

The Role of Digitalization in Enhancing the Functional Performance of Commercial Banks: A Case Study of the Bank of Agriculture and Rural Development (BADR) – Operations Directorate, Annaba Province

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Received: 20/01/2026

Accepted: 10/03/2026

Published: 27/03/2026

Abstract:

Employing a descriptive-analytical approach, this study evaluates the impact of digitalization on functional performance within the Bank of Agriculture and Rural Development (BADR) in Annaba. Utilizing employee surveys and SPSS analysis, the research identifies a positive correlation between digital integration, job performance, and process quality. While the limited sample size necessitates an exploratory interpretation, the findings underscore digitalization's role in enhancing operational outcomes. The study concludes by recommending that senior management align digital strategies with broader organizational goals to maximize efficiency and achieve sustainable strategic objectives.

Keywords: Digitalization; functional performance; Bank of Agriculture and Rural Development – Annaba.

Jel Classification Codes: G21, O33, M15

1. INTRODUCTION

In light of the changes witnessed by the global economy and the accelerated shift towards the digital economy, especially in the financial sector, financial institutions, including commercial banks, are compelled to keep pace with digital technology and to define the requirements of modern banking work in an era dominated by information and communication technology and modern digital technologies such as blockchain, the Internet of Things, artificial intelligence, and other contemporary technologies.

Commercial banks, too, are concerned with these transformations through digital transformation, the creation and development of new services, and the advancement of functional performance, which is the decisive factor among financial institutions. The human element is one of the fundamental pillars for advancing performance. To achieve this, employees in commercial banks must adopt digital technologies that affect their performance, as these are a main driver for enhancing the efficiency of functional performance, improving productivity, and providing innovative services to citizens and consumers. Digitalization contributes to saving time and effort, reducing costs, improving data accuracy and speed of access. Moreover, digitalization provides new opportunities for communication and interaction between individuals and institutions on a global scale, thereby contributing to economic, social, and cultural integration.

Based on the above, the research problem can be formulated as follows:

• What is the role played by digitalization in raising the efficiency of functional performance in commercial banks?

From the main question, the following sub-questions are derived:

- What is the impact of digital transformation on improving the efficiency of bank performance?
- How does the use of digital technologies affect the enhancement of bank performance?
- What is the effect of digitalizing bank employees?
- What is the impact of digitalization on customers and their relationships?

Research Hypotheses:

Main Hypothesis:

- There is a statistically significant effect between digitalization and the improvement of functional performance in the commercial bank BADR.

Sub-Hypotheses:

- There is a statistically significant effect between digital transformation in banking operations and the improvement of functional performance in

BADR.

- There is a statistically significant effect between the use of digital technologies in banking operations and the improvement of functional performance in BADR.
- There is a statistically significant effect between the digitalization of employees' tasks in banking operations and the improvement of functional performance in BADR.

Objectives of the Study:

The primary aim of the study is to provide a scientific foundation for the contribution of digitalization to improving the functional performance of banks. To achieve this main objective, the following sub-objectives must be realized:

- To identify digital transformation in banks.
- To identify the role of digitalization in improving functional performance to enhance competitive advantage.
- To identify how digitalization can attract investments to banks and achieve financial stability.

Methodology of the Study:

To answer the research problem, address the posed questions, and confirm or refute the hypotheses, the descriptive approach will be adopted for the theoretical aspect, as it presents, describes, analyzes, and interprets all the information used in the research to benefit the reader and enrich their knowledge. The analytical approach was adopted for the practical aspect, by applying it to the theoretical study represented by the contribution of digitalization to improving the functional performance of banks. Descriptive and inferential statistical methods were used for analysis and testing, utilizing the SPSS program as it is most suitable for processing questionnaire data.

2. The Concept and Importance of Digitalization:

2.1 The Concept of Digitalization:

There are multiple concepts circulating regarding digitalization, the most important of which are as follows:

Definition 01: Doug Hodges (2004) presented another concept of digitalization adopted by the National Library of Canada, considering it as “the process of converting intellectual content available on a traditional physical storage medium. (Atab, 2021)”

Definition 03: Taylor defined digitalization as representing the

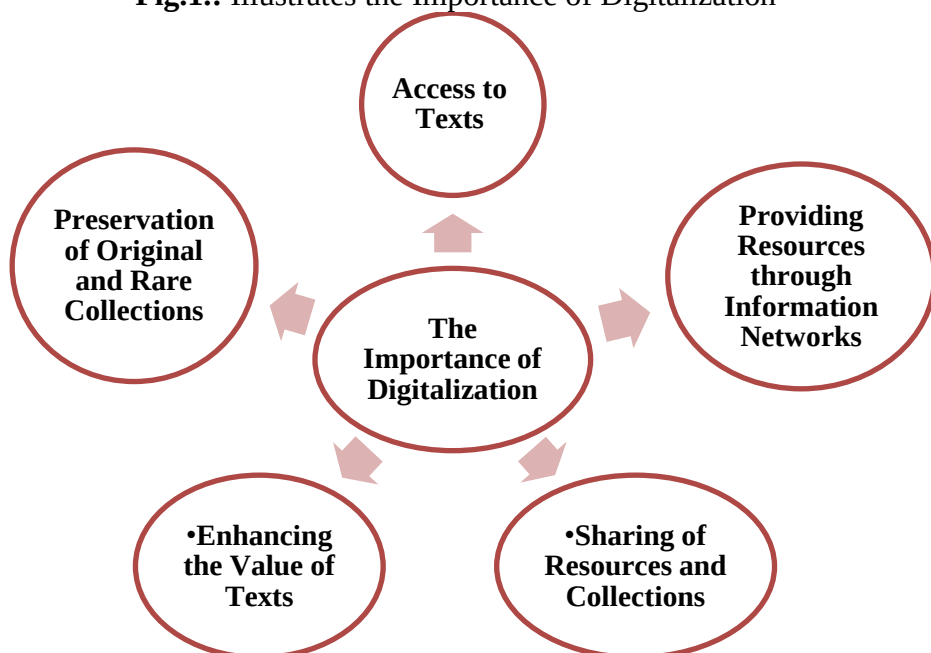
difference between “bits,” which have no color, size, or weight and can travel at the speed of light, and “atoms,” which naturally constitute solid matter such as paper and ink, which are combined to give meaning and value to this material. In practical terms, digitalization is an electronic system that enables certain devices to capture images of printed materials and make them available in an encoded language, then store, transmit, retrieve, copy, and even modify them (Sufyan, 2019-2020).

2.2 The Importance of Digitalization:

Digitalization holds significant importance, which can be summarized as follows:

- **Preservation of Original and Rare Collections:** Digitalization serves as an effective means for preserving rare and valuable information resources, especially those whose physical condition is fragile and therefore cannot be accessed directly by users. It also reduces or eliminates the need to consult original sources by providing an alternative electronic version accessible to beneficiaries.
- **Resource and Collection Sharing:** Digital resources can be used simultaneously by multiple users, which is a crucial consideration for overcoming the limitations of traditional collections, where the number of available copies restricts the number of users who can access a given resource at the same time.
- **Access to Texts:** Although digitalization may reduce the physical interaction between users and traditional information sources, it can, in some cases, offer a reading experience superior to that of the original text.
- **Enhancing the Value of Texts:** Digitalization provides an opportunity to benefit from valuable or rare information resources by making them available again, whether in the form of CD-ROMs, interactive CDs, or through the global Internet.
- **Providing Resources via Information Networks:** Remote access and exchange of information resources is a fundamental feature of digital collections. An organization can supply any other organization with an electronic copy of a resource through networked systems. This process should be reciprocal, enabling users to access and compare all available information resources from multiple organizations or information institutions in one place (Atab, 2021).

Fig.1.: Illustrates the Importance of Digitalization



Source: Prepared by the researcher based on the information provided above.

3. Uses and Challenges of Digitalization:

The uses of digitalization have diversified to keep pace with technological developments, yet it also faces numerous challenges, which will be addressed in this section.

3.1 Uses of Digitalization:

Digitalization has found applications in several fields, including:

- **Availability of the Workforce:** Careful selection of highly competent human resources capable of using devices and bearing the responsibility of digitalization is essential, as is forming a team able to operate in accordance with labor laws.
- **Financial Allocations:** These are determined by the costs of physical equipment such as workstations, various types of scanners, servers, as well as different software and applications. The choice of such equipment depends on the nature of the resources being processed. Providing all these requires substantial funding, and although equipment has become more available, human resources remain the key factor, requiring training and understanding of the digitalization project, which also entails costs (Bin Jarid, 2019).
- **Technical Constraints Related to the Nature of Information Sources:**

Digitalization must follow specific techniques and standards according to the information source, which can make its application in libraries and institutions challenging and necessitates careful study.

- **Transfer of Text Collections:** Due to the value or rarity of information resources, transferring or relocating them can be difficult. Therefore, appropriate digitalization methods and dedicated spaces must be chosen to preserve them within any library or institution. Companies may establish their own digital units within libraries to carry out this work, which is a viable alternative.
- **Scale of the Process:** This involves determining all the requirements for the digitalization process, including information sources, the time frame allocated, and the nature of the texts to be digitized.
- **Technologies and Physical Equipment Used:** Personnel involved in digitalization must be familiar with the physical capabilities used in the process (Khaldi, 2022).
- **Institutional Experience (Previous Projects):** This involves contacting libraries and institutions previously engaged in digitalization to assess their capabilities by reviewing their past projects, the objectives achieved, user satisfaction, and all aspects related to the digitalization of information sources, timeframes, and transfer processes.
- **Distance:** The distance between the external work site where digitalization occurs and the locations of information sources within the library should be considered.
- **Costs:** Through the tendering process for the digitalization project, the institution responsible for the project is selected, without neglecting the importance of experience in project implementation.
- **Control over the Quality of Digitized Information Sources:** It is necessary to ensure the quality of digitized sources, verify their scanning, and confirm that the output matches the requirements. This must be done accurately to detect and correct any errors before payments are made to the institution (Bin Jarid, 2019).

3.2 Challenges of Digitalization:

There are numerous challenges that hinder the implementation of digitalization in institutions, including:

Technical and Technological Challenges:

- Weak infrastructure and insufficient investment in research and development.

- Lack of assurance that all service recipients have the administrative digitalization requirements, either due to limited digital awareness or high acquisition costs.
- Inadequate communication lines and slow internet connectivity.

Organizational and Administrative Challenges:

- Weak planning and coordination at the senior management level for administrative digitalization programs.
- Insufficient implementation of necessary changes to introduce administrative digitalization.
- The shift from traditional manual work to electronic work raises concerns about confidentiality among employees and fear of change among officials.
- Persistence of centralization and resistance to change.
- Lack of clear vision for administrative digitalization and insufficient understanding of its objectives (Boushnaqa, 2018).

Human Challenges:

- Contradictions between individual needs and desires.
- Lack of planning for human resource development.
- Issues of informational and knowledge poverty.
- Low uptake of available training methods to improve human resource performance.
- Shortage of qualified personnel to use technologies.
- Digital illiteracy among many populations in developing countries, making communication via modern technology difficult.

Legislative Challenges:

- Difficulty in effectively monitoring information hackers and forgers and keeping up with their evolving methods.
- Difficulty in creating a protected work environment with legislative and legal frameworks suitable for digital work, which requires significant time and effort.
- Absence of active political will to support a qualitative shift towards a new model and provide the necessary political support to convince administrative bodies of the need to adopt modern technology and keep pace with the times.

Financial Challenges:

- Limited financial resources to benefit from high-quality information technology expertise and weak cash liquidity.

- Insufficient financial incentives due to fixed budgets and predetermined spending areas.
- High costs of providing infrastructure, including purchasing equipment, application software, establishing websites, and network connections.

Security and Social Challenges:

Administrative digitalization requires the exchange and immediate access to information, but issues such as hacking, website attacks, and electronic espionage are among the most serious challenges, including cybercrime, which transcends national borders and cannot be addressed by traditional legal means.

There is apprehension about technology and reluctance to engage in electronic transactions due to concerns about security and privacy in government services. Information security is characterized by its persistence and indestructibility. Achieving information security relies on three main elements:

- The physical element: providing physical protection for information systems.
- The technical element: using modern technologies to support and protect information security.
- The human element: developing the skills and capabilities of personnel in this field (Lakhal, 2023).

4. Uses of Digitalization in Enhancing Functional Performance

4.1 Determinants of Functional Performance:

The determinants of functional performance can be highlighted as follows:

1. **Effort:** This refers to the effort resulting from the support and motivation received by the employee, which translates into the physical, motor, and mental energies exerted by the employee to perform their task. These energies work together to accomplish the required work. This effort is stimulated by certain factors and influenced by others, which is reflected in performance. Thus, effort is considered one of the determinants of job performance, whether at the individual or group level (Al-Muhasna, 2013).
2. **Role Perception:** This means the individual's perception of their role and their impression of the behaviors and activities that constitute their job, as well as how they should perform their role within the

organization. It is the direction in which the individual believes it is necessary to channel their efforts at work. Accordingly, while performing their task, the employee receives stimuli that are translated into information, such as instructions, colleagues' feedback, and the rewards and incentives received. The employee sorts, interprets, organizes, and understands these stimuli based on their motivations, previous experiences, and the nature and characteristics of the information. From this perspective, individuals differ in their understanding and perception of the same circumstances and realities they encounter. For example, employee (A) may interpret the rewards they receive as a reflection of their competence and merit, considering them evidence of objective management, while employee (B) may see them as favoritism and a sign of subjective management (Bin Rahmun, 2013).

3. **Abilities:** Abilities represent the second factor that interacts with motivation in determining performance, and their impact depends on the nature and requirements of the necessary abilities. The effectiveness of using and processing information is also linked to the employee's sensory, motor, and cognitive abilities.
 - **Motor Abilities:** These include the motor responses performed by the individual based on their perception of certain stimuli. Three characteristics must be noted: speed, sensory-motor coordination, and physical fitness.
 - **Sensory Abilities:** Hearing and vision are among the most important senses for an individual's adaptation to the work environment.
 - **Cognitive Ability:** Mental abilities affect individuals' performance in complex tasks and represent the general intelligence of the employee. These branch into two main groups: one includes linguistic, mathematical, and educational abilities related to academic and educational performance, while the other comprises mental abilities of a mechanical and manual nature (Belqaid, 2017).

4-2- The Role of Digitization in Enhancing Job Performance:

Digitization constitutes a fundamental axis in raising the level of job performance in organizations and implementing administrative reform, as it provides services electronically, making work more effective. It leads to

cost reduction, saves time and effort for employees, improves and streamlines employee performance, increases their skills, organizes work, precisely defines responsibilities, and facilitates access to information. This, in turn, achieves employee satisfaction, a sense of belonging, and strengthens communication between subordinates and superiors within the organization.

- Digitization has greatly contributed to improving job performance by eliminating many routine tasks, resulting in faster, more efficient, and highly accurate work at lower cost.
- Digitization has effectively reduced routine job burdens on managers, allowing them to use this time for strategic planning and policy development, which has enhanced the efficiency and effectiveness of senior management.
- It has positively influenced employees' morale, increasing their loyalty and sense of belonging to the organization by providing easy access to information, thereby supporting their participation in decision-making.
- Organizations' pursuit of competitive advantage drives them to adopt digitization, which highlights the growing importance of research, development, and training, contributing to building and developing individual capabilities.
- Digitization has contributed to increasing the number of opportunities available to the organization in domestic and international markets and has activated the process of generating and applying new ideas necessary for the development of goods and services (Aqoun, 2022-2023).

5- Methodological Framework for the Applied Study:

To determine the role of digitization in improving job performance in the bank, a set of tools and methods were used to obtain the final result. This section addresses the methodology used in this study.

5-1- Study Population and Sample:

- The study population consists of all elements representing the phenomenon under study and sharing one or more specific characteristics, about which data must be collected.
- According to the subject of our research, all employees of the Bank of Agriculture and Rural Development (BADR) were selected. The purposive sample was chosen, with 46 questionnaires distributed to all employees of the bank. Thirty-six questionnaires were retrieved and

subjected to analysis, indicating that the study sample follows a normal distribution and is thus suitable for the study.

5-2- Design of the Study Tool:

This process was carried out after reviewing some previous studies that addressed the study variables and adhering to all comments provided by the supervising professors. Emphasis was placed on simplifying the statements as much as possible and avoiding complexity, ensuring they are understandable to the sample members. The questionnaire was divided into two parts as follows:

- **Part One:** Included personal data such as gender, age, educational qualification, job position, and professional experience.
- **Part Two:** Dedicated to the study axes, comprising 34 statements divided into two chapters:
 - **The first chapter** concerns the independent variable, digitization, and includes 17 statements.
 - **The second chapter** concerns the dependent variable, job performance, and includes 17 statements.

Second: Statistical Study of the Questionnaire Axes

The five-point Likert scale was used, as it is the most commonly used scale for measuring opinions: strongly disagree, disagree, neutral, agree, and strongly agree. Respondents are to mark (X) next to the appropriate answer. "Strongly disagree" corresponds to a score of (1), "disagree" to (2), "neutral" to (3), "agree" to (4), and "strongly agree" to (5).

Table 1. Five-Point Likert Scale

Classification	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Score	1	2	3	4	5

Source: Prepared by the researcher.

2-1- Validity of the Study Instrument:

The validity of the study instrument refers to the extent to which the questionnaire encompasses all elements that should be included in the analysis, as well as the clarity of its items and vocabulary, ensuring that it is comprehensible to all users. The validity of our study instrument was confirmed through both face and construct validity, as follows:

- **Face Validity of the Instrument:** To assess the apparent validity of the study instrument, it was presented to the supervising professor for an initial judgment. Additionally, with the assistance of the supervisor, it was submitted to specialized experts in the field for their opinions

regarding the clarity of the questionnaire items. After implementing the recommended modifications—such as deleting, amending, or rephrasing certain statements to enhance their clarity and comprehensibility for respondents—the final version of the questionnaire was established.

- **Construct Validity of the Instrument:** Construct validity was verified using Pearson’s correlation coefficient, with the results presented in the following table:

Table 2. Results of Measuring the Validity of the Study Instrument

Study Axes	Dimensions	Pearson Correlation Coefficient	Significance Level
Digitization	Digital Transformation	0.770	*0.000
	Use of Digital Technologies	0.909	*0.000
	Employee Digitization	0.834	*0.000
Job Performance	Job Performance	0.866	*0.000

Source: Prepared by the researcher based on SPSS v25 outputs.

*Statistically significant at $\alpha \leq 0.05$

Table 02 shows that the Pearson correlation coefficients between each dimension and the variables constituting the questionnaire are statistically significant at the 0.05 level, as the significance values are less than or equal to 0.05. The correlation coefficients range from 0.770 to 0.909, indicating a positive and direct relationship between the variables and their respective dimensions. This reflects the validity of the instrument in measuring what it was designed to assess.

5-2-2- Reliability of the Study Instrument: Reliability refers to the stability of the questionnaire results and the absence of significant changes if it were redistributed to the same sample under identical conditions over a specific period. The reliability of the questionnaire was verified using Cronbach’s Alpha coefficient to measure the consistency of respondents’ answers to all items in the scale. The results are shown in the following table:

Table 3. Results of Measuring the Reliability of the Study Instrument

Study Variables and Dimensions	Number of Items	Cronbach's Alpha Coefficient
Digitization	15	0.864
Job Performance	16	0.757
Total	31	0.874

Source: Prepared by the researcher based on SPSS v25 outputs.

The table above indicates that the overall reliability coefficient for the questionnaire reached 0.874, which is considered high and suitable for the purposes of the study, exceeding the general acceptance threshold of 0.60. The reliability coefficients for the study variables were also high: 0.864 for digitization and 0.757 for job performance. This suggests that if the instrument were redistributed to the same study sample under the same conditions, similar results would be obtained. Thus, the reliability of the study instrument is confirmed, providing full confidence in its accuracy and suitability for analyzing the results.

3.5. Statistical Methods Used in the Study: The Statistical Package for Social Sciences (SPSS) was employed, utilizing several statistical methods, including:

- ✓ **Frequencies and Percentages:** Used to identify the characteristics of the sample members.
- ✓ **Arithmetic Mean:** As a measure of central tendency, it was used to determine the extent to which the responses of the study sample were high or low for each item related to the study dimensions, and to rank the items according to the highest mean.
- ✓ **Standard Deviation:** As a measure of dispersion, it was used to assess the spread of the data.
- ✓ **Pearson Correlation Coefficient:** A statistical indicator used to measure the strength and robustness of the linear relationship between two variables; it was also used to verify the construct validity of the questionnaire.
- ✓ **Cronbach's Alpha Coefficient:** Used to confirm the reliability of the questionnaire.
- ✓ **Normality Test:** To verify that the study data follow a normal distribution.
- ✓ **Simple Linear Regression:** Used to test the study hypotheses.

5-4. Presentation and Analysis of the Digitization Axis Results:

5-4-1. Presentation and Analysis of the Digital Transformation Dimension:

To analyze respondents' answers regarding the digital transformation dimension, arithmetic means and standard deviations were calculated, as shown in the following table:

Table 4. Arithmetic Means and Standard Deviations of Respondents' Answers on Digital Transformation

No.	Statement	Mean	Std. Dev.	Level of Agreement	Rank of Importance
01	There are digital communication channels between the bank and customers.	4.46	0.50	Very High	4
02	The move towards digital transformation has improved the quality of banking services.	4.60	0.49	Very High	3
03	Digital transformation helps meet customer needs more quickly and in a timely manner.	4.83	0.37	Very High	1
04	Digital transformation enhances trust between employees and customers.	4.66	0.47	Very High	2
05	The devices and software used in digitization contribute to improving the bank's performance.	4.46	0.50	Very High	4
Overall (Digital Transformation Dimension)		4.60	0.35	Very High	/

Source: Prepared by the researcher based on SPSS v25 outputs.

Table 04 shows that statement (03) ranked first, with a mean of 4.83 and a standard deviation of 0.37, indicating a very high level of agreement. The lowest rank was shared by statements (01) and (05), each with a mean of 4.46 and a standard deviation of 0.50. This demonstrates that the employees under study generally and strongly agree that digital transformation plays a significant role in improving work efficiency and facilitating interactions between employees and customers.

5-4-2. Presentation and Analysis of the Use of Digital Technologies Dimension:

To analyze respondents' answers regarding the use of digital technologies,

The Role of Digitalization in Enhancing the Functional Performance of Commercial Banks

arithmetic means and standard deviations were calculated, as shown in the following table:

Table 5. Arithmetic Means and Standard Deviations of Respondents' Answers on the Use of Digital Technologies

No.	Statement	Mean	Std. Dev.	Level of Agreement	Rank of Importance
01	The bank possesses modern digital equipment and devices.	4.26	0.63	Very High	2
02	Most banking transactions are conducted digitally without the need for paper transactions.	3.53	0.97	High	5
03	The bank has sufficient electronic payment devices.	3.90	0.80	High	4
04	The bank is equipped with electronic surveillance cameras that enhance banking security.	4.23	0.85	Very High	3
05	Digital technologies help protect the privacy of customer data.	4.53	0.50	Very High	1
Overall (Use of Digital Technologies Dimension)		4.09	0.52	High	/

Source: Prepared by the researcher based on SPSS v25 outputs.

Table 05 shows that statement (05) ranked first, with a mean of 4.53 and a standard deviation of 0.50, indicating a very high level of agreement. The lowest rank was for statement (02), with a mean of 3.53 and a standard deviation of 0.97, reflecting a high level of agreement. The overall mean for the use of digital technologies dimension was 4.09, with a standard deviation of 0.52, confirming that respondents' answers indicated a high tendency towards the use of digital technologies.

5-4-3. Presentation and Analysis of the Results for the Digitization of Employee Activities

To analyze respondents' answers regarding the digitization of employees, arithmetic means and standard deviations were calculated, as shown in the following table:

Table 6. Arithmetic Means and Standard Deviations of Respondents' Answers on Employee Digitization

No.	Statement	Mean	Std. Dev.	Level of Agreement	Rank of Importance
01	The digitization of all departments in the bank enjoys broad acceptance among employees.	4.23	0.62	Very High	1
02	Employees adapt appropriately to digital transformation processes.	4.10	0.48	High	3
03	The bank has highly qualified human resources in the field of digitization.	4.06	0.69	High	4
04	The bank has highly competent staff who implement digital transformation and assist their colleagues in adapting to it.	4.23	0.72	Very High	2
05	The bank provides training and learning programs on the use of digital technologies.	3.66	0.71	High	5
Overall (Employee Digitization Dimension)		4.06	0.46	High	/

Source: Prepared by the researcher based on SPSS v25 outputs.

From Table 06, it is evident that statement (01) ranked first, with a mean of 4.23 and a standard deviation of 0.62, indicating a very high level of agreement. The lowest rank was for statement (05), with a mean of 3.66 and a standard deviation of 0.71, reflecting a high level of agreement. The overall mean for the employee digitization dimension was 4.06, with a standard deviation of 0.46, confirming that respondents' answers indicated a high tendency towards employee digitization. This demonstrates that employees have become proficient in using various modern digital technologies in their daily interactions.

5-5. Presentation and Analysis of Job Performance Results

To analyze respondents' answers regarding job performance, arithmetic means and standard deviations were calculated, as shown in the following table:

The Role of Digitalization in Enhancing the Functional Performance of Commercial Banks

Table 8. Arithmetic Means and Standard Deviations of Respondents' Answers on Job Performance

No.	Statement	Mean	Std. Dev.	Level of Agreement	Rank of Importance
01	I am satisfied with the amount of effort I put into my daily tasks.	4.66	0.47	Very High	4
02	I follow a clear work plan to perform my job well.	4.73	0.44	Very High	1
03	I make sure to communicate with my colleagues to accomplish tasks.	4.46	0.68	Very High	8
04	I am able to adapt to new changes and tasks.	4.50	0.73	Very High	7
05	I often strive to provide creative solutions and ideas in my work.	4.40	0.72	Very High	10
06	[Statement]	4.70	0.46	Very High	2
07	I am able to manage time and various tasks and ensure high accuracy in completing required tasks.	4.46	0.86	Very High	9
08	Receiving incentives motivates me to make greater efforts in my job.	4.30	0.79	Very High	12
09	Internal communication helps facilitate the tasks required of me.	4.10	0.75	High	13
10	Employees are satisfied with the new approach to improving job performance.	4.70	0.59	Very High	3
11	I perform my work with the required efficiency.	4.60	0.49	Very High	5

12	I can efficiently handle new work requirements.	4.10	0.84	High	14
13	With the presence of programs and applications, I have become more efficient in addressing work problems.	3.73	1.20	High	15
14	The bank is keen to retain competent employees.	4.73	0.44	Very High	1
15	I always adhere to working hours and complete my tasks on time.	4.30	0.59	Very High	11
16	Programs and applications help reduce the time required to complete work.	4.60	0.62	Very High	6
Overall (Job Performance Variable)		4.44	0.32	Very High	/

Source: Prepared by the researcher based on SPSS v25 outputs.

From the table above, it appears that the responses of the study sample indicated a very high tendency towards job performance, as evidenced by the mean value of 4.44 and the standard deviation of 0.32. This result is reinforced by the fact that most statements in this dimension were rated as very high, except for statements (09) and (13), which were rated as high. The means ranged between 3.73 and 4.73, and the standard deviations ranged between 0.44 and 1.20.

5-6. Hypothesis Testing

First: Statistical Test of the Main Hypothesis, which states:

H0: “There is no statistically significant effect of digitization on job performance in the bank under study at the significance level ($\alpha \geq 0.05$).”

H1: “There is a statistically significant effect of digitization on job performance in the bank under study at the significance level ($\alpha \geq 0.05$).”

To test this hypothesis, simple linear regression was used. The statistical analysis results can be summarized as follows:

Correlation Analysis (Correlation Coefficient): The following table shows the correlation between digitization as the independent variable and job performance as the dependent variable:

The Role of Digitalization in Enhancing the Functional Performance of Commercial Banks

Table 9. Correlation Results between Digitization and Job Performance

Variables		Correlation Coefficient (R)	Coefficient of Determination (R ²)	Adjusted	Standard Error
Independent Variable	Dependent Variable				
Digitization	Job Performance	0.542	0.294	0.269	0.324

Source: Prepared by the researcher based on SPSS V25 outputs.

Observations from Table 09 :

- The correlation coefficient value is 0.54, indicating a moderate positive relationship between digitization and job performance.
- The coefficient of determination shows that 29.4% of the variation in job performance is explained by digitization, while the remaining 70.6% is due to other variables outside the study's scope. The adjusted R² is 0.269, meaning the model accounts for 26.9% of the phenomenon.

F-Test (Overall Model Significance): At this stage, the quality of the model relating digitization (independent variable) to job performance (dependent variable) is tested, as shown below:

Table 10. Simple Linear Regression Estimates of Digitization's Effect on Job Performance

Model	Sum of Squares	Degrees of Freedom	Mean Squares	F-Test Value	Significance Level (Sig)	Statistical Decision
Regression	1.229	1	1.229			
Error	2.953	28	0.105	11.654	0.002	Hypothesis accepted
Total	4.181	29	/			

Source: Prepared by the researcher based on SPSS V25 outputs.

From the above table:

- The F-Test value (F = 11.654) exceeds the critical F value, and its significance (Sig = 0.002) is below $\alpha = 0.05$. Accordingly, the model is significant, leading to rejection of the null hypothesis and acceptance of the alternative: "There is a statistically significant effect of digitization on job performance in the bank under study at $\alpha \geq 0.05$."

5-6-1 Statistical Test of the First Sub-Hypothesis, which states:

H0: "There is no statistically significant effect of digital transformation on job performance in the bank under study at $\alpha \geq 0.05$."

H1: “There is a statistically significant effect of digital transformation on job performance in the bank under study at $\alpha \geq 0.05$.”

- F-Test (Overall Model Significance): The quality of the model relating digital transformation to job performance is tested as follows:

Table 12. Simple Linear Regression Estimates of Digital Transformation’s Effect on Job Performance

Model	Sum of Squares	Degrees of Freedom	Mean Squares	F-Test Value	Significance Level (Sig)	Statistical Decision
Regression	0.713	1	0.713			
Error	0.2336	28	0.083	8.552	0.007	Hypothesis accepted
Total	3.050	29	/			

Source: Prepared by the researcher based on SPSS V25 outputs.

From the above table:

- The F-Test value ($F = 8.552$) exceeds the critical F value, and its significance ($Sig = 0.007$) is below $\alpha = 0.05$. Accordingly, the model is significant, leading to rejection of the null hypothesis and acceptance of the alternative: “There is a statistically significant effect of digital transformation on job performance in the bank under study at $\alpha \geq 0.05$.”

5-6-2- Statistical Test of the Second Sub-Hypothesis: which states that:

H0: "There is no statistically significant effect at the significance level ($\alpha \geq 0.05$) of the use of digital technologies on job performance in the bank under study."

H1: "There is a statistically significant effect at the significance level ($\alpha \geq 0.05$) of the use of digital technologies on job performance in the bank under study."

F-Test (Model Significance Indicator): At this stage, the quality of the model relating the use of digital technologies to job performance will be tested, as clarified in the following table.

Table 14. Estimates of the Simple Linear Regression Model for the Effect of Digital Technologies Use on Job Performance

Model	Sum of Squares	Degrees of Freedom	Mean Squares	F-Test Value	Significance Level (Sig)	Statistical Decision
Regression	0.298	1	0.298	3.033	0.093	
Error	2.752	28	0.098			Hypothesis Rejected
Total	3.050	29	/			

Source: Prepared by the researcher based on V25 (SPSS) outputs.

From the above table, the following is evident:

The value of the (F-Test) indicates the quality of the model relating the use of digital technologies to job performance, where the value of (F) is (3.033), which is less than the tabular (F) value, and the statistical significance level (Sig = 0.093) is greater than the significance level ($\alpha \geq 0.05$). Accordingly, the model is not significant, and a decision can be reached to accept the null hypothesis, which states: "There is no statistically significant effect at the significance level ($\alpha \geq 0.05$) of the use of digital technologies on job performance in the bank under study."

5-6-3- Statistical Test of the Third Sub-Hypothesis: which states that:

H0: "There is no statistically significant effect at the significance level ($\alpha \geq 0.05$) of employee digitalization on job performance in the bank under study."

H1: "There is a statistically significant effect at the significance level ($\alpha \geq 0.05$) of employee digitalization on job performance in the bank under study."

F-Test (Model Significance Indicator):

At this stage, the quality of the model relating employee digitalization to job performance will be tested, as clarified in the following table:

Table 15. Estimates of the Simple Linear Regression Model for the Effect of Digital Transformation on Job Performance

Model	Sum of Squares	Degrees of Freedom	Mean Squares	F-Test Value	Significance Level (Sig)	Statistical Decision
Regression	1.128	1	1.128	16.440	0.000	Hypothesis Accepted
Error	1.921	28	0.069			
Total	3.050	29	/			

Source: Prepared by the researcher based on V25 (SPSS) outputs.

From the above table, the following is evident:

The value of the (F-Test) indicates the quality of the model relating employee digitalization to job performance, where the value of (F) is (16.440), which is greater than the tabular (F) value, and the statistical significance level (Sig = 0.000) is less than the significance level ($\alpha \geq 0.05$). Accordingly, the model is significant, and a decision can be reached to reject the null hypothesis and accept the alternative hypothesis, which states: "There is a statistically significant effect at the significance level ($\alpha \geq$

0.05) of employee digitalization on job performance in the bank under study."

6- Conclusion:

Today, commercial banks recognize the importance and necessity of moving towards digitalization in light of the changes occurring in the business environment, as well as its role in improving overall performance and facilitating administrative work mechanisms, and providing high-quality and effective services. This helps overcome various obstacles and respond to employees' aspirations to improve their performance and achieve the desired objectives with higher efficiency. Moreover, investment in digitalization can contribute to enhancing job performance, achieving competitive excellence, and ensuring sustainable growth in the evolving digital era. The importance of this new direction has become clear due to its significant role and impact on banks in providing services that meet customer expectations, and it has been observed that it has positive effects on improving job performance in commercial banks in general.

Through this study, we have examined the contribution of digitalization to improving job performance in commercial banks. We sought to identify the issue at the Agricultural and Rural Development Bank, which was the subject of our field study, in order to apply the theoretical aspect to the practical side. The aim was to answer the questions raised in our research problem, to determine the level of digitalization, to assess its actual presence, and to clarify its role in improving job performance at the bank under study.

Through this research, we have reached a set of results as follows:

• Study Results:

The following results are derived from the statistical analysis of the questionnaire distributed to employees of the Bank of Agriculture and Rural Development (BADR) in Annaba :

- Digitalization is one of the modern and contemporary concepts in banking practices, and it has proven effective in increasing the efficiency and productivity of banks and improving the performance of their employees.
- Digitalization is the pursuit of every modern institution to improve its performance, which depends on improving the performance of its members to keep pace with environmental developments and digital advancements.

- The success of the digitalization process depends on a set of requirements, the most important of which are: planning, the availability of infrastructure and technology, as well as a set of financial, legal, and policy requirements.
- Digitalization plays an effective role in enhancing internal and external communication among employees and with other institutions.
- The use of digital applications enables the improvement of work quality by reducing errors, increasing speed, and ensuring accuracy in execution.
- The digitalization process is not limited to technical aspects only, but also requires the necessary knowledge and skills, as digital processes require employees to possess cognitive and intellectual abilities, and motivate them to use knowledge effectively to achieve the desired goals.
- As the level of digitalization increases, the quality level at the Agricultural and Rural Development Bank increases.
- As the level of digitalization increases, the development of procedures at the bank increases.
- There is a positive and correlative relationship between digitalization and the job performance of employees, meaning that as digitalization improves, the job performance of employees improves.

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