:

- Flat sorting which consists of processing one variable at a time
- Cross-sorting allows us to make cross-references between two variables to be able to detect whether they influence each other in what way.

III. Analysis and interpretation of results by flat sorting:

The aim of these questions is to be able to classify clients according to their gender, age, intellectual level, socio-professional class, in order to clearly identify the sample studied and respond precisely to the research questions.

3-1 Identification of respondents

The analysis of the results gave us the following results:

- 52.13% of respondents are men compared to (47.87%) women.
- Of the 188 people surveyed by questionnaire, people whose age is centered between 25 and 35 years represent the majority with a percentage of (30.85%), in second place, we have both people whose age group is between 35 and 45 years and people aged 18 to 25 years with an equal percentage of (23.94%), then finally, and in last place, we have people over 45 years with a

percentage of (21.28%).

- 88% of those surveyed have a university level of education, compared to 6.9% of people who left high school, 1.6% left middle school, and 1.1% left primary school.
- The majority of those surveyed are employees or state civil servants with a percentage of (71.3%).
- The number of students is greater than that of entrepreneurs and people who exercise liberal professions with a percentage of (19.7%) against respectively percentages of (4.8%) and (4.3%).
- Among the 188 people we interviewed, 22.9% of them have CIH Bank, 20.7% ATW, 20.2% Banque Populaire, 13.8% BMCE, 6.9% for SGMB as well as Crédit du Maroc, and finally we have BMCI with 3.7% preceded by 4.8% of people who have other banks than those named on the table.
- The presence of Banque Populaire, ATW, BP and BMCE at the top of the list is only natural since these banks are the first in Morocco and they have a high concentration rate, as far as CIH is concerned their significant presence is due to their strategies which target young customers, particularly students.

3-2 Customers' awareness of their banks' online services

Analysis of tables no. 6 concerning customers' awareness of their banks' online services.

Table No. 1: Customers' knowledge of online banking

<i>Have you ever heard of online banking?</i>	F	%
Yes	178	94.7
No	10	5.3
Total	188	100.0

According to Table 1, (94.68%) of respondents are aware of the existence of online banking, compared to only (5.32%) who are not aware of online banking. (94.68%) is a very satisfactory figure, what remains to be seen is whether this awareness of the availability of online banking is translated into its use. This high rate of awareness is only normal given the large number of respondents who have completed higher education.

3-3 Customer behavior towards digital services

Through these questions we seek to study and understand the behavior of the bank's customers in relation to digital products and services, in order to be able to draw relevant conclusions.

Table 2: Possession of an application to access the online bank account

<i>Do you have an app to access your online account?</i>	F	%
Yes	154	86.5
No	24	13.5
Total	178	100

According to Table 2, we note that (86.5%) of the people surveyed have applications to access their bank accounts against (13.5%) of people who do not have any banking application. We note a discrepancy between the percentage of people who use banking applications (86.5%) and the percentage of people who say they are aware of the existence of the applications (94.68%), this means that not all the people who know about online services use them.

Table No. 3: Use of online services

<i>Have you ever made any online transactions?</i>	F	%
Yes	142	75.5
No	46	24.5
<u>Total</u>	188	100.0

From Table 3, we notice that (75.53%) of the people surveyed have use online services to carry out their transactions, against (24.5%) of people who do not use them. Once again, we notice discrepancies between the percentages of people who know about online services, people who have banking applications, and people who currently use them to carry out transactions. These discrepancies may be related to several factors.

Table No. 4: The most used digital services

Vending machine	152	40.5%	80.9%
Website	67	17.9%	35.6%
Application	135	36.0%	71.8%
Instant messaging	3	0.8%	1.6%
E-mail	14	3.7%	7.4%
Call center	4	1.1%	2.1%
	375	100.0%	199.5%

a. Group of dichotomies tabulated at value 1.

According to Table No. 4, (80.9%) of respondents use ATMs more, (71.8%) banking applications, (35.8%) websites, (7.4%) e-mails, (2.1%) call centers and finally (1.6%) of respondents use instant messaging more.

Table No. 5: The most frequent operations

Balance inquiry	103	27.4%	54.8%
Transfers	113	30.1%	60.1%
Withdrawals	101	26.9%	53.7%
Credit simulation	3	0.8%	1.6%
Editions of surveys of	29	7.7%	15.4%
Account			
Checkbook Requests	13	3.5%	6.9%
Research	14	3.7%	7.4%
information about a			
product/service			
376		100.0%	200.0%

a. Group of dichotomies tabulated at value 1.

(60.1%) of respondents say that transfers are the most frequently used operations through digital channels, balance consultation is at (54.8%), then withdrawals are at (53.7%), (15.4%) for issuing account statements, (7.4%) for searching for information, 6.9%) for requesting checkbooks, and finally (1.6%) for credit simulation

Table No. 6: Advantages of online services according to customers

What do you think is the advantage of digital services?	F	%
Mobility	34	18.1
Save time	97	51.6
Simplification of the Operations	36	19.1
Autonomy	21	11.2
Total	188	100.0

According to Table No. 6, we note that (51.6%) of the surveyed customers think that the advantage of online services remains in saving time, (19.1%) think that it is the simplification of operations, (18.1%) mobility, and finally (11.2%) think that it is more a question of autonomy. It is logical that more than half of the people surveyed, therefore half of the bank customers, find the advantage of online services in saving time given the problem we are experiencing today is the lack of time.

1. Obstacles to the use of online services

Table No. 7: Obstacles to the use of online services

What are the obstacles to using the services?	F	%
Waste of time due to misunderstanding of tools	4	8.7
Poor mastery of IT tools	12	21.7
Fear, linked to insecurity	33	69.6
Total	49	100.0

We note that (69.6%) of the people surveyed who do not use digital services, do not do so due to little linked to insecurity, against (21.7%) of people who say they do not see a good mastery of the computer tool to be able to use its digital services, while only (8.7%) think that digital is a waste of time. The majority of people are not against the use of digital services but hesitate either because of fear of insecurity or poor mastery of the computer tool.

2. Analysis and interpretation of results by cross-sorting

2.1. Intersection between age and online transaction execution

Table No. 8: Cross-section between age and online transaction execution

<i>Crosstab Have you ever made any online transactions? * What is your age group?</i>							
What is your age group?							
			18-25 years old	25-35 years old	35-45 years old	+45 years old	Total
Have you ever made any online transactions? ?	Yes	Effective	40	47	32	23	142
		% in What is your age group?	88.9%	81.0%	71.1%	57.5%	75.5%
	No	Effective	5	11	13	17	46
		% in What is your age group?	11.1%	19.0%	28.9%	42.5%	24.5%
Total		Effective	45	58	45	40	188
		% in What is your age group?	100.0%	100.0%	100.0%	100.0%	100.0 %

From Table 8, we note that (88.9%) of the respondents aged between 18 and 25 use online transactions, the same for those aged between 25 and 35 (81.0%), as for those aged between 35 and 45, (71.1%) of them use digital channels and finally, only (57.5%) of those aged over 45 make online transactions. We can thus conclude that the majority of the respondents aged between 18 and 45 use digital channels to make online transactions, compared to those aged over 45 who, for one reason or another, do not use digital channels. It is only logical and normal that the majority of people surveyed who are digital consumers are young people, since they are more initiated in all things computer and digital on the one hand, and they are people who use digital in their daily lives and at all times on the other hand. The fact that half of people aged over 45 use digital is still a good sign, it shows that some of them are also aware of the importance of digital.

Table No. 9: Chi-square test

	Value	Ddl		(bilateral)
Pearson chi-square	9,981a		1	,002
Correction for continuity	9,290		1	,002
Report of	10,073		1	,002
Linear association by	9,951		1	,002
Linear				
N of observations	188			

Asymptotic meaning

The chi-square test allows us to see whether or not there is a dependency between the crossed variables, and the strength or weakness of this said dependency. In our case, we found that the chi-square test validates the sample since no value is less than 5, it also attests to the existence of a relationship between age and the possession of an application because the margin of error is less than 0.005.

2.2. Cross-section between age group and frequency of visits to the agency

Table No. 10: Cross-section between age group and frequency of visits to the agency

	18-25 years old	25-35 years old	35-45 years old	+45 years old
Less than once a year		6	9	6
	13.3%	15.5%	13.3%	2.5%
Once a year	14	21	11	4
	31.1%	36.2%	24.4%	10.0%
Every quarter	19	17	13	7
	42.2%	29.3%	28.9%	17.5%
Every month		5	6	13
	11.1%	10.3%	28.9%	60.0%
Every week		1	5	2
	2.2%	8.6%	4.4%	10.0%
	45	58	45	40
	100.0%	100.0%	100.0%	100.0%

We decided to cross-reference the age groups of the people surveyed with the frequency of visits to the agency to be able to see if age is a factor that influences customer behavior with regard to trips to the agency. According to Table 10, respondents aged between 18 and 45 go to bank branches at most every quarter, while (60%) of seniors (people aged over 45) say they go to bank branches every month. As we can see, young people go less and less to branches, compared to seniors who have a more or less frequent visit, which is normal since young people today are more independent and carry out the majority of their transactions online. We can say that the lack of travel by young people is due to mobile applications, websites and all other digital channels that allow them to carry out the majority of transactions remotely and thus reduce their travel.

The reduction in the frequency of visits is positive for bank branches since it allows a reduction in the volume of basic and simple transactions processed in branches and allows bank employees to focus on the commercial aspect as well as on more profitable operations for the bank.

Table No. 11: Chi-square test:

	Value	ddl	Asymptotic meaning (bilateral)
Pearson chi-square	9,020a	1	,003
Correction for continuityb	6,938	1	,008

The chi-square test allows us to see if there is a dependency relationship between the crossed variables and the degree of this dependency, in our case, it is found according to the table that there is indeed a relationship between age and travel to the agency, given that the margin of error ($0.003 > 0.005$).

2.3. Cross-Relationship Between App Ownership and Agency Visit Frequency

Table No. 12: Cross-reference between ownership of an application and frequency of agency visits

Yes		No	Total
Less than once a year	19	2	21
12.3%		8.3%	11.8%
Once a year	43	5	48
27.9%		20.8%	27.0%
Every quarter	52	4	56
33.8%		16.7%	31.5%
Every month	34	12	46
22.1%		50.0%	25.8%
Every week	6	1	7
3.9%		4.2%	3.9%
	154	24	178
100.0%		100.0%	100.0%

We decided to cross the question about the possession of banking applications with the frequency of visits to the branch, to be able to see the influence of digital channels on the behavior of bank

customers. We note that half of the people surveyed who say they do not have banking applications go to bank branches every month, while (74%) of people who have banking applications go to branches at most every quarter. The results we obtained lead us to deduce that people who have applications do not often go to bank branches, this is a simple and logical deduction since the possession of applications makes visits to branches unnecessary, as long as several operations can be carried out remotely. For banks, this observation is important since it shows them the paths to follow to be able to encourage their customers to use the various exciting digital channels more and more, for example by installing and activating applications on customers' mobiles when opening accounts to encourage them to use them.

Table No. 13 : Chi-square test:

<i>Chi-square tests</i>			
	Value	Ddl	Asymptotic meaning (bilateral)
Pearson chi-square	8,867a	4	,004
Report of likelihood	8,135	4	,001
Linear association by linear	3,471	1	,001
N of observations <u>valid</u>	178		

The chi-square test carried out on this cross-section demonstrates that there is indeed a correlation between the possession of an application and the frequency of visiting an agency since the margin of error is less than 0.004.

3. Discussion :

Our research aimed to establish an overview of Moroccan banks in order to understand the contributions of digitalization as well as the risks it represents. The main objective of our research is to analyze the behavior of the bank's customers towards the different digital channels to analyze its impact on the change in customer behavior in the face of digitalization. Our research revealed that Moroccan banks are aware of the importance of digital in customer satisfaction, and have made many efforts in this area, by developing several aspects of digital. BAM has also made great efforts to

protect the personal data of its customers, by developing a first law in 2011, which is Law 09-08, relating to the protection of individuals with regard to the processing of data of a personal nature, and then by rising ever higher, by preparing a draft law dedicated to the activity of credit information offices, with the assistance of the IFC and the collaboration of the Ministry of Finance.

Our analysis showed that seniors are very attached to bank branches and human interaction. Moreover, a large part of seniors who visit branches do so more for human contact than to carry out transactions. Our survey showed us that more than (90%) of bank customers are aware of the existence of digital, and that the majority of people who have banking applications (74%) rarely go to bank branches. Our research revealed that 30.1% of those surveyed say that transfers are the most frequently used operations through digital channels, and 26.9% of them concern withdrawals. Finally, these results that we obtained must be taken with caution, and we cannot generalize them because our sample is small (188). Nevertheless, we hope that our research has been able to push the reflection on the question of digitalization, its contributions as well as its risks, especially in these difficult times that we are experiencing with the health crisis, which has served as a reminder of the importance of digitalization and self-service for Moroccan banks.

General conclusion:

Our research shows that most bank customers are aware of the existence of digital channels, however some of them continue to ignore them for various reasons related to insecurity, poor mastery of IT tools and the personal conviction that digital is a waste of time. The bank must first convince its customers that digital is crucial for the realization of all banking services by mainly offering simulations of operations and explaining to them the advantages that accompany digital. The bank must also offer a secure and simple service to protect its customers, and finally, the bank must support disadvantaged people by activating applications in branches and explaining the operating mode of the different digital channels. Banks must therefore invest in digital not only to satisfy an increasingly demanding clientele, but also to succeed in the challenge of digitalization at the level of the entire process, from the back office to bank branches.

Therefore, banks must also invest in systems to detect and combat fraud and hacking in order to protect confidential internal data and public savings. Thus, in order to verify the robustness of their systems, banks must carry out continuous stress tests.

To address the social consequences of digitalization, banks must consider solutions to reintegrate bank staff. Indeed, an increase in the use of digital channels means a decrease in the frequency of visits to bank branches by customers, which results in branch closures that fall within the

optimization objectives directly linked to the digitalization strategy of banks.

Finally, successful banks must comply with trends by innovating and developing their operating systems, especially Big Data, which is still not fully exploited; banks must use the data collected to perform product/needs cross-referencing for each customer.

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