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- A. Study design/  
Zaplanowanie badań
- B. Data collection/  
Zebranie danych
- C. Statistical analysis/  
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THE IMPACT OF ISLAMIC FINANCING AT AL BARAKA BANK  
ON THE GROWTH OF THE COUNTRY'S

WPŁYW FINANSOWANIA ISLAMSKIEGO W BANKU  
AL BARAKA NA ROZWÓJ KRAJU

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Abstract

**Purpose:** This study aims to explore the impact of Islamic finance at Al Baraka Bank on the growth of Algeria's Gross Domestic Product (GDP). It focuses on the development of the Islamic finance market in the Algerian economy, examining the size of Shariah-compliant financial assets and the role of the bank's intermediation structure based on profit-and-loss sharing.

**Design/methodology/approach:** The study utilizes statistical data from the EViews system to model the relationship between Islamic finance (independent variable) and GDP (dependent variable), based on hypotheses developed to examine the relationship between the variables.

**Findings:** The study includes an analysis of the budget allocated to Islamic financial services, along with an overview of total deposits and equity at Al Baraka Bank. These represent the financing sources used to deploy Islamic financial products in Algeria through the bank's Shariah-compliant framework.

**Originality/value:** This study investigates the role of the first Islamic bank in Algeria, established in 2006, in contributing to economic growth through Shariah-compliant financial practices.

**Keywords:** Islamic Finance; Al Baraka Bank; Economic Growth; Gross Domestic Product

Streszczenie

**Cel:** Niniejsze badanie ma na celu zbadanie wpływu finansów islamskich w banku Al Baraka na wzrost produktu krajowego brutto (PKB) Algierii. Skupia się ono na rozwoju rynku finansów islamskich w gospodarce algierskiej, analizując wielkość aktywów finansowych zgodnych z szariatem oraz rolę struktury pośrednictwa bankowego opartej na podziale zysków i strat.

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**Projekt/metodologia/podejście:** W badaniu wykorzystano dane statystyczne z systemu EViews do modelowania relacji między finansami islamskimi (zmienna niezależna) a PKB (zmienna zależna) w oparciu o hipotezy opracowane w celu zbadania relacji między zmiennymi.

**Wyniki:** Badanie obejmuje analizę budżetu przeznaczanego na islamskie usługi finansowe, a także przegląd całkowitych depozytów i kapitału własnego w banku Al Baraka. Stanowią one źródła finansowania wykorzystywane do wdrażania islamskich produktów finansowych w Algierii poprzez ramy zgodne z szariatem.

**Oryginalność/wartość:** Niniejsze badanie analizuje rolę pierwszego islamskiego banku w Algierii, założonego w 2006 r., w przyczynianiu się do wzrostu gospodarczego poprzez praktyki finansowe zgodne z szariatem.

**Słowa kluczowe:** finanse islamskie; Al Baraka Bank; wzrost gospodarczy; produkt krajowy brutto

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## 1. Introduction

The Islamic finance market occupies a significant position within the global financial system, particularly following the demonstrated stability of Islamic financial assets during periods of international monetary and financial crises. The resilience of Islamic financial investments amidst major collapses in global markets further underscores this robustness. Rooted in the principles of Islamic economics, Islamic finance operates on foundational tenets such as the doctrine of *al-ghunm bil-ghurm* (i.e., profit is accompanied by risk), a concept generally absent from conventional financial instruments. This principle of profit-and-loss sharing serves as the basis for financial intermediation between surplus and deficit units, while also channeling funds toward the real economy. Accordingly, these core principles constitute fundamental pillars of the Islamic banking and finance system. They play a critical role in promoting real-sector production and investment by directing financial resources through banks, thereby encouraging capital formation and reinforcing the relationship between investors and financiers in pursuit of sustainable economic growth.

This trend is reflected in the global expansion of Islamic finance industries, particularly in Arab countries, which have experienced substantial growth in Sharia-compliant financial assets, as certified by Sharia boards and audit committees within financial institutions. This expansion has coincided with increased economic growth rates in these regions. In parallel, regulatory frameworks have evolved, with institutions being formally licensed and supervisory bodies established to oversee the Islamic finance sector and enact pertinent legislation. Algeria, among these countries, has launched dedicated branches and specialized agencies focused on financing models based on profit-and-loss sharing. These initiatives aim to mobilize financial resources from individuals and entities seeking to invest in accordance with Islamic principles, under the supervision of Sharia-compliant governance structures. This strategy aligns not only with the religious convictions of the target investors but also with the government's objective to promote economic development through the diversification of alternative financing mechanisms, as stipulated by Banking Law No. 23/07 and Islamic Banking Law No. 20/02.

### 1.1. Study Problem

- To what extent do the Islamic financing methods employed by Bank Al Baraka influence the national economic output?
- Does Bank Al Baraka comply with the core principles of Islamic economic financing?
- What are the principal Islamic financial services provided by Bank Al Baraka?
- Has the growth of Islamic banking in Algeria contributed to broader economic development?

### 1.2. Study Hypotheses

- H1: Islamic financing has a significant impact on economic growth in Algeria in the short term or during the period from 2010 to 2023.

- H2: Islamic financing exerts a measurable influence on Algeria's economic growth in the long term.

### **1.3. Study significance**

The relevance of this study lies in the growing influence of Islamic finance within contemporary banking systems. This is reflected in the sustained expansion of Sharia-compliant financial assets and the increasing diversification of investment instruments and mechanisms. The study aims to clarify the fundamental principles and institutional frameworks of Islamic finance, with a particular focus on the Algerian context a developing economy seeking to expand and diversify its financing sources. It emphasizes the necessity of understanding the foundational concepts of Islamic banking, particularly its financing and investment models. The analysis centers on the financial structure of Bank Al Baraka, selecting a sample based on the volume of financing extended by the bank, and highlights its contribution to Algeria's financial system. Moreover, the study identifies the bank's financial products and instruments used in both consumer and investment financing. Finally, it assesses Bank Al Baraka's standing within the national banking sector by examining its asset base, capital growth, and balance sheet evolution from 2010 to 2023.

### **1.4. Study Objectives**

One of the main objectives of this study is to introduce Islamic financing and highlight its global position in the financial system, as well as to discuss the Islamic finance market in Algeria and review the first Islamic banking institution in the Algerian economy (Al Baraka Bank Algeria, n.d.). The study also aims to clarify the relationship between the Islamic financing variable in the bank and the national gross output variable of the state, and to understand how the financing methods in the bank affect productive investment and economic growth. This will be achieved through the use of quantitative data on the annual financing directed to clients and institutions in the bank via various financing formulas and banking contracts based on traditional Islamic financing principles, which have been developed and adapted to contemporary financial engineering systems while considering their Shariah compliance and financing efficiency for implementation.

## **2. Study Methodology**

The descriptive method was adopted in terms of collecting relevant statistics and concepts related to Islamic finance in Algeria, as well as the size and growth of the Islamic financial industry. The analytical method was then used to illustrate the development of Islamic finance at Baraka Bank. Additionally, the case study method was employed by analyzing a sample of financing data at Baraka Bank to assess its impact on economic growth. Therefore, the study focuses on the independent variable, Islamic finance at Baraka Bank, and the dependent variable, Gross National Product (GNP), to determine the causal relationship between them and illustrate the existence of a mutual impact over the long term, particularly concerning its effects on economic growth.

## **3. The Reality of Financing Activities in the Baraka Bank**

Baraka Bank is among the oldest Islamic banks in Algeria, having opened its first branch in 1991. Over time, the bank has expanded and now has several branches across the country. Specifically, in recent years, the bank has experienced significant growth in its financial assets. Its financial products and banking tools have gained widespread acceptance among individuals and investors. The bank also offers a variety of financing models that differ in terms and meet the requirements and needs of various investment groups. Furthermore, the bank follows a sustainable financing strategy aimed at distributing finance across all sectors to support comprehensive development and stimulate economic growth. This

is done through the activation of Islamic banking services, which serves as a clear plan in the bank's management, ensuring the legitimacy and compliance of its financing and investment activities.

We will now look at the development of financing at the bank and its impact on economic growth and support for various economic sectors through:

**Table 1.** Development of Financing at the Bank Unit: One hundred Algerian Dinars (100 DZD)

| Year | Customer Financing | Financing Granted to Financial Institutions | Total Annual Financing |
|------|--------------------|---------------------------------------------|------------------------|
| 2010 | 55.688.886         | 81.59                                       | 55.689.000             |
| 2011 | 58.583.867         | 153.598                                     | 58.584.000             |
| 2012 | 57.891.423         | 577.158                                     | 57.891.000             |
| 2013 | 62.640.201         | 879.397                                     | 63.354.000             |
| 2014 | 78.246.666         | 2.381.608                                   | 80.888.000             |
| 2015 | 94.097.100         | 2.356.604                                   | 96.453.000             |
| 2016 | 107.531.185        | 3.179.827                                   | 110.711.000            |
| 2017 | 136.553.371        | 3.123.641                                   | 139.677.000            |
| 2018 | 154.159.890        | 2.299.974                                   | 156.460.000            |
| 2019 | 153.053.279        | 1.547.484                                   | 154.600.000            |
| 2020 | 146.901.271        | 1.026.987                                   | 147.928.000            |
| 2021 | 139.499.026        | 725.373                                     | 140.224.000            |
| 2022 | 131.506.406        | 574.898                                     | 132.081.000            |
| 2023 | 137.661.979        | 1.255.453                                   | 138.917.000            |

Source: Prepared by the researchers based on the Al Baraka Bank.

From the table, it is evident that Al Baraka Bank continues to strengthen its financial support through participatory banking formulas to finance both institutions and individuals. This is part of its competition with traditional interest-based financing by commercial banks in supporting economic sectors and public investment, particularly. This requires the bank's management to compete with commercial banks in developing public investments and creating added value in priority economic sectors for economic recovery, achieving well-being, and improving purchasing power. This is done through adapting financing mechanisms and banking tools that ensure Sharia compliance, supporting the consumer and commercial sectors for clients to improve the purchasing power of those facing financial difficulties, and activating participatory financial intermediation between economic operators.

### 3.1. Structural Constraints of Islamic Finance in Algeria

Based on financial data and considering the relatively limited contribution of Islamic finance to the country's gross domestic product (GDP), the primary impediments appear to stem from the absence of a robust legal and regulatory framework governing Islamic banking and its internal operations. Furthermore, the lack of a comprehensive risk management system in the areas of financing and investment undermines investor confidence. In addition, there is insufficient strategic clarity regarding the role of Islamic banking in national economic sectors and local development projects. The key structural constraints hindering the advancement of Islamic finance and its capacity to support economic growth and contribute effectively to GDP can be summarized as follows:

- **Weak Regulatory and Legal Framework:** Although legislative measures concerning Islamic finance were enacted in 2018 and 2022, the legal framework remains fragmented and underdeveloped. Terminological ambiguity and the limited definition and standardization of technical procedures continue to pose significant challenges. To enhance the coherence and effectiveness of this framework, the

adoption of internationally recognized standards such as those established by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) and the Islamic Financial Services Board (IFSB) is imperative (Benmouhouf, 2025, p. 45).

- Dominance of the Public Banking Sector: The Algerian banking system is predominantly controlled by the public sector, with the six largest state-owned banks holding over 85% of total banking assets. This concentration of assets impedes the development of Islamic banks, restricts market competitiveness, and undermines the implementation of effective governance mechanisms (International Monetary Fund, 2024, p. 32).
- Weak Financial Inclusion and Public Awareness: Weak Financial Inclusion and Public Awareness: Only 42% of the population has an active bank account, and merely 29% of those individuals actually use their accounts (World Bank, 2021).
- Limited Product Diversity and Participation Mechanisms: Islamic finance in Algeria is primarily based on cost-plus financing and a limited number of lease-to-own contracts, while profit-and-loss sharing (PLS) instruments such as joint ventures and trust-based investment partnerships are almost entirely absent (Benmouhouf, 2025). As a result, many products closely resemble conventional financing, focusing on rapid commercial returns rather than supporting productive investment that stimulates exports, GDP growth, and value creation.
- Limited Fintech Development and Digital Inertia: Limited Fintech Development and Digital Inertia: Digitalization within Algerian banks remains in its early stages and faces numerous challenges, including low adoption of digital technologies and a limited culture of digital banking. This reflects the broader underdevelopment of financial technology (fintech), which constitutes a significant barrier to the expansion of inclusive financial services and hampers the ability of Islamic banks to effectively enter the digital market (Samra & Damene, 2023, p. 213).
- Absence of Sharia-Compliant Monetary Policy Tools: Algeria lacks an Islamic financial market and instruments such as Islamic bonds, which prevents the central bank from employing Sharia-compliant tools for maintaining monetary stability (International Monetary Fund, 2024, p. 15).

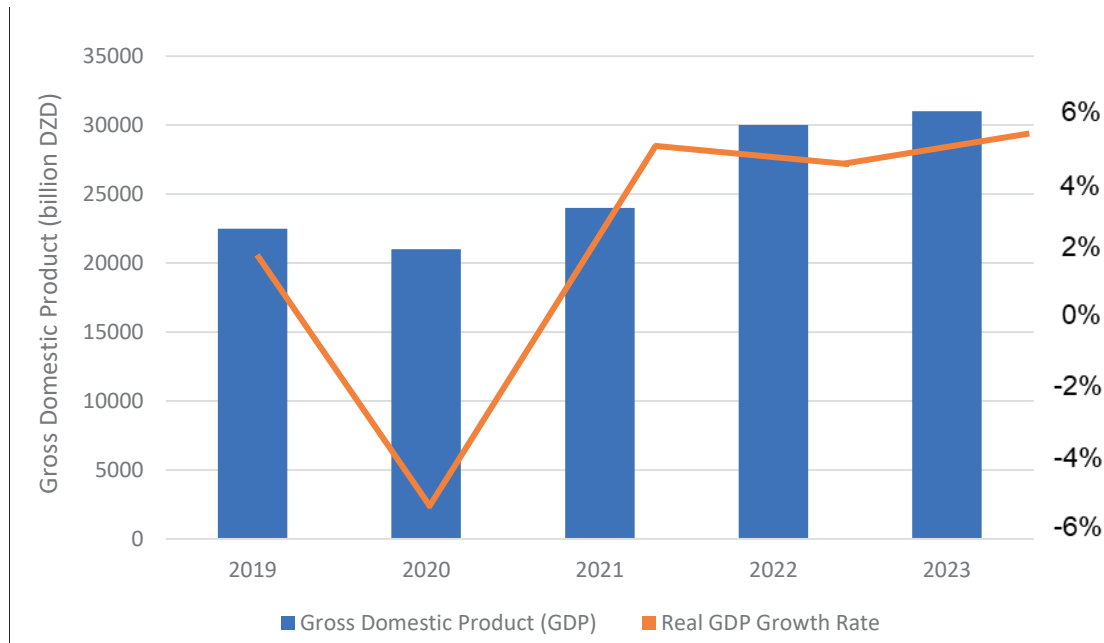
#### **4. The Reality of Economic Growth Development in Algeria**

In this section, we will examine the development of economic growth in Algeria by looking at the contributions of various economic sectors and clarifying the Gross Domestic Product (GDP) indicators in recent years.

##### **4.1. Development of the Gross Domestic Product (GDP)**

The Gross Domestic Product has seen progress through an increase in the output of economic sectors and their contributions to economic growth, especially in productive sectors. This is supported by a significant recovery in the production of the extractive industries sector and the remarkable performance of the agriculture, construction, and services sectors (Bank of Algeria, 2023).

The GDP growth rate rose by an additional 4.1% in 2023, after an increase of 3.6% in 2022. This demonstrates the success of the economic policy in financing economic sectors and focusing on an economic diversification strategy in specific fields. The following chart illustrates the development of GDP growth:



**Figure 1.** Development of Gross Domestic Product (GDP)

Source: Bank of Algeria Report, 2023.

The table shows that Algeria's national GDP growth rate began to rise starting in 2020. In that year, there was a noticeable decline in the growth rate, which can be attributed to the effects of the global health crisis, COVID-19. This crisis had a clear impact on national production, causing a drop in the import rates of raw materials, spare parts, and machinery. This, in turn, reflected a decline in some industries and a reduction in the value of services provided, in line with the preventive measures taken. However, in 2020, the economy began to recover significantly, reaching stability in 2022, and then saw further improvement in 2023. This reflects the policies and measures implemented to reduce imports and support national exports, particularly agricultural production and some local industries, such as construction materials, home appliances, clothing, and fruits and vegetables.

#### 4.2. Proposed Mechanisms to Enhance the Contribution of Islamic Finance to Algeria's GDP

The theoretical relationship between Islamic finance and gross domestic product (GDP) is grounded in several economic frameworks, most notably the Endogenous Growth Theory. This theory posits that improvements in the quality of financial institutions and increased access to financing and investment opportunities have a positive impact on productivity and economic growth. As Islamic finance is based on profit-and-loss sharing rather than interest, it encourages real investment and discourages speculation, thereby positively influencing key components of GDP such as consumption, investment, employment, and overall output (Chapra, 2008, p. 17).

The following are the primary mechanisms through which Islamic financing instruments and techniques could contribute to Algeria's GDP:

- **Productive Investment Mechanism through Partnership-Based Contracts:** This includes contracts such as trust-based investment partnerships, joint ventures, and forward sales, which are used to finance productive projects with performance-based returns. Directing these instruments toward value-added sectors such as agriculture, manufacturing, and small and medium-sized enterprises (SMEs) could strengthen the real sector of the GDP.
- **Financial Inclusion and Broadening the Beneficiary Base:** Given its emphasis on equity and inclusion, Islamic finance can extend financial services to individuals excluded from conventional banking

systems. This expansion would stimulate both consumption and domestic investment, thereby contributing to GDP growth (Iqbal & Mirakhor, 2011, pp. 98-101).

- Budget Financing via Sovereign Sukuk: The issuance of Sharia-compliant sovereign Islamic bonds to finance major infrastructure, energy, and healthcare projects constitutes an effective instrument for stimulating economic growth and expanding overall output (Zin, et al., 2011, p. 45).
- Creation of a Parallel Islamic Financial Market: The absence of an Islamic capital market in Algeria weakens the overall effectiveness of Islamic finance. Establishing a secondary Islamic financial market would enhance liquidity, promote long-term investment, and ultimately expand macroeconomic activity (Zin, et al., 2011, p. 46)

## 5. Modeling the Relationship Between Islamic Finance (IF) and GDP from 2010 to 2023

In this applied study, we will model the statistical relationship between the volume of Islamic financing granted at Baraka Bank and economic growth in Algeria from 2010 to 2023, using the VAR model. In this aspect, we will first examine the stationarity of the time series for the variables, followed by a study of the causality test between the two variables. Next, we will estimate the model and assess its validity through statistical tests to evaluate the suitability of time series models, in addition to its out-of-sample forecasts (Time Series Tests, n.d.).

### 5.1. Study of the Stationarity of Time Series for Islamic Financing (IF) and Economic Growth (GDP) using the Phillips-Perron Test

To study the stationarity of the time series, we rely on the Phillips-Perron test (Hamisultane, 2022), which is one of the most important tests used to check the stability of time series for variables. It should be noted that when using time series of unstable variables in regression models, the results may be unrealistic and misleading. Thus, examining the stationarity of time series for variables is a necessary condition.

The results of the Phillips-Perron test are as follows:

**Table 2.** Results of the Phillips-Perron Time Series Test

| Series | Original Series |       |        | First Difference |       |        | Second Difference |       |        |
|--------|-----------------|-------|--------|------------------|-------|--------|-------------------|-------|--------|
|        | P.V.C           | P.V.T | Result | P.V.C            | P.V.T | Result | P.V.C             | P.V.T | Result |
| IF     | 0.9689          | 0.05  | S.N    | 0.1787           | 0.05  | S.N    | 0.0092            | 0.05  | S.N    |
| GDP    | 0.9991          | 0.05  | S.N    | 0.02             | 0.05  | S      | -                 | -     | S.N    |

I.F = Islamic Financing; GDP = Gross Domestic Product; S.N = Non-stationary; P.V.C = p-Value (Calculated); P.V.T = p-Value (Threshold).

Source: Prepared by the researcher based on the output from the Eviews 8 system.

According to this test, we can say that the time series of a given variable is stable if the calculated p-value is less than the scheduled p-value of 0.005. It is clear from the table above that:

- The time series for Islamic financing in the bank (IF) is unstable and becomes stable after the second-degree difference, i.e., DDIF.
- The time series for economic growth, represented by the Gross Domestic Product (GDP), is unstable and becomes stable after the first-degree difference, i.e., DGDP.

On the other hand, the two time series for Islamic financing in the bank (IF) and Gross Domestic Product (GDP) are not integrated at the same degree, meaning they do not stabilize at the same level. This indicates that there is no cointegration relationship between them, i.e., no long-term correlation between Islamic financing in the bank and the Gross Domestic Product (GDP), or economic growth in Algeria.

This confirms that Islamic financing in the bank does not significantly support the country's

Gross Domestic Product (GDP) due to its limited contribution to economic growth. It is not heavily relied upon for general investment, and especially not in production. This could be attributed to the limited resources and the underdeveloped institutions in the economy, as well as its novelty in financing. Islamic financing accounts for less than 1% of the total financing in the economy.

### 5.2. Causality Study between Islamic Financing in the Bank and Gross Domestic Product in Algeria

To investigate the existence of causality between the variable of Islamic financing in the bank and the Gross Domestic Product (GDP) in Algeria, we will use the Granger causality test (StataCorp, n.d., pp. 1-4). The results of the test showed the following:

**Table 3.** Shows the results of the causality test between the variable of Islamic financing in the bank and the Gross Domestic Product (GDP) in Algeria

Pairwise Granger Causality Tests

Date: 03/20/25 Time: 19:04

Sample: 2010 2023

Lags: 2

| Null Hypothesis:                 | Obs | F-Statistic | Prob.  |
|----------------------------------|-----|-------------|--------|
| DDIF does not Granger Cause DGDP | 10  | 0.16988     | 0.8484 |
| DGDP does not Granger Cause DDIF |     | 0.47644     | 0.6466 |

Source: Prepared by the researcher using Eviews 8 System.

The table above shows the results of the Granger Causality Test as follows:

- **Causality in the first direction:** The p-value (Prob) is 0.84844, which means Prob:  $0.8484 > 0.05$ . Therefore, we accept the hypothesis indicating that Islamic financing in the bank (IF) does not cause GDP.
- **Causality in the second direction:** The p-value (Prob) is 0.6465, which means Prob:  $0.6465 > 0.05$ . Therefore, we accept the hypothesis indicating that GDP does not cause Islamic financing (IF).

Thus, there is no causal relationship or effect in either direction between GDP and Islamic financing in the bank (IF) during the study period.

### 5.3. Determining the Optimal Lag Length for the VAR Model:

To determine the optimal lag length for the model, we rely on the lg structure-lg length criteria test (Gonzalo, Pitarakis, n.d., p. 01). Based on this, we select the most significant criteria. The results of the test are as follows:

**Table 4.** Model Lag Effect Based on the lg Structure-lg Length Criteria Test

VAR Lag Order Selection Criteria

Endogenous variables: GDP IF

Exogenous variables: C

Date: 03/20/25 Time: 19:05

Sample: 2010 2023

Included observations: 11

| Lag | LogL     | LR        | FPE       | AIC        | SC         | HQ         |
|-----|----------|-----------|-----------|------------|------------|------------|
| 0   | 2.643266 | NA        | 0.003053  | -0.116958  | -0.044613  | -0.162561  |
| 1   | 24.24501 | 31.42072* | 0.000128  | -3.317275  | -3.100241  | -3.454084  |
| 2   | 29.51480 | 5.748859  | 0.000114* | -3.548146* | -3.186423* | -3.776161  |
| 3   | 33.28842 | 2.744447  | 0.000163  | -3.506985  | -3.000572  | -3.826207* |

\* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

Source: Prepared by the researcher using the appendix from the Eviews 8 System.

The Results of the Above Test Indicate That:

- LR Criterion: Refers to the first effect.
- FPE, AIC, and SC Criteria: Refer to the second effect.
- HQ Criterion: Refers to the third effect.

It is evident that most tests indicate the second effect of the model, and therefore, this study will adopt a lag of P=2, meaning the VAR(2) model.

#### 5.4. Estimation of the Studied VAR(2) Model:

The estimation results of the studied VAR(2) model using the most widely used methods in economic measurement, specifically the Ordinary Least Squares (OLS) method, are as follows:

**Table 5.** Estimation Results of the Studied VAR(2) Model

Vector Autoregression Estimates

Date: 03/20/25 Time: 19:06

Sample (adjusted): 2014 2023

Included observations: 10 after adjustments

Standard errors in ( ) &amp; t-statistics in [ ]

|          | DGDP       | DDIF       |
|----------|------------|------------|
| DGDP(-1) | 0.196800   | 0.220442   |
|          | (0.35396)  | (0.37528)  |
|          | [ 0.55600] | [ 0.58741] |
| DGDP(-2) | -0.748595  | 0.333285   |
|          | (0.45394)  | (0.48128)  |
|          | [-1.64911] | [ 0.69249] |

|                                         |            |            |
|-----------------------------------------|------------|------------|
| DDIF(-1)                                | 0.113354   | 0.140109   |
|                                         | (0.35607)  | (0.37751)  |
|                                         | [ 0.31835] | [ 0.37114] |
|                                         |            |            |
| DDIF(-2)                                | -0.177025  | -0.453160  |
|                                         | (0.35107)  | (0.37222)  |
|                                         | [-0.50424] | [-1.21746] |
|                                         |            |            |
| C                                       | 0.082396   | -0.036447  |
|                                         | (0.04255)  | (0.04512)  |
|                                         | [ 1.93635] | [-0.80785] |
| R-squared                               | 0.397271   | 0.314135   |
| Adj. R-squared                          | -0.084912  | -0.234558  |
| Sum sq. resids                          | 0.049953   | 0.056152   |
| S.E. equation                           | 0.099953   | 0.105974   |
| F-statistic                             | 0.823901   | 0.572515   |
| Log likelihood                          | 12.30689   | 11.72198   |
| Akaike AIC                              | -1.461379  | -1.344396  |
| Schwarz SC                              | -1.310086  | -1.193103  |
| Mean dependent                          | 0.061254   | -0.003971  |
| S.D. dependent                          | 0.095962   | 0.095377   |
| Determinant resid covariance (dof adj.) |            | 0.000106   |
| Determinant resid covariance            |            | 2.66E-05   |
| Log likelihood                          |            | 24.29534   |
| Akaike information criterion            |            | -2.859068  |
| Schwarz criterion                       |            | -2.556483  |

Source: Prepared by the researcher based on the Eviews 8 System.

A statistical and economic analysis of the estimated model can be presented as follows:

$$DGDP = 0.196 DGDP(-1) - 0.748 DGDP(-2) + 0.113* DDIF(-1) - 0.177* DDIF(-2) + 0.082^{**}$$

### 5.5. Statistical Analysis of the Estimated Model:

It is evident from the numbers in the table above that:

The R-squared value of 0.3972 indicates a weak explanatory power of the model being studied. This means that 39.72% of the changes in Gross Domestic Product (GDP), or economic growth, are explained by the changes in Islamic financing at the bank and GDP itself with a time lag. The remaining 60.28% is attributed to variables outside the model.

The calculated Fisher coefficient of 0.823901 (FC) indicates the absence of overall significance for the model. Additionally, all the computed t-statistics for the student's test are less than 2, which leads us to accept the hypothesis of non-significance for the parameters.

Therefore, it can be concluded that the estimated model does not possess explanatory power, meaning that Islamic financing at the bank does not explain changes in GDP, as confirmed by these statistical tests and the Granger causality test conducted earlier.

### 5.5.1. *Economic Analysis of the Estimated Model:*

Based on the results of the model estimation above, it can be said that Islamic financing at the bank does not explain the development of growth rates in Gross National Product (GNP) in Algeria through its impact on GDP. This is due to the small size of these financings compared to the financing provided by other commercial, interest-based banks. Moreover, the contribution of Islamic finance to GDP is minimal, and its institutions and financial instruments are limited. This is mainly attributed to a lack of awareness of Islamic financial products, the absence of incentives for transactions through investment and financing bodies in Algeria, and the disconnection between Islamic financial institutions and the conventional financial system. Islamic finance institutions rely on activities that contradict the principles and foundations of Islamic finance and do not adhere to Sharia compliance in their transactions. Furthermore, there is a lack of implementation of regulatory and legal provisions that encourage the use of Islamic banking tools, as outlined by law, which would support the Islamic finance market and encourage investors to participate in the alternative finance market.

### 5.5.2. *Analysis of the Lack of Impact of Islamic Finance on Algeria's National Output*

Islamic finance in Algeria also faces several structural barriers that hinder its effective contribution to GDP and broader economic growth; (Meghraoui, Mokhtari, 2021, pp.86-87)

- **Social and Legal Obstacles:** Public awareness of Islamic banking is limited, and legal frameworks often lack provisions for Sharia-compliant contracts. Jurisprudential complexities and the prohibition of interest on overdue debts reduce investment capacity. Moreover, Islamic banks struggle to access liquidity due to interest-based mechanisms at central banks.
- **Investment and Banking Obstacles:** Islamic banks heavily rely on short-term instruments like Murabaha and leasing, which limits long-term investment efficiency. The absence of a strong Islamic financial market and appropriate instruments hampers resource allocation.
- **Administrative and Regulatory Obstacles:** There is a shortage of qualified personnel trained in Islamic finance. Recruitment and performance evaluation often ignore Sharia-specific criteria, and organizational structures do not align with Islamic finance's ethical and social values.
- **Technical Obstacles:** Underdeveloped technological infrastructure restricts the ability of Islamic banks to compete, particularly in digital banking, where conventional banks have a significant advantage.
- **Public banks dominate over 80% of the total assets in Algeria's banking sector**, which significantly constrains innovation and limits the expansion of Islamic banking services. This dominance hinders the development of a diversified and competitive financial environment that is essential for stimulating economic growth and financial inclusion. (Algeria Invest, 2022).
- **Absence of an Islamic Financial Market and Sharia-Compliant Instruments**  
Algeria lacks a fully operational Islamic capital market and Sharia-compliant financial instruments, which significantly hampers the ability of Islamic banks to efficiently deploy liquidity and offer long-term financing solutions. (Meghraoui, Mokhtari, 2021, n.p.p).

The studies reviewed above clearly demonstrate the limited contribution of Islamic finance to Algeria's GDP when compared with international experiences. It is therefore essential to address foundational challenges and foster an enabling environment that would allow Islamic finance to play a more substantial role in promoting economic growth. The following recommendations are proposed:

- Develop a unified and specialized legal framework for Islamic finance.
- Open the market to participatory (Islamic) banks under competitive conditions.
- Strengthen financial education and public awareness.
- Establish an independent national Sharia supervisory board.
- Introduce long-term Islamic investment instruments, such as Islamic bonds, to enhance their impact on GDP and economic development.

### 5.6. Study of the Validity of the VAR(2) Model

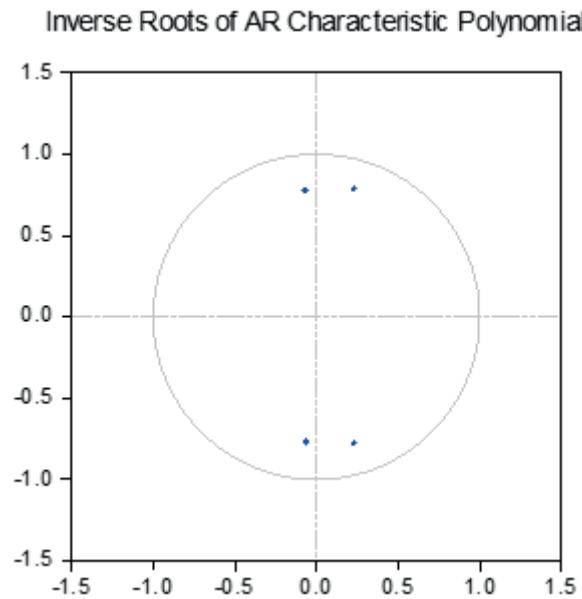
After estimating the VAR(2) model above, we can assess its validity through the following tests:

#### 5.6.1. Testing the Stability of the Model Using the Inverse Roots of the AR Characteristic Polynomial

To study the stability of the VAR(2) model, we rely on the Inverse Roots of the AR Characteristic Polynomial test. According to this test:

- We consider the model stable if all the inverse roots have an absolute value of less than one, i.e., they lie within the unit circle.
- We consider the model unstable if all the inverse roots have an absolute value greater than one, i.e., they lie outside the unit circle.

The results of the test are shown below:



**Figure 2.** Results of the Inverse Roots of AR Characteristic Polynomial Test for the Estimated VAR(2) Model

Source: Prepared by the researcher based on Appendix No. from the Eviews 8 system.

It is evident from the figure above regarding the Inverse Roots of AR Characteristic Polynomial test for the estimated VAR(2) model that all the inverse roots have an absolute value within the unit circle, meaning they are less than one. Therefore, we conclude that the estimated model is stable.

#### 5.6.2. Testing for Residual Heteroskedasticity in the VAR(2) Model

To study the homogeneity of residual variances in the estimated VAR(2) model, we use the Residual Heteroskedasticity Tests. The results of the test are as follows:

**Table 6.** Results of the Residual Heteroskedasticity Tests for the Estimated VAR(2) Model

VAR Residual Heteroskedasticity Tests: No Cross Terms (only levels and squares)

Date: 03/20/25 Time: 19:10

Sample: 2010 2023

|                           |           |          |        |           |        |
|---------------------------|-----------|----------|--------|-----------|--------|
| Included observations: 10 |           |          |        |           |        |
| Joint test:               |           |          |        |           |        |
| Chi-sq                    | df        | Prob.    | -      | -         | -      |
| 26.42864                  | 24        | 0.3318   | -      | -         | -      |
| Individual components:    |           |          |        |           |        |
| Dependent                 | R-squared | F(8,1)   | Prob.  | Chi-sq(8) | Prob.  |
| res1*res1                 | 0.984478  | 7.928182 | 0.2683 | 9.844782  | 0.2761 |
| res2*res2                 | 0.939480  | 1.940444 | 0.5067 | 9.394803  | 0.3101 |
| res2*res1                 | 0.833940  | 0.627740 | 0.7576 | 8.339401  | 0.4010 |

Source: Prepared by the researcher based on the Eviews 8 system, from Appendix.

The results of the Residual Heteroskedasticity Tests show that the calculated p-value (Prob) for the Chi-sq statistic is 0.3318, which is greater than the critical value of 0.05. Therefore, we accept the null hypothesis, indicating the presence of homoscedasticity, meaning the model used in the study does not suffer from heteroskedasticity issues.

Based on the previous tests for model stability and residual heteroskedasticity, it can be concluded that the model is valid for study.

### 5.7. Comparative Study with Similar Countries

The limited impact of Islamic finance on economic growth in Algeria can be more effectively contextualized through a comparative analysis of empirical studies conducted in other countries. These studies help to reinforce the hypotheses and substantiate the findings of this research.

#### A. The Case of Saudi Arabia

An empirical study examining the effect of Islamic bank financing on economic growth in Saudi Arabia employed a Vector Autoregressive (VAR) model using annual data from 2001 to 2017. The results revealed that Islamic finance did not have a statistically significant effect on GDP growth, although it was associated with other macroeconomic variables such as gross fixed capital formation (GFCF), technological development, and unemployment rates. The authors attributed this finding to structural limitations within the Islamic finance framework in Saudi Arabia, particularly the absence of developmental investment instruments capable of generating direct impacts on economic growth (Abalhareth, et al., 2021, p. 462).

#### B. The Case of Malaysia

A study utilizing quarterly data from 11 Islamic banks in Malaysia over the period 2012–2019 examined their relationship with the real GDP index. Employing a fixed-effects panel regression model, the study found that key Islamic banking variables assets, financing, deposits, and the financing-to-deposit ratio were statistically insignificant in explaining GDP fluctuations. Only the charitable contribution variable (zakat) exhibited a weak positive association with GDP; however, this relationship was also statistically insignificant (Zahid, Che Arshad, 2021, p. 412).

Another analytical study by (Essien & Hinson, 2020) applied an Autoregressive Distributed Lag (ARDL) model to investigate the relationship between Islamic financial activities and economic growth in Malaysia. The findings indicated that Islamic bank financing and deposits had no statistically significant short-term effect on GDP. These variables did not reach significance at conventional confidence levels, suggesting no immediate causal link between Islamic finance indicators and short-term economic growth. However, some long-run relationships emerged within the error correction model. The authors attributed these results to the Malaysian Islamic banking sector's reliance on cost-plus financing contracts, which resemble credit sales and lack the capacity to support long-term productive investment, thereby limiting their contribution to GDP.

According to a panel study employing the Generalized Method of Moments (GMM) model, based on data from 11 Islamic banks across five countries including Malaysia during the period 2014-2018, only the Return on Equity (ROE), a key performance indicator within the CAMELS framework, demonstrated a statistically significant and positive effect on real GDP. Other variables such as capital adequacy, asset quality, liquidity, and cost management did not exhibit statistically significant relationships with economic growth. These findings highlight the critical role of profitability efficiency in promoting economic activity within Islamic banks, in contrast to the limited impact of institutional or regulatory quality indicators (Ledhem, Mekidiche, 2020, p. 55).

### ***C. Commentary and Interpretation***

Islamic banks predominantly rely on profit-margin-based financing methods, such as cost-plus sales and installment credit, rather than equity-based instruments that are more suitable for financing developmental sectors and productive investments activities that create added value and drive GDP growth. Specifically:

- There is a noticeable lack of diversified Islamic financial products, particularly the underutilization of long-term equity-based instruments such as profit-sharing and joint venture contracts. These instruments are essential for financing strategic sectors, including construction, port infrastructure, and manufacturing.
- Most Islamic banking operations are concentrated in short-term cost-plus financing directed toward consumption and trade sectors. These transactions are typically low-risk and offer predetermined returns, thereby ensuring short-term profitability for banks. However, this focus limits the banks' involvement in financing the real economy and large-scale infrastructure projects. Consequently, their contribution to sustainable economic growth remains limited.

## **6. Conclusion**

In this study, we discussed the development of Islamic financing in Algeria during the period from 2010 to 2023. We presented the annual financing development of the bank, as well as the growth rates of the Algerian economy, and demonstrated the growth rates of Gross National Product (GNP). The study concluded that Bank Al Baraka has significant annual financing, targeting both individuals and institutions. It has achieved success in supporting infrastructure and financing economic sectors. However, these are relatively large-scale financings that are often limited to narrow areas, dominated by service and trade sectors, and are far from being developmental investments that impact the national output and, consequently, economic growth. This was confirmed by the empirical study, which concluded that:

- The time series of Islamic financing at the bank is unstable and becomes stable after the second difference, while the time series for economic growth is unstable and becomes stable after the first difference. The study, through the Granger causality test, showed no causal relationship between Islamic financing and growth in Gross National Product (GNP) in the short term, nor is there an impact in the long term.

- The estimation results of the studied model indicated that there is no significant effect of the development of Islamic financing in the bank on the growth of Gross National Product (GNP) in Algeria during the period 2010-2023, as evidenced by the weak R-squared value.

Based on the previous tests and results, we reject the following two hypotheses:

- There is a significant impact of Islamic financing on the growth of Gross National Product (GNP) in Algeria in the short term during the period 2010-2023.
- There is an effect of Islamic financing in the bank on the growth of Gross National Product (GNP) in Algeria in the long term.

### 6.1. Study Recommendations

- It is essential to operationalize the Islamic finance system as a tool for economic development by expanding access to long-term financing mechanisms.
- Greater diversification of Islamic financial instruments is required, with particular emphasis on equity-based models such as joint ventures and profit-sharing contracts to support infrastructure projects and strategic economic sectors.
- Reducing reliance on short-term, profit-driven financing primarily directed toward consumption and trade is necessary in favor of development-oriented financial solutions.
- Mobilizing national savings and directing them toward Islamic finance can stimulate domestic investment and generate added value, thereby fostering economic development.
- Enhancing financial inclusion and ensuring the availability of a robust digital infrastructure for Islamic finance are crucial for facilitating transactions and mobilizing deposits. This effort should be supported by public awareness initiatives that highlight the developmental and investment potential of Islamic finance.
- Establishing a secure and enabling environment for investors and stakeholders is critical. This includes the development and implementation of comprehensive regulatory frameworks that support Islamic financial transactions, particularly in terms of legal clarity, risk management, and protective mechanisms in cases of financial distress.

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