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Wiem Ben Jabra
Department of Finance,
Institute of Advanced Studies
of Sousse (IHES) University of
Sousse, Tunisia Research
Laboratory in Economics,
Management and Quantitative
Finance, Sousse, Tunisia

Correspondence
Wiem Ben Jabra
Department of Finance,
Institute of Advanced Studies
of Sousse (IHES) University of
Sousse, Tunisia Research
Laboratory in Economics,
Management and Quantitative
Finance, Sousse, Tunisia

Digital finance and value creation in Tunisian banking sector

Wiem Ben Jabra

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Abstract

This research attempts to analyze the effect of digital finance on value creation in Commercial Tunisian banks. Using a quantitative method, 100 people were surveyed in eighteen of the twenty three commercial banks in Tunisia. We performed a descriptive and then estimated an econometric model using panel data econometric model which measures the relationship between the explanatory factors of digital finance and value creation in the banking sector. The results show that digital finance has a positive impact on customer service and the satisfaction of several remote customer needs. This paper is original in that it focuses on the impact of digital finance on the banking value creation.

Keywords: Digital finance, value creation, bank, Tunisia

1. Introduction

The technological revolution has had an impact on many sectors, including banking sector. Many economic sectors are affected by this sudden and far-reaching phenomenon particularly the banking industry, a long-established sector that has undergone many changes, has not been spared (Murinde *et al.*, 2022) ^[49]. Almost every three or four months there is something new (Gharbi *et al.*, 2022) ^[15]. Indeed, banks are obliged to adapt to these changes, involving astronomical sums proportional to the size of their tangible and intangible infrastructures. It is also a sector at the forefront of digital transformation, and ranks fourth among the most digitally transformed sectors information and communication technologies, media and professional services (Gandhi, 2016) ^[16].

With the advent of new technologies and the democratization of the Internet, there is a growing imbalance in the distribution of information in banking industry. Consumer behavior has also evolved customers are more discerning, more demanding and less loyal, as they become highly and courted. They want their requests to be processed more quickly and they are also more increasingly well-informed (Menendez *et al.* 2020) ^[31]. Digital transformation has become a priority on leadership agendas. Faced to this new challenge and the need to remain competitive in their sector, managers and bankers need to formulate and implement strategies that take into account the implications of banking change and generate better operational performance (value creation). Unfortunately, there are many recent examples of financial institutions that have been unable to adapt to the new digital reality. The bankruptcy of rental company Blockbuster (Nadkarni *et al.*, 2021) ^[43] is a prime example. Many studies of digital finance in the banking sector are limited particularly by its instrumental dimension (Antwi. 2023) ^[3]. Banks are credit institutions whose business is to circulate money bought from and/or lent to customers, and they process financial information. They are therefore confronted with a radical transformation of their market, as well as (Ozili. 2021) ^[35]. Projects to exploit alternative channels often fail despite the maturity of existing technological solutions.

Against this backdrop digital finance affect value creation in Tunisian banking sector? More specifically, what influence does the use of digital tools on the value creation of banks in Tunisia? How does the digitalization of customer relations on the value creation of banks in Tunisia?

This study attempts to analyze the effect of digital finance on value creation in Tunisian banks. To achieve our objective, the reminder of the paper will be organized as follows.

Section 2 presents the literature review on the digital transformation of the banking sector. Section 3 will present methodology and analysis. In the fourth section, the results of empirical investigation will be presented and discussed and finally we will conclude.

2. Literature review

Digital banking can be defined as a combination of bank and fintech company. Fintech is the use of new technology to develop the financial system (Nurfadilah and Samidi, 2021) ^[32]. New technology is considered important for the success or failure of a bank (Lipton *et al.*, 2016) ^[27]. Melubo and Musau (2020) ^[30] considered that bank digitization facilitates the access to bank information by the use of Internet, telephone and different digital channels. We present not only the current state of digital transformation in the banking sector but also empirical work on digital finance and value creation.

2.1 Overview of the digital transformation of the banking sector

Technological inventions have been marked by an acceleration in their pace and by the extent to which they have spread to all sectors. This situation, combined with the globalization of economies, has created a turbulent economic environment for banks. Koch *et al.*, (2017) ^[22] recognize that the competitive advantages of companies are Internet connectivity. A study has been conducted on the state of the art in the digitization of customer services in banking and insurance on 21 sub-Saharan African countries. It showed the disparity in the level of digitization of remote customer services, notably via websites, cell phones, social networks and the possibility of remotely accessing money or insurance contracts. Banking customers are better connected and can easily access information on their contracts and services (via SMS or mobile applications) or access information about their institutions (via social networks or websites) than insurance company customers.

With the development of digital transformation champions such as Apple, Google or Fintechs (financial technology), the banking giants are going to have to review their strategy and refine their links with their customers while lowering their rates to remain competitive (Özkurt, 2021) ^[35]. Banks have increased their investments in modernizing their infrastructures and focus on delivering services via digital channels. The digital transformation of banks is emblematic of the opportunities and risks of the digital society (Bhat, 2019) ^[5]. Tunisian banks have not remained on the sidelines of these new developments. Digital finance is seen as an emerging market for digital financial services (DFS). Digital performance is referred to a company's economic performance (Bocean, 2023) ^[6]. In order to ensure digital performance, Tunisian banking industry is transformed and used new digital products (E-relevé, U-connect, mobile money application, SMS banking, bank card, etc.).

2.2 Theoretical framework: technological innovation and financial intermediation

The technological innovation paradigm stems from the traditional theory summarized by Arrow (1962) ^[4], which states that the social return on technological research is lower than its private return, due to positive externalities.

This theoretical model has been empirically reinforced. Studies by Kousky *et al.*, (2019) ^[25] place the social return, beyond the divergences, at 50 or 100% more than the private return. Innovating means matching a real or potential need, a market and feasible solutions. This is why innovation is considered a special case of value creation since it can only lead to the creation of value. For Hausman, (2014) ^[20], innovation is the key factor in the dynamics of our societies and driving new economic growth. From the point of view of technological intensity, two types of innovation appear in the literature: incremental or continuous innovation (Chiffi *et al.*, 2022) ^[9] which concern a change to an existing product, or the improvement or addition of functions to an object, a process or a service, making it evolve slightly and radical or disruptive innovation (creating a new product, process or service that is very different from the pre-existing one).

The theory of financial intermediation considers that financial intermediaries, and banks in particular, as specialized supervisors to whom lenders delegate credit monitoring. (Allen *et al.*, 1997) ^[1], and some indicators, such as the increase in a company's share price following the granting of a bank loan (Olokoyo, 2020) ^[33] or the fact that companies find it easier to raise capital after resorting to bank financing (Diamond, 1991) ^[13]. These authors seem to indicate that banks are particularly competent at granting and monitoring credit. Although this theory of financial intermediation is of the utmost importance, it finds its limits in the light of financial digitization. This creates a disintermediation or interface between customers and banks. There are three types of digital transformation, automation (the mechanical reproduction of a sequence of actions using a program), dematerialization (the replacement of physical media by digital files) and disintermediation (for the elimination of intermediaries made possible with digital technology) (Szalavetz, 2019) ^[44]. But disintermediation risks compromising the ability of government authorities to supervise banking, commercial and other vital areas.

2.3 Digital finance and value creation

The use of digital products improves bank performance. We review the literature focusing firstly on the tools of digital finance and value creation. Secondly, we look at the digitization of customer relations and the evolution of market share. Finance today needs to become more agile, forward-looking and focused on decision-making (Thi-Huong *et al.*, 2023) ^[46]. A digital bank is first and foremost a bank that is fully optimized for the mobile, with an Internet application that makes customers better informed and more demanding. Younger generations are more zappy, connected and autonomous customers. Well-managed digitization can increase productivity, launch new products and services (Waal, 2003; Whalen, 2015) ^[50-51].

Digital finance has a powerful impact on existing markets. It increases challenges, redistributes value within and between markets, and changes the nature of the business and the way it is run. It's very important to create value that helps the organization survive (Thi *et al.*, 2023) ^[46]. This value can emanate from a technological novelty or an improved production process that leads to an improved cost structure or product differentiation (Mamasioulas *et al.*, 2020) ^[29]. For Haksever (2004) ^[19], total value is a triad made up of a

value economic (financial) value, organizational value and social value. The creation of each of these three branches of total value has a strategic and an operational dimension. Value creation is based on the banks' financial objective of which is to increase productivity in order to better remunerate creditors and shareholders. According to Teece (2017) ^[45], a company's capacity to create value means the achievement of sustainable growth when investments generate a higher return than the weighted average capital cost. Among the methods for measuring value creation, those linked to financial (or economic) value creation are numerous (Porter, 1996) ^[46] and in the practices of large companies, are part of a context of financialization or the predominance of financial value.

According to Shil (2009) ^[40], EVA is a performance indicator that measures the economic profit generated by the company. As such, it is not influenced by the financing structure. It represents a company's surplus profitability after guaranteeing a minimum return to all providers of financial capital, lenders and shareholders. When EVA is positive, it indicates that the company is creating wealth. In negative, it means that the company's capital is being destroyed. For (Tortella. 2003) ^[47], "the EVA method is based on the idea that measurement indicators of the past, in particular return on equity, leave much to be desired to estimate value creation. One of the essential contributions of EVA is to highlight the fact that capital has a cost, even if it is not recorded in the accounts unlike the cost of debt". EVA is the difference between after-tax income from operations and the return on all capital employed in operating activities.

2.3.1 Tools for financial digitization

Digital technology has transformed customer and supplier relationships. It is now changing the structure of companies, their operations and performance management. Digital transformation means creating information from the ever-growing volume of data circulating within the company. It requires us to respond to the ever-increasing demand from shareholders for the right information at the right time to make the right decisions. This requires the use of flexible information technologies and techniques after the development of a strategic plan to support growth in a more unstable, disruptive and globalized world. It's all about technical progress, and its application to the preconception of a firm's competitive advantage, which is the source of growth (Zhang. 2023) ^[53].

For Szalavetz. (2019) ^[44]: « the transformations linked to digital technology are of three orders: automation, dematerialization and disintermediation ». Ha. (2022) ^[18] highlights the emergence of electronic money, which has had an impact on financial markets by lowering the cost of transmitting funds while deregulating the sector. Filotto (2021) ^[14] highlights four factors in the digital transformation of retail banks factors: optimizing the customer experience, transforming operational processes, changing operating modes and business models. They distinguish between (entity presence and visibility on social networks with interactions), (Impact of digital on the entity's ecosystem) and internal digital (Impact of digital on staff, organization and operational processes).

Digital transformation is important to remain or become a

successful bank (Bhat. s2019) ^[5]. The integration and exploitation of new digital technologies is one of the greatest challenges facing businesses today. These technologies, which we call digital products, vary from one bank to another. For Schatt (2014) ^[38], the drivers of innovation are the cloud (fast software updates and version consistency), the smartphone (which enables services like Square, iZettle, PayPal) and big data. Verhoef (2021) ^[48] points out that the 2008 crisis played an accelerating factor in digital transformation, in addition to digital switchovers (social networks with Facebook's accelerating growth, smartphones with the App Store allowing a host of applications to be downloaded for new mobile uses).

In the Tunisian context, the development of technologies has boosted the use of applications and software via the Internet. Banks are exploiting digital tools to improve financial services. The E-relevé product is explained by the fact that the subscriber consults their bank account via a small statement. However, customers cannot benefit from this product without subscribing to a bank card (prepaid or visa and currency).

Thus, the use of a bank card is very operational for some bank customers, without which account consultation via is not possible. Subscribers to SMS banking or electronic messaging are looking to keep track of their bank account movements. In the event of fraudulent on their bank accounts, they automatically receive the signal. The use of these products within banks adds economic value. No business sector is immune to the effects of digital transformation. With a view to identifying the weight of these products in the economic growth of these banks, we formulate the first hypothesis.

Hypothesis 1: The use of digital tools has a positive influence on the value creation of banks in Tunisia.

2.3.2 Digitizing customer relations

Customer Relationship Management (CRM) combines technologies and business strategies to offer customers the best possible service. Management combines technologies and business strategies to offer customers products and services they expect or are willing to pay for Gil-Gomez (2020) ^[17]. Customer Relationship is the ability to identify, acquire and retain the best customers with a view to increase sales and profits. The term customer relationship has become the important term for many IT solution providers. From sales force automation software to data mining, call center and geomarketing tools. Everyone is involved in customer relationship or customer capital management (Degryse, 2016) ^[12].

Developments in information systems increasingly demonstrate that new modes of production, distribution, pricing and promotion are combining to challenge traditional business fundamentals. The results obtained from the most advanced companies open up interesting perspectives on multiple levers: cost reduction, market share and creativity. CRM is a strategic issue for managers, as it concerns growth in sales and profits, unlike previous waves, which focused solely on reducing costs or increasing productivity Soni (2020) ^[41].

Banks have mobilized numerous human and financial resources to promote the new digital tools they have developed for their customers, who are gradually becoming

the new central intermediary in the relationship (Osei *et al.*, 2023) [34]. For the bank, the positive counterpart of this phenomenon is that the extra time available to the advisor can be devoted not only to high value-added commercial activities, but also to working service quality and customer satisfaction, whose importance increases as the level of competition (Supriyanto. 2021) [42]. In terms of digital applications, these include companies' engagement with their customers and suppliers; companies making greater use digital payments, digital marketing. This is how we set out the second hypothesis below:

Hypothesis 2: The digitization of customer relations has a positive effect on the value creation of banks in Tunisia.

3. Research Methodology

We discuss the choice of methodology, the method of data collection and analysis.

3.1 Methodological choice and sampling

This research focused on two hypotheses which appear to be the most explanatory of digital finance in the banking sector. The scope of this study focused on banks in Tunisia. A mixed methodology was used to quantitatively and qualitatively measure the following factors identified above to explain the challenges of digitalization in Tunisian banking sector. It enabled us to determine the strength of the variables association and to confirm or reject the hypotheses (Lund. 2022) [28].

The dependent variable, value creation, is measured by the economic value added (EVA) achieved by all Tunisian banks, based on net income and sales. In order to ensure digital performance, Tunisian banking industry is transformed and used new digital products (E-relevé, mobile money application, SMS banking, bank card, etc.).

The explanatory variable "use of digital tools" covers banks' digital products such as internet, E-relevé, SMS banking, bank card (prepaid or visa and currency). This variable is measured by the number of customers who have subscribed to these digital services. If the number of customers who have subscribed to a product increases with sales on the one hand, and the correlation coefficient linking the number of customers who have product and sales is positive, then the product in question is a performance asset for all Tunisian banks.

The second explanatory variable is the digitalization of customer relations and is measured by the degree of satisfaction of customers having digital services. The more satisfied customers are, the more profit the banks will reap from an increase in the number of subscribers. The sample is an extraction of the population, with characteristics defined by the survey, similar to the reference population and from which it is possible to establish certain generalizations.

Indeed, given the clause prohibiting disclosure of information specific to certain banks because of their sensitivity, we were able to obtain data on eighteen (18) banks, i.e. a percentage of 78.26%, with a sample of 100 people. The data analyzed in this work were collected using the reasoned choice method.

3.2 Digital finance activities of Tunisian banks

The Central Bank of Tunisia (BCT) has created a website "BCT FINTECH" to collaborate with the FinTechs and has launched FinTech initiatives such as "Regulatory SandBox" and "BCT-Lab" to change procedures in connection with technological advances.

A. Tunisian banks and mobile applications

Faced with an increasingly connected customer base, digital technology has become essential for building loyalty among existing customers and winning over new prospects. One of the most visible developments in the banking sector concerns mobile applications: 87% of banks in Tunisia now have a mobile application with a dedicated space for customers, and 100% have online credit simulators.

B. Tunisian banks and social presence

Banks have realized that the permanently connected customer expects more proximity. So they can't help but follow the trend. 56% of banks have understood that video has become the viral communication medium by excellence, and have integrated video into their digital strategy. Facebook, however, has had to dethrone YouTube, as there are currently 470 videos on Facebook versus 280 on YouTube.

C. Banks and HR Human Resources

While banks have understood the commercial importance of digital and are leveraging the influence of social networks, they need to make the same changes to their HR processes, as only 25% have begun digitizing their HR systems. Even if reinventing customer relations is the main trigger, digital transformation must not only affect the commercial aspect, but also involve a profound change in the company's HR culture, leading banks to reinvent their business model and organization.

To make the customer experience as seamless as possible, digitalization must impact all the bank's departments, not just communication and marketing, and the various channels must be interconnected with one another.

3.3 Data collection and analysis

For data collection purposes, and in view of our research object, we felt it would be useful to use a multi-method approach to answer the question posed. With this in mind a survey was implemented, consisting of hand-delivered paper questionnaires and interviews with selected bankers. The data collection took place between October and November 2022. Processing consisted firstly of descriptive analysis of the data, followed by estimation of an econometric model (correlation matrix).

For the first hypothesis, we evaluated the evolution of the average net income of all the average number of subscribers to each digital product over the last five years (2018 to 2022) and also estimated the correlation matrix in order to the existing links between the different variables. For the second hypothesis, we categorized the customers surveyed according to their level of satisfaction (very satisfied, satisfied, not very satisfied, no satisfaction) on the use of digital products.

3.4 Variables summary

Table 1: Shows variables summary

Variables	Abbreviation
Average net results	ANR
Average number of e-mail subscribers	AES
Average number of internet subscribers	AIS
Average number of SMS banking subscribers	ASMSS
Average number of E-Relevés subscribers	AERS
Average number of credit card customers	ACC
Level of customer satisfaction	LCS

4. Research Results

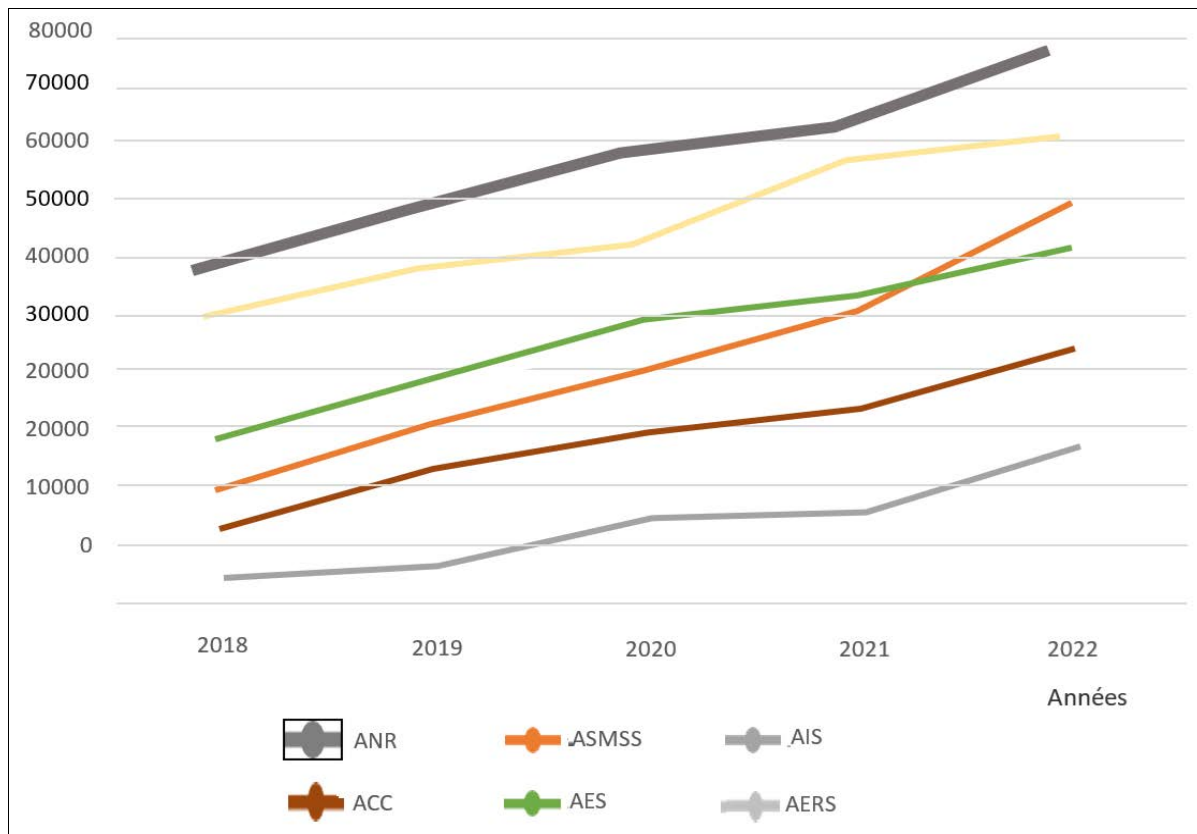
4.1 Presentation and Analysis of Results

Tunisian banks are adjusting their overall strategy in response to the evolution of digital finance in the banking sector. The difficulties associated with digital operations and the distance between banks and customers, are leading to tighter financing conditions, slower progress in lending activity, and growing competition for deposits and easily bankable customers. Today's banks must adapt to technological change to improve their results. The following

figure summarizes the data relating to the evolution of the average net income of all selected banks with the average number of subscribers for each digital instrument.

4.1.1 Net income and number of subscribers to digital products

We have calculated the net results from the financial statements obtained and calculated the average per year. This average net income is compared with the number of subscribers to each digital product.



Source: Survey Results, 2022

Fig 1: Average Net Income and Average Number of Subscribers to Digital Tools

From this graph, it can be seen that the average net income over the last five years has grown proportionally with the average number of e-mail, internet, SMS banking, credit card, and E-relevé. This suggests that the development of globalization, new information and communication technologies have accelerated the internationalization of banks and the creation of complex global networks. For institutional investors, who control more companies across their power, a company's ability to create value is an

essential criteria. These categories of customer represent a major business case for banks. They do not prefer to use digital products. This growth in average net income is explained by exploitation of the banks' digital tools.

4.1.2 Estimation of the correlation matrix

The results of the correlation matrix are estimated as follows:

Table 2: Correlation Matrix

	ANR	AES	AIS	ASMSS	AERS	ACC
ANR	1.000					
AES	0.9530*	1.000				
	0.0012					
AIS	0.9718*	0.9476*	1.000			
	0.0098	0.0102				
ASMSS	0.9145*	0.9055*	0.8715	1.000		
	0.0165	0.0150	0.0710			
AERS	0.7875	0.8250	0.9178*	0.8852	1.000	
	0.1085	0.0625	0.0350	0.0612		
ACC	0.9817*	0.9257*	0.9360*	0.8715	0.8950*	1.000
	0.0011	0.0018	0.0125	0.0590	0.0390	

Source: Statistical test results, 2022

The correlation coefficients between average net income and the set of explanatory variables namely: the average number of e-mail, internet, SMS banking, E-relevés and bank card are significant and positive at the 5%. On the other hand, the number of customers having subscribed to

E-relevé is not significantly correlated with average net income. Digital tools therefore have a positive causal link with the average net income of Tunisian banks. This shows that the use of digital tools has a positive effect on the value creation of Tunisian banks. The Hypothesis H1 is therefore confirmed.

4.1.3 Categorizing customer satisfaction and the use of digital tools

Financial capitalism has undergone a series of transformations that have given a new dimension to value creation for both customers and bank shareholders. The digitization of customer relations motivates some subscribers to the detriment of others. Some customers subscribe to this or that digital product with commissions, but other customers refuse even to subscribe. They don't want to hear if the products are profitable for them or at least favorable. We have collected data to measure the effect of the customer relationship through their level of satisfaction.

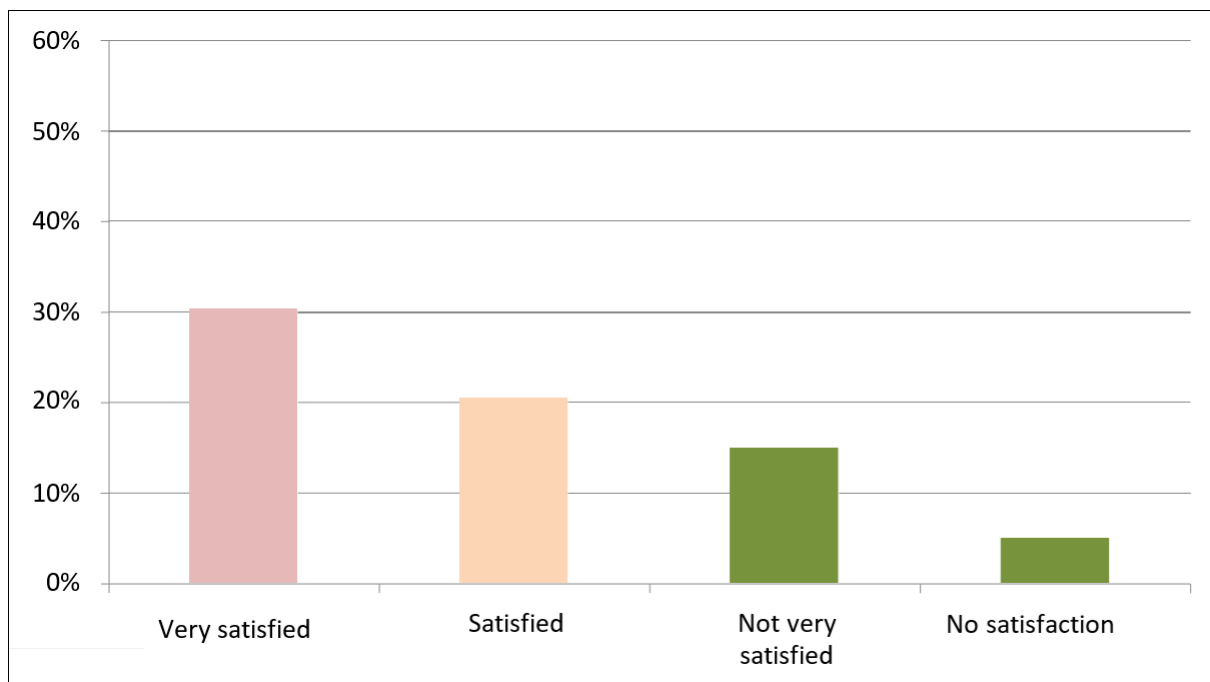


Fig 2: Customer satisfaction with digital products

This graph shows that 80% of customers surveyed are highly satisfied with the use of digital tools. Customer relationship management in the area of digitalization with the aim of identifying, acquiring and retaining the best customers is therefore effective. An effective digitalization of customer relations means higher sales and profits. Motivating customers to subscribe to products is therefore a very important aspect to be taken into account by suppliers (bank managers). Fees and charges of each digital product are no less substantial, these costs that customers who subscribe to financial services contribute to the increase in sales. This increase is a source of value creation. This focus on value creation is explained by a concern to satisfy the demands of shareholders. Thus, hypothesis 2, which states that "the digitization of customer relations has a positive effect on value creation" is therefore confirmed.

5. Discussion of results and implications

5.1 Discussion of results

Digital transformation is the adoption of technological skills that transforms the organization's reactivity to market changes (Konopik. 2022) [23]. Existing digital tools in Tunisian banking finance sector include the internet, electronic messaging or SMS banking, website, bank cards, etc. Customers and consumers have been offered a new choice and have profoundly changed their approaches and expectations. Loyalty operations can develop the use of their activity and, in turn, increase banks' sales.

The costs incurred by customers are opportunity costs for banks. It is value that financial services create. All the banks in Tunisia use digital products in their own way. The results show that digital finance influences value creation in Tunisian banks. It's not just a question of increasing added value, but also of enable customers to consult their accounts

via digital banking, carry out all their banking operations daily, such as adding a beneficiary or making a transfer via digital tools. New functionalities have also been introduced. Among categorization of expenses, receipt of account balance SMS messages, display of an information feed news containing the latest expenses. Tunisian banks have entered the era of financial digitization, but they still have some way to go to keep pace with the rise of digital technology.

All banks are concerned by digital finance, which inevitably has an effect on their value creation. This revolution is profoundly changing the way banking professions (Bousrih, 2023) [7]. Korobov (2017) [24] points out that the main factors in the transformation of banking are globalization, concentration of capital, the formation of a new banking model and a new banking culture. It has been shown that the driving forces behind these processes are competition and innovation, which in turn business models and a broader range of products and services.

Our results run counter to those obtained by Chhaidar *et al.*, (2022) [8], who believe that financial digitization leads banks to run the risk of losing the customer interface daily (particularly payments) and to be progressively disintermediated for savings and loans. The overriding risk was undoubtedly that of disintermediation of the relationship between the customer and the bank. However, the digitalization of Tunisian banks has been successfully implemented, enabling them to increase productivity, launch new products and services, and generate alternative revenues. In view this assessment, we can say that our results corroborate the conclusions obtained by Sajic *et al.* (2018) [37]. For them, banks need to transform themselves in order to satisfy the customers' wishes. The conclusions drawn from this research rhyme with the results of Allmendinger and Lombreglia (2005) [2] and Wuenderlich *et al.* (2015) [52], who argue that product alone is no longer enough, as digitization paves the way for the emergence of a new form of "intelligent service". This is supported by Kraus. (2022) [26], whose findings revealed that digital transformation in banking addresses three issues: declining margins, the structure of the distribution network (branches) and management methods.

5.2 Theoretical and managerial contributions

5.2.1 Theoretical contributions

The aim of our study is to analyze the effect of digital finance on value creation in banks in Tunisia. Researchers are increasingly interested in the issue of financial digitization (Schatt, 2014) [38]. Gandhi *et al.* (2016) [16] have examined the state of different sectors of the US economy and found large and growing gaps both between sectors and between companies within those sectors. We've entered the banking sector. It is important to carry out the digital transformation to remain or become a successful bank. The integration and exploitation of new digital technologies is one of the greatest challenges facing companies currently. These technologies, which we call digital products, vary from one bank to another. The particularity of this study lies in determining the drivers of digital finance in the Tunisian banking sector.

5.2.2 Managerial contributions and recommendations

At the end of this research, bankers and capital providers

understand the contribution of digital products to value creation. While the 2008 crisis and that of covid-19 played an accelerating role in digital transformation in addition to digital switchovers (social networks with accelerating growth of Facebook, smartphones with the App Store enabling a host of applications for new mobile uses). Across digital banking, users can consult their bank account in real time via banking websites with basic services, without having to visit a branch. Today, all data is now available on the bank's mobile applications. Our offer of digital services for digital transformation has a positive and significant influence on value creation in Tunisian banks.

6. Conclusion

This article focuses on digital finance and value creation in Tunisian banking sector. Digital finance is a vector of value creation and business opportunities within Tunisian banks. E-relevés, bank cards (prepaid or visa and currency), SMS banking, internet, are used in the form of digital tools. These are significant and positive at the 5% threshold. On the other hand, the number of customers subscribing to the platform is not significantly correlated with average net income. Digital tools therefore have a positive causality with value creation.

The use of these digital products and the digitization of customer relations are affecting banks in Tunisia by increasing their sales and improving their bottom line. The costs of digital products bring a profitable margin to the bank concerned. Despite all the efforts made by Tunisian banks in the era of financial digitalization, they still have some way to go if they are to keep pace with the rise of digital technology.

Our work presents limitations linked to the collection of information and to the variables. It would be interesting to conduct an exploratory study enriched by a slightly more advanced analysis mobilizing, more elaborate methodological frameworks and more comprehensive data, including technological and customers' perceptions of the use of digital tools in a qualitative approach.

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