JDI JOURNAL OF DEVELOPMENT AND INTEGRATION

JOURNAL OF DEVELOPMENT AND INTEGRATION
No. 81 (2025) 58-65 | jdi.uef.edu.vn

The Relationship Between Economic Growth, Inflation and Unemployment: Policy Implications for Vietnam

Vo Thi Kim Loan[1,*], **Nguyen Thi Thanh Thao**[2]
[1]Van Lang University, Vietnam
[2]University of Economics and Law,
Vietnam National University Ho Chi Minh City, Vietnam

KEYWORDS

Economic growth,
Inflation,
Unemployment,
Macroeconomic policy,
Vietnam economy.

ABSTRACT

This study focuses on the relationship between economic growth, inflation, and unemployment in Vietnam during the period from 2004 to 2023, aiming to provide insights into the factors influencing the sustainable economic development of the country. The significance of this research lies in clarifying the interconnections among these three variables, an area that has not been fully explored in the existing literature, particularly in the context of Vietnam facing numerous global economic challenges. The subjects of the study include macroeconomic indicators such as GDP, inflation rates, and unemployment rates. The research method uses descriptive statistical analysis and visual data presentation to examine trends and fluctuations of economic indicators over time, using data sourced from the World Bank. The results reveal a complex relationship between economic growth, inflation, and unemployment. Specifically, when economic growth declined due to the Covid-19 pandemic in 2020, the unemployment rate increased while inflation remained under control. The study also indicates that inflation can negatively impact economic growth when it surpasses a certain threshold. These findings hold significant implications for policy, emphasizing the necessity to maintain effective inflation control measures and promote sustainable growth to ensure job stability and long-term economic development.

1. Introduction

In the context of globalization and the continuous development of the economy, the relationship between economic growth, inflation, and unemployment has become an important research topic in the field of economics. The objective of macroeconomic policy for governments is to promote economic growth, control inflation, and manage unemployment rates. The sudden fluctuations of these three factors not only directly affect the economy but can also lead to social difficulties, resulting in serious issues in people's lives (Sinha, 2022). Economic

*Corresponding author. Email: *loan.vtk@vlu.edu.vn*

https://doi.org/10.61602/jdi.2025.81.07
Submitted: 21-Nov-2024; Revised: 12-Feb-2025; Accepted: 13-Feb-2025; Online first: 31-Mar-2025
ISSN (print): 1859-428X, ISSN (online): 2815-6234

growth is not only an indicator reflecting the development of a country but also influences the living standards and employment opportunities of its citizens. Inflation, as a factor that adjusts prices and purchasing power, can significantly impact investment and consumption decisions. Meanwhile, unemployment is not only a social issue but also a crucial indicator in assessing the health of the economy.

The relationship between economic growth, inflation, and unemployment in Vietnam has been extensively studied in recent years. According to the Phillips curve theory, there is an inverse interaction between inflation and unemployment rates in the short term; however, this relationship may change over time and be influenced by various factors such as monetary policy and global economic conditions (Phillips, 1958). In Vietnam, the period from 2004 to 2023 has witnessed significant fluctuations in inflation and unemployment rates. For instance, the years 2008 and 2011 recorded inflation rates exceeding 20%, while unemployment rates remained low. This indicates that in a context of strong growth, inflation control policies can help maintain stability in the labor market.

Vietnam is facing numerous challenges in maintaining a balance between economic growth, controlling inflation, and reducing unemployment rates. The sudden increase in inflation can exert pressure on citizens' purchasing power, thereby affecting consumption and investment. Simultaneously, rising unemployment due to external shocks such as the Covid-19 pandemic has created an urgent demand for policymakers to seek effective solutions to stabilize the labor market.

Therefore, this study aims to analyze the relationship between economic growth, inflation, and unemployment in Vietnam during the period from 2004 to 2023. Through this analysis, the research will clarify the interactions among these factors and propose appropriate policies to maintain stability and sustainable development for Vietnam's economy in the near future.

2. Literature review

In the context of studying the relationship between economic growth, inflation, and unemployment, economic theories have provided significant foundations for a deeper understanding of these factors and their interactions.

Firstly, the theories of economic growth have undergone substantial development. Keynes (1936) argued that the economy does not always reach its potential output through self-adjusting mechanisms. The economy can achieve and maintain equilibrium at a certain level of output without being constrained by growth-influencing factors.

According to Samuelson (1948), economic growth is defined as the expansion of potential output or GDP. Meanwhile, Khuong (2023) emphasizes the role of human capital, investment capital, and total factor productivity (TFP) in driving economic growth. Human capital, which encompasses the skills and knowledge of the workforce, plays a crucial role in enhancing productivity and innovation.

Next, inflation is defined as a continuous increase in prices, or conversely, a persistent decline in the value of currency. Friedman (1963) further articulates inflation as a steady and ongoing rise in the general price level, emphasizing two critical aspects: (i) the increase in price levels, and (ii) the regular and continuous nature of this increase. He asserts that "inflation is always and everywhere a monetary phenomenon". Inflation results from an increase in the money supply within an economy. According to the quantity theory of money, if the money supply grows faster than the production of goods and services, inflation will ensue (Friedman, 1995). Meanwhile, the demand-pull theory posits that inflation occurs when aggregate demand exceeds aggregate supply. An increase in consumption, investment, or government spending can create upward pressure on prices (Keynes, 1936).

From a classical perspective, unemployment arises from an imbalance between labor supply and demand. When real wages exceed equilibrium levels, the quantity of labor supplied surpasses the amount businesses are willing to hire, resulting in unemployment. Pigou (2013) emphasizes that unemployment can be explained through labor market adjustments. Therefore, unemployment is characterized by a labor supply that exceeds what the economy can absorb. Furthermore, Keynes (1936) argues that unemployment is an involuntary phenomenon primarily caused by a deficiency in aggregate demand within the economy. He contends that when aggregate demand declines, firms reduce production and lay off workers, leading to higher unemployment rates. Conversely, Keynesians describe employment as contingent upon actual demand for goods and services generated by fixed-price activities. Thus, total demand generates profits at a certain level, which is expected to create more new jobs. This implies that unemployment decreases as actual demand rises. Simultaneously, Friedman's (1995) natural rate of unemployment theory posits that there exists a natural level of unemployment in the economy encompassing frictional and structural unemployment. This natural rate is inevitable due to changes in labor demand and worker skills.

When examining the relationship among these three factors, research has demonstrated that they do not exist independently but interact within a complex context. Initially, the relationship between economic growth and unemployment was empirically studied and established by Arthur Okun in 1962, known as Okun's Law, which remains recognized as one of the fundamental principles in macroeconomics. Okun's Law indicates an inverse relationship between the rate of production growth and the unemployment rate.

Over the decades, literature has continuously explored the connection between unemployment and economic growth, considering factors such as Okun's Law, labor market dynamics, and policy implications. Hjazeen et al. (2021) found consistent results highlighting a negative correlation between economic growth and unemployment. Meanwhile, Bankole and Fatai (2013) offered a contrasting perspective, demonstrating a positive relationship between unemployment and economic growth. These diverse findings underscore the complexity and variability of the dynamics between unemployment and economic growth in Nigeria.

Umora and Anyiwe (2013) showed that as inflation rates increase, unemployment rates also tend to rise. Furthermore, the presence of stagflation-characterized by high inflation coexisting with high unemployment-poses significant challenges for policymakers.

The relationship between economic growth and inflation is more complex and nonlinear. Research indicates that low and stable inflation can promote economic growth. However, when inflation exceeds a certain threshold (typically around 2-3% in developed countries and 7-11% in developing nations), it begins to adversely affect growth (Barro, 1995; Khan & Senhadji, 2001). Similarly, Andrés and Hernando (1997) found that even at low or moderate levels of inflation, it still negatively impacts economic growth rates. They argue that controlling inflation is essential not only for maintaining economic stability but also for fostering sustainable long-term growth.

The Phillips Curve describes the inverse relationship between inflation and unemployment in the short run. As unemployment rates decrease, inflation tends to rise, and vice versa (Phillips, 1958). However, this relationship holds true only in the short term and is unstable in the long term. Additionally, Okun's Law indicates a short-term inverse relationship between cyclical unemployment rates and economic growth in the United States during 1947–1960. Since its inception, several studies have been conducted to validate Okun's coefficient. A notable stable result has been observed in the U.S., compared to OECD countries. In contrast, the Phillips Curve maintains a stable relationship concerning inflationary dynamics and unemployment (Phillips, 1958).

Moreover, both Okun's Curve and Phillips Curve provide hypotheses that explain many discussions regarding the interrelationship among inflation-unemployment-growth over the past four decades. Okun predicted that when an economy grows faster than its potential output, unemployment will decrease; conversely, when actual growth equals potential output, the unemployment rate will stabilize (Abdul-Khaliq et al., 2014).

3. Methods and data

This study adopts a comprehensive mixed-methods approach to explore the intricate relationships between economic growth, inflation, and unemployment in Vietnam from 2004 to 2023. It leverages both statistical analysis and advanced data visualization techniques to provide a detailed examination of these economic indicators.

Statistical analysis: The research employs descriptive statistics to identify trends, fluctuations, and key characteristics of economic growth, inflation, and unemployment rates over the years.

Table 1. Statistical Description

Variable	n	mean	sd	median	trimmed	mad	min	max	range	skew	kurtosis	se
Economic growth	20	6.23	1.47	6.56	6.47	1.34	2.55	8.12	5.57	-1.18	0.66	0.33
Inflation	20	6.7	5.56	5.34	5.6	3.68	0.63	23.1	22.48	1.6	2.05	1.24
Unemployment	20	1.68	0.41	1.79	1.69	0.4	1	2.38	1.39	-0.26	-1.28	0.09

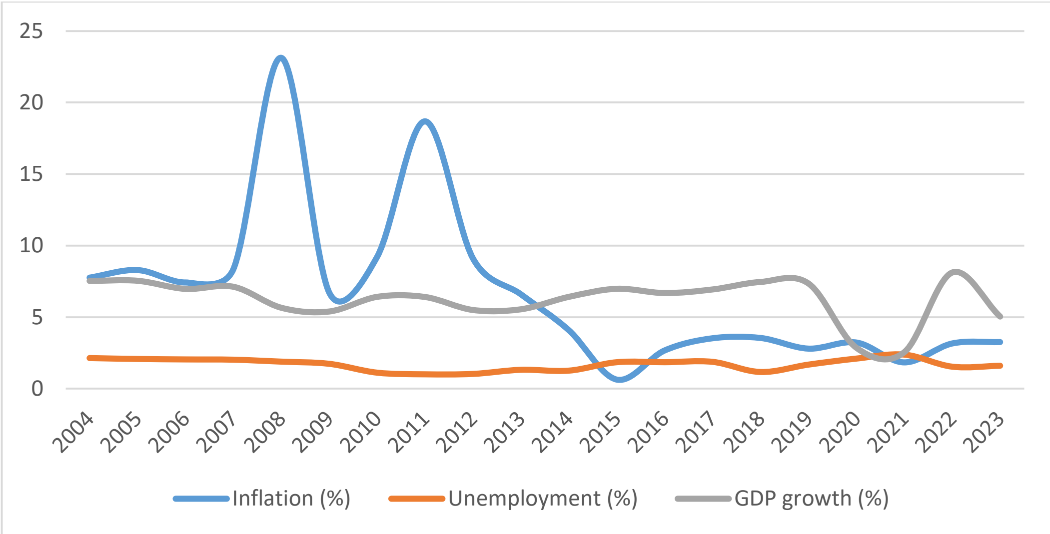

Figure 1. Trends in Economic Growth, Inflation, and Unemployment

This includes calculating measures of central tendency (mean, median) and dispersion (standard deviation, range) to summarize the data.

Data visualization: To complement the statistical analysis, the study utilizes sophisticated visualization methods: (i) interactive time series charts illustrate trends and fluctuations over time in economic indicators, providing a dynamic view of Vietnam's economic performance; (ii) scatter plots with fitted regression lines depict bivariate relationships between variables, helping to understand how changes in one factor can affect another.

Data sources: Time series data on macroeconomic aggregates concerning economic growth, inflation, and unemployment are primarily sourced from the World Bank, spanning the period from 2004 to 2023. This extensive dataset provides a robust foundation for analyzing Vietnam's economic landscape over the past two decades.

The average economic growth rate stands at 6.23%, with a standard deviation of 1.47, indicating relative stability but notable fluctuations, particularly during the 2020-2021 period due to the impact of the Covid-19 pandemic. Average inflation is recorded at 6.70%, with a higher standard deviation of 5.56, reflecting significant volatility in years such as 2008 and 2011 when inflation exceeded 20%. The unemployment rate remains low, averaging 1.68% with a standard deviation of merely 0.41, suggesting a relatively stable labor market (Table 1).

4. Results and Discussion

The collection of graphs in Figure 1 below illustrates the trends of various economic indicators for Vietnam over time. Overall, Vietnam's economic growth has remained robust from 2004 to 2019, with an average growth rate of approximately 5-7%. However, the year 2020 witnessed a significant decline due to the impact of the Covid-19 pandemic, with growth only reaching about 2.87%. In 2021, the economy rebounded strongly with a growth rate exceeding 8%, before stabilizing at around 5% in 2023. The inflation

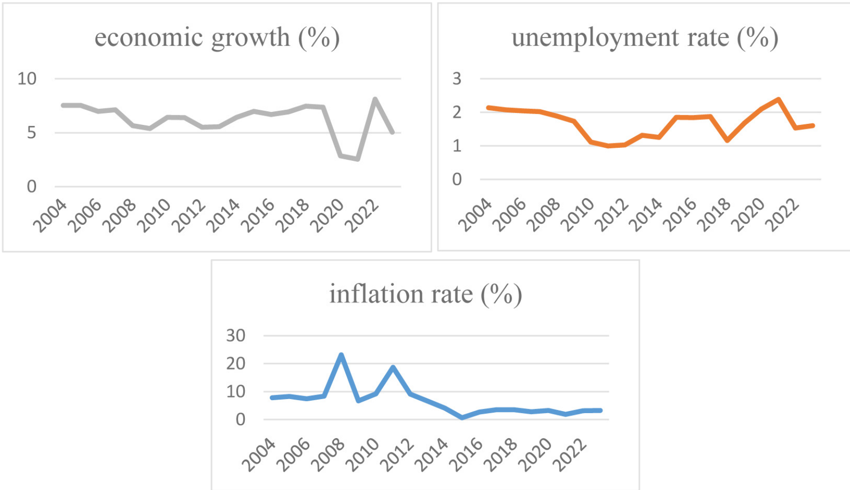

Figure 2. The relationship between economic growth, inflation, and unemployment

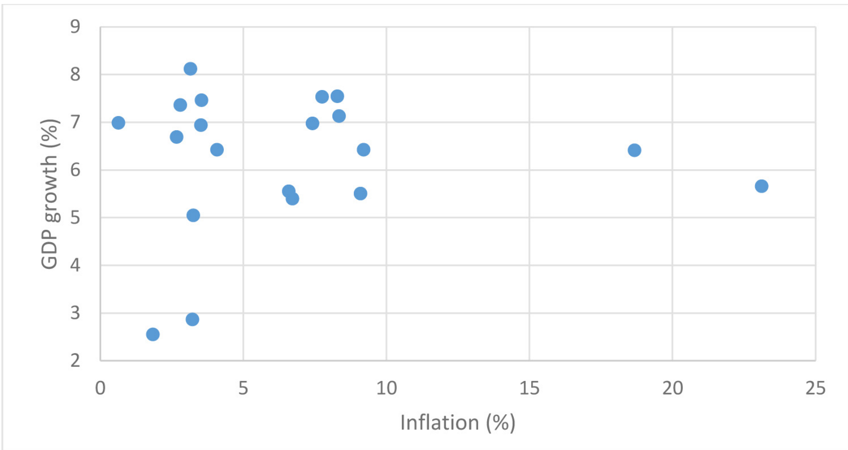

Figure 3. The relationship between economic growth and inflation

chart for the period from 2004 to 2023 shows considerable fluctuations. The peak occurred in 2008 and 2011 when inflation rates exceeded 18%. Subsequently, inflation gradually decreased and stabilized from 2015 to 2023, oscillating between 2-4%. This volatility reflects changes in monetary policy and global economic conditions, as well as Vietnam's ability to adjust its economy. From 2004 to 2023, Vietnam's unemployment rate decreased from over 2% in 2004 to below 1% in 2010. However, starting in 2011, this rate began to fluctuate and showed a slight upward trend, particularly during the period of 2020-2021 due to the effects of the Covid-19 pandemic. In 2021, the unemployment rate rose to nearly 2.4% before slightly declining in subsequent years. This increase reflects the challenges faced by the Vietnamese economy in maintaining job stability amid global fluctuations. This necessitates flexible and effective policies to support the labor market and promote sustainable growth. Consequently, the sudden increase in recent years may indicate economic shocks, policy changes, or external factors such as global financial crises or pandemics. These factors can lead to a sudden spike in unemployment and inflation rates.

When economic growth sharply declined in 2020, the unemployment rate increased; however,

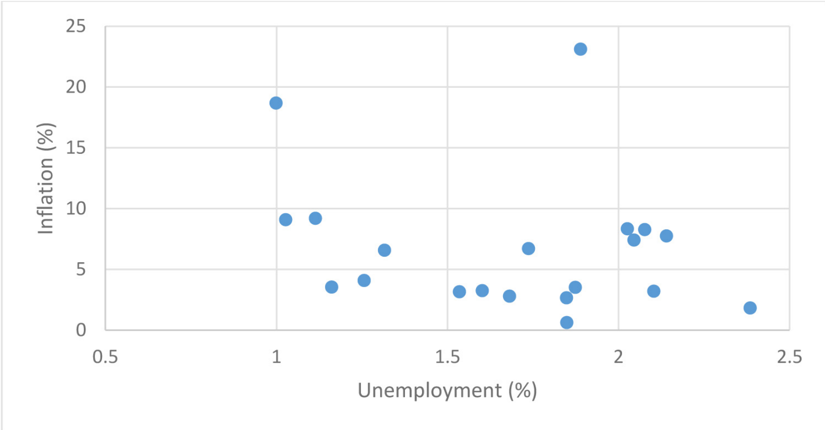

Figure 4. The relationship between inflation and unemployment

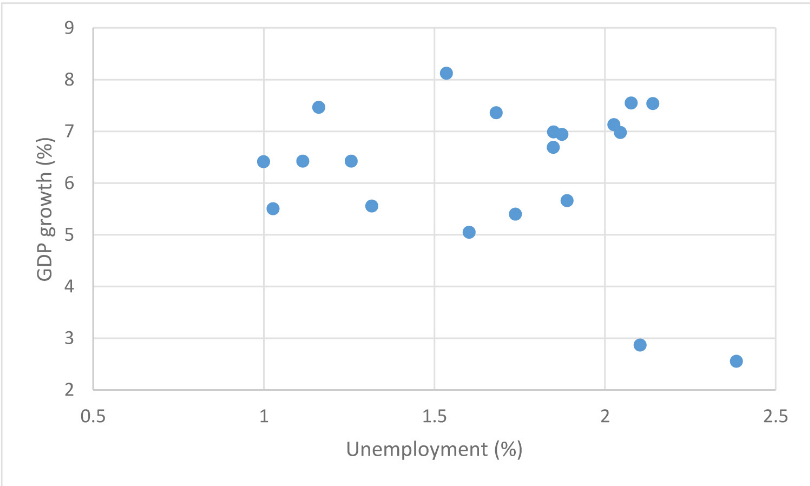

Figure 5. The relationship between economic growth and unemployment

inflation remained under control (Figure 2). The rapid economic recovery in 2021 demonstrated the economy's flexible adjustment capacity in response to external shocks.

The relationships between economic growth, inflation, and unemployment in Vietnam during this period illustrate a complex and intertwined dynamic, specifically:

The relationship between economic growth and inflation: From 2004 to 2023, inflation in Vietnam exhibited significant fluctuations, particularly in 2008 and 2011 when it peaked above 20% (Figure 3). During these years, economic growth also stagnated, indicating an inverse relationship between the two factors: as inflation surged, economic growth was often adversely affected. However, after inflation was brought under control and stabilized from 2015 onwards, economic growth gradually recovered and became more stable.

The relationship between inflation and unemployment: The Phillips Curve theory elucidates the inverse relationship between inflation and unemployment. During the peak inflation periods of 2008 and 2011, a notable trend emerged where unemployment rates tended to decline (Figure 4). However, from 2012 onwards, despite a stabilization of inflation rates, unemployment exhibited slight fluctuations. The observed fluctuations in unemployment could be linked to broader economic transformations, such as shifts in industry demands, technological advancements, or changes in labor force participation rates.

The relationship between economic growth and unemployment: Economic growth is often associated with a decline in unemployment rates. During the period from 2004 to 2010, Vietnam experienced sustained high economic growth, which corresponded with a gradual decrease in the unemployment rate. However, the period from 2020 to 2021 revealed a significant downturn in growth due to the impact of the Covid-19 pandemic, leading to an increase in unemployment rates. As the economy rebounded in 2021 with a growth rate exceeding 8%, the unemployment rate also saw a corresponding decline.

5. Conclusions and Policy implications

In evaluating the intricate dynamics between economic growth, inflation, and unemployment in Vietnam, it becomes evident that a multifaceted policy approach is essential for sustaining economic stability and fostering long-term growth. Vietnam's remarkable transition from a low-income to a middle-income economy underscores the significance of sound macroeconomic policies in navigating global uncertainties. The interplay between inflation control and employment generation must be prioritized to mitigate adverse social impacts while promoting economic resilience. To this end, the Vietnamese government should adopt a dual strategy:

Firstly, implementing stringent monetary policies aimed at maintaining inflation within a target range of 2-4%, as recommended by Barro (1995), to ensure price stability and protect the purchasing power of consumers.

Secondly, to address unemployment challenges exacerbated by external shocks, comprehensive labor market reforms should focus on vocational training and support for small and medium enterprises (SMEs). Key initiatives include: (i) developing market-driven vocational programs in high-demand sectors such as advanced technology, healthcare, and green energy, combining classroom instruction with on-the-job training; (ii) implementing digital skills training programs for unemployed workers, emphasizing areas like data analysis, digital marketing, and software development; (iii) establishing regional job centers that provide comprehensive services, including skills assessment, career counseling, job matching, and retraining programs. Moreover, fostering innovation and technological advancement is imperative for increasing productivity and sustaining economic growth. As noted by Khan and Senhadji (2001), maintaining low inflation is conducive to creating an environment where investment in technology can flourish, thereby driving long-term economic expansion. Specifically: (i) creating innovation hubs and technology parks to foster collaboration between research institutions and businesses; (ii) investing in digital infrastructure and smart manufacturing capabilities.

Finally, strengthening international trade partnerships will not only diversify Vietnam's export markets but also enhance its resilience against global economic fluctuations. Specifically: (i) streamline customs procedures through digital transformation; (ii) negotiating new free trade agreements while maximizing benefits from existing ones.

The analysis of Vietnam's economic trends from 2004 to 2023 reveals significant fluctuations in inflation, unemployment, and economic growth. Notably, inflation spiked during 2008 and 2011 but has been more effectively controlled in recent years. The unemployment rate has generally decreased, yet it remains volatile due to global economic factors and the impacts of the Covid-19 pandemic. Economic growth was robust prior to the pandemic, followed by a swift recovery, highlighting the resilience of Vietnam's economy. These trends emphasize the critical need for maintaining flexible and effective macroeconomic policies. Controlling inflation is essential not only for protecting consumer purchasing power but also for fostering a stable business environment that encourages investment and sustainable growth. The rapid recovery post-pandemic further illustrates Vietnam's adaptability in facing external shocks. In conclusion, ongoing monitoring of factors affecting inflation and unemployment is crucial. The government should prioritize strategies that ensure sustainable growth while addressing employment stability. Economic stability must be viewed as a long-term objective, serving as a foundation for national development amid increasing globalization challenges.

Limitations: (i) The study relies on macroeconomic data from the World Bank, which, while comprehensive, may not capture all nuances of Vietnam's economic landscape. For instance, regional disparities, informal sector activities, and the impact of policy changes at the micro-level are not fully reflected in the data; (ii) The research primarily employs descriptive statistics and visual analysis. While these methods provide valuable insights into trends and relationships, they do not establish causality or quantify the strength of relationships between variables. More advanced econometric techniques could offer deeper insights into the causal mechanisms at play.

Future research directions: (i) Future research should incorporate more rigorous econometric modeling techniques such as Vector Autoregression (VAR), Granger causality tests, and Impulse Response Functions (IRFs) to establish causal relationships between economic growth, inflation, and unemployment; (ii) Comparing Vietnam's economic performance with other countries facing similar challenges could offer valuable lessons and policy recommendations.

By addressing these limitations and exploring these future research directions, the study can provide a more comprehensive understanding of the complex interplay between economic growth, inflation, and unemployment in Vietnam, offering policymakers more nuanced and actionable insights.

REFERENCES

Abdul-Khaliq, S., Soufan, T., & Shihab, R. A. (2014). The relationship between unemployment and economic growth rate in Arab Country. *Journal of Economics and Sustainable Development*, 5(9), 56-59.

Andrés, J., & Hernando, I. (1999). Does inflation harm economic growth? Evidence from the OECD. In *The costs and benefits of price stability* (pp. 315-348). University of Chicago Press.

Barro, R. J. (1995). *Inflation and economic growth*.

Friedman, M. (1963). *Inflation: Causes and consequences*. Asia Publishing House (New York).

Friedman, M. (1995). *The role of Monetary Policy* (pp. 215-231). Macmillan Education UK.

Hjazeen, H., Seraj, M., & Ozdeser, H. (2021). The nexus between the economic growth and unemployment in Jordan. *Future Business Journal*, 7(1), 42.

Keynes, J. M. (1936). *The General Theory of Employment interest and Money*. Macmillan and Company.

Khan, M. S., & Ssnhadji, A. S. (2001). Threshold effects in the relationship between inflation and growth. *IMF Staff papers*, 48(1), 1-21.

Khuong, H. N. (2023). Impact of Macroeconomic Indicators and Resources on Vietnam's Economic Growth. In *International Conference on "Global Changes and Sustainable Development in Asian Emerging Market Economies* (pp. 223-233). Cham: Springer Nature Switzerland.

Okun, A. M. (1962). *Potential GNP: Its Measurement and Significance*. Cowles Foundation for Research in Economics at Yale University.

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.

Pigou, A. C. (2013). *Theory of Unemployment*. Routledge.

Samuelson, P.A. (1948). *Economics: The Original 1948*. 1st edition. Publisher: McGraw-Hill Education.

Sinha, J. K. (2022). Impact of Unemployment and Inflation on the Economic Growth of India. *Journal of Development Economics & Finance*, 3(2), 397-417.

Umoru, D., & Anyiwe, M. A. (2013). Dynamics of inflation and unemployment in a vector error correction model. *Research on Humanities and Social Sciences*, 3(3).