

***Financial Innovation as a Tool for Enhancing Financial Performance in Algerian Banks: a case study of Banks in the Tebessa Region***

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**Abstract:**

The research aims to explore the role of financial innovation in improving the financial performance of Algerian banks in the Tebessa region. To achieve this, a descriptive analytical approach was adopted. Whereas a questionnaire consisting of 24 statements was designed and distributed to a sample of 90 employees of the banks where the survey was conducted.

This study concludes that there is a positive correlation between these two variables, It also concludes that Tebessa's Algerian banks is employing financial innovations to improve its efficiency and financial performance, thereby contributing to higher customer satisfaction and lower financial transaction costs.

**Keywords:** Financial; performance; Financial innovation; Efficiency; Algerian banks.

**Jel Classification Codes:** G30, O3, G21.

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## **1. Introduction**

The banking industry faces fierce competition and constant change, requiring continuous adaptation, financial innovation is crucial for banks to enhance efficiency, and achieve goals. By innovating, banks can create services and products that meet evolving market demands and leverage new technologies. This allows them to better serve customers and stay competitive in a dynamic financial landscape. Innovation enables banks to align their offerings with shifting market needs and technological progress.

**1.1. Study problematic:** The key question arising from this context is:

How significantly can financial innovation improve the performance of banks in Algeria's Tebessa region?

### **1.2. Study Importance and Objectives:**

This study addresses a crucial gap in financial research by examining the relationship between innovation and performance in banking. It focuses on the understudied Tebessa region of Algeria. The research objectives are twofold:

- Review existing literature on financial innovation and its impact on bank performance.
- Analyze how innovation affects financial outcomes for banks specifically in Tebessa. This regional focus provides valuable insights into a lesser-explored banking market

**1.3. Study Methodology:** A descriptive approach was employed to gather information and data for the theoretical framework. For the applied aspect, an analytical approach was utilized, using SPSS v.24 to analyze the results and test hypotheses.

### **1.4. Literature Review:**

**Study of** (Raman, 2023): it aims to examine the impact of financial innovation on corporate financial performance, the results highlight that Financial Innovation can have both positive and negative effects on corporate financial performance.

**Study of** (hammou, 2023): it investigates the effect of financial innovation in improving financial performance of simple of employees in some of financial companies in the Iraq Stock Exchange the study reveals that there is positive correlation and influence

relationship between Financial Innovation and financial performance through enhanced production, efficiency and reduce the operational costs.

## **2. Theoretical framework**

### **2.1. The financial innovation in the banks**

#### **2.1.1. Concept Of Financial Innovation:**

Financial innovation involves offering new financial services, products to customers by leveraging the latest technology, alongside enhancements and modifications in financial products and the organizational structures of financial institutions; (Kamel Ameur, 2019, p. 634)

expands on this concept, stressing the importance of integrating new financial instruments into existing systems. This integration spans across various aspects of banking, including product development, process improvements, and the application of information technology; (Abor, 2005, p. 170)

Schumpeter's definition, as cited by (Tamer Khraisha, 2018, p. 04) takes a broader view. It frames financial innovation as the implementation of new processes across multiple areas of business operations, from production methods to organizational structures. This perspective underscores the far-reaching impact of innovation on all aspects of financial institutions.

From these definitions, financial innovation can be understood as the creation of new financial products and services, modifying and enhancing existing offerings or developing new technological solutions for financial processes.

#### **2.1.2. Categories Of Financial Innovation**

According to Schrieder and Heidhus, financial innovations are categorized as follows: (Mahmoud Barkan, 2023, p. 423)

- **Product Innovations:** This category encompasses the creation of new financial products or services, as well as improvements to existing ones.

- **Process Innovations:** This refers to the introduction of new processes or the improvement of existing ones, leading to better quality and increased efficiency.
- **Institutional Innovations:** This category focuses on the establishment of new financial institutions or the significant restructuring of existing ones. It includes the creation of new types of financial intermediaries or the transformation of traditional institutions to adapt to changing market conditions.

"Perez" offers an alternative classification of financial innovations: (Mahmoud Barkan, 2023, p. 423)

- **Innovative Tools Supporting Real Activities:** These innovations directly facilitate economic activities in the real sector. Examples include various forms of bank loans, venture capital funding, and the structure of joint stock companies, all of which provide crucial financial support for businesses and entrepreneurs.
- **Innovations Facilitating Institutional Growth and Expansion:** This category primarily revolves around bonds and similar debt instruments. These innovations enable institutions to raise capital for expansion and growth, offering alternatives to traditional equity financing.
- **Innovations Modernizing Financial Services:** These innovations focus on enhancing the customer experience and operational efficiency of financial services. Examples include the development of personal checking accounts, the introduction of ATMs, and the advancement of electronic banking systems.
- **Financial Innovations Aimed at Profit and Risk Management:** This category includes sophisticated financial instruments and strategies designed to optimize returns while managing risk. Examples encompass investment funds, underwriting services, various financial derivatives, and hedge funds.

- **Financial Innovations for Financing Obligations or Mobilizing Assets:** These innovations provide mechanisms for managing financial obligations and leveraging assets. Examples include swaps and futures contracts, which allow for risk transfer and hedging, as well as activities like mergers and acquisitions, which facilitate the reorganization and optimization of corporate assets.

**Third classification:** In addition to the previously mentioned types, there are several other important financial innovations:

- **Risk Management Innovations:** These innovations are designed to reduce risks by transferring them to entities better equipped to handle them, in exchange for certain benefits.
- **Liquidity-Enhancing Innovations:** These innovations aim to increase the liquidity of securities and create new financing sources for borrowers.
- **Market Expansion Innovations:** These innovations attract new investors and create new opportunities, thereby boosting market liquidity.

## **2.2. Background of Financial Performance**

### **2.2.1. Definition Of Financial Performance:**

Financial performance is the assessment of an organization's operational and financial characteristics through examination and analysis of its financial statements to evaluate performance efficiency. (Amalendu Bhunia, 2011, p. 270)

It reflects an organization's financial position at a specific time or over a period, encompassing both specific aspects and overall performance (Wenxiang Lu, 2016, p. 14) .This concept utilizes financial indicators like profitability to express business performance, aiding in understanding, developing, and implementing the company's financial position through financial statement analysis. (Abdikani Shire Anshur, 2018, p. 02)

It also serves as the essential foundation for an organization's various activities, assessing results from policies and operations financially. (Mawangi, 2016, p. 04)

In essence, financial performance represents an institution's financial status and its ability to optimally utilize resources to achieve goals and accurately determine its actual condition.

### **2.2.2. Financial performance objectives:** (Al-Damour, 2020, p. 35)

- **Monitoring Plan Objectives:** This involves regularly checking the organization's progress against predetermined goals or targets set in its strategic plan.
- **Measuring the Organization's Success in Sustaining Its Activities and Achieving Goals:** This objective focuses on providing various levels of information to both internal and external stakeholders.
- **Identifying Weaknesses:** This is a critical aspect of performance evaluation. It involves a deep dive into areas where the organization is underperforming.
- **Enhancing Oversight Mechanisms on the Company's Performance:** The information and data obtained from performance evaluations support oversight mechanisms, enabling continuous and comprehensive monitoring to ensure optimal results.
- **Providing a Database and Information on the Company's Performance:** This information is crucial for developing future policies, studies, and research aimed at improving the performance processes and increasing efficiency.

### **3. Effect of Financial Innovation in improving Financial Performance:**

Theoretical analysis suggests a positive relationship between financial innovation and banking performance. Financial innovation enhances banking services, competitiveness, and efficiency. It increases revenue and reduces costs through new customer-focused products and services. By creating or improving banking products, it

also mitigates risks. This leads to higher profits and improved operational efficiency (manikanta, 2023, p. 6251).

The studies by (manikanta, 2023) and (hammou, 2023), provide empirical evidence supporting the idea that financial innovation positively impacts a bank's financial performance. As a result, banks should prioritize and efficiently implement financial innovations to achieve greater profitability and enhance their future financial performance.

#### **4. Field study**

**4.1. methodology research:** The methodological framework for conducting the field study is outlined as follows:

**4.1.1. Study sample:** We conducted our study across six banks in Tebessa Region, including the National Bank of Algeria, the Bank of Agriculture and Rural Development, and others.

To ensure we got a fair representation, we used stratified random sampling to select our participants. This meant we divided the employees into groups based on their banks and job titles, then randomly selected from each group. This way, we made sure we weren't just hearing from one type of employee or one particular bank. We ended up selecting 55 employees to survey. After sending out our questionnaires, we got 46 valid responses back. That's about an 84% response rate, which we were quite pleased with. In survey research, anything above 80% is considered excellent. It means our results are likely to be a good reflection of what's actually happening in these banks.

The high response rate also suggests that the employees were interested in our study and felt it was important enough to participate. This engagement gives us more confidence in the quality of the responses we received.

**4.1.2. Study tool:** We developed our questionnaire carefully, basing it on the theoretical framework we'd established earlier. It consisted of 24 questions, and we used a five-point Likert scale for the responses. This scale allowed our participants to express how much they agreed

or disagreed with each statement, giving us nuanced data to work with, we structured the questionnaire into three main sections:

The first part asked for personal information. This helps us understand who our respondents are and allows us to look for patterns based on demographics, The second part focused on financial innovation. We included questions about different aspects of innovation in banking, like new products or services, The third part explored financial performance. Here, we asked about various indicators of how well the banks were doing financially. For our data analysis, we used SPSS version 24.

## 4.2. Analysis Data

### 4.2.1. Validity of the study:

**Table 1: The test of validity results**

Statement	Correlation	Sig
Financial innovation	0.847	0.000
Financial performance	0.771	0.000

**Source:** Prepared by reasearchers using spss.

The results in the table reveal a strong and high correlation, suggesting that the statements are accurate and yield positive outcomes that support the study. This confirms that the questionnaire is reliable and assures that its results can be trusted.

### 4.2.2. Reliability of the study:

**Table 2: The reliability test results**

Statement	Crombach's Alpha
Financial innovation	% 90
Financial performance	% 74
Total stability	% 86.9

**Source:** depending on spss v.24 outputs.

Cronbach's alpha coefficient ( $\alpha$ ) = 0.869 (86.9%) for the complete instrument, exceeding the conventional threshold of 0.70. This indicates strong internal consistency reliability across all study variables.

### **4.3. Analysis of the Results:**

#### **4.3.1. Analyze results related to personal data**

- **Age group variable:** The survey sample was categorized based on age, as detailed in the following table:

**Table 3: Distribution of study participants by age group**

<b>Category</b>	<b>Frequency</b>	<b>%</b>
<b>Under 30 years</b>	13	%28.3
<b>30 to 40 years old</b>	15	%32.6
<b>40 to 50 years old</b>	17	%37.0
<b>50 years or more</b>	1	%2.2
<b>Total</b>	46	100%

**Source:** Prepared by reasearchers using spss.

The table 03 shows that the highest percentage of respondents, in this variable is in the category of 40-50 years old, which constitutes 37% of the sample. This is followed by the 30-40 years age group, which represents 32.6%. The category of under 30 years ranks third, with a percentage of 28.3%, while the group over 50 years is the smallest, with just 2.2%. This suggests that the economic institutions studied have a predominantly experienced workforce, but also includes a significant number of younger employees who are able to understand and respond to the survey items.

- **Academic level variable:**

**Table 04: Distribution of study participants by educational level**

Category	Frequency	%
<b>Bachelor</b>	6	%13.0
<b>BA</b>	18	%39.1
<b>Master</b>	16	%34.8
<b>Ph.D</b>	1	%2.2
<b>Other certificates</b>	5	%10.9
<b>Total</b>	46	%100

**Source:** Prepared by reasearchers using spss

The table 04 reveals that most of the survey sample possesses a Bachelor's degree comprising 39.1% of the participants. This is followed by those with a Master's degree, representing 34.8%. Other academic categories show lower percentages, with no participants holding a PhD. These results suggest that the economic institutions involved have a strong academic foundation that can contribute to growth and development. This distribution aligns with the scientific qualifications typically required by economic institutions for various employment opportunities

➤ **Professional experience variable:**

**Table 5: Distribution of study participants by Professional experience**

Category	Frequency	%
<b>Under 5 years</b>	8	17.4%
<b>05-10 years</b>	17	37.0%
<b>10-15 years</b>	11	23.9%
<b>Over 15 years</b>	10	21.7%
<b>Total</b>	46	%100

**Source:** Prepared by reasearchers using spss.

The modal experience category is 5-10 years (37.0%), followed by 10-15 years (23.9%) and >15 years (21.7%). The cohort with less than 5 years of experience comprising the smallest segment (17.4%) of the total sample. Meaning that the group with less 5 years of

experience need motivation and support to improve their performance, and enhance the financial performance of the banks.

### 4.3.2. Analysis the axes of the questionnaire

➤ **First Part:**

**Table 06: Analysis of the financial innovation**

	<b>Statement</b>	<b>mean</b>	<b>S d</b>	<b>Degree of verification</b>
<b>Innovating financial tools</b>				
01	The bank is working to introduce new tools characterized by innovation and innovation.	3.98	1.043	High
02	The bank provides a system that stimulates the creativity process in the field of updating new tools.	3.52	1.005	High
03	New banking tools are in line with the needs of customers and clients.	4.15	0.842	High
<b>Innovating financial mechanisms</b>				
04	The Bank is designing new financing mechanisms	3.76	0.947	High
05	The bank works to provide innovative solutions to financing problems.	3.91	0.962	High

06	Innovative financing formulas vary by sector and are compatible with economic progress	3.76	0.970	High
<b>Innovation of financial products</b>				
07	The bank provides platforms and websites for conducting various banking operations	3.20	1.204	Middle
08	The bank provides remote banking services	3.13	1.024	Middle
09	Bank card services work to meet the needs of customers	3.30	1.113	Middle
<b>Promoting financial innovations</b>				
10	The bank works to develop workers' knowledge through training courses	3.17	1.217	Middle
11	The bank provides financial incentives to encourage workers to provide their best at work.	3.11	1.059	Middle
12	The bank gives moral incentives to encourage its workers to submit suggestions regarding the development of its products	3.30	1.072	Middle
	Total	3.90	0.512	High

**Source:** depending on spss outputs.

The table 06 shows a high mean of 3.90 and a standard deviation of 0.512. According to the Likert scale used, this falls within the range of 3.40-4.19, indicating a general agreement among the study sample. Therefore, it can be concluded that there is a strong interest and positive attitude toward financial innovation at the Algerian banks studied.

➤ **Second Part:**

**Table 07: Statistical indicators for financial performance**

	<b>Statement</b>	<b>mean</b>	<b>S d</b>	<b>Degree of verification</b>
01	The bank has the ability to pay its obligations when due	4.02	0.614	High
02	The available resources and capabilities are exploited in an optimal way that enables the bank to improve its financial position.	3.57	1.025	High
03	Increasing profitability is an essential feature of bank management	3.70	0.986	High
04	The bank benefits from advice on business and financial strategies in order to increase its performance	3.07	1.020	Middle
05	There are sound control systems in the bank, which prevent financial manipulation	3.20	0.806	Middle
06	Periodic comparison of the results and financial performance of the bank helps it determine its financial plans and strategy	3.39	0.829	Middle
07	Financial incentives have an	3.37	0.951	Middle

	impact on improving the financial performance of the bank			
08	Financial statements are characterized by credibility and transparency, in order to exploit them to improve financial performance	3.44	0.967	Middle
09	The bank is characterized by effective decision-making and avoiding financial failure	3.48	0.960	High
10	The bank continuously monitors and monitors the level of its financial performance	3.46	0.959	High
11	At every stage, the bank maintains a margin of safety that achieves financial balance	3.22	1.228	Middle
12	The bank uses financial indicators to highlight its financial balance in the short and long term	3.37	1.236	Middle
Total		3.46	0.537	High

**Source:** depending on spss outputs.

The table 07 yielded a high arithmetic mean of 3.46 with a standard deviation of 0.537. within the five-point Likert scale, this mean indicating a positive relationship between variables. This improvement aligns with the key objective that banks strive to achieve for sustained success.

**4.3.3. Hypotheses testing:** After presenting and analyzing the study data, the hypotheses will be examined to determine their validity. This involves testing both the main hypothesis and its sub-hypotheses, while also ensuring that the study data follows a normal distribution.

➤ **First section: analysis of normal distribution**

**Table 08: Normal distribution test results**

Axis content	Z	(sig)
<b>Financial innovation</b>	1.109	0.171
<b>Financial performance</b>	0.981	0.290
<b>Questionnaire</b>	0.966	0.308

**Source:** depending on spss outputs.

The table 08 shows that the data follows a normal distribution, this is because the significance level for each axis for the data (sig > 0.05).

➤ **Second Section: Testing sub-hypotheses**

**Table 9: Test of sub-hypotheses**

Independent variable	Dependent variable	B	Standard error	Beta	T	sig
Innovating financial tools	Financial performance	.1920	.1330	.2650	1.45	.154
Innovating financial mechanisms		.0350	.1300	.0510	.265	.792
Innovation of financial products		.5170	.1270	.6460	4.05	.000
Promoting financial innovations		.3440	0.137	.3210	2.51	.016
R		0.611				
R <sup>2</sup>		0.374				
F		2.693				

**Source:** Prepared by reasearchers using spss.

- **Test first sub-hypothesis:**

The data demonstrates a moderate relationship between financial instrument innovation and performance ( $R = 0.611$ ), with the coefficient of determination ( $R^2 = 0.374$ ) explaining 37.4% of variance. The regression model yields critical test statistics ( $T = 1.451$ ,  $F = 2.693$ ) with significance level 0.154, meaning that there is no effect of financial instrument innovation in the banks of Tebessa.

- **Test second sub-hypothesis:**

The correlation coefficient demonstrates moderate association between financial mechanism innovation and performance ( $R = 0.611$ ). The regression coefficient ( $\beta = 0.035$ ) indicates minimal positive effect, with 1-unit increase in innovation of financial mechanisms corresponding to 3.5% financial performance improvement. Model diagnostics reveal statistically insignificant relationship ( $F = 2.693$ ,  $p = 0.792 > 0.05$ ), meaning that There is no impact between innovation of financial mechanisms and financial performance in banks of Tebessa region.

- **Test third sub-hypothesis:**

Note from the table 09 that significance level for the innovation of financial products is 0.000 which is less than 0.05, This indicates statistically significant effect providing evidence that banks in the Tebessa region are focused on innovating financial products.

- **Test fourth sub-hypothesis:**

Note from table 09 that significance level of encouraging financial innovations is 0.016 which is less than 0.05, meaning that there is statistically significant differences, This evidence confirms that encouraging innovation is a strategic priority within the banking sector of the Tebessa region.

- **Third Part: Test the main hypotheses**

**Table 10: Results of regression test analysis"the main hypotheses"**

<b>Independent variable</b>	<b>Dependent variable</b>	<b>(<math>\alpha</math>)</b>	<b>(<math>\beta</math>)</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>t</b>	<b>F</b>	<b>sig</b>
Financial innovation	Financial performance	0.285	2.674	0.397	0.157	2.865	8.210	0.006

**Source:** depending on spss outputs.

Based on Table 10, the analysis reveals a statistically significant relationship between financial innovation and financial performance, demonstrated by  $F = 8.210$  and a significance level of  $0.006$  ( $p < 0.05$ ). This robust statistical evidence confirms that financial innovation plays a crucial role in driving improved financial performance among Algerian banks in the Tebessa region.

## **5. Conclusion**

Financial innovation is a key priority for banks amid the competitive financial environment, due to its significant role in attracting customers and reducing costs. This drive for innovation leads banks to develop new financial services and products that strengthen their strategic position and ensure stability, ultimately resulting in improved performance and efficiency. Consequently, financial innovation presents a valuable opportunity for Algerian banks, leveraging modern, high-quality technology to enhance and elevate their financial performance.

### **Results:**

- The empirical evidence demonstrates that financial innovation serves as a transformative force in Algerian banking, significantly enhancing service delivery while driving substantial improvements in overall financial performance;

- The findings conclusively show that financial innovation directly elevates customer satisfaction, builds stronger client relationships, and successfully reduces costs associated with financial transactions;
- Banks demonstrate a clear strategic commitment through their hiring practices, prioritizing candidates with scientific qualifications and relevant certifications, indicating their dedication to fostering innovation-driven growth;
- Statistical analysis confirms that innovation in financial products has a significant positive impact on improving the financial performance of Algerian banks in the study area;
- The evidence further establishes that promoting financial innovation initiatives significantly enhances the financial performance of Algerian banks in the Tebessa region, validating innovation as a key driver of banking success.

**Study recommendations:**

- Banks should strategically leverage financial innovation as a differentiating tool in their service offerings, transforming it into a sustainable competitive advantage that directly enhances their market performance;
- The Algerian banks under study should integrate various dimensions of financial innovation into their services to achieve higher profits and mitigate risks;
- Banks in the region of Tebessa should focus on training their employees in financial innovation techniques, recognizing their crucial role in improving performance and creating value;
- Algerian banks in Tebessa must develop and implement robust strategies focused on service enhancement and development, ensuring their offerings align precisely with evolving customer needs;
- The Algerian banks under study should update their financial services and products by incorporating financial innovations to boost their performance;

- Building on the proven success models of leading financial institutions, Algerian banks should actively adopt and adapt established financial innovation practices to elevate their operational excellence and market performance.

## **6. Bibliography List:**

*Abdikani Shire Anshur, M. M. (2018). the role of inventory management on financial performance in some selected manufacturing companies in Mogadishu. International Journal of Accounting, 06(02).*

*Abor, J. Y. (2005). Technological Innovations and Banking in Ghana: An Evaluation of Customers Perceptions. journal of IFE Psychologie, 01(13).*

*Al-Damour, L. A. (2020). The impact of intellectual capital on the financial performance of Jordanian industrial companies listed on the Amman Stock Exchange. MBA thesis, Mutah University, Service of Accounting, Jordan.*

*Amalendu Bhunia, S. S. (2011). Financial performance analysis a case study. Journal of Social Sciences, 03(03), 269-275.*

*hammou, Z. j. (2023). Financial innovation and its effectiveness in improving financial performance: An reconnaissance study of a For the opinions of a sample of employees in some of financial companies included in the Iraq Stock Exchange. Warith Scientific Journal, 05(15), 326-335. available at: <https://www.iasj.net/iasj/article/285113>*

*Kamel Ameur, a. c. (2019). The reality of financial innovation in Islamic finance. Journal of finance, accounting and managerial studies, 03(06).*

*Mahmoud Barkan, R. H. (2023). Financial innovation as a mechanism for developing the financial industry in Algeria. Journal of Quantitative Economic Studies, 09(01).*

*manikanta, K. s. (2023). the impact of financial innovation on corporate financial performance. journal of survey in fisheries sciences, 10(01).*

*Mawangi, j. m. (2016). Effect of financial structure on the financial performance of firms listed at East African securities exchanges. doctor of philosophy, university of Agriculture and technology, Business of administration, Kenya.*

Raman, M. (2023). *The impact of financial Innovation on corporate financial performance. journal of survey in fisheries sciences, 10(01), 6245-6254.*

Tamer Khraisha, K. A. (2018). *can we have a general theory of financial innovation processes? a conceptual review. Khraisha and Arthur financial innovation, 04(04), 01-27.*

Wenxiang Lu, M. T. (2016). *Which factors moderate the relationship between sustainable performance and financial performance? a meta-analysis study. Journal of International Accounting Research, 15(01).*