International Journal of Accounting and Economics Studies, 12 (6) (2025) 220-229

International Journal of Accounting and Economics Studies

Website: www.sciencepubco.com/index.php/IJAES
https://doi.org/10.14419/vk7s9x48
Research paper

The Multidimensional Impact of Inflation: A Panel Data Analysis of Socioeconomic Effects in North African Countries

Oumari Loubna, Adamou Illou Mohamed, Es-Salmani Mourad, Es-Sanoun Mohamed *

Faculty of Legal, Economic and Social Sciences, Sidi Mohammed Ben Abdellah University, Fez, Morocco
**Corresponding author E-mail: mohamed.essanoun20@gmail.com*

Received: June 16, 2025, Accepted: September 23, 2025, Published: October 7, 2025

Abstract

This article analyzes the macro-social effects of inflation in Morocco, Tunisia, Algeria, Egypt and Mauritania over 1990–2023 using a panel VAR with system-GMM. We document that moderate inflation is associated with higher GDP growth and lower unemployment in the short run, while it depresses real consumption per capita (our poverty proxy), implying higher poverty in the absence of compensating social policies. Inflation also crowds out investment, consistent with risk and cost channels. These results highlight the need to contain inflation volatility and shield vulnerable households, while preserving a price environment supportive of activity.

Keywords: *Inflation; Investment; Economic Growth; Unemployment; Poverty.*

1. Introduction

One of the fundamental objectives of economic policy in most countries around the world is to guarantee price control, an essential condition for socio-economic stability (Gillman, 2018). Inflation, defined as a sustained and widespread increase in the prices of goods and services, remains a major concern for developing countries, particularly those in North Africa. These countries face structural challenges where inflation impacts both economic growth (Aydın and Esen, 2015) and social imbalances, such as poverty and unemployment (Linda and Helmut, 2024). In this context, we were motivated by a concern to demonstrate the impact of inflation on the real economy, seeking to understand how it affects the dynamics of economic growth and investment in North African countries. This work also examines the impact of inflation on social inequalities, in particular the rise in poverty and unemployment, which represent major obstacles to sustainable development and social cohesion in the region.

Recent global crises, notably the COVID-19 pandemic and geopolitical tensions, have exacerbated inflationary pressures worldwide (Kemp et al., 2023), with particularly marked effects in vulnerable economies. These shocks have profoundly disrupted supply chains, increased production costs and reduced governments' fiscal room for maneuver, thus compromising their ability to stabilize the economy (Andriantomanga et al., 2023). Against this backdrop, questions about the extent of inflation volatility and its persistence, as well as its impact on the real economy and widening social disparities in North African countries, are of crucial importance. In the absence of an optimal formula for sustainably controlling the general price level, inflation fluctuations remain harmful and hold back improvements in economic and social performance (Baharumshah et al., 2016). The sudden return of inflation to historically high levels after a long period of moderation is fuelling debates about its structural and cyclical causes. Among the main factors identified are post-COVID-19 stimulus policies, health restrictions that have crippled activity, and the conflict between Ukraine and Russia, which has rekindled tensions on global energy and commodity markets, contributing to prolonged instability in North African countries.

Recent economic literature recognizes that inflation can, in some cases, stimulate investment or reduce public debt by lowering its real value. However, beyond a certain threshold, it has negative effects on consumption, employment and social inequalities (Ali AK, Asfaw DM (2023) (Balcilar et al., 2014); Moreover, developing countries are particularly exposed to inflationary shocks due to their dependence on imports and the weakness of their social protection systems(Easterly & Fischer, 2001; Jongrim Ha et al., 2019; El Kadri & El-Khodary, 2025)

Despite the abundance of studies on inflation in the major developed economies, research on North African countries remains relatively limited, particularly in the context of recent shocks. This gap hampers understanding of the specific effects of inflation on the region's economic and social dynamics.

In a context of global turbulence, where inflation is becoming a structuring factor of economic and social policies, this study aims to shed light on its repercussions on North African economies. The central question this work seeks to answer is: To what extent has inflation influenced the main socio-economic variables in this region?

Copyright © Oumari Loubna et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

The analysis proposed in this paper will be divided into two main complementary parts. The first, theoretical, part will be devoted to a literature review of recent empirical work on inflation and its socio-economic repercussions. This review will draw out the main lessons from previous research, while identifying existing gaps, particularly with regard to North African countries. The second part will adopt an empirical approach, based on an econometric analysis covering the period 1991-2023. It will aim to quantitatively assess the impact of inflation on several key macroeconomic variables, using data from North African countries, in order to provide robust results likely to inform economic policy decisions.

2. The Socio-Economic Impact of Inflation: A Review of Theoretical and Empirical Literature

Inflation is one of the most significant and most debated economic phenomena of recent decades. It refers to a widespread and sustained rise in prices, affecting all economic agents and profoundly altering the dynamics of growth, investment, and social well-being. Its effects are far from unequivocal: depending on its magnitude, duration, and the macroeconomic context in which it occurs, inflation can simultaneously stimulate or hinder economic activity, and improve or worsen people's living conditions.
In this work, we propose to analyze the socioeconomic repercussions of inflation, focusing on two key areas. The first, economic, will focus on the impact of inflation on investment and economic growth. The second, with a social dimension, will examine the effects of inflation on crucial variables such as unemployment and poverty.
But Before analyzing the socio-economic impact of inflation, it is essential to present the causes of this complex phenomenon, which results from the interaction of numerous economic factors.

2.1. Theoretical analysis of the causes of inflation

To better understand the socio-economic repercussions of inflation in North Africa, it is necessary to first examine the originsand key factors of inflation, a complex phenomenon resulting from multiple economic interactions. This analysis will be developed in the following literature review, in order to provide a solid conceptual framework for our study.
Monetary theories examine the link between the quantity of money circulating in an economy and the general price level, and stipulate that inflation stems mainly from an excessive rate of monetary expansion that far exceeds the rate of real growth. The most primitive vision of the quantitative theory of money, developed by J. Bodin, the first author to examine the causes of rising prices in the sixteenth century, explains the “dearness of all things” by the abundance of the money supply. Hume asserts this theory: “If the quantity of money miraculously doubles overnight, all prices will double the next day”,Oumari ,Illou(2022).
Several economists have pointed out that inflationary pressures can be caused by excessive demand for goods and services relative to their supply in an economy. This imbalance in the mechanism between supply and demand can be explained by the inability of producers to meet demand, or by their refusal to do so. This idea, developed by authors such as J.M. Keynes (1936), J. Tobin (1958), P. Samuelson (1948) and A. Lerner (1943), challenges J.B. Say's law of outlets, which states that every supply creates its own demand, and rejects the possibility of overproduction thanks to an invisible hand that spontaneously self-regulates the market mechanism.
Structural theories of inflation analyze inflationary pressures arising from production costs, such as labor and raw materials, which are passed on to the price of goods and services, as well as the dynamics of market competition, highlighting the impact of monopolistic or oligopolistic behavior on prices.

2.2. Complex relationships between inflation and investment

The results of theories and empirical studies on the relationship between inflation and private investment remain mixed. Indeed, despite the large number of studies devoted to the analysis of the impact of inflation on investment, the majority agree on a negative relationship. This negative relationship is mainly explained by the fact that inflation increases macroeconomic uncertainty, which discourages private investment Friedman (1977), Ball (1992)Ferderer(1993), Serven and Solimano (1993), Pindyck and Solimano (1993), Byrne and Davis (2004) ; Fisher(2009); Abaidoo, (2015), Iqbal and Nawaz, (2009) ; Carruth et al.(2000). These authors agree that inflation generates increased inflationary uncertainty, causing general concern about liquidity, thus pushing entrepreneurs to focus more on the survival of their business in the market and avoiding the risk of bankruptcy. Furthermore, inflation and its uncertainty tend to reduce the share of profits in overall income Nevile,(1975), which has a depressive effect on investment. Furthermore, monetary shocks lead to an increase in the rate of business non-performance. Inflation and the resulting uncertainty also impose various risks on the business environment, such as limiting the duration of investment projects, reducing profit margins, and making it difficult to make decisions regarding potentially profitable projects Baum et al.(2004).
According to Cizkowicz (2013), even low or moderate inflation can represent a significant source of uncertainty in the economy. The author also highlights that inflation and this uncertainty negatively affect the use of flexible production factors.
Furthermore, some research, such as that of Abu Asab and Al-Tarawneh (2018), highlights the non-linear nature of the relationship between inflation and investment. They demonstrate the existence of a critical inflation threshold beyond which the effect of inflation on investment becomes significantly negative, while below this threshold, the impact remains relatively neutral or even moderate. These studies highlight the importance of maintaining controlled inflation rates in order to preserve a favorable climate for private investment.
Conversely, another perspective developed by Hartman (1982) and Abel (1983), notably, proposes that increased uncertainty can actually stimulate investment, due to the fact that the capital invested by the firm is an increasing function of prices. Indeed, when price variance increases, the expected return on investment also increases. Caballero (1991), for his part, emphasizes the role of the structure of the industrial market by stating that in a competitive market context, higher prices favor investment. However, Zeira (1990) qualifies this positive relationship by indicating that it can be reversed if market agents show an aversion to risk. Similarly, Huizinga (1993) emphasizes that the effect of uncertainty on investment depends strongly on the very nature of this uncertainty.
These divergences show that the impact of inflation on investment depends on the economic and institutional context. In the North African case, marked by limited access to credit, a strong dependence on bank financing and low economic diversification, the positive effects identified by certain theories appear difficult to observe, which reinforces the predominance of a negative relationship.

2.3. Inflation and economic growth: an ambivalent relationship

This empirical study revealed a positive and significant impact between inflation and economic growth, as measured by the growth rate. Our results corroborate the findings of Asfaq Ahmad (2024), Hamadouche (2017), and Khan and Senhadji (2001), who also demonstrated a positive relationship, emphasizing that inflation can have a stimulating effect on economic growth at moderate levels by supporting demand and encouraging short-term investment.

The positive effect of inflation on economic growth observed in our study may reflect nominal growth dynamics driven by high prices, without necessarily implying sustained real growth. In North Africa, where inflation levels have recently exceeded moderate thresholds (often above 9%), this positive impact may be explained by valuation effects in export-oriented sectors (commodities, hydrocarbons) and by the lagged effects of accommodative monetary and fiscal policies designed to boost domestic demand. Nevertheless, this raises the question of the sustainability of such growth, since persistently high inflation tends to penalize purchasing power, discourage long-term productive investment, and increase macroeconomic uncertainty.

Indeed, several studies highlight the existence of critical inflation thresholds beyond which inflation becomes harmful to growth (Olowofeso et al., 2022; Itchoko & Tsopmo, 2017; Fouopi Djiogap, 2018; Maiga, 2024). Olowofeso et al. (2022) identify a threshold of 10.3% for the WAMZ, indicating that moderate inflation stimulates growth while excessive inflation slows it. Itchoko and Tsopmo (2017) estimate a lower threshold of 4.3% for the BEAC zone, suggesting greater sensitivity to inflation in this region. Fouopi Djiogap (2018) offers a more nuanced interpretation, showing that the threshold depends on the exchange rate regime and institutional quality, confirming that the effect of inflation on growth is neither universal but contextual.

Conversely, our results are not consistent with those of Barro (1995), Fischer (1993), Bruno & Easterly (1998), and Sweidan (2004), who suggest a negative relationship between inflation and economic growth. These discrepancies can be explained by structural and institutional differences across economies. In several North African countries, monetary policy is often accommodative and geared toward boosting domestic demand. This means that inflation, particularly when linked to increased consumption or public investment, can coincide with a phase of economic expansion, especially in post-crisis or fiscal stimulus contexts. Moreover, the structure of North African economies, characterized by a high share of non-tradable sectors (services, construction, subsistence agriculture), suggests that inflation may reflect increased local demand or supply pressures rather than a deep macroeconomic imbalance. Finally, some countries in the region still heavily subsidize basic goods (energy, food), which weakens the negative transmission mechanism of inflation to real consumption and may make the macroeconomic effects of inflation less adverse in the short term.

Overall, these findings confirm that the relationship between inflation and growth is non-linear and context-dependent: inflation may support growth when it remains at moderate levels, but its benefits fade and eventually reverse when inflation exceeds economy-specific thresholds or when policy credibility is weakened.

2.4. Inflation-unemployment dynamics

Empirical analysis also reveals that inflation has a positive impact on unemployment. This result may seem counterintuitive given the classic interpretation of the Phillips curve, which posits an inverse relationship between inflation and unemployment. However, in the North African context, several structural factors can explain this positive correlation. Inflation is often imported (due to rising global commodity or food prices) and not caused by overheating domestic demand. In this case, it stimulates neither productive investment nor employment, but rather destabilizes macroeconomic balances, creating uncertainty and slowing economic activity.

These results are consistent with recent work by Dekkiche, D, and Cherayett, F. (2024), which confirms that an initial inflationary shock leads to an increase in unemployment, which then gradually declines, suggesting a complex relationship between inflation and unemployment. This dynamic can be interpreted through the short-term effect of inflationary shocks on purchasing power, consumption, and corporate margins, which slow hiring, followed by delayed adjustments in the labor market. In North Africa, the slowness of public policies to respond to shocks, as well as labor market rigidities, initially accentuate the negative effect of inflation.

These results do not corroborate other previous studies that confirm a negative link between inflation and unemployment TakeleWogari,(2023) and others that reveal a nonlinear relationship between inflation and unemployment Dodo &Idris,(2022); Galstyan,(2021). Other studies, such as that of ShairilIzwan,Taasim et al. (2022), identify an inflation threshold beyond which the relationship between inflation and unemployment changes in nature. Below this threshold, inflation has a negative effect on unemployment, while above it, the effect becomes positive, suggesting an inverted U-shaped Phillips curve.

This theoretical framework may be particularly relevant for understanding the North African situation, where recent inflation levels may exceed this critical threshold. Moderate inflation could indeed support employment, but when it exceeds a certain level, it becomes a factor of economic disruption, slowing investment and exacerbating labor market insecurity, particularly for young people and women. This interpretation partly explains the positive effect observed in our study between inflation and unemployment.

2.5. Interaction between inflation and poverty

Our results indicate that inflation has a negative effect on poverty, and that rising inflation worsens the economic situation of the poor in North Africa.

This finding can be explained by the fact that poor households spend a larger share of their income on basic necessities, whose prices increase more rapidly during inflationary periods. Thus, their purchasing power is directly affected, reducing their ability to meet their basic needs.

This conclusion is consistent with several previous studies, including those by Loewald and Makrelov (2020), El-Laithy et al. (2023), Olaniyi and Odhiambo (2024), and the OECD (2023), which have highlighted a disproportionate impact of inflation on poor households, limiting their real consumption and increasing their economic vulnerability.

Our results do not support the notion that rising inflation reduces the poverty rate. and support the hypothesis that moderate inflation is a lever for inclusive growth. Inflation is therefore not the cruelest tax, as Easterly and Fischer (2001) suggest. Romer and Romer (1998) also support the argument that higher inflation will produce more investment and employment opportunities, leading to lower unemployment and higher incomes, which in turn will help the poor meet their basic needs. This indicates that inflation does not pose a significant threat to poverty reduction Olaniyi et al., (2023), but rather stimulates it.

However, this “beneficial” effect of inflation does not appear to apply in the North African context analyzed, where monetary transmission mechanisms are limited, labor markets are rigid, and informal sectors are highly developed. Under these conditions, the potential gains

from economic activity do not necessarily benefit the most vulnerable populations. However, this optimistic view must be qualified, as it strongly depends on the institutional context, the state's ability to redistribute gains, and protect the poorest.
While our results generally confirm the negative effect of inflation on poverty, certain nuances appear depending on the economic context, thus concurring with the findings of Talukdar (2012), who highlights a non-linear relationship between inflation and poverty, particularly in very low-income countries.
This suggests that threshold effects or structural factors (such as the level of development, macroeconomic stability, or the existence of compensation mechanisms) may attenuate or reverse this relationship in some cases.

3. Study Variables and Econometric models

3.1. Study variables and

To analyze the socioeconomic impact of inflation, several variables were used. The Consumer Price Index (CPI) was used to measure changes in the general price level. Although it has certain methodological limitations—including substitution, quality, and weighting biases—it remains one of the most widely used indicators due to its availability, readability, and analytical relevance (Oumari and Illou); Méo et al.(2018).
The unemployment rate was used to reflect the health of the labor market. It is measured by the "Unemployment, total (% of total labor force)" indicator, as estimated by the International Labor Organization (ILO) Beletskaya, (2022).
Investment was measured using gross fixed capital formation (GFCF), a recognized indicator for measuring productive investment in an economy Landowska et al.(2025).
Poverty was measured using final consumption expenditure per capita, an indicator often favored in empirical studies due to its stability, greater availability, and its ability to reflect the levels of satisfaction of basic needs, both food and non-food. Several authors have opted for this measure, including Olaniyi et al. (2023), Akinlo and Dada (2021), Garza Rodriguez (2018), and Odhiambo (2010), among others.
Finally, economic growth was measured using the annual growth rate of gross domestic product (GDP), in accordance with standards established by the World Bank and widely adopted in the economic literature. This aggregate indicator makes it possible to quantify the overall performance of an economy over a given period, and to examine its interactions with other macroeconomic variables such as inflation, unemployment or investment (Gondauri et al., 2024; Zhang et al., 2023).

Table1: Study Variables

Variables	Source	Observations
Inflation	World Bank database	Annual observations from 1990 to 2023
Investment	World Bank database	Annual observations from 1990 to 2023
Unemployment	World Bank database	Annual observations from 1990 to 2023
Economic growth	World Bank database	Annual observations from 1990 to 2023
Poverty	World Bank database	Annual observations from 1990 to 2023

3.2. Econometric model

To analyze the dynamic interactions between inflation and key socioeconomic indicators in North African countries, we employ a Panel Vector Autoregression (PVAR) model. This framework is particularly suitable for capturing the endogenous relationships among macroeconomic variables across countries and over time, while accounting for unobserved heterogeneity and dynamic feedback effects.
Our model includes five endogenous variables: the Consumer Price Index (CPI), Gross Domestic Product growth (GDP), Investment (INV), Unemployment rate (UNEMP), and Poverty rate (POV). Treating all variables as endogenous allows the model to capture their joint dynamics without imposing restrictive a priori assumptions on causal directions.
The PVAR model is specified as follows:

$$Y_{it} = A_1 Y_{it-1} + A_2 Y_{it-2} + \cdots + A_p Y_{it-p} + \mu_i + \varepsilon_{it}$$

Where:

$$Y_{it} = (CPI_{it}, GDP_{it}, INV_{it}, UNEMP_{it}, POV_{it})'$$

Is a 5×1 vector of endogenous variables for country i at time t; $A_1, \ldots, A_p$ are 5×5 coefficient matrices capturing the lag structure; μ_i denotes country-specific fixed effects; and ε_{it} represents the idiosyncratic error term.
This setup allows each variable to respond not only to its own past values but also to the lagged values of all other variables, thereby reflecting complex dynamic interdependencies and adjustment mechanisms within the system.
One of the key econometric challenges in estimating PVAR models is the potential endogeneity of lagged dependent variables, which may be correlated with the error term, violating the assumption of strict exogeneity. This issue can result in biased and inconsistent estimates when using Ordinary Least Squares (OLS), particularly in panels with a limited time dimension (Nickell, 1981).
To overcome this challenge, we use the System Generalized Method of Moments (System-GMM) estimator developed by Arellano and Bover (1995) and Blundell and Bond (1998). This estimator removes fixed effects through first-differencing and employs lagged levels and differences of the endogenous variables as instruments. It effectively addresses endogeneity, measurement error, and omitted variable bias.
Given the unbalanced nature of our panel data and its moderate time span, the System-GMM estimator is particularly appropriate. We assess the validity of the instruments and model specification using the Hansen J-test for overidentifying restrictions and the Arellano-Bond tests for serial correlation.
Overall, this rigorous econometric approach provides a robust framework for analyzing the inflation–growth–investment–unemployment–poverty nexus in North Africa, yielding insights that are directly relevant for macroeconomic policy and social development strategies in the region.

4. Results and Discussions

4.1. Descriptive statistics of variables

Table 2: Descriptive Statistics of Study Variables

	GDP	CPI	INVESTMENT	UNEMPLOYMENT	POV
Mean	3,431019	96,82718	26,6615	12,52144	1,846894
Median	3,673178	87,20726	25,05684	11,01	1,917012
Maximum	18,3332	363,2548	93,54746	31,84	37,42272
Minimum	-9,01193	19,53677	12,44601	7,306	-9,55035
Std. Dev.	3,255569	54,02903	8,866796	4,398149	4,405866
Skewness	-0,19002	2,038526	2,911835	2,095783	3,020114
Kurtosis	6,943877	9,278333	21,75796	8,002551	27,98667
Jarque-Bera	107,9279	373,5988	2571,841	287,5146	4543,124
Probability	0	0	0	0	0
Sum	566,1182	15492,35	4265,84	2028,473	304,7375
Sum Sq. Dev.	1738,192	464142,7	12500,59	3114,338	3183,511

The study is based on an unbalanced panel of annual macroeconomic data for North African countries. Analysis of the descriptive statistics reveals that the distribution of the raw variables is highly non-normal, as evidenced by the skewness and Kurtosis coefficients of 2.04 and 9.278 respectively, as well as the results of the Jarque-Bera test and the volatile nature of inflation, since the standard deviation is estimated at 54.03.

We also note that the consumer price index recorded an average of 96.83 over the period studied. The minimum value recorded is 19.54, while the maximum value is 363.25. i.e. an amplitude of 343.71.

In order to reduce heteroscedasticity and improve the stationarity of the series, certain variables have been transformed into logarithms, notably the consumer price index, the unemployment rate and investment.

4.2. Correlation matrix

Table 3: Correlation Matrix between Study Variables

Variables	GDP	POV	LCPI	LINVES	LUNEMP
GDP	1				
POV	0,373	1			
LCPI	0,001	0,113	1		
LINVES	-0,094	-0,046	-0,213	1	
LUNEMP	-0,187	-0,063	-0,145	-0,159	1

Although the correlation matrix is not a requirement in the estimation of a panel VAR model, it was used here for exploratory purposes to examine the initial interactions between the variables studied. According to the results obtained, we observe that the LCP variable is very weakly positively correlated with economicgrowth and poverty. Indeed, the correlations are estimated at (0.1%) and (11.3%), respectively. While inflation is negatively correlated with investment and unemployment, recording degrees that are -0.213 and -0.145, respectively.

4.3. Stationarity test

To examine the stationarity of the study variables, we used the impesaranshin (ISP) and augmented Dickey-Fuller (ADF) tests.

Table 4: IPS and ADF Stationarity Tests

VARIABLE	IPS		FISHER-ADF		Ordre of intégration
	t-stat	P-value	t-stat	P-value	
LCPI	4.3834	1.0000	3.0137	0.9987	I(1)
ΔLCPI	-1.6970	0.0448	30.4242	0.0007	I(0)
LINVES	-0.1062	0.4577	-0.7127	0.2380	I(1)
Δ LINVES	-6.7143	0.0000	156.614	0.0000	I(0)
LUNEMP	-0.1665	0.4339	-0.8693	0.8077	I(1)
ΔLUNEMP	-4.5649	0.0000	105.429	0.0000	I(0)
POV	-5.3981	0.0000	168.444	0.0000	I(0)
GDP	-4.9000	0.0000	140.909	0.0000	I(0)

Based on both tests, it is revealed that all variables are non-stationary in level except for poverty and economic growth. The other variables, namely investment, unemployment rate, and inflation, are non-stationary in level but all become stationary when differentiated once.

4.4. Determining optimal lags and estimating the model

Before estimating the PVAR model, we first attempted to calculate the optimal lag using the information criteria: AIC, BIC, and QIC. The results obtained are as follows:

Table 5: Result of the Optimal Lag Calculation

Lag	CD	J	J pvalue	MBIC	MAIC	MQIC
1	-0,61027	85,94127	0,182176	-273,743	-64,0587	-149,22
2	-119,509	50,91366	0,437447	-188,876	-49,0863	-105,86
3	-2,56881	29,41846	0,246803	-90,4763	-20,5815	-48,9685
4	-347,731	.	.	.	.	.

The table reveals that the optimal lag is 1. Indeed, it is the lag that minimizes the three information criteria used. This lag effectively balances the complexity of the model and the robustness of the results.

4.5. Model estimation

After determining the optimal lag, we opted to estimate the model using the GMM method, which takes into account endogeneity and individual heterogeneity; the results obtained are:

Table 6: Model Estimation Results

VARIABLES	GDP	DLINVES	DLUNEMP	POV	DLCPI
L.GDP	-0.382*** (0.0775)	-0.00174 (0.00270)	-0.00603*** (0.000755)	-1.483*** (0.212)	0.00316*** (0.000440)
L.DLINVES	4.252*** (0.822)	-0.534*** (0.0412)	-0.190*** (0.0159)	-27.77*** (3.130)	0.0816*** (0.00720)
L.DLUNEMP	21.09*** (3.136)	-2.267*** (0.178)	-0.198*** (0.0348)	-161.5*** (12.11)	0.215*** (0.0172)
L.POV	-0.132*** (0.0404)	-0.0112*** (0.00162)	0.00836*** (0.000476)	-0.593*** (0.122)	-0.00107*** (0.000292)
L.DLCPI	217.0*** (21.82)	-5.283*** (0.610)	-0.296*** (0.131)	-141.2*** (27.70)	0.0600 (0.0558)

Since our research is to study the socioeconomic impact of inflation, we pay close attention to the last column of the table.
According to the estimation results, we observe that the inflation rate has a significant impact on the variables economic growth (GPD), investment, unemployment, and poverty, since the t- statistics are greater than 2 in absolute value.

4.6. Stability test

The stability test reveals that the estimated model is indeed stable, since all the characteristic roots are located within the unit disk, as shown in the following graph:

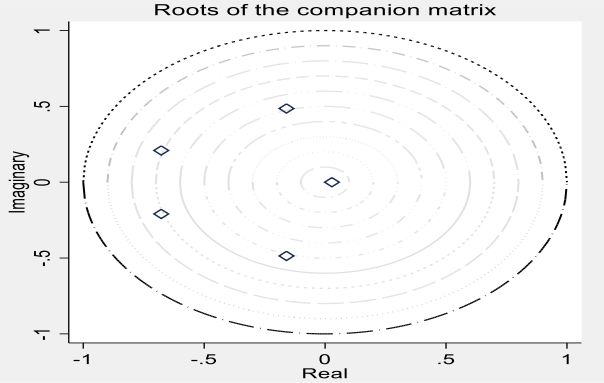

Fig. 1: Model Stability.

4.7. Granger test

To further our analysis, we conducted a structural analysis that focuses on causality testing, impulse analysis, and variance decomposition. Regarding the Granger causality test, the results show that inflation causes all the variables in the study. Indeed, the p-values obtained are all less than 5%. A notable exception concerns economic growth, which does not cause investment, given that the p-value is 52%. The results obtained are summarized in the following table:

Table 7: Results of the Granger Causality Test

Causes ↓ \ Affecte →	GDP	DLINVES	DLUNEMP	DLCPI
GDP	—	✗ (p = 0,520)	✓	✓
DLINVES	✓	—	✓	✓
DLUNEMP	✓	✓	—	✓
DLCPI	✓	✓	✓	—

"X: does not Granger-cause Y" and "✓ means the null is rejected at 5%".

The results indicate a highly interconnected macroeconomic system. Inflation Granger-causes all other variables—GDP, investment, unemployment and poverty—with p-values < 5%, positioning inflation as a leading predictor in the short-run dynamics. Conversely, economic growth does not Granger-cause investment (p = 0.520), suggesting that, conditionally on the other variables and lags used, investment does not react contemporaneously to past GDP innovations.
Beyond these two central findings, the GDP equation rejects non-causality for investment, unemployment, poverty and inflation (all p = 0.000), implying that shocks to these variables help predict GDP. In the investment equation, unemployment, poverty and inflation all Granger-cause investment (all p = 0.000), underscoring the sensitivity of capital formation to labor-market slack, social conditions and price dynamics. For unemployment and poverty, all four predictors (GDP, investment, inflation and the other social indicator) exhibit significant Granger causality, which is consistent with the view that labor-market and distributional outcomes respond quickly to macro-financial shocks. Finally, inflation itself is Granger-caused by GDP, investment, unemployment and poverty (all p = 0.000), highlighting potential feedback loops.

4.8. Impulse responses

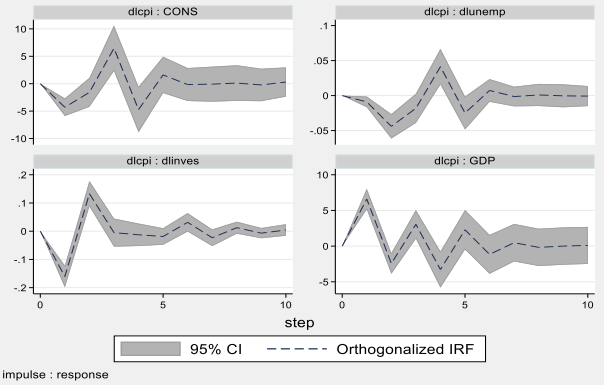

Fig. 2: Results of Impulse Analysis.

Impulse analysis (shock analysis) shows that the inflation shock is significant, especially in the first five periods, for all variables in the study. Indeed, the inflation shock fades from the fifth period onward. These results confirm the sensitivity of macroeconomic balances to inflation in North African countries and highlight the delayed interactions between variables.

5. Discussions

Our results indicate that inflation has a negative effect on poverty, and that rising inflation worsens the economic situation of the poor in North Africa. This finding can be explained by the fact that poor households spend a larger share of their income on basic necessities, whose prices increase more rapidly during inflationary periods. Thus, their purchasing power is directly affected, reducing their ability to meet their basic needs. This conclusion is consistent with several previous studies, including those by Loewald and Makrelov (2020), El-Laithy et al. (2023), Olaniyi and Odhiambo (2024), and the OECD (2023), which have highlighted a disproportionate impact of inflation on poor households, limiting their real consumption and increasing their economic vulnerability. Our results do not support the notion that rising inflation reduces the poverty rate and support the hypothesis that moderate inflation is a lever for inclusive growth. Inflation is therefore not the cruelest tax, as Easterly and Fischer (2001) suggest. Romer and Romer (1998) also support the argument that higher inflation will produce more investment and employment opportunities, leading to lower unemployment and higher incomes, which in turn will help the poor meet their basic needs. This indicates that inflation does not pose a significant threat to poverty reduction (Olaniyi et al., 2023b), but rather stimulates it.

However, this "beneficial" effect of inflation does not appear to apply in the North African context analyzed, where monetary transmission mechanisms are limited, labor markets are rigid, and informal sectors are highly developed. Under these conditions, the potential gains from economic activity do not necessarily benefit the most vulnerable populations. However, this optimistic view must be qualified, as it strongly depends on the institutional context, the state's ability to redistribute gains, and protect the poorest. While our results generally confirm the negative effect of inflation on poverty, certain nuances appear depending on the economic context, thus concurring with the findings of Talukdar (2012), who highlights a non-linear relationship between inflation and poverty, particularly in very low-income countries. This suggests that threshold effects or structural factors (such as the level of development, macroeconomic stability, or the existence of compensation mechanisms) may attenuate or reverse this relationship in some cases.

Empirical analysis also reveals that inflation has a positive impact on unemployment. This result may seem counterintuitive given the classic interpretation of the Phillips curve, which posits an inverse relationship between inflation and unemployment. However, in the North African context, several structural factors can explain this positive correlation. Inflation is often imported (due to rising global commodity or food prices) and not caused by overheating domestic demand. In this case, it stimulates neither productive investment nor employment, but rather destabilizes macroeconomic balances, creating uncertainty and slowing economic activity. These results are consistent with recent work by Dekkiche, D, and Cherayett, F. (2024), which confirms that an initial inflationary shock leads to an increase in unemployment, which then gradually declines, suggesting a complex relationship between inflation and unemployment. This dynamic can be interpreted through the short-term effect of inflationary shocks on purchasing power, consumption, and corporate margins, which slow hiring, followed by delayed adjustments in the labor market. In North Africa, the slowness of public policies to respond to shocks, as well as labor market rigidities, initially accentuate the negative effect of inflation.

These results do not corroborate other previous studies that confirm a negative link between inflation and unemployment (TakeleWogari, 2023) and others that reveal a nonlinear relationship between inflation and unemployment (Dodo & Idris, 2022; Galstyan, 2021). Other studies, such as that of ShairilIzwanTaasim et al. (2022), identify an inflation threshold beyond which the relationship between inflation and unemployment changes in nature. Below this threshold, inflation has a negative effect on unemployment, while above it, the effect becomes positive, suggesting an inverted U-shaped Phillips curve. This theoretical framework may be particularly relevant for understanding the North African situation, where recent inflation levels may exceed this critical threshold. Moderate inflation could indeed support employment, but when it exceeds a certain level, it becomes a factor of economic disruption, slowing investment and exacerbating labor market insecurity, particularly for young people and women. This interpretation partly explains the positive effect observed in our study between inflation and unemployment.

This empirical study revealed a positive and significant impact between inflation and economic growth measured by the growth rate. Our result corroborates with the work of Hamadouche (2017), Khan and Senhadji (2001), who also highlighted a positive relationship emphasizing that inflation can have a positive effect on economic growth at moderate levels, supporting demand and encouraging short-term investment. However, beyond certain critical thresholds, inflation becomes harmful to growth (Olowofeso et al., 2022; Itchoko & Tsopmo, 2017; Fouopi Djiogap, 2018). These studies highlight the existence of critical inflation thresholds, beyond which its impact on economic growth becomes negative. Olowofeso et al. (2022) identify a threshold of 10.3% for the WAMZ, indicating that moderate inflation stimulates growth, while excessive inflation slows it. For their part, Itchoko and Tsopmo (2017) estimate a lower threshold, at 4.3%, for the BEAC zone, suggesting greater sensitivity to inflation in this region. Fouopi Djiogap (2018) provides a more nuanced interpretation by

showing that this threshold depends on the exchange rate regime and the quality of institutions, confirming that the effect of inflation on growth is neither linear nor universal, but contextual.

However, our results do not align with those of Barro (1995), Fischer (1993), Bruno & Easterly (1998), Sweidan (2004), which suggest a negative relationship between inflation and economic growth. Our empirical results highlight a significant relationship between inflation and investment, suggesting that inflation, up to a certain level, can have a stimulating effect on investment activity. This conclusion is consistent with several previous studies, which argue that a moderate level of inflation can promote investment (Atesoglu, 2005). However, other studies (Güney, 2020) find that inflation-related uncertainty has a significant negative effect on private investment. More specifically, high inflation (and its volatility) increases macroeconomic risks, deteriorates the profitability of long-term projects, and thus slows investment.

Building on these findings, policy measures should combine short-term protective instruments with medium- and long-term reforms to promote inclusive growth. Governments could implement targeted subsidies for essential goods and direct cash transfers to protect vulnerable households from inflationary shocks, while expanding social safety nets to improve resilience. Monetary authorities should reinforce inflation-targeting frameworks and coordinate closely with fiscal policy to stabilize the economy, complemented by strategic reserves and careful exchange rate management to mitigate imported inflation. Structural reforms aimed at labor market flexibility, youth and women employment, and formalization of the informal sector are essential to ensure that the benefits of moderate inflation reach the poorest. Institutional strengthening is equally critical, as the effectiveness of fiscal and monetary policies depends on robust governance, efficient targeting, and credible central bank operations. Additionally, complementary measures such as price monitoring, subsidized credit for small enterprises, and investment in education and infrastructure can further support households and firms in coping with inflation.

In conclusion, addressing the negative effects of inflation in North Africa requires an integrated approach that combines immediate protective measures for vulnerable populations with structural and institutional reforms to ensure sustainable, inclusive growth. Only by carefully balancing short-term interventions with long-term reforms can inflation be managed in a way that reduces poverty, supports investment, and strengthens overall economic resilience.

6. Conclusion

The empirical analysis conducted in this study highlights the multidimensional impact of inflation on key socioeconomic variables in five North African countries. Our results reveal, first, that inflation has a negative effect on poverty, confirming that households, particularly the most vulnerable, see their purchasing power seriously eroded during periods of price instability. This reality exacerbates inequalities and hinders poverty reduction efforts in the region. Furthermore, inflation appears to be positively correlated with unemployment, although this relationship appears complex and potentially nonlinear, suggesting the existence of differentiated mechanisms depending on inflation thresholds and the structural specificities of the economies studied. Regarding economic growth, our results show that a moderate level of inflation can play a catalytic role by stimulating aggregate demand and investment, but that beyond certain critical thresholds, this effect reverses and becomes counterproductive. Finally, inflation also affects investment in an ambivalent manner: it can encourage short-term investment decisions in a context of price moderation, but becomes a disincentive when it generates macroeconomic uncertainty and instability.

The importance of this work lies in its integrated approach, which does not limit itself to examining the impact of inflation on a single macroeconomic variable, but simultaneously explores its effects on poverty, unemployment, investment, and growth, in a regional context that has yet to be explored jointly: that of North Africa.

This work can contribute to the reflection of researchers and policymakers on the conditions for a more balanced management of inflation, reconciling macroeconomic stability, social development, and economic dynamism. A better understanding of these interrelationships appears essential to guide more coherent public policies that are better adapted to the structural challenges facing North African countries.

This study, while providing relevant insights into the socioeconomic effects of inflation in North African countries, has certain limitations that should be acknowledged. First, the analysis is based on aggregated macroeconomic data, which limits the consideration of regional or sectoral disparities likely to influence the relationships between inflation, investment, economic growth, unemployment, and poverty. Second, the temporal dimension of the analysis, although extensive, could be further explored through a dynamic panel approach or more advanced structural modeling. Furthermore, the study does not explicitly incorporate institutional, monetary, or fiscal variables, whose role can be decisive in the transmission mechanisms of inflation to socioeconomic indicators. With this in mind, future research could enrich the discussion by mobilizing comparative approaches between subregions or groups of countries according to their degree of macroeconomic vulnerability, or by integrating qualitative variables related to economic governance. Analyzing the differential impact of inflation on certain social categories, particularly young people, women and rural populations, also constitutes a promising avenue for deepening our understanding of the distributive effects of inflation in emerging contexts.

Acknowledgement

This is a text of acknowledgements. Do not forget people who have assisted you on your work. Do not exaggerate with thanks. If your work has been paid by a Grant, mention the Grant name and number here.

References

[1] Abaidoo, R. (2015). Inflation, inflation expectations, and investment performance volatility: Evaluating potential causal interactions. International Journal of Economics and Finance, 7(5), 1–12. https://doi.org/10.5539/ijef.v7n5p50.

[2] Abu Asab, N., & Al-Tarawneh, A. (2018). The impact of inflation on investment: The non-linear nexus and inflation threshold in Jordan. Modern Applied Science, 12(12), 113–123. https://doi.org/10.5539/mas.v12n12p113.

[3] Ali, A. K., & Asfaw, D. M. (2023). Nexus between inflation, income inequality, and economic growth in Ethiopia. PLOS ONE, 18(11), e0294454. https://doi.org/10.1371/journal.pone.0294454.

[4] ZAndriantomanga,Marijn A. Bolhuis,S Hakobyan. (2023). Global supply chain disruptions: Challenges for inflation and monetary policy in Sub-Saharan Africa (IMF Working Paper No. WP/23/43). International Monetary Fund. https://doi.org/10.5089/9798400235436.001.

[5] Asfaq Ahmad. (2024). Impact of Money Supply and Inflation on Economic Growth. Journal of Corporate Finance Management and Banking System , 4(04), 42–52. https://doi.org/10.55529/jcfmbs.44.42.52.

[6] Aydin, C. (2016). Inflation and economic growth: A dynamic panel threshold analysis for Turkish republics in transition process. Procedia – Social and Behavioral Sciences, 235, 537–544. https://doi.org/10.1016/j.sbspro.2016.07.129.

[7] Baharumshah, A. Z., Slesman, L., & Wohar, M. E. (2016). Inflation, inflation uncertainty, and economic growth in emerging and developing countries: Panel data evidence. Economic Systems, 40(4), 638–657. https://doi.org/10.1016/j.ecosys.2016.02.009.

[8] Barro, R. J. (1995). Inflation and economic growth (NBER Working Paper No. 5326). National Bureau of Economic Research. https://doi.org/10.3386/w5326.

[9] Barro, R. J. (1996). Inflation and growth. Federal Reserve Bank of St. Louis Review, 78(3), 153–169. https://doi.org/10.20955/r.78.153-169.

[10] Berisha, E., … (2022). Inflation and income inequality: Does the level of income inequality matter? Applied Economics, 54(37), 4319–4330. https://doi.org/10.1080/00036846.2022.2128293.

[11] Bruno, M., & Easterly, W. (1996). Inflation and growth: In search of a stable relationship. Federal Reserve Bank of St. Louis Review, 78(3), 139–146. https://doi.org/10.20955/r.78.139-146.

[12] Bruno, M., & Easterly, W. (1998). Inflation crises and long-run growth. Journal of Monetary Economics, 41(1), 3–26. https://doi.org/10.1016/S0304-3932(97)00063-9.

[13] Byrne, J. P., & Davis, E. P. (2004). Permanent and temporary inflation uncertainty and investment in the United States. Economics Letters, 85(2), 271–277. https://doi.org/10.1016/j.econlet.2004.04.015.

[14] Caballero, R. J. (1991). Competition and non-robustness of the investment–uncertainty relationship. American Economic Review, 81(1), 279–288.

[15] Carruth, A., Dickerson, A., & Henley, A. (2000). What do we know about investment under uncertainty? Journal of Economic Surveys, 14(2), 119–153. https://doi.org/10.1111/1467-6419.00107.

[16] Ciżkowicz, P., & Rzońca, A. (2013). Does inflation harm corporate investment? Empirical evidence from OECD countries. Economics: The Open-Access, Open-Assessment E-Journal, 7, 1–38. https://doi.org/10.5018/economics-ejournal.ja.2013-16.

[17] Darby, M. R. (1979). The NBER International Transmission Model: The Mark II disequilibrium version, estimates, and lessons. In Proceedings of the 1978 West Coast Academic Federal Reserve Economic Research Seminar (pp. 1–40). Federal Reserve Bank of San Francisco.

[18] Dekkiche, D., & Cherayett, F. (2025). Impact of fluctuations in inflation rate on unemployment in Algeria: A SVAR approach. Economic and Regional Studies / Studia Ekonomiczne i Regionalne, 17(4), 640–661. https://doi.org/10.2478/ers-2024-0035.

[19] Felix Emmanuel Dodo, & Moukhtar Muhammad Idris. (2022). Impact of Inflation on Unemployment in Nigeria (1985-2019): A Non-Linear Approach. Global Journal of Management and Business Research, 22(C2), 19–28. Retrieved from https://journalofbusiness.org/index.php/GJMBR/article/view/102203.

[20] Easterly, W., & Fischer, S. (2001). Inflation and the poor. Journal of Money, Credit and Banking, 33(2), 160–178. https://doi.org/10.2307/2673879.

[21] El Aboudi, S., & Khanchaoui, I. (2021). Exploring the impact of inflation and external debt on economic growth in Morocco: An empirical investigation with an ARDL approach. Asian Economic and Financial Review, 11(11), 894–907. https://doi.org/10.18488/journal.aefr.2021.1111.894.907.

[22] El Kadri, A., & El-Khodary, M. (2025). World crude oil price volatility impacts on domestic fuel-imports and carbon emissions : Short and long-run evidence using ARDL. Environment, De-velopment and Sustainability. https://doi.org/10.1007/s10668-025-05969-z.

[23] El-Laithy, H., & Armanious, H. (2023). The impact of inflation on poverty, food & nutrition security (Working paper). https://www.researchgate.net/publication/371938973.

[24] Ferroud, … (2021). Impact of inflation on economic growth: The case of Morocco. Zenodo.

[25] Fischer, S. (1993). The role of macroeconomic factors in growth. Journal of Monetary Economics, 32(3), 485–512. https://doi.org/10.1016/0304-3932(93)90027-D.

[26] Fouopi Djiogap, D. (2018). A re-examination of the inflation–growth nexus in African countries. Revue Internationale des Économistes de Langue Française, 3(2), 196–223. https://doi.org/10.18559/rielf.2018.2.13.

[27] Fukunaga, I., Komatsuzaki, T., & Matsuoka, H. (2019). Inflation and public debt reversals in advanced economies (IMF Working Paper No. 19/297). International Monetary Fund. https://doi.org/10.5089/9781513521596.001.

[28] García-Macia, D. (2023). The effects of inflation on public finances (IMF Working Paper No. 2023/093). International Monetary Fund. https://doi.org/10.5089/9798400241529.001.

[29] Galstyan, V. (2021). Expectations, unemployment and inflation: An empirical investigation. International Finance, 24(3), 394–420. https://doi.org/10.1111/infi.12396.

[30] Glawe, L., & Wagner, H. (2024). Inflation and inequality: New evidence from a dynamic panel threshold analysis. International Economics and Economic Policy, 21(2), 297–309. https://doi.org/10.1007/s10368-023-00580-x.

[31] Robert J. Gordon, 2018. "Friedman and Phelps on the Phillips curve viewed from a half century's perspective," Review of Keynesian Economics, vol 6(4), pages 425-436. https://www.nber.org/papers/w24891. https://doi.org/10.4337/roke.2018.04.03.

[32] Hamadouche, A. (2017). L'impact de l'inflation sur la croissance économique : Le cas des pays du Nord africain. Revue des Réformes Économiques et Intégration dans l'Économie Mondiale, 12(23), 25–39. https://asjp.cerist.dz/en/article/20453.

[33] Hartman, R., & Makin, J. H. (1982). Inflation uncertainty and interest rates: Theory and empirical tests (NBER Working Paper No. 906). National Bureau of Economic Research. https://www.nber.org/papers/w0906. https://doi.org/10.3386/w0906.

[34] Hilscher, J., Raviv, A., & Reis, R. (2014). Inflating away the public debt? An empirical assessment (NBER Working Paper No. 20339). National Bureau of Economic Research. https://www.nber.org/papers/w20339. https://doi.org/10.3386/w20339.

[35] Huizinga, J. (1993). Inflation uncertainty, relative price uncertainty, and investment in U.S. manufacturing. Journal of Money, Credit and Banking, 25(3), 521–549. https://doi.org/10.2307/2077721.

[36] Huybens, E., & Smith, B. D. (1999). Inflation, financial markets, and long-run real activity. Journal of Monetary Economics, 43(2), 283–315. https://doi.org/10.1016/S0304-3932(98)00060-9.

[37] Iqbal, N., & Nawaz, S. (2009). Investment, inflation, and economic growth nexus. The Pakistan Development Review, 48(4), 863–874. https://doi.org/10.30541/v48i4IIpp.863-874.

[38] Itchoko, N., & Tsopmo, P. C. (2017). Non-linearity between inflation and economic growth: What lessons for the BEAC Zone? Revue d'économie du développement, 25(2), 41–62. https://doi.org/10.3917/edd.312.0041.

[39] Khan, M. S., & Senhadji, A. S. (2001). Threshold effects in the relationship between inflation and growth. IMF Staff Papers, 48(1), 1–21. https://doi.org/10.5089/9781451853339.001.

[40] Kremer, S., Bick, A., & Nautz, D. (2013). Inflation and growth: New evidence from a dynamic panel threshold analysis. Empirical Economics, 44(2), 861–878. https://doi.org/10.1007/s00181-012-0553-9.

[41] Loewald, C., & Makrelov, K. (2020). OBEN 2001–October 2019: The impact of inflation on the poor (OBEN/20/01). Occasional Bulletin of Economic Notes. South African Reserve Bank. https://www.resbank.co.za/content/dam/sarb/publications/occasional-bulletin-of-economic-notes/2020/10005/OBEN-2001--The-impact-of-inflation-on-the-poor----June-2020.pdf.

[42] Mallik, G., & Chowdhury, A. (2001). Inflation and economic growth: Evidence from four South Asian countries. Asia-Pacific Development Journal, 8(1), 123–135. https://www.unescap.org/sites/default/files/apdj-8-1-ResearchNote-Mallik-and-Chowdhury.pdf.

[43] Mambo, J., et al. (2018). Simulating the effect on households' real consumption and poverty of the increase in prices that followed the 2015–16 economic crisis in Mozambique (WIDER Working Paper 2018/61). Université des Nations Unies – World Institute for Development Economics Research. https://www.wider.unu.edu/sites/default/files/Publications/Working-paper/PDF/wp2018-61.pdf. https://doi.org/10.35188/UNU-WIDER/2018/503-9.

[44] Mohamed, E.-S., Elmoukhtar, M., Mohammed, F., Yassine, N., & Mounir, B. (2024). Modeling the impact of exchange rate fluctuations on agricultural performance: Evidence from Morocco during the period 2000–2023. Edelweiss Applied Science and Technology, 8(6). https://doi.org/10.55214/25768484.v8i6.3731.

[45] Mohamed, E.-S., Hind, H., Abdellah, K., Maryem, E. A., & Mounir, B. (2025). Manufacturing sector performance in Morocco: What role do exchange rate fluctuations play? Journal of Posthumanism, 5(1). https://doi.org/10.63332/joph.v5i1.591.
[46] Mohamed, E.-S., Hjouji, Z., Bousraraf, Z., Mounir, B., & Nacer, M. (2024). The effects of real exchange rates on international tourism: Empirical evidence from Morocco. Pakistan Journal of Life and Social Sciences, 22(2), Article 100970. https://doi.org/10.57239/PJLSS-2024-22.2.00829.
[47] Mohamed, E.-S., Khaoula, E., Idriss, O., Meryam, E.-A., & Mounir, B. (2025). The impact of exchange rate and inflation on economic growth: Empirical evidence from the MENA region using panel data analysis. Journal of Ecohumanism, 3(8). https://doi.org/10.62754/joe.v3i8.5848..
[48] Maiga, Y. (2024). Impact of Inflation on Economic Growth: Evidence from Tanzania. Journal of Agricultural Studies, 12(2), 77–100. https://doi.org/10.5296/jas.v12i2.21708.
[49] Mundell, R. A. (1963). Inflation and real interest. Journal of Political Economy, 71(3), 280–283. https://doi.org/10.1086/258771.
[50] Olaniyi, C. O., & Odhiambo, N. M. (2023). Interdependence, asymmetry and policy… Do variations matter in the causality between remittances and poverty? Journal of International Trade and Economic Development, 1–39. https://doi.org/10.1080/09638199.2023.2288191.
[51] Olaniyi, C. O., & Odhiambo, N. M. (2024). Inflation-poverty causal nexus in sub-Saharan African countries: An asymmetric panel causality approach. International Trade, Politics and Development, 8(3). https://doi.org/10.1108/ITPD-08-2023-0024.
[52] Olowofeso, O. E., John-Sowe, M., Kargbo, S. M., Adeleke, A. I., Yengbe, J. R., & Cham, Y. (2022). Threshold effect of inflation on economic growth in the West African Monetary Zone (WAMI Occasional Paper Series No. 26). West African Monetary Institute. https://wami-imao.org/sites/default/files/202306/WAMI%20OCCASIONAL%20PAPER%20SERIES%20NO.%2026%20Threshold%20Effect%20of%20Inflation%20on%20Economic%20Growth%20in%20he%20West%20African%20Monetary%20Zone.pdf.
[53] Oumari, I. L., & Adamou Illou, M. (2022). Modeling the impact of inflation on economic growth: Case of Morocco. International Journal of Accounting, Finance, Auditing, Management and Economics, 3(4-3), 297–314.
[54] Phillips, A. W. (1958). The relation between unemployment and the rate of change of money wage rates in the United Kingdom, 1861–1957. Economica, 25(100), 283–299. https://doi.org/10.2307/2550759.
[55] Pindyck, R. S., & Solimano, A. (1993). Economic instability and aggregate investment. In O. J. Blanchard & S. Fischer (Eds.), NBER Macroeconomics Annual 1993 (Vol. 8, pp. 259–318). MIT Press. https://doi.org/10.2307/3585033.
[56] Romer, C. D., & Romer, D. H. (1998). Monetary policy and the well-being of the poor (NBER Working Paper No. 6793). National Bureau of Economic Research. https://doi.org/10.3386/w6793.
[57] Samuelson, P. A., & Solow, R. M. (1960). Analytical aspects of anti-inflation policy. American Economic Review, 50(2), 177–194.
[58] Sbrancia, M. B. (2011). Debt and inflation during a period of financial repression. University of Maryland. https://drum.lib.umd.edu/items/b797d36e-aa25-48f4-87d2-2322663c1d6d.
[59] Servén, L. (1997). Uncertainty, instability, and irreversible investment: Theory, evidence, and lessons for Africa (Policy Research Working Paper No. 1722). World Bank.
[60] Serven, L., & Solimano, A. (1992). Private investment and macroeconomic adjustment: A survey. The World Bank Research Observer, 7(1), 95–114. https://doi.org/10.1093/wbro/7.1.95.
[61] Taasim, S., Teruki, N., Yun, W. S., & Pinjaman, S. (2022). Inflation targeting and unemployment rate in Malaysia: The threshold regression approach. The Empirical Economics Economics Letters, 21(12), 1–10. https://www.researchgate.net/publication/366206392_Inflation_Targeting_and_Unemployment_Rate_in_Malaysia_The_Threshold_Regression_Approach.
[62] Talukdar, S. R. (2012). The effect of inflation on poverty in developing countries: A panel data analysis (Master's thesis). Texas Tech University. https://ttu-ir.tdl.org/ttu-ir/bitstream/handle/2346/46939/TALUKDAR-THESIS.pdf.
[63] Tobin, J. (1965). Money and economic growth. Econometrica, 33(4), 671–684. https://doi.org/10.2307/1910352.
[64] Wogari, T. (2023). An econometric analysis of impact of inflation and economic growth on unemployment in Ethiopia. European Business & Management, 8(6), 149–158. https://doi.org/10.11648/j.ebm.20220806.11.
[65] Zeira, J. (1990). Cost uncertainty and the rate of investment. Journal of Economic Dynamics and Control, 14(2), 53–63. https://doi.org/10.1016/0165-1889(90)90005-2.