

Investigating the Relationship between Real GDP Growth and Key Macroeconomic Indicators across Global Economies (2019–2024)

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DOI: <https://doi.org/10.51244/IJRSI.2025.120700078>

Received: 04 July 2025; Accepted: 08 July 2025; Published: 02 August 2025

ABSTRACT

It is now more crucial than ever to comprehend the factors that contribute to long-term growth and economic recovery in the wake of the COVID-19 pandemic. Across three global economy categories—advanced, emerging, and Low-Income Developing Countries (LIDCs)—this study examines the correlation between real GDP growth and five key macroeconomic indicators: investment, inflation, export volume, government spending, and total external debt. The study uses correlation analysis to find patterns of association between each indicator and real GDP growth within the designated country groups using cross-country macroeconomic data from the International Monetary Fund (IMF) for the 2019–2024 period.

The study is supported by a comparative framework and previous empirical findings in growth theory, especially those that highlight trade openness, capital accumulation, inflation control, and fiscal restraint. A clear, albeit non-causal, indicator of the direction and strength of linear relationships is provided by the study's statistical tool, Pearson's correlation coefficient (r). Microsoft Excel was used to process and analyze the data. IMF classifications were used to group countries, and each group was evaluated independently to account for structural and developmental variations in macroeconomic responses.

Important conclusions highlight the crucial role of international trade and integration by showing that export volume has the strongest and most reliable positive correlation with GDP growth, especially in advanced economies ($r = +0.98$). In emerging economies, investment exhibits the strongest correlation ($r = +0.65$), underscoring its importance in capital formation and industrial growth during phases of transitional development. In contrast, Low-Income Developing Countries (LIDCs) economies exhibit negative correlations between inflation and external debt, with external debt displaying a large negative relationship ($r = -0.69$), indicating vulnerabilities associated with debt overhang and inadequate monetary control.

It's interesting to note that government spending and GDP growth are weakly or negatively correlated across all three economic groups. This suggests that public spending may not effectively translate into productive outcomes unless it is managed transparently and efficiently. The comparative character of the analysis shows that although some indicators, such as investment and exports, generally contribute to growth, their effects differ according to economic maturity, governance, and institutional quality.

The reviewed literature supports these trends. Studies by Barro, Fischer, Sala-i-Martin, and others empirically support the observed relationships. For example, the beneficial impact of investment is consistent with Solow's model, whereas Fischer's findings are consistent with the detrimental effects of inflation in developing nations. The robust GDP-export relationship in developed economies supports the export-led growth model.

The study concludes that macroeconomic policies need to be customized for the developmental stage of each nation. Particularly in developing and emerging economies, policymakers need to concentrate on keeping inflation under control, carefully controlling debt levels, and allocating public funds to high-impact areas like infrastructure and human capital. Facilitating investment and promoting exports continue to be key components of sustainable growth in all economies.

For scholars, economists, and policymakers looking to create robust and situation-specific economic policies, this study provides an empirical snapshot of macroeconomic interactions during a time of global crisis and recovery.

INTRODUCTION

One of the most important indicators of a country's development, prosperity, and progress is its rate of economic growth. It affects a nation's capacity to create jobs, offer social services, lessen poverty, and engage in international trade. Real GDP growth is generally regarded as the most complete indicator among the many metrics used to evaluate economic performance. Real GDP accounts for inflation and shows how an economy's output has increased over time. Particularly in a world shaped by recurring global shocks and shifting development dynamics, an understanding of the macroeconomic drivers of GDP growth is still essential to economic research and policy planning.

GDP growth is known to be influenced by several macroeconomic indicators, both separately and in combination. Investment promotes innovation, increases production capacity, and aids in capital formation. Depending on its rate and volatility, inflation can either boost demand or jeopardize economic stability. The trade balance, foreign reserves, and production incentives are all directly impacted by export volume. Government spending is a reflection of fiscal policy choices and contributes to long-term development, infrastructure improvement, and aggregate demand stimulation. Although external debt is frequently used to fund public investments, it can become a burden if improperly managed, compromising the stability and credibility of the economy. However, the impact of these indicators varies by nation. Development level, institutional quality, and economic structure all have a big impact on how these factors interact with GDP growth.

Global occurrences like the COVID-19 pandemic have made it even more important to reevaluate these connections. Global economies experienced previously unheard-of disruptions in public spending, trade, investment flows, and inflationary trends between 2019 and 2024. Regional and income-level differences in recovery efforts resulted in a range of macroeconomic outcomes. Therefore, examining the 2019–2024 timeframe provides a rare chance to comprehend the behaviour of important macroeconomic indicators during both crises and recovery.

This study examines how real GDP growth relates to five key macroeconomic indicators in advanced, emerging, and LIDC economies worldwide: investment, inflation, export volume, government spending, and external debt. The study uses Pearson correlation analysis to evaluate the direction and strength of the relationships between each independent variable and GDP growth using macroeconomic data from the International Monetary Fund (IMF). Although correlation does not necessarily indicate causation, it provides a clear picture of statistical relationships and is especially helpful in identifying important variables for additional research and policy consideration.

To draw attention to the differences between development levels, a comparative method is used. The study investigates whether export-driven growth is more prevalent in emerging markets or whether a macroeconomic factor, such as government spending, has a greater effect on GDP growth in advanced economies as opposed to Low-Income Developing Countries. When it comes to adapting economic strategies to local conditions, these comparisons are useful.

The ultimate goal of this study is to empirically inform researchers and policymakers about the macroeconomic variables that are most closely linked to growth in various country categories. Targeted, fact-based policy decisions that take into account both the changing global environment and national economic priorities can be informed by these insights.

LITERATURE REVIEW

There is broad agreement among academics that macroeconomic factors such as government spending, debt, trade, inflation, and investment have a significant impact on GDP growth. Important empirical studies are highlighted in this review of the literature and linked to the current comparative analysis framework.

Underpinned by the Solow growth model's emphasis on capital accumulation, *Barro and Sala-i-Martin (2004)* showed that investment, particularly in human and physical capital, forms a primary growth driver. Higher investment rates are associated with faster convergence to steady-state GDP levels and higher productivity, according to their cross-country analysis. This realization confirms the high correlations between investment and GDP in emerging economies, where capital deepening is still a crucial developmental tactic.

While moderate inflation and growth can coexist, *Fischer (1993)* looked at non-linear inflation growth dynamics and discovered that high and volatile inflation consistently degrades economic performance in developing nations. His findings underline the significance of price stability in emerging and developing economies, which are characterized by a negative correlation between GDP and inflation.

Sala-i-Martin (1997) offered compelling empirical evidence in favour of the export-led growth theory. His thorough regression analysis demonstrated that, particularly in advanced economies where trade integration and technology spillovers are most noticeable, export openness is associated with higher GDP growth. This directly supports our conclusion that advanced nations have nearly perfect export-GDP correlations.

In a panel of 39 developing nations, *Ahamed (2021)* examined the effects of public and private investment. He discovered that public investment, which is not always government consumption, has a significant positive impact on growth, particularly when it is allocated to public capital and infrastructure. This implies that inefficient spending or allocation to non-productive sectors may be the cause of the weak or negative correlations between government spending and GDP that we have seen. A debt overhang effect was observed by *Poirson, Ricci, and Pattillo (2002)*, who examined data from 93 developing nations and found that slower growth was linked to high external debt ratios (above about 35–40% of GDP). Our strong negative correlation between external debt and GDP in developing economies is consistent with their findings of debt-induced investment crowding out.

Divergent macroeconomic trends in the post-COVID era are highlighted by the IMF World Economic Outlook (2024): advanced economies continue to gain from trade and investment, while developing nations are confronted with inflationary and debt pressures. This demonstrates that the factors influencing GDP growth vary significantly across economic levels, which validates the logic of our segmented analysis.

Objectives

- To determine the relationship between real GDP growth and each of the five factors: exports, government spending, inflation, investment, and external debt.

This goal aims to determine the relationship between real GDP growth and each of the chosen macroeconomic variables. The study uses Pearson's correlation coefficient to assess the direction and strength of the relationships between exports, government spending, inflation, investment levels, and total external debt. Knowing these correlations can help determine whether some factors consistently support or impede economic growth. The export-led growth hypothesis, for instance, may be supported by a strong positive correlation between exports and GDP growth, whereas a negative correlation with inflation may indicate macroeconomic instability. The empirical analysis of the study is based on this goal, which makes it possible to discern which variables are more strongly associated with economic performance over the 2019–2024 timeframe.

- To compare the differences in these relationships between Low-Income Developing countries (LIDCs), emerging, and advanced nations between 2019 and 2024.

A comparative approach that takes into consideration the structural, institutional, and developmental diversity of global economies is emphasized by this goal. The study examines how the influence of macroeconomic indicators on GDP growth differs across development stages by classifying countries into three groups based on IMF classifications: advanced, emerging, and Low-Income Developing Countries (LIDCs). For example, because of infrastructure requirements, investment may be more important in emerging markets, whereas inflation may be more harmful in developing nations with less robust monetary policies. Drawing context-specific insights and realizing that economic strategies that work for one group might not work as well for another requires the use of this comparative lens.

- To assist policymakers in comprehending the elements that promote or inhibit economic growth in various economic types.

Converting empirical results into practical policy recommendations is the ultimate goal. The study intends to provide evidence-based insights to policymakers by determining which macroeconomic factors are most closely linked to growth in each country group. This entails identifying factors that promote growth, like investment or export performance, and warning against factors that undermine it, like inflation or excessive debt. To promote sustainable growth and address structural weaknesses, the goal is to assist in the design of development strategies that are specific to each group's economic realities. In the end, this goal closes the gap between statistical analysis and realistic financial planning.

METHODOLOGY

This study examines the relationship between real GDP growth and five macroeconomic indicators across global economies—total external debt, government spending, export volume, inflation, and investment—between 2019 and 2024 using a quantitative, descriptive, and comparative methodology. The approach is based on statistical analysis using secondary data and aims to offer a clear, fact-based understanding of how these economic variables interact in diverse developmental contexts. The study's comparative approach aids in determining which indicators have greater sway over economies at various stages of development.

Source of Data and Period

The study's secondary data came from the International Monetary Fund's (IMF) World Economic Outlook Database, a reputable and well-known source for cross-country economic statistics. Consistency in variable definitions and collection methods is ensured by the inclusion of comprehensive and standardized economic data across nations and years in this database. To capture the pre-pandemic, pandemic, and post-pandemic recovery phases, the 2019–2024 time frame was specifically chosen. For examining macroeconomic performance and resilience, these six years represent a tumultuous but incredibly illuminating time frame. The dataset includes real GDP growth and annual data on the five macroeconomic indicators for a wide range of nations.

Only those nations for which complete data for every variable were available for the full 2019–2024 period are included in the study. To guarantee the accuracy of the statistical analysis, entries that were missing or inconsistent were eliminated. This method prevents results from being skewed by incomplete datasets by striking a balance between sample size and data integrity.

Criteria for Country Grouping

To take into consideration structural variations and differing degrees of economic development, the nations were categorized into three groups based on the IMF's official classification:

Developed economies, such as the US, Japan, and Germany, are distinguished by their robust institutions, diverse industrial and service sectors, high per capita income, and active participation in international trade.

Brazil, South Africa, and India are examples of emerging market economies. Despite their rapid industrialization and modernization, these countries continue to struggle with issues of governance, income inequality, and external vulnerability.

Ethiopia, Nepal, and Haiti are examples of low-income economies. These nations typically have inadequate infrastructure, few industrial bases, a reliance on exports from the primary sector, and a high susceptibility to economic shocks.

The study's comparative framework depends on this grouping. It makes it possible to interpret the results in a meaningful way by demonstrating how, depending on institutional and structural factors, the same macroeconomic variable may correlate negatively with GDP in one group but positively with GDP in another.

Selection of Variables

Six variables—five independent and one dependent—are included in the analysis because they have been shown to have an impact on macroeconomic performance and are significant in economic literature:

The dependent variable, real GDP growth (%), shows how a nation's inflation-adjusted output changes annually. It is the main indicator of economic performance.

Changes in consumer prices as determined by the CPI are reflected in the inflation rate (%). It shows an economy's dynamics of purchasing power and macroeconomic stability.

As a percentage of GDP, gross capital formation serves as a stand-in for both foreign and domestic fixed asset investment, which is essential to long-term economic productivity.

Export Volume (in USD): Indicates how open and competitive the nation is on the global stage. It has a significant impact on industrial output and foreign exchange earnings.

Government Spending (as a percentage of GDP): Shows how much money the government spends on public services, infrastructure upkeep, and economic stimulation.

The burden of financial obligations to foreign lenders is represented by the total external debt (USD or as a percentage of GDP). Excessive debt can impede long-term growth, even though it may be useful in funding development.

These factors were chosen because they are frequently mentioned in growth theories like Keynesian economics, the Solow Growth Model, and numerous empirical studies conducted by the IMF, Barro, and Fischer.

Analytical Tool and Technique

The data was gathered, arranged, and processed using Microsoft Excel for the statistical analysis. The degree and direction of the linear relationship between each independent variable and real GDP growth were evaluated using the Pearson correlation coefficient (r). The range of Pearson's r is:

+1: A perfect positive correlation

0: No linear association

-1: A perfect negative correlation

For each of the three country groups, a different correlation matrix was created. The study avoids broad interpretations and identifies distinct patterns associated with economic development levels by separating correlations within each group.

Correlation offers important first-level insight into potential relationships between economic variables, even though it does not imply causation. With regression or time-series modeling, these findings can direct future investigations. Additionally, scatterplots were utilized to identify any possible outliers or anomalies in the dataset and to visually interpret relationships.

LIMITATIONS OF THE METHODOLOGY

Although correlation analysis is straightforward to understand, it has several methodological drawbacks.

Strong correlations do not prove causation.

- Multicollinearity and indirect effects: The interplay between independent variables, such as how inflation influences investment, is not taken into consideration.

- Lag effect exclusion: Because the model assumes contemporaneous relationships, it might not account for delayed effects (such as debt's long-term effects on growth).
- Lack of confounding variable control: Demographics, political stability, and institutional quality are not taken into account.
- Linear focus: Nonlinear or threshold effects are not taken into account, such as when inflation rises above 10% and causes a significant drop in GDP.
- Despite these drawbacks, Pearson correlation is suitable for exploratory and comparative analysis. It establishes the groundwork for additional econometric modelling in subsequent studies.

Despite these drawbacks, Pearson correlation is suitable for exploratory and comparative analysis. It establishes the groundwork for additional econometric modelling in subsequent studies.

Moral Points to Remember

Since no human subjects were used in the study, no formal ethical clearance was required because it only used publicly available secondary data from an official international source. Every source, particularly the IMF World Economic Outlook Database, has been appropriately referenced. Academic transparency, accuracy, and objectivity were taken into consideration when handling, processing, and presenting the data. During the analysis, no bias or data manipulation was applied.

RESULTS AND DISCUSSION

Review of Related Work

The macroeconomic factors that influence GDP growth in different economies have been the subject of much research over the years. While more recent empirical studies emphasize the roles of government policy, trade openness, inflation, and debt management, Solow's (1956) neoclassical growth model holds that labor and capital investment are the fundamental drivers of economic growth.

High inflation rates are negatively correlated with economic growth, particularly in developing nations where monetary instability frequently results in lower investment confidence, according to a 1991 study by Barro. Similar to this, Fischer (1993) highlighted the necessity of macroeconomic stability as a precondition for sustainable growth, specifically inflation control and fiscal restraint.

Levine and Renelt (1992) demonstrated a robust positive relationship between GDP growth and gross capital formation in emerging economies about investment. Their findings lend credence to the idea that, particularly in economies with limited capital, higher investment rates result in greater infrastructure development and productivity.

Another well-known factor contributing to growth is exports. Export-oriented economies typically see faster GDP growth because of higher foreign exchange earnings and access to international markets, according to research by Balassa (1985) and Dollar & Kraay (2004). However, the results of government spending are not always consistent. Several empirical studies (e.g., Afonso & Furceri, 2010) indicate that excessive or misallocated spending may result in inefficiency and the accumulation of public debt, despite Keynesian theory's support for its role in stimulating demand.

Another important consideration is external debt. While moderate borrowing can aid in development, high debt levels can impede growth by creating a debt overhang and reducing fiscal space available for investments in productive sectors, according to studies like Pattillo et al. (2002).

Discussion of Findings

Our correlation-based analysis from 2019 to 2024 not only provides useful information across economic groups, but it also aligns with several established studies and theoretical frameworks:

- With a nearly perfect positive correlation between export volume and GDP growth ($r = 0.98$), advanced economies provided strong support for the export-led growth theory. This demonstrates that in nations

with developed manufacturing and service sectors, competitive global positioning, and sophisticated infrastructure and logistics, trade continues to be a key factor in output growth. Access to international markets and involvement in global value chains are very beneficial to these economies.

- Investment and GDP growth showed the strongest correlation in emerging economies ($r = 0.65$), which is consistent with Levine and Renelt's (1992) findings. This emphasizes how capital formation promotes long-term development and increases productive capacity. Emerging economies benefit greatly from increased investment flows because they are frequently in a transitional phase where their financial markets, industrial base, and infrastructure are expanding quickly.
- Perhaps as a result of more robust fiscal management frameworks and monetary institutions, the effects of debt and inflation were relatively less noticeable in advanced and emerging economies. Nonetheless, there was still a slight negative correlation between GDP growth and inflation, indicating that too much price volatility can reduce purchasing power and slow down economic growth. Conversely, there was only a weak or marginally positive correlation between government spending and its impact, suggesting that efficiency and allocation direction are more important factors than volume alone.
- The results were more alarming in developing economies. High debt loads can stifle investment and growth by limiting fiscal flexibility and creating repayment uncertainty, according to the debt overhang hypothesis, which is supported by a significant negative correlation ($r = -0.69$) between external debt and GDP growth. Additionally, inflation had a somewhat negative impact, indicating structural vulnerabilities like currency instability and import dependence as well as inadequate monetary control. Furthermore, there was no discernible positive impact of government spending, which may be the result of institutional weakness, corruption, and inefficiencies in implementing development-focused budgets.
- A recurrent theme emerged from the overall weak or negative correlation between government spending and GDP growth across all categories: public spending by itself does not ensure growth unless it is well-targeted, transparent, and productivity-enhancing. These results highlight how crucial it is to formulate policies contextually, with strategies catered to the economic stage, institutional quality, and governance capacity of each nation. A policy that works for one group might not work for another, or even work against them.

This emphasizes the necessity of context-sensitive and differentiated economic planning, in which the same macroeconomic levers are modified according to national circumstances rather than being applied consistently.

Result Analysis

Advanced Economies

Table 1: Correlation and Regression Summary – Advanced Economies (N = 6)

Indicator	Correlation with GDP (r)	Regression Coefficient	p-value	Significance
Investment	+0.52	-0.935	0.453	Not significant
Inflation	-0.18	-0.055	0.744	Not significant
Export Volume	+0.98	+0.532	0.010	Significant
Government Spending	-0.11	—	—	—
External Debt	-0.29	—	—	—

In developed economies, export volume is the highest and statistically most robust growth driver of GDP, with an almost perfect relationship ($r = +0.98$) and significantly high regression coefficient ($p = 0.010$). This reflects the significance of competitive exports, trade openness, and global value chains in leading output in developed economies like Germany, Japan, and South Korea. They are favoured with good institutions, technology superiorities, as well as robust external demand for high-tech products.

Investment likewise had a positive correlation ($r = +0.52$) but was insignificant in the regression analysis, indicating that its influence could be more indirect or lagged in developed economies. Inflation and government expenditure were weakly negatively correlated, probably an indication of good macroeconomic management, price stability, and prudence in fiscal policy. Developed economies are usually endowed with automatic stabilizers and firm monetary policies that keep these variables less volatile.

Emerging Economies

Table 2: Correlation and Regression Summary – Emerging Economies (N = 6)

Indicator	Correlation with GDP (r)	Regression Coefficient	p-value	Significance
Investment	+0.65	-0.177	0.900	Not significant
Inflation	-0.43	+0.140	0.783	Not significant
Export Volume	+0.71	+0.356	0.145	Not significant
Government Spending	-0.22	—	—	—
External Debt	-0.31	—	—	—

Emerging nations like India, Brazil, and Indonesia had the strongest positive correlation between GDP growth and investment ($r = +0.65$). This indicates the pivotal importance of infrastructure development, industrial growth, and private capital creation in emerging economies. Export volume also correlated strongly ($r = +0.71$) with growth, validating the export-led growth hypothesis, which argues that outward-oriented policies spur development.

Though in the regression model, none of the predictors were statistically significant, mostly as a result of the small sample size and multicollinearity. Trade was near significance level ($p = 0.145$) and could provide more useful insights at larger sample sizes or using panel methods. Inflation had a moderate negative correlation with GDP ($r = -0.43$), which suggests that volatile prices deter investor confidence, decline consumer buying capacity, and make policy planning difficult. Public expenditure and external debt had weak negative associations, indicating inefficiency or poor targeting in budgetary policies

Low-Income Developing Countries (LIDCs) Economies

Table 3: Correlation and Regression Summary – LIDCs (N = 6)

Indicator	Correlation with GDP (r)	Regression Coefficient	p-value	Significance
Investment	+0.39	-0.091	0.837	Not significant
Inflation	-0.56	-0.022	0.854	Not significant
Export Volume	+0.42	+0.435	0.053	Marginally significant
Government Spending	-0.34	—	—	—
External Debt	-0.69	—	—	—

In poor developing countries, external debt had the weakest negative correlation with GDP growth ($r = -0.69$). This is in line with the debt overhang hypothesis, with large debt service deterring productive investment and limiting government expenditure. Most LIDCs depend much on foreign aid or concessionary credit, which may not necessarily contribute to long-term economic efficiency. Export quantity was moderately related ($r = +0.42$) and borderline significant in regression ($p = 0.053$), pointing to its potential for growth if logistics and trade competitiveness are enhanced. Nations like Bangladesh or Ethiopia that have diversified and made investments in export infrastructure have yielded encouraging performance. Inflation once again showed a very strong negative correlation ($r = -0.56$), showing that monetary institutions with weakness and price volatility directly constrain economic stability. Government investment and expenditure were weakly correlated with GDP growth, perhaps because of problems such as misallocation, corruption, or foreign aid dependence in the budget.

Observations Across Groups

- Exports were the strongest growth predictor, highly significantly so in developed economies ($p = 0.010$) and for the LIDCs marginally significant ($p = 0.053$).
- Investment was the strongest in emerging economies ($r = +0.65$), although not statistically significant in regression.
- Inflation had stronger negative impacts in emerging and low-income economies, validating the value of monetary stability frameworks.

- Government expenditure reflected poor or inverse correlations with all groups, suggesting the necessity of more targeted, effective, and transparent fiscal policies.

CONCLUSION

Over the 2019–2024 timeline, this research analysed the relationship between real GDP growth and five macroeconomic indicators—inflation, investment, export volume, government expenditure, and external debt—among advanced, emerging, and low-income developing countries. Employing IMF statistics and Pearson correlation tests, the research aimed to identify how the effect of these variables varies with each nation's level of development. The results show that macroeconomic drivers affect growth in varying ways at different development levels. Export volume and investment were found to be the most stable positive GDP growth correlates. In developed economies like Germany, Japan, and South Korea, there was close to perfect correlation between export volume and growth ($r \approx +0.98$), which highlights the ongoing salience of global value chains, trade efficiency, and diversified export bases. These economies have used high rates of trade integration to drive recovery in the post-COVID period.

In India and Brazil, the emerging economies, investment was found to have the most positive correlation with GDP growth ($r \approx +0.65$). This is an indication of the significance of capital formation, infrastructure development, and industrialization in transition-economy stages. Foreign direct investment (FDI) was greatly enhanced in India by the introduction of Production-Linked Incentive (PLI) schemes and the improvement in the post-2020 business environment. Low-income developing countries (LIDCs) likewise showed positive but weaker linkages between investment/export volume and GDP growth. This indicates that in spite of comparable macroeconomic inputs, weak infrastructure, low trade competitiveness, and institutional weaknesses make them less effective. Governance frameworks must therefore be strengthened and absorptive capacity enhanced in these economies.

Inflation and external debt had robust negative correlations with GDP growth in developing and low-income economies. Argentina's more than 100% inflation in 2023, for instance, seriously undermined economic stability and investor confidence. Excessive debt servicing costs in most LIDCs narrowed fiscal space for productive expenditure. To tackle this, emerging economies ought to seek to cap inflation levels under 6%, as IMF-recommended thresholds, and implement credible inflation-targeting regimes. More advanced economies showed less severe negative correlations with debt and inflation, probably because they have more mature institutions, better fiscal buffers that can absorb macroeconomic shocks, and higher monetary credibility.

One notable and surprising observation was the negative or weak relationship between government expenditure and GDP growth among all groups. This implies that public spending has to be properly targeted, transparent, and growth-oriented. In most LIDCs, inefficiencies in budgeting, corruption, and misuse of funds water down the expected benefits of higher expenditure. Governments ought to focus on strategic areas like infrastructure, education, health, and innovation to ensure long-run returns. Ultimately, the study confirms that macroeconomic indicators do not influence growth uniformly across countries. A nuanced, data-driven, and context-specific policy mix is essential. Policymakers should adopt the following differentiated approaches:

Advanced economies should increase investments in R&D, green technologies, and trade facilitation to stay competitive and sustainable. Emerging economies must control inflation, attract strategic investment, and enhance infrastructure for inclusive growth. Low-income countries must prioritize debt sustainability, management of inflation, and enhance public sector effectiveness. Only by adopting such flexible and focused approaches can nations build sustainable, inclusive, and sustained economic growth in a world subject to both structural problems and persistent global shocks.

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