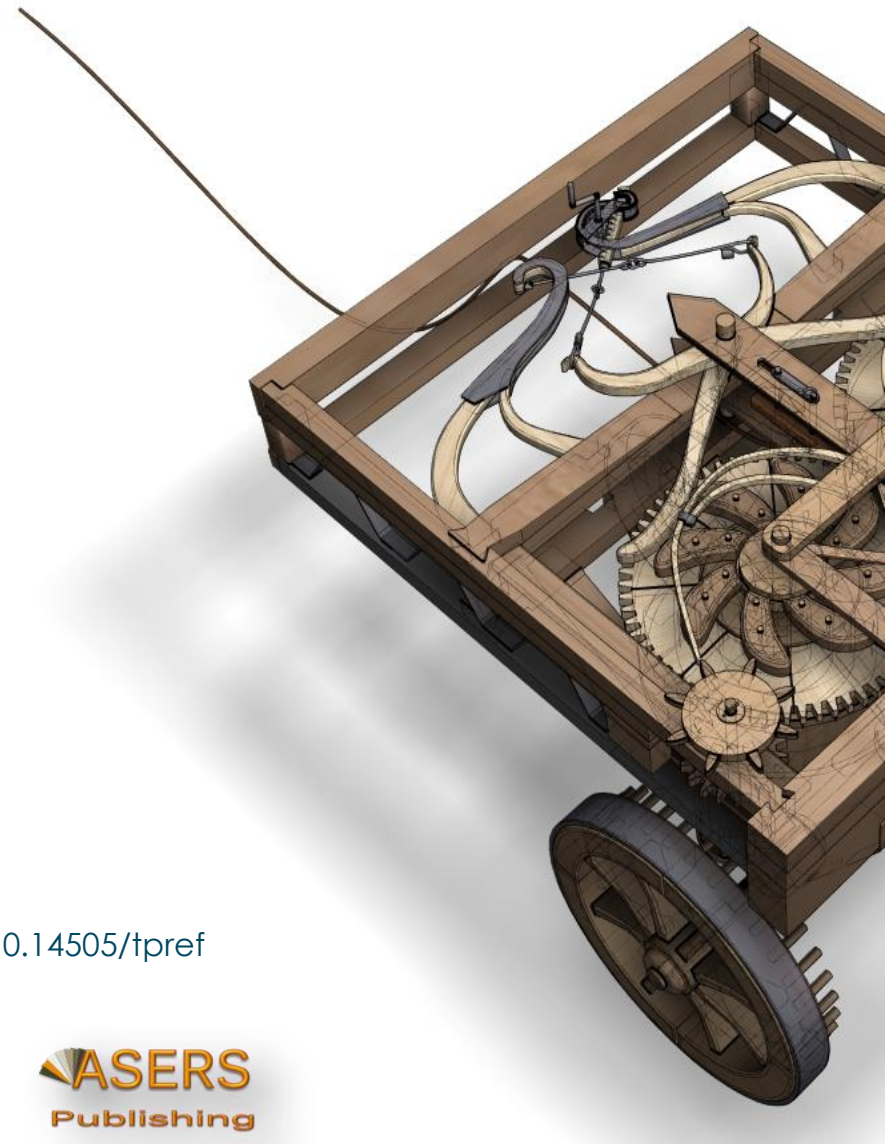
Theoretical and Practical Research in Economic Fields



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Call for Papers
Fall Issue
Theoretical and Practical Research in Economic Fields

Many economists today are concerned by the proliferation of journals and the concomitant labyrinth of research to be conquered in order to reach the specific information they require. To combat this tendency, **Theoretical and Practical Research in Economic Fields** has been conceived and designed outside the realm of the traditional economics journal. It consists of concise communications that provide a means of rapid and efficient dissemination of new results, models, and methods in all fields of economic research.

Theoretical and Practical Research in Economic Fields publishes original articles in all branches of economics – theoretical and practical, abstract, and applied, providing wide-ranging coverage across the subject area.

Journal promotes research that aim at the unification of the theoretical-quantitative and the empirical-quantitative approach to economic problems and that are penetrated by constructive and rigorous thinking. It explores a unique range of topics from the frontier of theoretical developments in many new and important areas, to research on current and applied economic problems, to methodologically innovative, theoretical, and applied studies in economics. The interaction between practical work and economic policy is an important feature of the journal.

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The Impact of Macro-Economic Indicators on Corporate Investment Decisions. A Financial Management Approach

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Abstract: This study investigates the impact of key macroeconomic indicators - including inflation, interest rates, and economic growth - on corporate investment decisions across three major industries: technology, automotive, and energy. Utilizing quarterly data from 2019 to 2024 and applying econometric techniques such as Vector Autoregression (VAR) and Impulse Response Functions (IRFs), the analysis explores how these macroeconomic shocks influence investment behavior. The results reveal that economic growth above the 3% threshold significantly boosts investment in the automotive sector. Conversely, a 1% increase in interest rates leads to a sharp short-term decline in investment within the technology sector, highlighting its sensitivity to monetary tightening. Additionally, the energy sector exhibits a marked reduction in investment levels when inflation exceeds 5%, reflecting the adverse effects of rising input costs and economic uncertainty. These findings underscore the critical role of macroeconomic conditions in shaping investment strategies, particularly in capital-intensive industries.

Keywords: sectoral investment response; macroeconomic shocks; monetary policy; inflation sensitivity.

JEL Classification: E31; E27; E52; C15.

Introduction

Corporate investment decisions are central to both firm growth and broader economic expansion. Macroeconomic volatility - characterized by fluctuations in inflation, interest rates, and GDP growth - plays a crucial role in shaping these decisions. Early seminal research established that financing constraints significantly affect investment behavior (Fazzari, Hubbard, & Petersen, 1988; Abbasi *et al.* 2024). In addition, Keynes's (1936) accelerator

principle suggests that shifts in aggregate demand can trigger disproportionate changes in investment, while Oh *et al.* (2007) q theory highlights that firms tend to invest more when their market valuations exceed replacement costs.

More recent studies have reinforced these theoretical perspectives by documenting the sensitivity of corporate investment to changes in the economic environment. For instance, Campello, Graham, and Harvey (2010) demonstrated that during financial crises, firms experiencing tighter financing conditions drastically reduce their investment levels. Similarly, Bernanke and Gertler (1988) emphasized that increased borrowing costs in adverse macroeconomic conditions can constrain corporate investment.

Empirical evidence using panel data methods further supports these theoretical insights. Love (2003) found that financial development is positively correlated with dynamic investment behavior, indicating that firms operating in more stable financial environments are better able to invest. Steigum (1983) also underscored the role of capital costs in determining investment levels, while Dib (2010) illustrated how credit market imperfections amplify the cyclical nature of investment.

Building on these foundations, recent research has examined how macroeconomic factors influence investment decisions across different industries. For example, Farooq, Ahmed, and Khan (2020) used a generalized method of moments approach to show that higher inflation and interest rates are associated with reduced investment, whereas robust GDP growth tends to stimulate investment activity. Moreover, Khan *et al.* (2018) provided evidence that financial development can mitigate the adverse effects of financing constraints on corporate investment.

This study addresses this gap by examining how key macroeconomic indicators - inflation, interest rates, and GDP growth - affect corporate investment decisions in three critical sectors: technology, automotive, and energy. Using quarterly data from 2019 to 2024 for 100 publicly listed firms and applying advanced econometric methods such as Vector Autoregression (VAR) and Impulse Response Functions (IRFs), the research explores sectoral heterogeneity in response to macroeconomic shocks.

The novelty of this study lies in its disaggregated, sector-based approach, which allows for more precise insights into how macroeconomic conditions influence investment across different industries. Its significance rests in providing actionable knowledge for corporate financial managers, investors, and policymakers aiming to formulate adaptive investment strategies in the face of economic volatility.

The primary objective of this study is to analyze the impact of macroeconomic indicators on corporate investment decisions across selected industries and to identify sectoral variations in their responsiveness to these indicators.

1. Research Background

The literature on corporate investment decisions has evolved from early theoretical models to sophisticated empirical analyses that incorporate both firm-level and macroeconomic determinants. Early seminal works laid the theoretical foundation: Keynes's (1936) accelerator principle posits that changes in aggregate demand drive investment, while Steigum (1983) emphasized the role of capital costs in determining investment behavior. Oh et al (2007) further advanced this discourse by introducing the concept of Oh *et al.* suggesting that firms invest more when their market valuations exceed the replacement costs of their capital.

Empirical investigations soon followed. Fazzari, Hubbard, and Petersen (1988) provided pivotal evidence that investment is highly sensitive to internal cash flows, highlighting the critical role of financing constraints in investment decisions. Bernanke and Gertler (1988) expanded on this by demonstrating that credit market imperfections - manifested in higher borrowing costs - can significantly depress investment, particularly during economic downturns. Complementing these findings, Dib (2010) illustrated how cyclical fluctuations in credit conditions can amplify the variability of investment.

Subsequent research applied advanced econometric techniques to further unpack these relationships. Love (2003) employed a panel VAR framework to capture the dynamic interactions influencing investment behavior, underscoring the importance of financial development. Campello, Graham, and Harvey (2010) documented that financial constraints become especially binding during periods of crisis, leading to more pronounced reductions in investment. More recently, Farooq, Ahmed, and Khan (2020) utilized a generalized method of moments (GMM) approach to investigate the impact of macroeconomic factors on corporate investment decisions across 12 Asian countries, reinforcing the significance of macroeconomic stability. Additionally, Khan *et al.* (2018) demonstrated that robust financial development can mitigate the adverse effects of financing constraints on investment.

Broader geopolitical and policy contexts have also been shown to influence investment climates. Ghalamkari (2024a) discusses how deviations from classical strategic frameworks in China's Middle East policy - particularly the Tehran-Riyadh duality - affect regional stability and, consequently, economic decision-making. Similarly, Ghalamkari (2024b) explores Russia's regional realignment and its implications for economic cooperation with Iran. In the context of Turkey, Omidi and Ghalamkari (2019) emphasize the role of development-oriented foreign policy in facilitating economic growth between 2002 and 2017, further reinforcing the need to view investment decisions through both economic and geopolitical lenses.

In addition to these foundational works, more recent studies have expanded the scope of investigation into areas closely linked to corporate investment decisions. For instance, Valipour *et al.* (2023) designed a model of credit risk management within the network of after-sales service companies, highlighting how the integration of financial components and meta-innovative approaches can enhance risk management - a increasingly pertinent factor in investment decision-making. Similarly, Kazemian and Sanusi (2015) examined the relationship between earnings management and ownership structure in Iran, comparing firms with institutional versus individual investors, which adds depth to our understanding of how internal financial strategies influence investment outcomes. Taherinia *et al.* (2024) further contributed by exploring capital structure adjustment speed and expected returns, emphasizing the moderating role of information asymmetry in investment decisions. Complementing these insights, Valipour (2011) investigated the impact of privatization on earnings management in developing countries, providing an important perspective on the effects of policy changes on corporate financial behavior.

Moreover, the application of advanced analytical and computational techniques has broadened the empirical toolkit available for studying investment decisions. Recent contributions by Zareeihemat *et al.* (2025) and Salehipour *et al.* (2025) have demonstrated the use of reinforcement learning-based feature selection approaches in forecasting stock market volatility, thereby offering novel methods that can enhance predictive accuracy in investment environments. Furthermore, Wang and Zareeihemat (2025) introduced a novel Q-learning and mutual learning-based artificial bee colony algorithm for multi-channel advertising budget allocation, linking strategic marketing decisions to broader corporate investment strategies. Additionally, Valipour (2024) investigated the relationship between the quality of management's expected profit and equity, shedding light on internal financial expectations as a determinant of firm value and potential investment behavior.

Despite these advances, several gaps remain in literature. Many studies have predominantly focused on firm-specific determinants or have utilized aggregate data, often overlooking heterogeneity across different industries. Furthermore, much of the research is region-specific, limiting the generalizability of the findings to other economic contexts. These limitations point to the need for studies that compare the impact of macroeconomic indicators on corporate investment across various sectors and more recent periods.

The present research addresses these gaps by examining a sample of 100 companies from the technology, automotive, and energy sectors over the period 2019–2024. By employing a Vector Auto Regression (VAR) model, this study aims to capture the dynamic interrelationships between macroeconomic indicators and sector-specific investment behaviors, thus positioning the current research as a significant extension of the existing literature.

2. Experimental Methods

This study employed a quantitative approach using time-series data collected from reputable financial databases, including the International Monetary Fund (IMF), Yahoo Finance, and Bloomberg. To assess the dynamic relationship between macroeconomic variables (interest rates, inflation, and economic growth) and corporate investment decisions, we applied the Vector Auto Regression (VAR) model. The VAR model is particularly suited for capturing the interdependencies among multiple time-series variables, allowing each variable to be treated as endogenous and modeled as a function of its lags and those of other variables in the system.

Before implementing the VAR model, stationarity tests (Augmented Dickey-Fuller test) were conducted to ensure the suitability of the time-series data. All variables were transformed into their stationary forms, and the optimal lag length was determined using the Akaike Information Criterion (AIC). The Granger causality test was also used to examine the directionality of relationships between macroeconomic indicators and investment levels. Furthermore, impulse response functions (IRFs) and variance decomposition analyses were employed to assess the magnitude and timing of responses in investment behavior following shocks to macroeconomic variables.

3. Research Results

To assess the influence of macroeconomic indicators on corporate investment decisions, a Vector Auto Regression (VAR) model was applied to quarterly data spanning from 2019 to 2024. The analysis encompasses three major industries: technology, automotive, and energy. Before estimation, all series were tested for stationarity using the Augmented Dickey-Fuller test, and optimal lag selection was conducted via the Akaike Information Criterion (AIC). This section presents the VAR model results, followed by impulse response functions (IRFs) and graphical illustrations that highlight sector-specific investment sensitivities.

Table 1. VAR Model Coefficient Estimates by Sector

Variable	Technology Sector	Automotive Sector	Energy Sector
Interest Rate (%)	-0.024 (p = 0.03)	-0.010 (p = 0.15)	-0.015 (p = 0.08)
GDP Growth (%)	0.005 (p = 0.25)	0.076 (p = 0.01)	0.003 (p = 0.30)
Inflation Rate (%)	0.002 (p = 0.60)	-0.005 (p = 0.50)	-0.041 (p = 0.04)

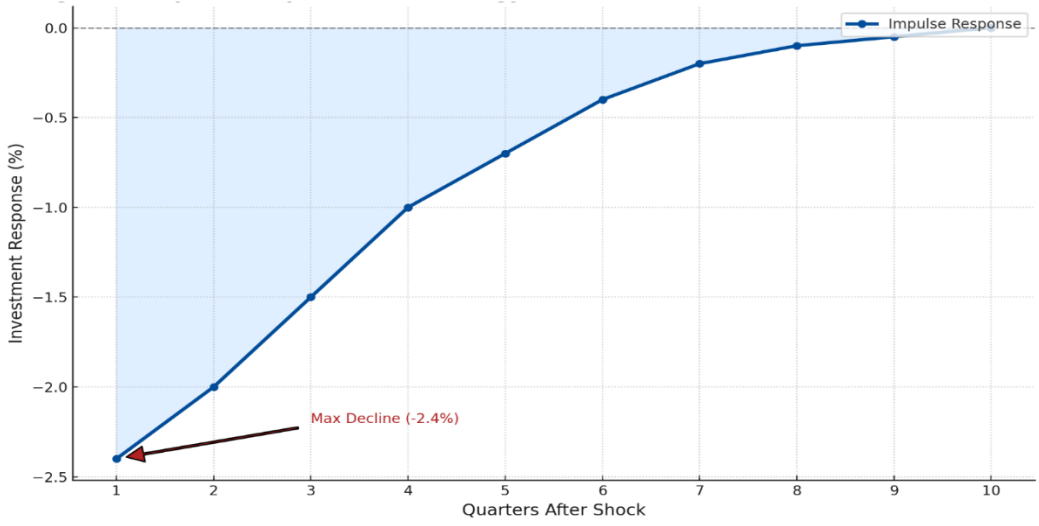
As shown in Table 1, the technology sector demonstrates a statistically significant negative response to interest rate hikes, where a 1% increase leads to a 2.4% decline in investment (p = 0.03). For the automotive sector, investment exhibits a strong positive correlation with GDP growth; a 1% increase in GDP leads to a 7.6% rise in investment (p = 0.01). Meanwhile, the energy sector is negatively affected by inflation, specifically, inflation rates exceeding 5% are associated with a 4.1% reduction in new investments (p = 0.04).

3.1 Impulse Response Analysis

Impulse response functions (IRFs) were generated to further examine the dynamic effects of shocks. Figure 1 presents the IRF for the technology sector, showing how investment responds over a 10-quarter horizon following a 1% shock in interest rates.

According to Figure 1, a 1% increase in interest rates leads to an immediate and sharp decline in technology sector investment. The strongest negative response - approximately -2.4% - occurs in the first quarter following the shock. This adverse effect gradually diminishes over time, with the impact approaching zero by the tenth quarter. This pattern reveals that technological investments are highly sensitive to monetary policy in the short term, while the long-term effects are mitigated as the sector adjusts.

Figure 1. Impulse Response Function for Technology Sector Investment to a 1% Interest Rate Shock



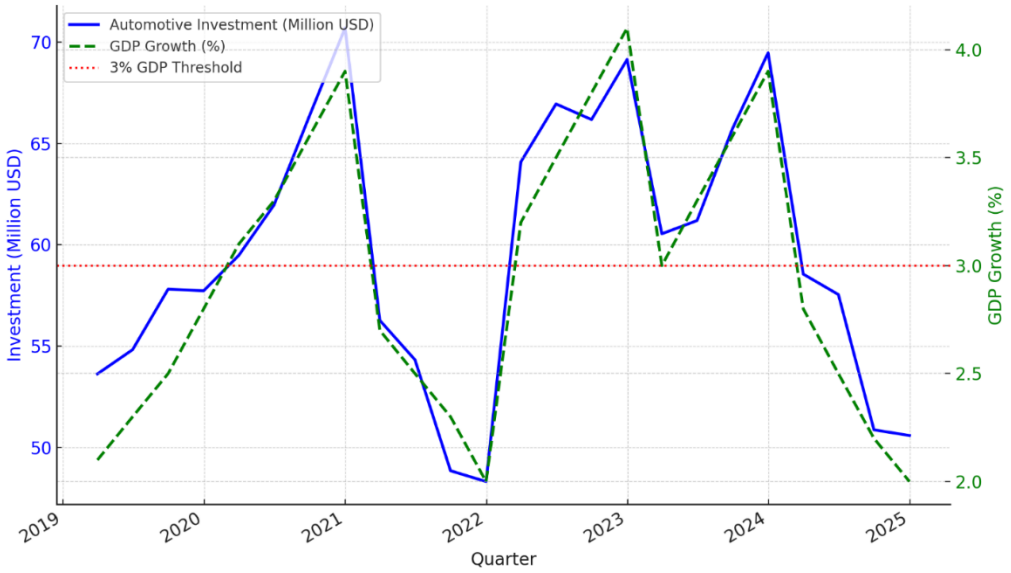
3.2 Time Series and Comparative Analysis

Automotive Sector

Figure 2 displays a time-series line chart that compares quarterly investment levels in the automotive sector with quarterly GDP growth rates. The chart clearly shows that when GDP growth exceeds the 3% threshold, investment increases significantly, consistent with the VAR estimation.

According to Figure 2, automotive sector investment exhibits a strong positive correlation with GDP growth. During periods when economic growth exceeds 3%, investment levels in the automotive industry significantly rise. This co-movement suggests that expansionary economic conditions lead to improved demand expectations, higher capacity utilization, and increased capital expenditures in the automotive sector.

Figure 2. Quarterly Automotive Sector Investment vs. GDP Growth (2019–2024)

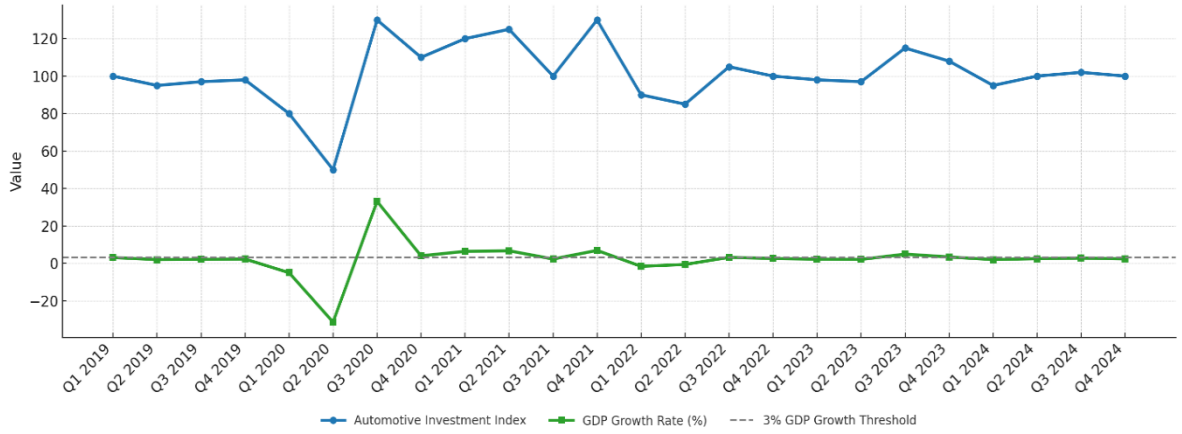


Energy Sector

Figure 3 is a bar chart that depicts the sensitivity of investment in the energy sector to varying inflation rates. The chart categorizes inflation into ranges, and it is evident that when inflation exceeds 5%, investment falls by approximately 4.1%.

According to Figure 3, investment in the energy sector displays a clear negative sensitivity to higher inflation rates. While inflation levels below 3% show negligible impact, inflation above 5% correlates with a decline in investment of approximately 4.1%. This trend indicates that rising input and operational costs associated with high inflation act as a deterrent to capital spending within the energy industry.

Figure 3. Bar Chart of Energy Sector Investment Sensitivity to Inflation Rates



4. Discussions

The findings of this study offer important insights into the sector-specific effects of macroeconomic shocks on investment behavior. The results highlight the heterogeneous sensitivity of the technology, automotive, and energy sectors to fluctuations in interest rates, GDP growth, and inflation, respectively. These differentiated responses have crucial implications for policymakers and investors aiming to navigate a volatile economic landscape.

The impulse response analysis revealed that the technology sector is particularly vulnerable to monetary tightening, with investment dropping sharply in the immediate aftermath of a 1% interest rate shock. This aligns with earlier research suggesting that capital-intensive and innovation-driven sectors are more interest-rate sensitive due to their reliance on external financing (Hauzenberger *et al.* 2025; Gulen & Ion, 2016; Ahmadirad, 2024a). The gradual moderation of the effect over subsequent quarters suggests that while monetary shocks have strong short-term implications, adaptive expectations and market adjustments help dampen long-term impacts.

In contrast, the automotive sector exhibits a strong pro-cyclicality concerning GDP growth. As observed in Figure 2, investment in this sector expands significantly during economic upturns. This pattern supports findings by Bloom (2009), who emphasized that investment in durable goods industries is closely tied to output expectations and consumer demand cycles. Given the automotive sector's dependence on consumer confidence and discretionary income, its responsiveness to economic growth is both expected and consistent with macroeconomic theory (Bernanke, Gertler, & Gilchrist, 1999; Salajeghe *et al.* 2012; Abdoh Tabrizi *et al.* 2013).

The energy sector, however, shows a markedly different profile. As seen in Figure 3, energy investment contracts significantly in response to rising inflation, particularly beyond the 5% threshold. This inverse relationship likely reflects the increased input and capital costs faced by firms operating under inflationary pressures, consistent with the cost-push theory of inflation. Empirical studies such as those by Fama and Schwert (1977) and Aghion *et al.* (2009) have shown that inflation distorts investment incentives by increasing uncertainty and reducing real returns, particularly in sectors with heavy operational and infrastructure-related expenditures like energy.

Taken together, these findings underscore the importance of tailored policy measures**.** A one-size-fits-all approach to macroeconomic management may lead to unintended consequences, especially in sectors that are highly interest rate or inflation-sensitive. For instance, aggressive rate hikes aimed at curbing inflation could disproportionately hinder innovation and technological progress if not carefully calibrated. Similarly, counter-cyclical fiscal policies might be more effective in stabilizing automotive investment during downturns.

In sum, the sectoral heterogeneity uncovered in this study highlights the complex interplay between macroeconomic variables and investment decisions. Future research may benefit from a deeper exploration of firm-level data to uncover how internal characteristics - such as leverage, R&D intensity, or export orientation - mediate the effects observed here.

Conclusions and Further Research

This study provides compelling evidence of the differentiated impact of macroeconomic shocks across key industrial sectors. The findings indicate that while the technology sector is highly sensitive to interest rate changes, the automotive sector responds predominantly to fluctuations in GDP growth, and the energy sector is particularly vulnerable to inflationary pressures. These sector-specific dynamics highlight the need for nuanced economic policies that consider the unique structural characteristics and financial dependencies of each sector. Understanding these variations is essential for designing effective monetary and fiscal strategies that foster investment stability and sustainable economic growth.

Credit Authorship Contribution Statement

Jamal Valipour: Methodology, Providing Survey, Formal Analysis.
Zahra Najafabadipour: Methodology, Providing the Survey, Data Curation.
Samira Mohamadi: Validation, Formal Analysis, Writing.
Pourya Zareeihemat: Writing and Editing, Visualization.
Hero Isavi: Conceptualization, Project administration, Writing and Supervision

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Declaration of Use of Generative AI and AI-Assisted Technologies

The authors declare that they have not used generative AI and AI-assisted technologies during the preparation of this work.

References

[1] Abbasi, S., Mazaheri, S., Talaie, H. R., & Ghasemi, P. (2024). Designing green logistics networks under carbon tax policy: post-COVID condition. *Results in Engineering*, *23*, 102830. DOI:https://doi.org/10.1016/j.rineng.2024.102830

[2] Abdoh Tabrizi, H., Asadi, B., & Mazaheri, S. (2013). Study of security selection and market timing abilities in mutual funds in Iranian capital market. *Financial Research Journal*, *15*(2): 247-268. DOI:https://doi.org/10.22059/JFR.2013.51080

[3] Aghion, P., Bacchetta, P., Rancière, R., & Rogoff, K. (2009). Exchange rate volatility and productivity growth: The role of financial development. *Journal of Monetary Economics*, 56(4): 494–513. DOI:https://doi.org/10.1016/j.jmoneco.2009.03.015

[4] Ahmadirad, Z. (2024). The Beneficial Role of Silicon Valley's Technological Innovations and Venture Capital in Strengthening Global Financial Markets. *International journal of Modern Achievement in Science, Engineering and Technology*, *1*(3): 9-17. DOI: https://doi.org/10.63053/ijset.40

[5] Bernanke, B. S., & Gertler, M. (1988). Agency costs, net worth, and business fluctuations. *The American Economic Review, 79*(1): 14–31. Available at: https://econpapers.repec.org/RePEc:aea:aecrev:v:79:y:1989:i:1:p:14-31

[6] Bernanke, B., Gertler, M., & Gilchrist, S. (1999). The financial accelerator in a quantitative business cycle framework. *Handbook of Macroeconomics*, 1: 1341–1393. DOI: 10.1016/S1574-0048(99)10034-X

[7] Bloom, N. (2009). The impact of uncertainty shocks. *Econometrica*, 77(3): 623–685. DOI:https://doi.org/10.3982/ECTA6248

[8] Campello, M., Graham, J. R., & Harvey, C. R. (2010). The real effects of financial constraints: Evidence from a financial crisis. *Journal of Financial Economics, 97*(3): 470–487. DOI:https://doi.org/10.1016/j.jfineco.2010.02.009

[9] Dib, A. (2010). *Banks, credit market frictions, and business cycles* (No. 2010-24). Bank of Canada working paper. DOI: https://doi:10.34989/swp-2010-24

[10] Fama, E. F., & Schwert, G. W. (1977). Asset returns and inflation. *Journal of Financial Economics*, 5(2): 115–146. DOI: https://doi.org/10.1016/0304-405X(77)90014-9

[11] Farooq, U., Ahmed, J., & Khan, S. (2020). Do the macroeconomic factors influence the firm's investment decisions? A generalized method of moments (GMM) approach. *International Journal of Finance & Economics, 26*(1): 790–801. DOI: https://doi.org/10.1002/ijfe.1820

[12] Fazzari, S. M., Hubbard, R. G., & Petersen, B. C. (1988). Financing constraints and corporate investment. *Brookings Papers on Economic Activity, 1988*(1): 141–206. DOI: https://DOI 10.3386/w238

[13] Ghalamkari, A. (2024a). Russia and the world system: New regionalism and relations with Iran. *Russian Law Journal*, *12*(1). Available at: https://www.russianlawjournal.org/index.php/journal/article/view/4036

[14] Ghalamkari, A. (2024b). The end of patience: Deviation from the classical context and Janusian construction of China's Middle East policy (Tehran-Riyadh duality). *Russian Law Journal*, *12*(1): 1749-1773. Available at: https://www.russianlawjournal.org/index.php/journal/article/view/4045

[15] Gulen, H., & Ion, M. (2016). Policy uncertainty and corporate investment. *Review of Financial Studies*, 29(3): 523–564. DOI: https://doi.org/10.1093/rfs/hhv050

[16] Hauzenberger, N., Huber, F., Klieber, K., & Marcellino, M. (2025). Machines learn the macroeconomic effects of financial shocks. *Economics Letters*, *250*, 112260. DOI:https://doi.org/10.1016/j.econlet.2025.112260

[17] Kazemian, S., & Sanusi, Z. M. (2015). Earnings management and ownership structure. *Procedia Economics and Finance*, *31*: 618-624. DOI: https://doi.org/10.1016/S2212-5671(15)01149-1

[18] Keynes, J. M. (1937). *The general theory of employment, interest, and money*. Palgrave Macmillan. DOI:https://doi.org/10.2307/1882087

[19] Khan, M. K., He, Y., Kaleem, A., Akram, U., & Hussain, Z. (2018). Remedial role of financial development in corporate investment amid financing constraints and agency costs. *Journal of Business Economics and Management, 19:* 176–191. DOI: https://doi.org/10.3846/16111699.2017.1422797

[20] Love, I. (2003). Financial development and dynamic investment behavior: Evidence from panel VAR. *Journal of Money, Credit and Banking, 35*(5): 1166–1197. DOI: https://doi.org/10.1016/j.qref.2005.11.007

[21] Oh, G., Kim, S., & Eom, C. (2007). Market efficiency in foreign exchange markets. *Physica A: Statistical Mechanics and its Applications*, *382*(1): 209-212. DOI: https://doi.org/10.1016/j.physa.2007.02.032

[22] Omidi, A., & Ghalamkari, A. (2019). Analysis of the Relationship between Foreign Policy and Economic Development: Comparison of Khatami, Ahmadinejad, and Rouhani Governments (1376-1396). *The Islamic Revolution Approach*, *13*(46): 72-47. Available at: https://www.rahyaftjournal.ir/article_89629.html?lang=en

[23] Omidi, A., & Ghalamkari, A. (2019). The role of development-oriented foreign policy on Turkey's economic progress (2002-2017). *International Political Economy Studies*, *2*(1): 301-332. DOI:https://10.22126/IPES.2019.4016.1118

[24] Salajeghe, S., Montazer, M., Nourollahi, N., Valipour, J., & Mohammadi, M. (2012). Earnings management and companies' ownership structure in Iran (A Comparison of Earnings Management between companies with institutional investors and companies with individual investors). *Journal of Basic and Applied Scientific Research*, *2*(2): 1728-1734. Available at: https://scholar.google.com/scholar?cluster=4848148751649491734&hl=en&oi=scholarr

[25] Salehipour, M., Najafabadipour, Z., Mohammadi, S., & Shohani, M. (2025). Analysis of the key drivers affecting the development of small and medium sports businesses. *SPORT TK-Revista EuroAmericana de Ciencias del Deporte*, *14:* 3-3. DOI: https://doi.org/10.6018/sportk.644351

[26] Steigum Jr, E. (1983). A financial theory of investment behavior. *Econometrica: Journal of the Econometric Society*, 637-645. DOI: https://doi.org/10.2307/1912151

[27] Taherinia, M., Matin, M., Valipour, J., Abdolahi, K., Shouryabi, P., & Barzegar, M. M. (2024). Capital Structure Adjustment Speed and Expected Returns: Examination of Information Asymmetry as a Moderating Role. arXiv preprint arXiv:2403.06035. DOI: https://doi.org/10.48550/arXiv.2403.06035

[28] Valipour, J. (2011). The impact of privatization on earnings management in a developing country like Iran. *African Journal of Business Management*, *5*(13), 5179. DOI: https://doi.org/10.5897/AJBM10.1401

[29] Valipour, J. (2024). Investigating the relationship between the quality of management's expected profit and equity. *Russian Law Journal*, 12(1). Available at: https://www.russianlawjournal.org/index.php/journal/article/view/3994

[30] Valipour, J., Sasani, F., Saberi, M., Dustmohamadloo, H., & Jafari, S. (2023). Designing a model of credit risk management in the network of agents of after-sales service companies Using the financial components of after-sales services and meta-innovative algorithms. *Revista Electrónica de Investigación en Ciencias Económicas*, *11*(22): 208-231. DOI: https://doi.org/10.5377/reice.v11i22.17363

[31] Wang, B., & Zareeihemat, P. (2025). Multi-channel advertising budget allocation: A novel method using Q-learning and mutual learning-based artificial bee colony. *Expert Systems with Applications*, 126649. DOI:https://doi.org/10.1016/j.eswa.2025.126649

[32] Zareeihemat, P., Mohamadi, S., Valipour, J., & Moravvej, S. V. (2025). Forecasting stock market volatility using housing market indicators: A reinforcement learning-based feature selection approach. *IEEE Access*. DOI: https://doi.org/10.1109/ACCESS.2025.3554224

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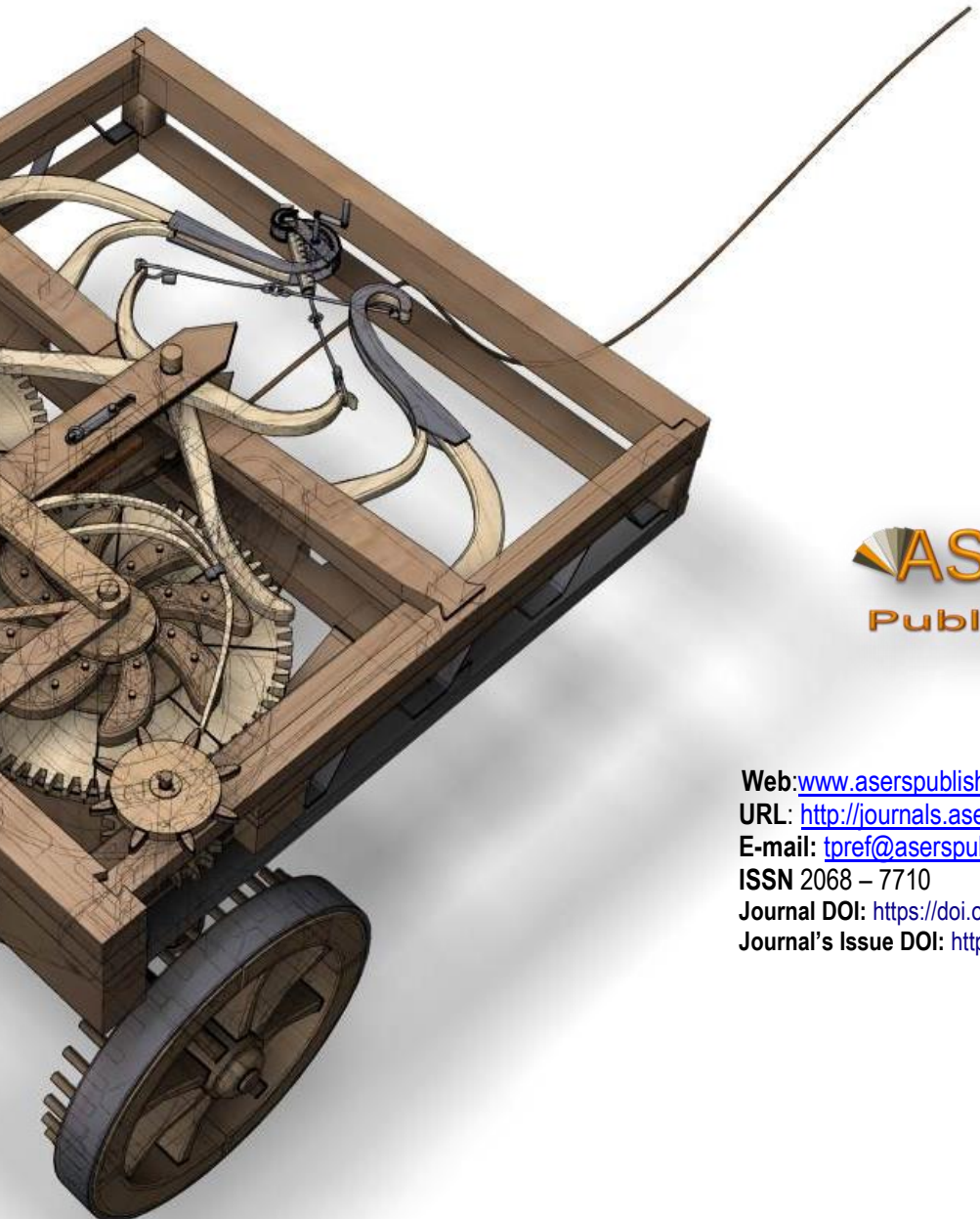

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