

DELMAR INTERNATIONAL

FOR UNDERADUATE AND POSTGRADUATE
PROFESSIONAL STUDIES COLLEGE LTD



Professional Research

*The impact of inflation and profitability in global markets on
the financial performance of economic units in developing
countries*

analytical study

The Researcher

Hazem Mousa Alshourafa

Supervisor

DR.Mohamed Aledwi

Committee for research and advanced professional studies

Dedication

*To the soul of my mother, who always wished to see me reach the
highest ranks of knowledge*

To the soul of my father, who devoted his life for our sake

To all who read this research and benefit from it

*This work is an ongoing charity (Sadaqah Jariyah) for the souls of my
mother and father*

May Allah have mercy on them

Introduction.

The world today is witnessing an unprecedented level of economic and financial interconnectedness. Local markets no longer operate in isolation from global markets; rather, economic developments in one country can rapidly impact the rest of the world through trade, investment, and financial market channels. Within this framework, inflation plays a pivotal role as one of the most critical economic indicators characterized by a high capacity for transmission across countries, particularly in the context of financial globalization and market liberalization.

The increasing interdependence among economies has given rise to the phenomenon of "transnational inflation," whereby inflationary pressures are transmitted from major economies—such as the United States or the European Union—to the rest of the world. This directly affects production costs, commodity prices, purchasing power, and the profitability of economic units in other countries. This phenomenon is particularly evident in emerging markets, which are often more vulnerable to global price fluctuations, commodity price volatility, and shifts in global interest rates.

In this context, the profitability of local firms no longer depends solely on internal factors such as productivity or financial management, but is also

influenced by global inflationary dynamics. This adds complexity to the economic environment in which these firms operate. Here, the importance of technical and time-series economic analysis emerges as essential tools for monitoring and understanding patterns of global price changes and their implications for local markets.

Understanding the nature of the relationship between global inflation and the profitability of local economic units not only contributes to developing academic insights into macroeconomic dynamics, but also holds significant practical value for policymakers, investors, and financial managers seeking to enhance their performance and insulate their institutions against transnational inflationary risks.

The study Problem.

First: In light of increasing levels of economic and financial globalization, national markets are no longer insulated from global economic developments. Inflation, as a macroeconomic monetary phenomenon, is no longer confined to local frameworks; rather, it is transmitted through multiple channels including international trade, financial markets, and global supply chains, thereby directly and indirectly affecting the economic performance of local firms. This profound shift in the global economic environment has created new challenges for economic units in emerging markets, which have become increasingly exposed to inflationary pressures of external origin that affect their profitability and financial stability.

Second: In this context, a fundamental problem emerges, namely the limited theoretical and empirical understanding of how inflation is transmitted across borders and its specific impact on the profitability of local firms. Despite the abundance of studies that have examined the relationship between inflation and corporate profitability from a traditional domestic perspective, few have addressed this relationship within a transnational framework, employing analytical tools capable of capturing time dynamics (cross-border analysis) and technical fluctuations in global financial and economic markets.

Third. Given that much economic data tends to be non-stationary and volatile, the use of technical analysis tools such as Elliott Wave Theory and Japanese candlesticks may help analyze and interpret movements in inflation and profitability more accurately. This can be combined with time-series econometric models that may provide future forecasts.

Therefore, we find it necessary to answer the following question:

Can an integrated analytical model be developed to monitor, analyze, and interpret the mechanisms of transmitting inflationary pressures from global markets to local markets, measure their impact on the profitability of economic units, and test the effectiveness of technical and time-series economic analysis tools in predicting this phenomenon and supporting financial and managerial decision-making in an environment characterized by volatility and uncertainty?

The importance of studying:

First: The significance of this study lies in its attempt to integrate technical analysis with time-series economic analysis within an academic research framework that links two pivotal variables in microeconomics and finance:

- *The inflation rate as one of the most prominent macroeconomic indicators.*
- *The profitability of economic units as a measure of financial performance and operational efficiency of firms.*

These variables are often examined separately or within traditional conventional frameworks, without employing modern tools such as technical analysis instruments, including Japanese candlesticks and Elliott Wave Theory, or contemporary time-series models such as ARIMA-GARCH.

What is novel in this study is that it seeks to synthesize two different analytical approaches (technical and time-series economic analysis) in analyzing economic and financial variables, which represents a qualitative addition to the academic and research field.

Second: In a global economic environment characterized by:

- *Rising inflation rates following financial crises and financial market volatility*
- *Instability of monetary policies in many countries*

Understanding the impact of inflation on corporate profitability has become more urgent than ever before.

This study provides an in-depth analytical perspective that helps address these challenges through:

- *Analyzing the causal relationship between the two variables*
- *Revealing the role of technical and time-series tools in forecasting future performance*

Objectives of the study:

This study aims to achieve the following objectives:

- *Analyze the nature of the relationship between global inflation and the profitability of economic units in emerging markets.*
- *Explore the channels of cross-border transmission of inflationary pressures and their impact on the financial performance of economic units.*
- *Determine the extent of variation in the impact of global inflation across different economic sectors (industrial, service, and financial) within the local market.*
- *Conduct time-series analysis of inflation rates and profitability during the study period using technical analysis indicators such as Moving Averages and Trend Lines.*
- *Employ Candlestick Patterns to identify potential reversal signals between inflation and profitability.*
- *Analyze economic cycles through the use of Elliott Waves to understand the nature of cyclical changes and their impact on financial performance.*

- *Apply stationarity tests such as the Augmented Dickey-Fuller (ADF) test to verify the characteristics of time series.*
- *Construct econometric models such as VAR (Vector Autoregression) and ARIMA (Autoregressive Integrated Moving Average) to examine the causal effects between inflation and corporate profitability.*
- *Utilize Granger Causality tests to determine the direction of influence between the two variables.*

Study hypotheses and questions.

Research Hypotheses

- *There is a statistically significant relationship between global inflation and the profitability of economic units in emerging markets.*
- *Technical and time-series economic analysis tools contribute to predicting the effects of cross-border inflation on corporate profitability.*

Based on this main hypothesis, which forms the foundation of the research, we have the following sub-hypotheses, from which questions will also emerge that this research will address:

- *Rising inflation rates in the American and European economies lead to a notable decline in the profitability of local firms in emerging markets.*
- *Fluctuations in commodity prices (oil, gold) are directly associated with changes in local profitability levels.*
- *The response of local economic sectors' profitability to global inflation varies according to the nature of economic activity.*

- *Candlestick patterns provide early signals of the transmission of inflationary pressures across markets.*
- *Elliott Waves help interpret the temporal cycles of inflation transmission and its effects on corporate performance.*
- *Time-series models (ARIMA - VAR) possess high explanatory power in analyzing the dynamics of the relationship between global inflation and local profitability.*

Research Questions

Based on the research problem and objectives, this study attempts to answer the following questions:

- *To what extent does global inflation affect the profitability of economic units in emerging markets?*
- *Through which channels are inflationary pressures transmitted from global markets to local markets?*
- *Does the response of different economic sectors to changes in global inflation rates vary?*
- *How effective is the use of technical analysis tools in anticipating inflationary shifts across markets?*

- *To what degree can time-series models be relied upon to explain the relationship between global inflation and local corporate profitability?*
- *What is the optimal analytical model for studying the transmission of cross-border inflation effects on profitability?*

Study Approach.

Temporal Scope: 2019 to 2024

This period was selected due to the significant changes it witnessed in inflation rates both globally and locally.

Spatial Scope: Arab Republic of Egypt

Study Variables

Independent Variable.

Global Inflation

This represents changes in global price levels, particularly inflation in major economies (such as the United States, the European Union, and China), or inflation related to commodity prices (oil, gold, food). It measures the rate of change in the general price level during a specific period.

- *Indicator Used: Consumer Price Index (CPI)*
- *Measurement Method: Annual or monthly percentage change in the index*

Dependent Variable.

Profitability of Economic Units

Indicators Used.

- *Net Profit Margin (NPM)*

- *Return on Assets (ROA)*
- *Return on Equity (ROE)*

Study plan:

Chapter One: General Theoretical and Economic Background of Inflation and Its Transmission Across Markets

Section One: Theoretical and Conceptual Framework

- *The Concept and Types of Inflation*
- *Causes and Effects of Inflation*
- *Global Inflation Spillover*

First: The Impact of Cross-Border Inflation on the Local Economy Second: The Relationship Between Inflation and Corporate Profitability

Section Two: Economic Theories Related to the Relationship Between Inflation, Interest Rates, and Economic Growth

First: The Fisher Effect Second: Demand-Pull Inflation Third: Cost-Push Inflation

Chapter Two: Technical and Time-Series Framework for Analyzing Inflation and Economic Unit Profitability

Section One: Technical Analysis Tools

First: Introduction to Technical Analysis Second: Japanese Candlesticks and Their Role in Price Movement Forecasting Third: Elliott Waves and

the Interpretation of Economic Cycles Fourth. Technical Indicators Related to Inflation Changes

Section Two. Time–Series Analysis Tools

First. Economic Time Series Second. ARIMA and VAR Models Third. Causality and Cointegration Tests Fourth. Application of These Tools to Analyze the Relationship Between Inflation and Profitability

Chapter Three. Applied Analytical Study on Global Markets and Their Implications for Emerging Markets

Section One. Applied Study Methodology

First. Study Design Second. Data Sources Third. Analytical Tools Used Fourth. Population and Sample Fifth. Conceptual Study Model

Section Two. Statistical Analysis and Relationship Measurement

First. Hypothesis Testing Second. Results Analysis Third. Interpretation of the Relationship Between Inflation and Profitability Using Technical and Time–Series Tools Fourth. The Impact of Global Inflation on Specific Emerging Markets

Chapter Four. Findings, Recommendations, and Future Proposals

Section One. Results and Conclusions

First: Key Findings at the Theoretical and Applied Levels Second: Extent of Hypothesis Verification Third: Interpretation of Economic Phenomena from Technical and Time-Series Perspectives

Section Two: Recommendations and Proposals

First: Recommendations for Policymakers and Monetary Policy Authorities Second: Recommendations for Corporations and Investors Third: Proposals for Future Research

Conclusion.

The study has demonstrated that cross-border inflation represents a major challenge for developing economies, as it reshapes the business environment through multiple channels including exchange rates, capital flows, and global commodity prices.

However, reliance on economic analysis alone—despite its importance in explaining macroeconomic phenomena—may be insufficient to provide a comprehensive picture of market and corporate performance amid these rapid changes.

Here emerges the importance of integrating technical analysis with economic analysis, as each offers a different yet complementary perspective:

- ***Quantitative/Econometric Analysis** enables researchers and investors to understand the fundamental causes behind inflation and the transmission of its effects on profitability indicators, cash flows, and exchange rates.*
- ***Technical Analysis**, on the other hand, reveals the actual reflections of these factors in financial markets through price trends, support and resistance levels, momentum indicators such as RSI and MACD, and chart patterns such as double tops or triangles.*

Integrating these two approaches creates a more comprehensive and flexible framework, as it allows for:

- 1. **Early Prediction.** Technical analysis can capture signals of market trend reversals before their full implications appear in economic indicators.*
- 2. **Risk Assessment.** Combining technical trends with econometric model results helps decision-makers and investors identify the magnitude and timing of risks more accurately.*
- 3. **Enhanced Investment Decisions.** Integration enables the development of more effective strategies in emerging markets, where uncertainty is higher and volatility is more severe.*

Accordingly, this study's recommendation emphasizes the necessity of adopting a dual analytical framework in evaluating performance in emerging markets. Researchers and investors should not rely solely on quantitative economic analysis, nor on technical tools alone, but rather work to integrate both in a manner that reflects the complex reality of global inflation's impact. This integration not only enhances the accuracy of economic forecasts but also improves the efficiency of financial and investment policies, providing corporations and investors with better

capacity to hedge against risks and capitalize on opportunities in a volatile global environment.

Results:

- ✓ *First Hypothesis: "Global inflation has a tangible impact on the performance of emerging markets." **Verified.** The analyses demonstrated that global inflation was indirectly reflected through exchange rates and the cost of imports.*
- ✓ *Second Hypothesis: "Rising global commodity prices enhance the profitability of oil companies in emerging markets." **Partially verified.** AMOC benefited from rising oil prices; however, the appreciation of the US dollar against the Egyptian pound diminished these gains.*
- ✓ *Third Hypothesis: "Global inflationary crises are transmitted to emerging markets in a magnified manner through exchange rates." **Clearly verified.** The depreciation of the Egyptian pound was the most influential factor affecting financial results and the stock's market price.*

Recommendations:

First: Recommendations for Policymakers and Monetary Policy Authorities

1. Hedging Against Exchange Rate Volatility:

- *Establish a derivatives market (futures & options) in Egypt to enable companies to hedge against US dollar risks.*
- *Hypothetical example: Had AMOC hedged against dollar fluctuations in 2023, it could have mitigated the impact of the pound's depreciation on its costs.*

2. Diversification of Energy Sources and Trade:

- *Reduce dependence on imports from a single market, thereby limiting inflation transmission through the global trade channel.*

3. Coordinated Monetary Policy:

- *Link interest rate hikes to broader economic stabilization plans to prevent the exit of short-term investments.*

Second: Recommendations for Corporations and Investors

1. For Companies Such as AMOC:

- *Utilize hedging instruments against oil prices and exchange rates.*
- *Diversify export markets to reduce risks associated with domestic demand.*
- *Invest in renewable energy to create alternative revenue streams.*

2. For Investors.

- *Use technical analysis to identify optimal entry and exit points during periods of volatility.*
- *Integrate economic analysis (Global CPI + Brent + FX) with technical analysis to make informed decisions.*
- *Practical example: An investor who purchased AMOC stock in early 2022 at a price support level (coinciding with rising oil prices) would have realized gains before exchange rate pressures began in 2023.*

Third. Proposals for Future Research

1. Sectoral Comparison.

- *Study the impact of global inflation on the agricultural or real estate sector in Egypt to identify differences.*

2. Geographic Comparison.

- *Compare Egypt with other developing countries (Nigeria, Brazil, Turkey) to identify similarities and differences in inflation transmission.*

3. Predictive Models.

- *Develop models using artificial intelligence (machine learning) to predict the impact of global inflation on local stock markets.*

4. Longitudinal Studies.

- *Analyze long-term periods (e.g., 15–20 years) to examine how the impact of global inflation evolves across different crises (the 2008 financial crisis, the 2020 COVID-19 pandemic, the 2022 Russia–Ukraine war).*

The reviewer:

References

- <https://apnews.com/article/2744cb224074a59b909060e798d9bbf6>. (n.d.). Retrieved from Egypt raises fuel prices amid surging inflation and falling currency.
- : *International Inflation Spillovers: The Role of Different Shocks*. (n.d.).
- Alexandria Mineral Oils Company (AMOC). (2015–2024). Annual Reports. Egyptian Exchange. (n.d.).
- Annual report 2023-2024 Alexandria Mineral Oils Company. (n.d.).
- Blanchard, O., & Johnson, D.R. (2012). *Macroeconomics*. Pearson. (n.d.).
- Box, G. & Jenkins, G. (1976) – *Time Series Analysis: Forecasting and Control*. (n.d.).
- Central Bank of Egypt. (2023). *Annual Economic Report*. Cairo: CBE. (n.d.).
- Chatfield, C. (2003). *The Analysis of Time Series: An Introduction*. Chapman & Hall/CRC. (n.d.).
- Dr. Raghda Saied Ahmed Mohammed, 2023-Can Exchange Rates and Interest Rates Affect Macroeconomic Indicators (inflation, unemployment & economic growth)? (n.d.).
- Egypt raises fuel prices amid surging inflation and falling currency*. (n.d.).
- Egypt raises fuel prices amid surging inflation and falling currency*. (n.d.).
- Elliott Wave Principle Applied to the Stock Market* - Robert Prechter. (n.d.).
- Elliott Wave Principle: Key to Market Behavior* - Robert Prechter - A.J. Frost. (n.d.).
- Elliott Wave Principle: Key to Market Behavior* – A.J. Frost & Robert R. Prechter Jr. (n.d.).
- Enders, W. (2014) – *Applied Econometric Time Series*. Wiley. (n.d.).
- Engle, R.F., & Granger, C.W.J. (1987). Co-integration and Error Correction: Representation, Estimation, and Testing. *Econometrica*. (n.d.).
- Erb, C. & Harvey, C. (2013) – The Golden Dilemma. *Financial Analysts Journal*. (n.d.).
- Estrella, A. & Mishkin, F. (1996) – The Yield Curve as a Predictor of U.S. Recessions. Federal Reserve Bank. (n.d.).
- Fama, E. & Gibbons, M. (1984) – A Comparison of Inflation Forecasts. *Journal of Monetary Economics*. (n.d.).
- Fisher, I. (1930). *The Theory of Interest*. Macmillan. (n.d.).
- Frost, A. J. & Prechter, R. R. (2005) – *Elliott Wave Principle: Key to Market Behavior*. (n.d.).
- Granger, C.W.J. (1969). *Investigating Causal Relations by Econometric Models and Cross-Spectral Methods*. (n.d.).

Gujarati, D. N. (2020). *Econometrics by Example*. Palgrave Macmillan. (n.d.).

Hamilton, J. (1983) – Oil and the Macroeconomy since World War II. *Journal of Political Economy*. (n.d.).

Hamilton, J. (1994) – *Time Series Analysis*. Princeton University Press. (n.d.).

Hamilton, J.D. (1994). *Time Series Analysis*. Princeton University Press. (n.d.).

<http://www.hotcandlestick.com/candles.htm>. (n.d.).

<https://amoceg.com/reports/media/annual>. (n.d.).

<https://fred.stlouisfed.org/series/EGYPCPIPCHPT>. (2024).

https://fred.stlouisfed.org/series/POILBREUSDM?utm_source=chatgpt.com#. (2024).

https://www.exchangerates.org.uk/USD-EGP-spot-exchange-rates-history-2025.html?utm_source=chatgpt.com. (2024).

Investing.com – XAU/USD Historical Data. (n.d.).

Investing.com (Markets section). (n.d.).

Johansen, S. (1991). Estimation and Hypothesis Testing of Cointegration Vectors in Gaussian Vector Autoregressive Models. *Econometrica*. (n.d.).

Joseph Schumpeter (1939) – *Business Cycles: A Theoretical, Historical, and Statistical Analysis*. (n.d.).

Lütkepohl, H. (2005). *New Introduction to Multiple Time Series Analysis*. Springer. (n.d.).

Murphy, J. (1999) – *Technical Analysis of the Financial Markets*. New York Institute of Finance. (n.d.).

Murphy, J. J. (1999). *Technical Analysis of the Financial Markets*. New York Institute of Finance. (n.d.).

New Introduction to Multiple Time Series Analysis. Springer ARIMA ◊VAR ◊Cointegration ◊VECM. (n.d.).

Prechter, R. (2002) – *Conquer the Crash: You Can Survive and Prosper in a Deflationary Depression*. (n.d.).

Samuelson, P.A., & Nordhaus, W.D. (2010). *Economics*. McGraw-Hill. (n.d.).

Sims, C.A. (1980). *Macroeconomics and Reality*. *Econometrica* VAR Models. (n.d.).

Technical Analysis of the Financial Markets - John Murphy. (n.d.).

The Global Transmission of Inflation Uncertainty. (n.d.).

The Long Wave Theory The Kondratiev Cycle A Generational Interpretation - Brian Berry. (n.d.).

Time Series Analysis and Its Applications: With R Examples (4th Edition). Springer Shumway, R.H., & Stoffer, D.S. (2017). (n.d.).

Time Series Analysis: Forecasting and Control (5th Edition). Box, G.E.P., Jenkins, G.M., Reinsel, G.C., & Ljung, G.M. (2015). (n.d.).

Unveiling the Impact of Inflation A Study of Technical Analysis as a Strategic Tool for Financial Market Navigation Daniel Jaksties & Martin Lindblad . (n.d.).

World Bank. (2022). Global Economic Prospects: Inflation Transmission and Emerging Economies. World Bank Publications. (n.d.).

. (n.d.). كتاب : الدكتور عبد المجيد المهيلمي – التحليل الفني للأسواق المالية

Contents.