



Digital transformation and its role in improving the quality of banking service

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Abstract

This paper examines the awareness of banks operating in Algeria of digital transformation and how this affects the quality of their services. To achieve this goal, NRI has been adopted for digital transformation determinants and quality dimensions of banking service for search tool design, a questionnaire that includes to sections. A questionnaire comprising two sections was prepared and distributed to a sample of 300 banking branches from a total of 1330, which represents the entire population of banks and agencies in Algeria. The study concluded that there was a close relationship between Algerian banks' ownership of digital transformation indicators and improving the quality of their banking services, albeit to varying degrees.

Key Words: Digital Transformation, Quality of banking services, Improve service quality

Jel Classification: L86, L83, C49

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.1- Introduction :

The substantial change in globalization brought about by market liberalization is one of the most important features of the contemporary economy, the trend towards the digitization of the economy and transactions and the increasing number of globalized companies and institutions such as multinational companies, banks, etc. Each seeks to penetrate new markets by diversifying and improving the quality of services provided to customers, products that are consistent with what is necessary to integrate into the new digital environment. This environment varies from country to country according to the indicators of digital transformation and development. In fact, these entities had to modify their strategies to align with the new digital environment, plans and means of improving the quality of their products to suit the desires and realities of the digital consumer.

1.2 The problem statement :

Informed by prior research, the issue statement will be:

How far can digital transformation affect the increased quality of the banking service provided?

As a result, several questions were posed, including the following:

- A. Are banks adequately aware of the realities of digital transformation within their operational environment?
- B. In Algeria, are banks seeking to improve the quality of their banking services?
- C. Do the digital transformation factors of a given society have an impact on increasing the quality of banks' banking service?

1.3 Significance of the Study:

The study is highly significant as the digital transformation within a specific society has a profound impact on the behaviors of individuals and organizations, influencing their engagement with banks. Consequently, banks must formulate strategies, policies, and marketing plans that align with the surrounding digital landscape in a competitive marketplace; otherwise, they risk losing market share and positioning. Thus, there is a need for a new database and updated tools to better understand the elements and dimensions of the digital landscape in terms of relevance.

1.4 The Study's Objectives:

This research seeks to:

- Highlight the theoretical concepts related to variables: digital transformation as well as quality of banking service
- Identify one of the most important dimensions of measuring the quality of banking service. Also approved digital transformation indicators
- Explore the Algerian banks' awareness of the digital transformation surrounding them and their ability to analyse and keep them up with them.
- Know the impact of digital transformation on increasing the quality of services provided by the bank.

Submission of proposals allowing Algerian banks to analyze their digital environment and develop mechanisms to modernize the quality of their banking services

1.5 Study hypotheses :

- H :1 Banks in Algeria are fully aware of the digital transformation indicators in their environment
- H :2 Banks in Algeria support the determinants of the quality of their banking services.
- H :3 Digital transformation affects increased quality of services stationed by Algerian banks

The following sub-hypothesis can be inferred from this one :

- a- There is a relationship between the technology and the quality of banking service
- b- There is a relationship between the people's and the quality of the banking service.
- c- There is an influence between the government index and the quality of banking service.
- d- There is an impact between the impact index and the quality of the banking service

2. Review of Relevant Literature::

2.1 Review of Empirical Literature :

* Deghnouche Latra , Digital Transformation's Contribution to Improving the Quality of E-Banking. (Deghnouche, 2023)

The purpose of the study was to determine how digital transformation technologies helped a sample of public and private banks in the state of Algiers provide better electronic banking services. According to the study's findings, digital transformation technology greatly raises the standard of online banking services.

* Yongjie Zhu and Shanyue Jin How Does the Digital Transformation of Banks Improve Efficiency and Environmental, Social, and Governance Performance (Yongjie & Shanyue, 2023)

Through empirical analysis, this study examined the connections between digital transformation of banks, bank efficiency, and environmental, social, and corporate governance (ESG). It also examined the effects of CEOs' technical expertise and innovation awareness on these relationships. This paper conducted an empirical investigation using data from China's A-listed banks from 2011 to 2021 using the fixed effects regression method. The findings of the study demonstrate that commercial banks' ESG performance and efficiency have increased as a result of their digital transformation

* Meriem Guechi . The Future of the banking industry in the era Of digital ransformation. (Guechi, 2020)

The article's objectives were to describe digital transformation in the banking industry and examine the steps being taken by FinTech startups and banks in the market. According to the survey, traditional banks and FinTech firms are in fierce competition with one another. It also emphasized the possibility of cooperation between these organizations, though. The banking industry's future depends on banks and FinTech companies cooperating with other ecosystem participants by adopting open banking services

* Rabia Atallah Al-Saadi. the impact of digital transformation on marketing and quality of banking services in Iraq. (Al-Saadi, 2024)

The impact of digital transformation on the marketing and caliber of banking services in Iraq is examined in this study, along with the difficulties public and private banks face when putting



digital transformation into practice. According to the study's findings, factors related to digital transformation have a positive impact on customer satisfaction and the caliber of banking services in a competitive setting. However, there are issues with the infrastructure and the process of promoting the digital transformation culture, particularly among customers. The relevance of digital transformation, quality, electronic financial services, time, ease of use, secrecy, security, and customer satisfaction are all emphasized in the study.

* Phuong thanh thi trana, thi thuy hang leb, nga hang thi phanc. Digital transformation of the banking industry in developing countries. (thi trana & hang leb , thi phanc , 2024)

Testing the effect of digital transactions on banking performance is the aim of the study. The importance of digital banking in growing the banking sector, particularly in developing nations, has been acknowledged based on prior studies and real-world circumstances.

2.2 Literature Review: Theoretical Framework

2.2.1 The idea of digital transformation:

Digital transformation means a change in the business methodology of enterprises, moving towards a reduction of monopolistic work versus increased opportunities for thinking and development, by accelerating day-to-day working methods by exploiting technological development to provide better and faster service to clients, which represents an increase in the productivity of the members of the task force without an increase in the size of the human resource (yahiaoui & kerabsi,2019)

Digital transformation also means harnessing information and communication technologies to bring about radical changes in work methods, or in other words, moving towards a business model that relies on digital technologies in running and so on in the delivery of products and services (alouah ,2020)

It is also defined as the process of moving enterprises from a traditional business model to another that relies on digital technologies in innovation for products and services, as well as methods of running and marketing, while providing new revenue channels through the building of a digital strategy, which can only be done through an assessment of digital potentials and a study of digital investment requirements under digital marketing activities with the will to change management towards digital transformation .(elbar ,2018)

In general, digital transformation can be described as the ongoing process of adaptation by enterprises towards their clients, through the use of digital transformation as a way to improve the quality of their capabilities .

Employment of digital capabilities through innovation and development of business models, products and services across all levels of the organization with a view to achieving the highest level of efficiency by employing all digital capabilities, technologies, information technology and communications.

2.2.2 Motives for digital transformation:

There are often three main drivers of digital transformation :(Slaimi & bouchi , 2019)

a. ***Increased costs and budgetary pressures:*** The significant decline in the revenues of many countries, particularly petroleum ones, and especially after 2014 made the reduction of their

spending a top priority, so they resorted to cost-saving measures and more effective government operations and created an opportunity in digital technology

b. ***Citizens' demands***: The spread of the media, social media and communications technology to the people has led to demands for a higher level of government services and products and has provided new channels of communication to institutions and governments to learn about citizens' and customers' needs and opinions, which are designed to develop and upgrade their digitization .

c. ***Government directives***: the adoption by the Government of the vertical (top-to-base) planning approach in its decision-making and in order to make its plans operational more quickly and effectively finds itself obliged to include digital transformation programmer in its priority list in the strategic vision and national plans .

Of course, in addition to the above motives, digital technology during the Corona pandemic represented the fine line of survival in the home as work continued, enabling it to achieve the required limit on the continuity of public utilities without having to break the rules of the home ban, which increased the importance of digitization and made it a central tool in achieving all economic and social goals that were a goal in themselves.

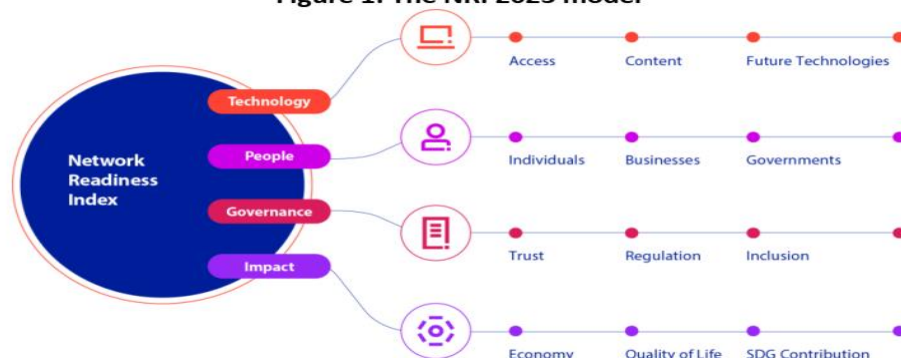
2.2.3 The reality of digitization in Algeria and its challenges:

Although Algeria has developed a policy for the development of the telecommunications sector since 2000 aimed at providing a legal and institutional environment for the promotion and development of telecommunications services, Algeria did not have a clear and targeted strategy for an appropriate digital environment to assist digital transformation. The first signs of digital transformation emerged in Algeria through the adoption of the Algiers Electronic Project 2008-2013, which reflected Algeria ' s impact on the rapid digital transformations of the world, on the one hand, and translated the Government ' s desire to move towards the digital world, which is a positive step towards the establishment of the knowledge society through the use of electronic means to carry out the work of departments and organizations that are spread across the most important sectors .

In order to analyze Algeria ' s position and position as any country in the area of digital transformation, many international organizations and institutions have developed common indicators that enable them to identify and assess the digital divide in countries and help them to develop strategies and plans for the application of digitization and access to information technologies. The Network Readiness Index, developed by the World Economic Forum since 2000, is arguably the most significant of these metrics. The United States Institute of PORTULANS, also known as the Digital Readiness Index, is now in charge of the index's development. The economies of nations that stand to gain from information and communications technology are evaluated by this index. One of the most important metrics for assessing the use and effects of ICTs in global economies is the Network's Readiness Index. The Institute of Natural Resources' most recent assessment, published in 2020, charts the web-based preparation landscape of 134 economies according to how well they perform in four distinct areas: impact, governance, people, and

technology. Three sub-pillars, each containing 58 variables, make up each of these pillars.

Figure 1: The NRI 2023 model

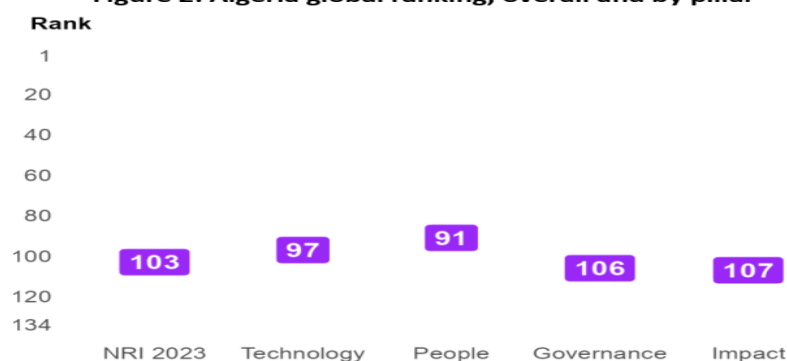


Source: <https://networkreadinessindex.org/>

Algeria ranks 103rd out of 134 economies listed in the National Institute for Research in the Economics of Countries for the year 2023.

<https://networkreadinessindex.org/country/algeria/>

Figure 2: Algeria global ranking, overall and by pillar



Source: <https://networkreadinessindex.org/reports/countries/2023/Algeria.P01>

Table 1: Algeria rankings by sub-pillar

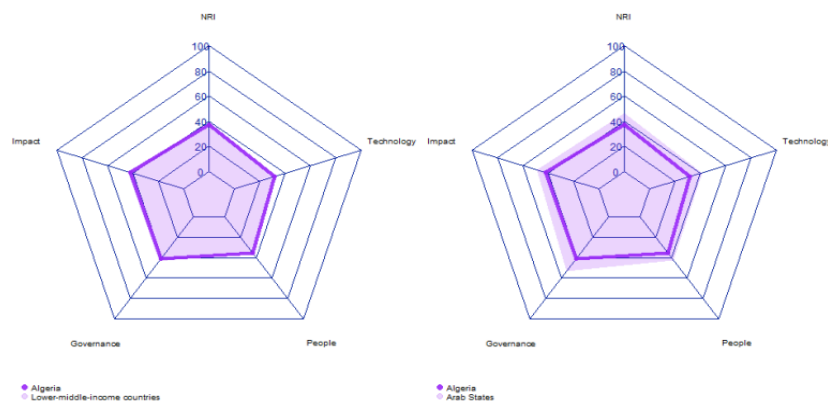
Sub-pillar	Rank	Sub-pillar	Rank
Individuals	62	Inclusion	98
Economy	90	Access	101
Future Technologies	91	Quality of Life	102
Content	92	SDG Contribution	106
Governments	92	Businesses	111
Regulation	96	Trust	117

Source: <https://networkreadinessindex.org/reports/countries/2023/Algeria.P02>

In the lower-middle income bracket, Algeria comes in at number twenty-two. On one of the four pillars of pillar-based performance-people-it performs better than the average for the income category. This group performs better than lower-middle-income nations in four of the twelve sub-pillars: governments, people, access, and the sustainable development cluster's contribution.

Among the Arab nations, Algeria comes in at number twelve. In all four pillars, it falls

Figure 3: Performance of Algeria against its income group and region, overall and by pillar



short of its region

Source:<https://networkreadinessindex.org/reports/countries/2023/Algeria.P03>

Algeria's best contributions to the sub-pillars include those that deal with the economy, people, and governments. Nonetheless, there is still room for improvement in the corporate, regulatory, and trust sub-pillars of the economy. because it continues to lag and be weak in the field.

Table 2: Algeria scores vs. averages of its income group and region, overall and by pillar

Dimension	Algeria	Lower-middle-income countries	Arab States
NRI	37.52	38.41	46.59
Technology	31.45	32.12	41.17
People	35.63	34.38	42.66
Governance	41.18	43.27	53.45
Impact	41.82	43.89	49.08

Source:<https://networkreadinessindex.org/reports/countries/2023/Algeria.P03>



Table 3: Highlight of Strengths and Opportunities for Algeria

Strongest indicators	Rank	Weakest indicators	Rank
3.2.4 E-commerce legislation	1	4.3.2 SDG 4: Quality Education	74
3.3.5 Rural gap in use of digital payments	3	3.1.3 Online access to financial account	123
1.2.4 AI scientific publications	28	4.2.2 Freedom to make life choices	125
2.1.1 Mobile broadband internet traffic within the country	32	1.3.4 Computer software spending	126
4.1.5 Prevalence of gig economy	33	3.2.1 Regulatory quality	130
1.1.5 International Internet bandwidth	36		
4.1.4 Domestic market size	40		
2.2.4 Annual investment in telecommunication services	42		
2.3.3 Government promotion of investment in emerging technologies	42		
2.1.2 ICT skills in the education system	45		
4.3.1 SDG 3: Good Health and Well-Being	50		

Source: <https://networkreadinessindex.org/reports/countries/2023/Algeria.P04>

It appears from the leading indicators that Algeria is still suffering from lagging ranks in various axes and has not even reached the level of middle-income countries. Looking at the numbers and points recorded, we notice a greater lag in terms of information and communications technology infrastructure, as well as sector governance and the business environment. The reasons for the delay are mainly due to the following points : (Naamouni,2020)

- High prices of smartphones.
- Poor geographic connectivity to high-streaming Internet.
- Not developing smart applications for phones.
- Lack of availability of the latest modern technologies.
- Weakness in e-commerce.
- Delayed development of electronic management.
- Cybersecurity problems.
- Regulatory problems and inadequate legislation.
- Weakness in the production of high-quality goods and services in the information and communications technology sector.

2.3.1 Definition of banking service quality:

When defining the notion of banking service quality, there are numerous definitions and points of view, as some see it as: the integration of the efforts of all activities and departments, (farah , 2015) through which a service is produced and provided that matches the expectations of customers. (essarn ,2007) It is sometimes referred to as a standard for the extent to which the service's actual performance aligns with its clients' expectations; in other words, it is the difference. Due to prior knowledge of the customer's expectations or expectations regarding the

banking service and its actual performance, some people believe that there is no defect or error in the banking service's completion and delivery, and Parasuraman, Zeithaml & Berry's definition indicates that it is the difference between the service Expected and actual service. Based on all of the above, a definition of banking service quality can be given as the bank's keenness to produce and provide a banking service that is free of any defect or error and matches customers' expectations (Halouz & benhabib ,2014)

2.3.2 Levels of quality of banking services:

The study claims that (Parasuraman,Zeithaml and Berry,1985), the levels of banking service quality are : (Bouhafs & Filali, 2012)

- Expected quality: It represents the quality that the client or client expects to obtain through his dealings with the bank.
- Perceived quality: It expresses the aspect of quality that the bank sees as being able to satisfy customers' desires.
- Technical quality: It is evident through the methodology and way in which employees perform banking services to customers .
- Actual quality: It is the real quality that is actually provided to customers .
- Quality promoted to customers: indicates how satisfied clients are with the services they receive, how much they accept them, and how satisfied they are with the bank.

2.3.3 Qualities of banking services:

The study (Parasuraman & Zeithaml and Berry, 1985) is considered one of the most important and comprehensive studies in determining the Qualities of banking services, through which ten dimensions of banking service quality were identified and includes 34 items: reliability, responsiveness, trustworthiness, ease of access and access. (on service, empathy, communication, credibility, safety, knowledge and understanding of the customer, and tangible physical aspects), and in 1988, the same researchers combined these dimensions into only five dimensions that included 22 items, which are: Tangible physical aspects, dependability, responsiveness, safety, and empathy, which can be highlighted through : (Parasuraman & Berry, 1985)

-Tangible material aspects: It includes both the physical facilities and the equipment used to produce and provide the banking service, in addition to the external appearance of the bank's employees.

-Reliability: represented by the bank's ability to perform the service according to the promises it made to the customer, at the time the customer requests it and with the accuracy that satisfies his ambition .

-Responsiveness: It reflects the readiness of the bank's employees to deal with customers' requirements and respond to their reactions and complaints while working to resolve them and respond to their inquiries despite work pressures .

-Safety: This means psychological and material reassurance that there are no mistakes, risks, or uncertainties in the services offered to clients.

-Empathy: It means personal care for the customer by the bank employees, making him feel his importance and the desire to satisfy his needs.

2.3.4 Techniques for evaluating banking services' quality:



There are several methods for evaluating banking service quality, including:

A - The gap model: It is also called the service quality measure, which was designed by Parasuraman, Zeithaml & Berry (1988). It represents one of the most important and comprehensive models for measuring the quality of banking service, and it measures the gap between customers' expectations of the level of service and its actual performance. Service quality can be expressed according to this model with the following equation: Service quality = perceptions - expectations. If customers' perceptions of the quality of the service provided match their expectations, then the quality is satisfactory. However, if their perceptions are higher than their expectations, then the service quality is outstanding. However, if their perceptions are lower than your expectations, then the quality is poor . (Cronin & Taylor, 1992)

B - Actual service performance model (Servperf): This model was presented by Taylor & Cronin (1992) as a criticism of the gap model, as it focused on the actual performance of the service provided and excluded customer expectations. Service quality can be expressed according to this model according to the following equation: Service quality = Performance . (Nawala, 2016)

3. Methodology:

3.1 study approach:

Using literature, interviews, research, and observations, we used a descriptive and analytical method to investigate the variables associated with the topic. We used a case study methodology for the applied study in banks, which included collecting data using statistical techniques and questionnaires to verify our hypothesis. In order to ascertain the correlations between the study variables, we also computed statistical indicators, evaluated the data, and added commentary to the tables.

3.2 Study Aid:

The research was limited to a questionnaire, which is considered a means of collecting information and data. We performed an applied study using a random sample drawn from a variety of Algerian banking institutions in order to meet the study's goals. Participants in each bank received 299 questionnaires from us, both on paper and in electronic format. The questionnaire's contents were separated into two sections:

The personal factors pertinent to the research category-gender, educational background, work and professional experience, age, and bank type-are covered in the first part.

The second Part: Areas of study

_ NRI index: consists of the following axes:

- Technology: (04) Phrases
- People's: (04) Phrases
- Government: (04) Phrases
- Impact Index: (04) Phrases

_Components of banking quality dimensions(20) :

Legcart has been used to measure respondents' reaction to questionnaire statistics: it's been used as one of the maximum commonplace metrics requiring research to decide their diploma

of agreement with precise alternatives, and this measure regularly includes seven progressive alternatives through which studies indicates that one has been identified. it is defined as follows:

Table N 04 : the degrees of the Likert Seven

Response	Totally Disagree	Disagree	somewhat disagree	neutral	somewhat agree	agree	Totally agree
Degree	1	2	3	4	5	6	7
Approval Stretch	1,00_1,85	1,86_2,71	2,72_3,57	3,58_4,43	4,44_5,29	5,30_6,15	6,16_7,00

Source : Education of the researchers

One of the most crucial statistical programs used to do statistical analysis in all its documentation is SPSS 25, which we completed and processed after gathering data from e-questionnaires and distributed questionnaires.

- The following statistical fixes were applied: percentages, standard deviations, computation averages, and repetitions.
- Pearson's correlation coefficient and the alpha Cronbach coefficient.
- Use the t-test to examine the variations in averages.
- Monovariation analysis and basic linear regression analysis.

3.3 The area of the Study:

The investigation was carried out at random in 2023 and 2024 on banks operating all over Algeria.

3.4 The size population and sample:

The scale populace includes 1,330 banking companies which are unfold throughout the use of a and represent branches of nineteen banks, of which 07 are locals and 12 are foreign banks

the size of the hunt pattern become calculated in keeping with the Krejcie & Morgan desk and the have a look at sample turned into 300 in a 5% margin of error and 95% confidence level.

4. Findings and discussion:

4.1 Stability of threshing tools:

To ensure the overall balance of the questionnaire and the degree of internal consistency among its expressions, the Alfa Cronbach coefficient was used in the tool's installation. The effects of Alfa Cronbach's analysis were as follows:

Table N 05 : Cronbach's coefficient for each of the study's axes

N	Axes	Alpha Cronbach
01	Technology	0,821
02	People's	0,781
03	Government	0,911
04	Impact	0,788
A	NRI index	0,879



B	banking quality	0,913
	Total	0,907

Source: education of the researchers primarily based on the effects of the Spss

The value of the Alpha-Cronbach coefficient for the maximum of the aforementioned observe axes between 0.8 and 0.9 changed into the price of the Alpha-Cronbach coefficient for all questionnaire records 0,907 and is surprisingly stable within the mild of the outcomes recorded within the above table. This suggests that the information from the questionnaire is consistent and internally reliable, making it suitable for examination, analysis, and debrightsticulation.

4.2 Statistical description of the pattern take a look at based totally on demographic variables :

Table N 06 : The distribution of the observer's demographic variables

Descriptive	Ranking	frequency	percent	total
Demographic variables				
genre	Male	206	68,60%	300
	Female	94	31,40%	
Functional level	Bank Manager	08	02,30%	300
	Bank Agency Manager	96	32,10%	
	Manager	196	65,60%	
Educational level	Secondary	75	25,00%	300
	University	198	66,22%	
	Post-graduate	27	08,80%	
Professional experience	Less than 5 years	47	15,70%	300
	5 - 15 years old	126	42,10%	
	15- 25 years old	105	34,80%	
	≥25 years	22	07,40%	
Age	≤ 30years	40	13,40%	300
	30- 40years old	100	33,40%	
	40- 50years old	120	39,80%	
	≥ 50years	40	13,40%	
Bank type	Local	208	69,20%	300
	Foreign	92	30,80%	

Source: education of the researchers primarily based on the effects of the Spss

According to the above table, the majority of respondents were young men between the ages of 30 and 40 and 50. Additionally, roughly two thirds of the entire sample were highly

experienced managers, indicating that the top group of managers in this section gave their solutions a great deal of credibility because they were fully aware of the issue and all of its contributing factors.

Since they were the most significant bulk within the Algerian market, the majority of local banks have been located outside.

4.3 Analyze the effects of the answers for the have a look at axes:

Table 07 : suggests the path, borders, and common of pattern responses:

Table N 07 :the outcomes of the research axis' responses

Descriptive Statistics						
	N	Min mu m	Maxim um	Mean	Std Deviation	Varia
banking quality dimensions	300	1,00	7,00	4,5211	1,65786	2,768
NRI index	300	2,00	7,00	4,3221	1,26516	1,601
Technology Index	300	1,50	7,00	3,6865	1,81493	3,294
People's Index	300	2,00	6,50	4,2453	1,52511	2,539
Government Index	300	1,00	6,50	3,1326	1,45182	2,167
Impact Index	300	1,00	6,50	4,4354	1,59072	2,634
Valid N (listwise)	300					

Source: education of the researchers primarily based on the effects of the Spss

From the table above, we see that the average reaction to the banking quality axes is 4,5211 with a trendy deviation of 1,65786 and corresponds to a mild diploma, so maximum respondents accept as true with that their banking companies enhance the quality of the banking provider but not in enough size. maximum of the sampling responses to the surroundings were digital transformation in the middle of my account, except for the era Index axes authorities Index, which has been within the area barely respectively, even though it indicates know-how of some variables, generally indicates a hazy and ambiguous know-how of the dimensions of digital transformation. this means that they do no longer see their administration as being sufficiently privy to this.

4.4 Test of correlation:

based on the table beneath, the consequences obtained imply a correlation between all axes of the take a look at, where the Pearson correlation aspect among the era index and banking first-rate dimensions is anticipated to be 0.617, a mean correlation. Then 0.825 among the people's Index and the banking fine dimensions method ", which is the best showing significant correlation, and there may be a moderate to vulnerable correlation among different axes of the virtual transformation and the banking excellent dimensions, with value at the desired degree.

**Table N 08** :the Pearson Correlation

		B.Q. D	T I	P I	G I	I I
banking quality dimensions	Pearson Corre	1	,617 **	,825 **	,251 **	,301 **
	Sig.		,000	,000	,000	,000
	N	300	300	300	300	300
Technology Index	Pearson Corre	,617 **	1	,680 **	,433 **	,259 **
	Sig.	,000		,000	,000	,000
	N	300	300	300	300	300
People's Index	Pearson Corre	,825 **	,680 **	1	,368 **	,423 **
	Sig.	,000	,000		,000	,000
	N	300	300	300	300	300
Government Index	Pearson Corre	,251 **	,433 **	,368 **	1	,138 *
	Sig.	,000	,000	,000		,017
	N	300	300	300	300	300
Impact Index	Pearson Corre	,301 **	,259 **	,423 **	,138 *	1
	Sig.	,000	,000	,000	,017	
	N	300	300	300	300	300

Source: education of the researchers primarily based on the effects of the Spss

4.5 Testing theories:

Testing computational averages using T-test at one sample was used to test the primary and second essential hypotheses, and the results were reported in accordance with the following table

Table N 09 :the results of the t-test one sample for the answer grades for both variables

Descriptive Variables	Mean	Std Deviation	Value of T	Level of Free	Probability value Sig
Digital transform	4,2341	1,26346	56,723	299	0,00
banking quality dimensions	4,4318	1,65985	47,945	299	0,00

the Correlation was significant at the 0.0 5.

Source: education of the researchers primarily based on the effects of the Spss

The contrast analysis of ANOVA and the basic linear regression analysis of regression were used to examine the third primary hypothesis.

Table N 10 :displays the findings of a straightforward linear regression analysis comparing the parameters of banking quality and digital transformation

	Independent variable : Digital transform		
	R	R ²	Régression coeffi
Dependent variable : banking quality dimensions	0,564	0,317	0,735

Source: Preparation of the researchers based on the results of the Spss

Table N 11: The ANOVA contrast analysis model between the characteristics of digital transformation and banking quality

Model	Sum of squ	D of free	Mean	F	Sig
Regression	256,167	1	256,167	132,849	0,000
Residual	574,781	298	1,935		
Total	830,948	299			

the Correlation was significant at the 0.05

Source: education of the researchers primarily based on the effects of the Spss

Table (10) demonstrates that there may be a middle ground between digital transformation and enhancing the quality of banking services, as indicated by the $R = 0,564$ correlation coefficient value. Additionally, the $R^2 = 0,317$ coefficient price indicates that 30.8% of the bank's excellent carrier is attributable to virtual transformation. We reject the H_0 hypothesis and are given the H_1 opportunity hypothesis because the ANOVA variability evaluation table shows that the extent of moral significance = 0.0000 falls below the 0.05 of the permitted moral indication degree. The $B = 0.735$ regression coefficient also highlights a gradual dating between digital transformation consciousness and maintaining tempo and improving the high-quality of bank banking services. Additionally, the first and second hypothesis were typical for the same previous criterion.



5. Conclusion :

Some conclusions regarding the impact of virtual transformation on enhancing the caliber of banking offerings have been drawn in light of the aforementioned research facts:

- Digital transformation significantly influences the development and enhancement of the caliber of services offered by banks.
- One of the elements of a comprehensive and successful plan is raising the standard of financial services in accordance with the requirement for digital transformation.
- Algerian banks are currently making an effort to keep up with the digital revolution that has occurred, although they have not been successful in doing so.
- Managing the overall quality of banking services is a major challenge for Algerian banks.
- From this point of view, it clearly demonstrates the relevance and impact of digital transformation on banks' quality policies, which plays a significant role in shaping their marketing strategy.

6. Recommendations:

Based on the studies's findings, a number of the subsequent pointers and suggestions were made:

- Banks operating in Algeria must develop clear strategies to keep pace with the digital transformation that has taken place.
- Banks operating in Algeria must work to develop and improve the quality of services provided in accordance with their digital reality.
- Banks operating in Algeria should benefit from the expertise of foreign banks working in banking in the aspects of digitization and quality.
- Maintaining market status, particularly when opening up to international competition, requires a dynamic quality strategy for banks that incorporates accelerated digital innovations.

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