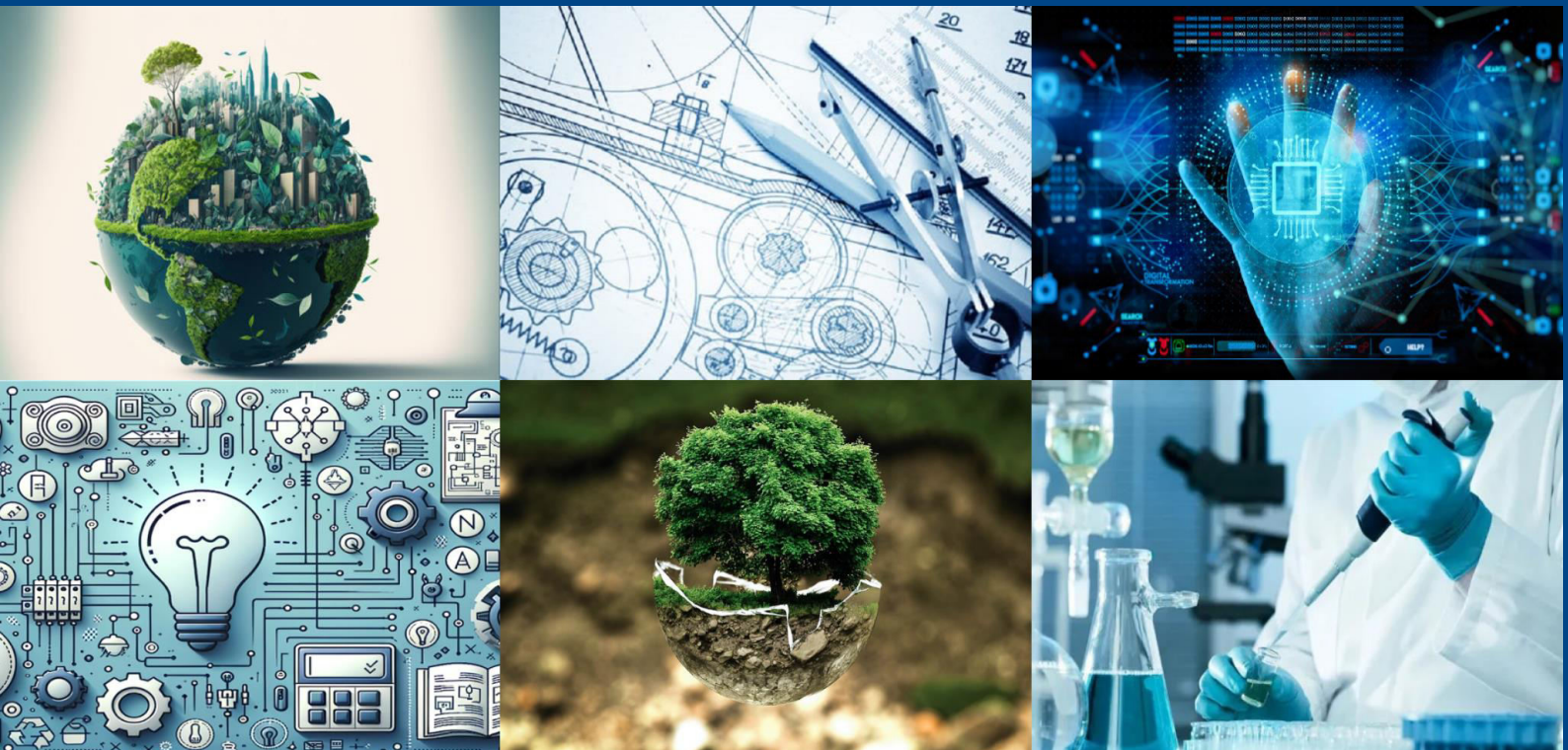




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Tax Policy and Economic Growth: A Comparative Study of Developed and Emerging Economies

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ABSTRACT: Tax policy has been an important tool of economic growth and development. It is of the utmost importance, since it strongly influences investment and consumption in general, while facilitating revenue generation by the government. The research contrasts the effect of tax policy on economic growth in developed and emerging economies. This paper evaluates major tax structures—corporate tax, income tax, and consumption-based taxation—for effectiveness in fostering sustainable economic growth.

This research analyses secondary data from international financial institutions, tax policy reports, and economic growth indicators using a mixed-method approach. The empirical evidence is drawn from case studies of selected developed and emerging economies with the view of bringing to light policy differences and their economic outcomes. The findings suggest that while developed economies emphasize progressive taxation and fiscal stability, emerging economies rely more on indirect taxation and incentives to attract foreign investment. The study also examines the trade-offs involving tax efficiency, equity, and economic growth.

The research findings indicate that balanced tax policy, if properly aligned to the particular economic context, is a must for long-term growth. This includes optimization of the tax structure for the generation of revenue while causing minimal distortion in investment and productivity. This paper carries lessons that can be of value to policymakers designing tax systems that are inclusive and conducive toward sustainable economic growth.

KEYWORDS: Tax Policy, Economic Growth, Developed Economies, Emerging Economies, Fiscal Policy, Tax Efficiency

I. INTRODUCTION

1.1 Background and Context

Tax policy is a fundamental instrument of fiscal policy that directly impacts economic growth, income distribution, and government revenue generation. Governments worldwide use taxation to finance public expenditures, regulate economic activities, and influence market behaviour. However, the structure, administration, and effectiveness of tax policies vary significantly between developed and emerging economies. Developed economies such as the United States, Germany, and France have well-established tax systems with efficient tax collection mechanisms, while emerging economies like India, Brazil, and South Africa face challenges such as tax evasion, informal sectors, and administrative inefficiencies (OECD, 2023; IMF, 2022).

Economic theories such as the Laffer Curve suggest that there exists an optimal tax rate that maximizes government revenue without discouraging economic activity (Laffer, 2004). In contrast, the Endogenous Growth Theory posits that taxation can influence long-term growth by affecting capital



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accumulation, innovation, and human capital development (Barro & Sala-i-Martin, 1995). The debate over the impact of taxation on economic growth remains central to fiscal policy discussions, particularly in light of recent global economic challenges such as inflationary pressures, geopolitical tensions, and post-pandemic recovery strategies.

While tax policies in developed economies focus on progressive taxation and high compliance rates, emerging economies struggle with tax base broadening, enforcement, and revenue mobilization. A comparison between these two economic groups offers valuable insights into how different tax policies shape economic performance, income distribution, and investment patterns across regions. This study aims to analyse the linkages between tax structures, revenue allocation, and economic growth, comparing policy effectiveness across developed and emerging economies.

1.2 Statement of the Research Problem

The relationship between tax policy and economic growth has been a subject of extensive research, yet there is no universally accepted model that guarantees optimal economic performance. Developed economies tend to implement high tax rates with strong compliance mechanisms, yet they sustain robust growth rates due to advanced infrastructure, skilled labour, and stable institutions (OECD, 2022). In contrast, many emerging economies adopt lower tax rates to attract investment but often struggle with tax compliance, revenue mobilization, and fiscal deficits (World Bank, 2023). This study explores the trade-offs, key drivers of efficient tax systems, and comparative tax structures in developed and emerging economies.

1.3 Objectives and Significance of the Study

The primary objective of this study is to analyse the impact of tax policies on economic growth in developed and emerging economies. Specifically, the research aims to:

1. Examine the relationship between different tax structures (direct vs. indirect taxation) and economic growth in developed and emerging economies.
2. Evaluate the role of tax revenue in financing public investment and its impact on long-term economic stability.
3. Assess the effect of corporate taxation on foreign direct investment (FDI) inflows and business competitiveness.
4. Analyse the impact of tax burden on income inequality and social welfare.
5. Compare the effectiveness of tax compliance and enforcement mechanisms in developed and emerging economies.
6. Provide policy recommendations for optimizing tax structures to achieve sustainable economic growth.

Significance of the Study

This study is highly relevant for policymakers, economists, and international financial institutions such as the International Monetary Fund (IMF), the World Bank, and the Organization for Economic Cooperation and Development (OECD). By comparing tax policies across economic contexts, the study will:

- **Contribute to fiscal policy debates** by identifying best practices in tax policy design and implementation.
- **Help emerging economies improve their tax systems** by learning from the experiences of developed nations.
- **Provide empirical evidence** on the effects of taxation on economic growth, investment, and income distribution.
- **Assist global organizations in developing tax harmonization frameworks** for better coordination in international taxation.

1.4 Research Questions and Hypotheses

This study seeks to answer the following research questions:

1. How do different tax structures influence economic growth in developed and emerging economies?
2. What is the relationship between tax revenue and public investment efficiency?



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3. Does corporate taxation significantly affect foreign direct investment (FDI) inflows?
4. To what extent does the tax burden impact income inequality?
5. How do consumption taxes contribute to inflation and economic stability?
6. The study will also test the following hypotheses:

Hypotheses

H1: Tax structure has a significant impact on GDP growth.

H0: Tax structure has no significant impact on GDP growth.

1.5 Scope and Limitations

Scope of the Study

This study focuses on a comparative analysis of tax policies in developed and emerging economies, covering the period from 2000 to 2023. It examines the following key areas:

- **Tax structures:** Direct taxes (income tax, corporate tax) vs. indirect taxes (VAT, sales tax).
- **Macroeconomic indicators:** GDP growth, FDI inflows, public investment, income inequality (Gini coefficient).
- **Regional focus:** Developed economies (U.S., U.K., Germany, France) vs. Emerging economies (India, Brazil, South Africa, Indonesia).
- **Policy analysis:** Evaluation of fiscal reforms, tax compliance measures, and revenue mobilization strategies.

Limitations of the Study

Despite its broad scope, this study faces certain limitations:

1. **Data availability and reliability:** Differences in tax reporting and economic data across countries may pose challenges in standardizing analysis.
2. **External economic factors:** Inflation, exchange rates, and political stability also influence economic growth, making it difficult to isolate the effects of tax policies alone.
3. **Variability in tax enforcement:** While tax rates can be compared, tax enforcement and compliance mechanisms differ significantly across countries, affecting outcomes.
4. **Short-term vs. long-term impact:** Some tax policy effects materialize over longer time horizons, making it challenging to draw definitive short-term conclusions.

Despite these limitations, this study aims to provide a comprehensive understanding of the role of tax policy in shaping economic growth and to offer actionable insights for policymakers.

1.6 Variables for Statistical Analysis

To empirically analyse the relationship between tax policy and economic growth, the following independent and dependent variables will be used:

Independent Variables (Tax Policy Indicators)

- **Corporate Tax Rate (%):** Impact on business investment and FDI.
- **Personal Income Tax Rate (%):** Effect on labour force participation and disposable income.
- **Value-Added Tax (VAT)/Goods & Services Tax (GST) Rate (%):** Contribution to consumption behaviour and inflation.
- **Tax Revenue as % of GDP:** Measure of tax burden and government revenue.
- **Tax Progressivity Index:** Measures the progressiveness of the tax system.



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Dependent Variables (Economic Growth Indicators)

- **GDP Growth Rate (%)**: Indicator of overall economic growth.
- **Foreign Direct Investment (FDI) Inflows (% of GDP)**: Measures investment attractiveness.
- **Gini Coefficient**: Indicator of income inequality.
- **Inflation Rate (CPI-based)**: Impact of consumption taxes on price levels.

Government Expenditure on Public Infrastructure (% of GDP): Reflects tax revenue utilization efficiency.

II. REVIEW OF LITERATURE

Tax policy plays a significant role in shaping the course of a country's economic development by affecting investment, income distribution, and government revenue. Different studies have demonstrated the effect of different taxation structures in economies belonging to developed and emerging countries.

Taxation and Its Impact on Economic Growth

Taxation is among the major factors affecting economic behaviour, working incentives, savings, and investment decisions. Laffer's hypothesis, which can be identified by the so-called Laffer Curve (Laffer, 2004), outlines that at some point, tax rate is optimal and tax revenue is maximal for the government. If tax rates are very high, people and businesses significantly lower economic activities to avoid more tax burden. On the other hand, moderate tax rates raise compliance and, therefore, stimulate investment and subsequently higher economic growth. The idea has widely been in use to support tax reforms reducing excessive tax burdens while safeguarding fiscal sustainability. (Laffer, A. B. (2004). "The Laffer Curve: Past, Present, and Future." Heritage Foundation.)

Tax Structures in Developed vs. Emerging Economies

Taxation structures vary considerably among countries due to differences in their economic maturity, governance quality, and administrative capacity. Developed economies, including the United States, Germany, and the United Kingdom, are based on progressive taxation: the higher the income bracket, the higher the tax rate. On the other hand, countries like India, Brazil, and South Africa, which have emerging economies, rely more on indirect taxes—VAT and sales taxes—because of their wider tax base and ease of enforcement. However, tax evasion, weak compliance, and administrative inefficiencies remain some of the chronic problems confronting the developing economies in mobilizing revenues and fiscal capacity (OECD, 2023). (OECD. (2023). "Tax Administration 2023: Comparative Information on OECD and Other Advanced Economies." OECD Publishing.) Corporate Taxation and Foreign Direct Investment (FDI)

The corporate tax regime significantly influences FDI and business expansion. World Bank (2023) found that countries with lower corporate tax rates tend to attract more multinationals, as firms minimize their tax liabilities to maximize post-tax profits. Very low corporate tax rates, however, may eventually lead to BEPS, where companies shift their profits to low-tax jurisdictions, which in essence reduces revenues available for public spending. Policymakers need to balance tax competitiveness with fiscal sustainability to avoid the loss of revenue while keeping the attraction of investment. (World Bank. (2023). "World Development Report 2023: Taxation, Investment, and Growth.")

Taxation and Income Inequality

Progressive taxation is seen to be effective in reducing income inequality. According to the OECD (2022), developed economies make use of the progressive tax structure in a bid to redistribute wealth, ensuring high-income earners contribute more toward public revenue. On the other hand, developing countries generally have very weak direct taxation mechanisms and depend more on regressive indirect taxes, such as VAT and sales taxes, which tend to be particularly burdensome for lower-income groups. Such inequalities increase the gap in wealth accumulation, perpetuating poverty and squashing opportunities for social mobility. The challenge for policymakers in developing nations is to broaden their tax base while sharing an equitable tax burden. (OECD. (2022). "Income Inequality and Taxation: The Role of Fiscal Policies." OECD Economic Outlook.)

Public Investment and Use of Tax Revenue

Tax revenues are major sources of financing public services such as health, education, and infrastructure. World



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Bank (2023) indicates that tax efficiency is central to ensuring that revenue collected is used well to make productive investments. Thus, developed economies are usually characterized by effective mechanisms of tax compliance and transparent governance that result in the effective use of tax revenues. Added to that, emerging economies are often beset by other problems, such as misallocation of funds, corruption, and general weak public sector management, which makes taxation a poor tool for developing the economy. (World Bank. (2023). "Public Finance for Development: The Role of Taxation.")

Tax Policy in Developed Economies

Marginal Tax Rates: Lower marginal tax rates in the U.S. during the 1980s contributed to economic recovery and growth, although they also led to increased budget deficits, which could undermine long-term stability (Boskin, 1988).

Capital Mobility: Developed countries often experience significant capital mobility, where taxation can lead to either stagnation or rapid growth, depending on the policies implemented (King & Rebelo, 1990).

Tax Policy in Emerging Economies

Threshold Effects: Emerging economies exhibit an inverted U-shaped relationship between corporate income taxation and capital accumulation, indicating that moderate taxation can enhance growth, while excessive taxation may hinder it (Thanh & Canh, 2020).

Policy Design: Tailored tax designs are essential for developing countries to optimize capital formation and economic growth, contrasting with the needs of developed nations (Thanh & Canh, 2020).

While tax policies can stimulate growth, they also pose risks, particularly in terms of budget deficits and capital flight, necessitating careful consideration of the unique economic contexts of each country.

Historical Context:

Historical analyses show that taxation has evolved to play a critical role in economic development, particularly post-war, where government policies have been pivotal (Tanzi et al., 2023).

The Effect of Consumption Taxes on Inflation and Stability

Consumption-based taxes, such as Value-Added Tax (VAT) and Goods and Services Tax (GST), offer stable revenue streams to governments but might feed into inflationary pressures if badly implemented. The IMF found in 2022 that the high levels of VAT rates in developing economies are increasing consumer prices—most especially on basic goods—thereby making taxation burdensome for the lower-income population. While VAT helps the government achieve fiscal stability, policymakers have to consider targeted social welfare programs so that the regressive effects of VAT can be mitigated. (IMF. (2022). "Taxation and Inflation: Analysing the Role of Indirect Taxes.")

Tax Compliance, Enforcement, and Digital Taxation

The effectiveness of any tax system is, to a great extent, dependent on the mechanisms of compliance and enforceability. Advanced economies leverage technology in tax administration: e-filing systems, AI-driven audits, and automated tax reporting reduce tax evasion and enhance compliance. As noted by the OECD (2023), digital tax reforms have significantly increased revenue collection in high-income countries. Yet, most developing countries lack the technological infrastructure to track transactions and ensure compliance, losing a huge amount of revenue as a result. (OECD. (2023). "Tax Administration 2023: Improving Compliance and Revenue Collection.")

Global Tax Harmonization and Policy Coordination

Globalisation has increased tax competition among countries; many governments have reduced corporate tax rates to lure multinational companies. In response, IMF & OECD (2023) have been promoting the Global Minimum Corporate Tax, at a 15% rate, to stop profit shifting and tax avoidance. The policy is expected to bring greater fairness in the global tax framework, ensuring multinationals pay taxes where economic activities occur.



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However, some traditionally low-tax jurisdictions might become relatively less competitive as a result of this, which may impact the investment climate of such countries. (IMF & OECD. (2023). "The Global Minimum Tax: Implications for International Business.")

Economic Trade-offs in Tax Policy Design

In tax system design, policymakers have to make difficult trade-offs between economic growth, social equity, and fiscal sustainability. Barro (1990) believes that though taxation is necessary to fund public goods and social programs, excessive taxation has the effect of reducing incentives for labour participation, investment, and business expansion. Countries with lower corporate and income tax rates usually enjoy higher economic growth but may have strained resources in funding basic services. A balanced approach must therefore be assumed by policymakers to ensure both revenue generation and economic efficiency. (Barro, R. J. (1990). "Government Spending in a Simple Model of Endogenous Growth." *Journal of Political Economy*, 98(5), S103-S125.)

III. METHODOLOGY

1. Research Design: Research design is instrumental in setting out the plan and strategy that will be employed to conduct the research. This paper employs a comparative and explanatory research design, in a bid to examine how different tax policies affect economic growth for both developed and emerging economies.

1. A comparative approach will compare the structures of tax policy and its outcomes in developed economies such as the U.S., Germany, and France with emerging economies like India, Brazil, and South Africa to help discover some patterns and differences.
2. Explanatory research helps analyze the causal relationships between tax policy indicators and economic growth indicators.
3. Mixed-Methods Approach: Though dominantly quantitative, the study also includes qualitative knowledge from policy documents and expert opinions to enrich the analysis.

2. Data Collection Methods: Data collection is a significant aspect in realizing accurate and reliable information. This research depends on secondary data sources, bearing in mind the existence of comprehensive datasets on tax policies and economic performance.

2.1 Secondary Data Sources

The research is based on data from reputable international organizations and government databases that ensure the accuracy and reliability of the data. The main sources of data include:

- International Monetary Fund (IMF)
- World Bank
- Organization for Economic Cooperation and Development (OECD)
- National statistical agencies, such as the U.S. Bureau of Economic Analysis and the Indian Ministry of Finance
- Published academic research and reports, Tax structure, GDP growth, foreign direct investment (FDI), public investment, and inequality data are also compiled for the period 2000-2023 to ensure comprehensiveness.

2.2 Data Variables

The independent and dependent variables used in the study are:

Independent Variables (Tax Policy Indicators)

- Corporate Tax Rate (%)
- Personal Income Tax Rate (%)
- Value-Added Tax (VAT)/Goods and Services Tax (GST) Rate (%)
- Tax Revenue as % of GDP
- Tax Progressivity Index

Dependent Variables: Economic Growth Indicators



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- GDP Growth Rate (%)
- Foreign Direct Investment (FDI) Inflows (% of GDP)
- Gini Coefficient (Income Inequality)
- Inflation Rate (CPI-based)
- Government Expenditure on Public Infrastructure (% of GDP)

3. Sampling Techniques

The present study entails a comparison of developed and emerging economies; this research, therefore, employs a purposive sampling technique to guarantee the selection of representative countries.

3.1 Country Selection Criteria

The following are the criteria used in selecting the countries:

Economic Classification: The countries under study are those classified as developed and emerging economies by the IMF and World Bank.

Data Availability: This research only includes countries with consistent and reliable data from the period 2000-2023.

Relevance to the Study Objectives: Priority is given to those countries with major fiscal policy reforms in the study period.

3.2 Sample Size

The sample size is eight countries, comprising developed and emerging economies:

- Developed Economies: United States, United Kingdom, Germany, France
- Emerging Economies: India, Brazil, South Africa, Indonesia

4. Data Analysis Techniques

The data set is analyzed through descriptive and inferential statistics in order to find the relationship between tax policy and economic growth.

4.1 Descriptive Analysis

Descriptive statistics summarize data, hence allowing an inference of the distribution and trend of indicators of tax policy and economic growth metrics.

- Mean, Median, and Standard Deviation
- Trend Analysis: Tracking changes over time in the selected tax policies and economic growth
- Graphical Representations: Charts and graphs to make patterns more understandable

4.2 Inferential Analysis

Inferential statistics are applied in hypothesis testing, which aids in making conclusions about the relationship between variables.

1. Correlation Analysis: to measure the strength and direction of relationships between tax policy indicators and economic growth indicators.

2. Regression Analysis: to determine the impact of the tax policy variables on economic growth metrics. The following regression models are used:

- Ordinary Least Squares (OLS) Regression
- Panel Data Regression: Fixed-effects and random-effects models to control for unobserved heterogeneity across countries

3. Hypothesis Testing: The following hypothesis will be tested in the study:

- H1: Tax structure significantly influences GDP growth.
- H0: Tax structure has no significant influence on GDP growth.

4.3 Econometric Software



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Statistical software, namely, STATA and SPSS, will be used in analyzing the data to ensure it is done in an accurate and efficient manner.

5. Reliability and Validity

The results must first be credible, hence reliability and validity are key.

5.1 Reliability

Reliability refers to the consistency of measurements. This research has its reliability ensured through the following ways:

- Use of Verified Data Sources: Only data from recognized organizations are used.
- Consistent Data Collection Methods: The same variables and time periods are analyzed across all countries.
- Replication of Analysis: Statistical tests are replicated to confirm consistency.

5.2 Validity

Validity refers to the accuracy and appropriateness of the measurements taken in the study

- Content Validity: Satisfied by including all the relevant tax policy and economic growth indicators.
- Construct Validity: Achieved by the use of well-established economic indicators
- External Validity: The comparative nature of the study enhances generalizability

6. Ethical Considerations

Ethical considerations are embedded in the process of carrying out responsible research

1. Data Integrity and Transparency: Sources of all data are cited and manipulation of data is avoided.
2. Confidentiality: The research, though secondary, respects the ethical requirements in that sensitive information or data are not divulged.
3. Objectivity and Impartiality: Analysis has been free from bias and is transparent in results
4. Conformity to the Requirements of the Research: International research rules

7. Limitations of the Method

While the methodology is designed to provide a strong framework for analyzing tax policy and economic growth, there are certain limitations:

1. Data availability and reliability: There might be differences in data quality and reporting standards across countries.
2. External Economic Factors: Such factors as global economic conditions, political stability, and changes in the exchange rate may affect the outcomes.
3. Time Frame: The period considered is between the years 2000 to 2023. Some of the long-run impact of tax policy changes might be missed out on.
4. Complexity in tax systems – these are reflected by differences in administrative and enforcement mechanisms, the implications of which would be somewhat quantifiable.

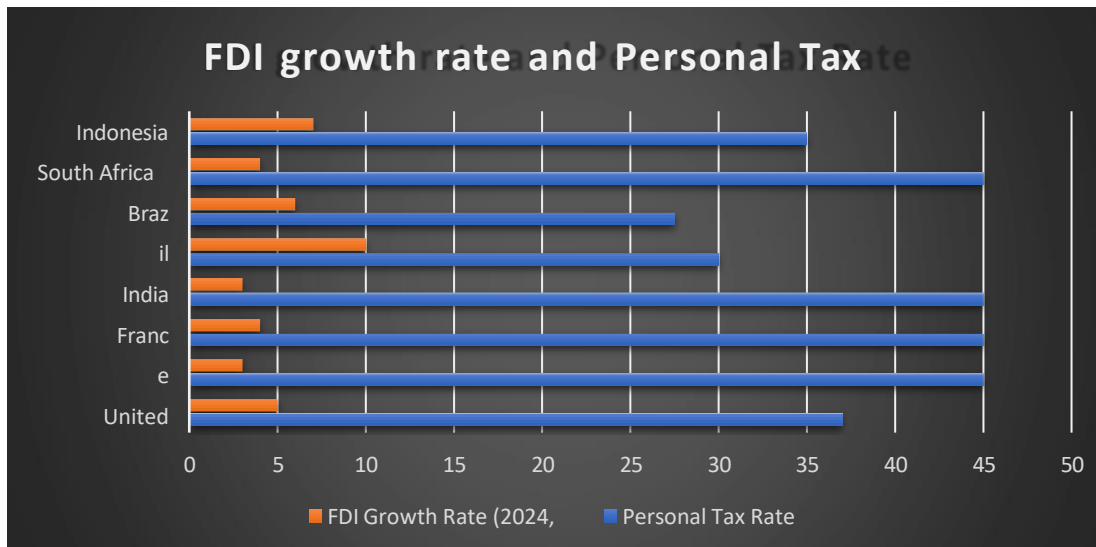


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IV. ANALYSIS AND INTERPRETATION

Country	Personal Tax Rate (%)	GST/VAT Rate (%)	Corporate Tax Rate (%)	GDP Growth Rate (2024, %)	FDI Growth Rate (2024, %)
United States	37	7.25	21	2.3	5
Germany	45	19	30	1.5	3
United Kingdom	45	20	19	1.8	4
France	45	20	25	1.4	3
India	30	28	25	6.5	10
Brazil	27.5	17	34	2.2	6
South Africa	45	15	28	1.3	4
Indonesia	35	11	22	5.2	7



SUMMARY OUTPUT

Regression Statistics

Multiple R 0.819019
 R Square 0.670792
 Adjusted R 0.615923
 Standard E 1.472172
 Observatic 8

ANOVA

	df	SS	MS	F	ignificance F
Regressor	1	26.49626	26.49626	12.22553	0.012881
Residual	6	13.00374	2.167289		
Total	7	39.5			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	15.51357	2.981171	5.203852	0.002007	8.21891	22.80823	8.21891	22.80823
X Variable	-0.26529	0.075874	-3.4965	0.012881	-0.45095	-0.07964	-0.45095	-0.07964



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Relationship Between Personal Tax Rate and FDI Growth Rate

Regression analysis shows a significant negative relationship between personal tax rates and FDI growth, driven by several factors:

1. Theoretical Justification for Negative Relationship

- a. Investor Confidence & Economic Attractiveness: High personal tax rates lower disposable income, reducing domestic consumption and economic activity. Low-tax environments appear more business- friendly, attracting FDI.
- b. Labor Market Competitiveness: High personal taxes can drive talent out of the country, which may make it less attractive for foreign businesses.
- c. Business Operating Costs: Higher taxes increase wage demands, increasing labor costs for foreign investors.
- d. Capital Flight & Savings Impact: High taxes can lead to capital outflows, reducing investment funds.

2. Other Factors Influence FDI More are

Political stability, infrastructure, and business climate tend to outweigh tax considerations. Countries like those in Scandinavia attract FDI even with high tax rates because of strong economic fundamentals.

- Potential Reverse Causality: High FDI may cause countries to lower their taxes to attract more FDI, and economic growth may cause higher taxes to fund public services.

- a. Sector-Specific Effects: Low taxes are important for tech and finance, while manufacturing is more driven by corporate tax and infrastructure.

3. Emerging vs. Developed Economies

- a. Emerging -High taxes in India cannot scare away the IT sector; Brazil: High taxes cause disincentive to FDI; Indonesia: Moderate taxes attract more investment
- b. Developed-The U.S. attracts FDI due to innovation and legal protections despite high taxes; Germany's stability ensures inflows.

4. Policy Implications

- a. Reduce personal taxes and give incentives with corporate tax.
- b. Improve business infrastructure to support FDI despite heavy taxation.

5. Conclusion

- a. Personal tax rates are negatively correlated with FDI, but taxation is not the only determinant.
- b. Governance, infrastructure, and market stability are equally important.
- c. Policymakers need to strike a balance between taxation and incentives to support the continued growth of FDI.

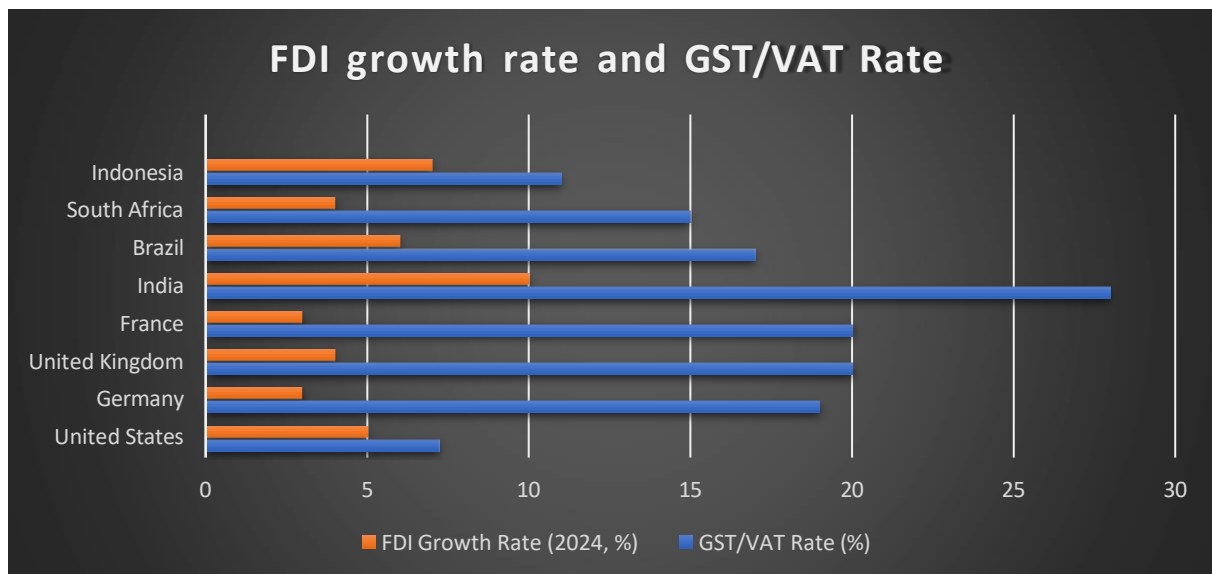


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V. GST RATE AND FDI GROWTH RATE

Country	GST/VAT Rate (%)	FDI Growth Rate (2024, %)
United States	7.25	5
Germany	19	3
United Kingdom	20	4
France	20	3
India	28	10
Brazil	17	6
South Africa	15	4
Indonesia	11	7



SUMMARY OUTPUT

Regression Statistics

Multiple R 0.302462
 R Square 0.091483
 Adjusted R -0.05994
 Standard E 2.445622
 Observations 8

ANOVA

	df	SS	MS	F	Significance F
Regression	1	3.613588	3.613588	0.604171	0.466522
Residual	6	35.88641	5.981069		
Total	7	39.5			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	3.293531	2.66143	1.237504	0.26213	-3.21876	9.805816	-3.21876	9.805816
X Variable	0.114038	0.146714	0.777284	0.466522	-0.24496	0.473034	-0.24496	0.473034



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Relationship Between GST Rate and FDI Growth Rate

Regression analysis shows a weak and statistically insignificant positive relationship between GST rates and FDI growth.

1. Theoretical Explanation

- a. Possible Positive Impact: Higher GST provides revenue stability, improving infrastructure and tax compliance, and is good for investors.
- b. Possible Adverse Effects: Higher GST increases business costs, lowers profit margins, and reduces consumer demand, and makes the markets less attractive.

2. Interpretation of Regression Results

- a. Low R-Square (0.091): GST explains only 9.1% of FDI variation. High P-Value (0.467): No statistically significant relationship.
- b. Small Positive Coefficient (0.114): Weak, unreliable correlation.

3. Developing Economies vs Developed Economies

- a. Emerging - GST reforms in India improved compliance but added complexity; in Indonesia, competitive GST rates enhance FDI.
- b. Developed- US lures FDI through low sales tax; although high VAT, investment in Germany is not deterred by high VAT due to strong infrastructure.

4. Other factors

More than GST, political stability, labor costs, and regulation attract FDI. Input tax credits for manufacturing benefits while high rates hurt retail.

5. Policy Implications

- High GST can be offset with credits and exemptions
- a. To simplify the tax regime and improve the infrastructure
 - b. Reduce GST for export-oriented industries to keep them competitive.

6. Conclusion

- a. No strong relationship between the rate of GST and growth of FDI.
- b. Size of the market, stability and infrastructure play larger roles.
- c. Policymakers should avoid changing GST rate but focus on holistic economic reforms.

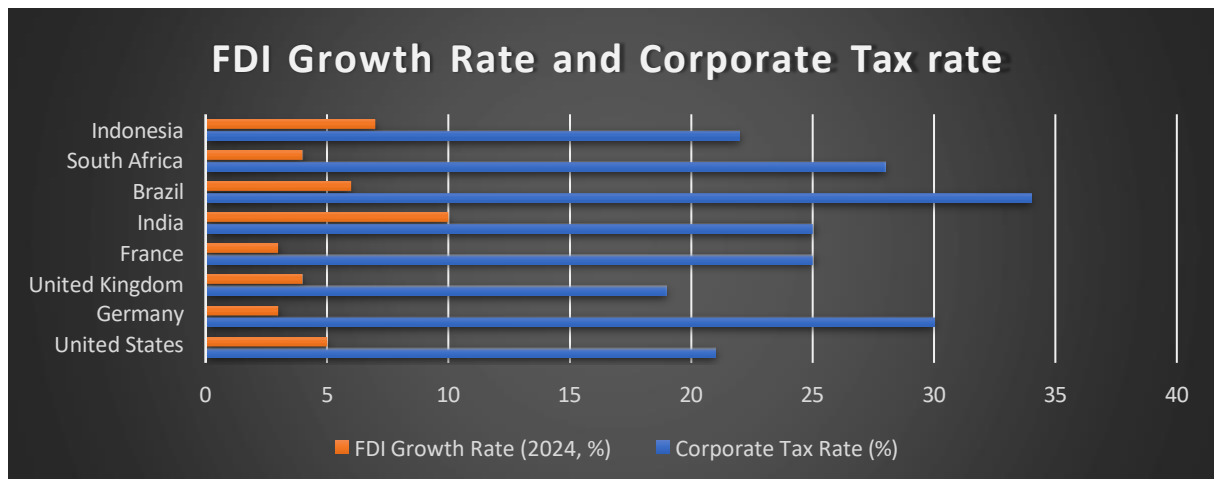


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VI. CORPORATE TAX RATE AND FDI

Country	Corporate Tax Rate (%)	FDI Growth Rate (2024, %)
United States	21	5
Germany	30	3
United Kingdom	19	4
France	25	3
India	25	10
Brazil	34	6
South Africa	28	4
Indonesia	22	7



SUMMARY OUTPUT

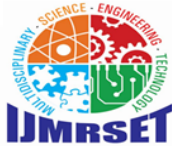
Regression Statistics

Multiple R 0.060311
 R Square 0.003637
 Adjusted R -0.16242
 Standard E 2.56113
 Observatic 8

ANOVA

	df	SS	MS	F	ignificance F
Regressior	1	0.143678	0.143678	0.021904	0.887191
Residual	6	39.35632	6.559387		
Total	7	39.5			

	Coefficients	standard Err	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	5.982759	5.03317	1.188666	0.27948	-6.33297	18.29848	-6.33297	18.29848
X Variable	-0.02874	0.194159	-0.148	0.887191	-0.50383	0.446354	-0.50383	0.446354



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Relationship Between Corporate Tax Rate and FDI Growth 1.Theoretical Explanation

Why Higher Corporate Tax Might Reduce FDI

- a. Lower after-tax returns mean reduced profitability for foreign investors.
- b. Higher cost of doing business discourages investment.
- c. Tax competition leads countries to lower rates in hopes of attracting FDI—e.g., Ireland's low rate.

Why Higher Corporate Tax Might Not Affect FDI

- a. FDI decisions are based on factors other than tax (size of the market, stability, infrastructure, and labor skills).
- b. Tax incentives such as holidays and deductions lower the effective tax rate.
- c. In market-seeking FDI, access to consumers is more important than tax rates.

Country-Specific Analysis

Weak Relationship: Low R^2 value—only a small percentage of the variation in FDI growth is explained by the tax rate.

High p-value—implies that the relation is statistically not significant. The U.S. tax cut was statistically not significant in changing FDI growth.

Emerging Economies

- a. India: High FDI due to reforms and labour force
- b. Brazil: FDI more influenced by instability rather than by tax
- c. South Africa: More influenced by political uncertainty than tax effects
- d. Indonesia: FDI dependent on economic growth, not by tax

Developed Economies

- a. U.S.: FDI depends on innovation, not on tax
- b. Germany: High FDI because of stability and labour force
- c. UK & France: Strong investment even with higher rates of tax

Policy Implications

- a. Tax alone is not enough to attract FDI; rather, regulatory stability, infrastructure, and labor market are more important.
- b. A balanced policy—tax incentives coupled with a business-friendly environment—works better.
- c. Sector-specific incentives can optimize the impact of FDI.

Conclusion: Corporate tax rate is not a strong predictor of FDI growth. Investment decisions depend more on market conditions, infrastructure, and workforce.

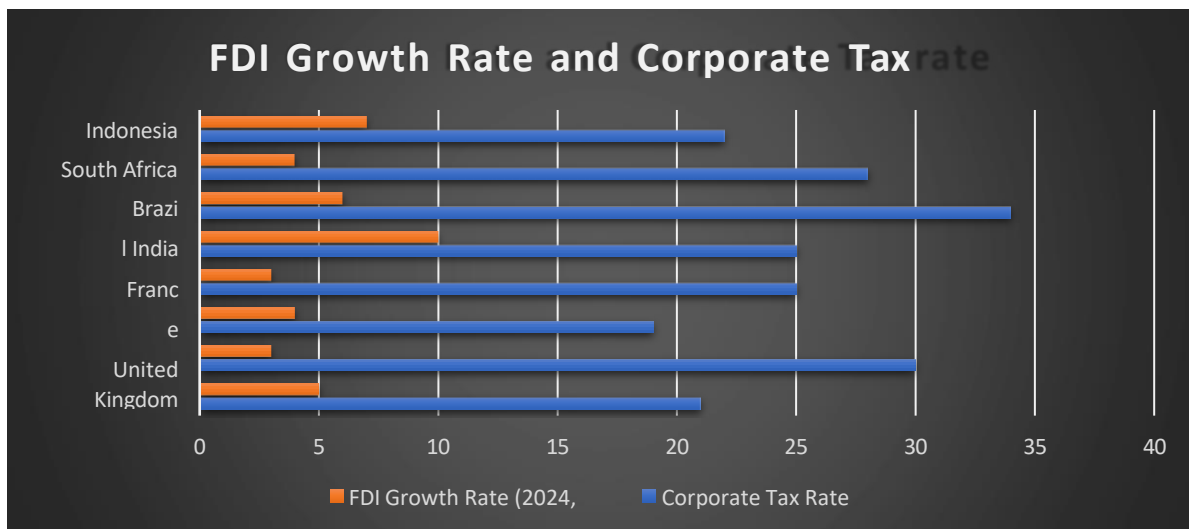


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VII. THEORETICAL EXPLANATION OF PERSONAL TAX AND GDP GROWTH RELATIONSHIP

Country	Personal Tax Rate (%)	GDP Growth Rate (2024, %)
United States	37	2.3
Germany	45	1.5
United Kingdom	45	1.8
France	45	1.4
India	30	6.5
Brazil	27.5	2.2
South Africa	45	1.3
Indonesia	35	5.2



SUMMARY OUTPUT

Regression Statistics

Multiple R 0.657785
 R Square 0.432681
 Adjusted R 0.338127
 Standard E 1.596459
 Observatic 8

ANOVA

	df	SS	MS	F	ignificance F
Regressor	1	11.6629	11.6629	4.576052	0.076238
Residual	6	15.2921	2.548683		
Total	7	26.955			

	Coefficients	andard Err	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%	pper 95.0%
Intercept	9.584411	3.232856	2.964689	0.02513	1.673899	17.49492	1.673899	17.49492
X Variable	-0.17601	0.08228	-2.13917	0.076238	-0.37734	0.025321	-0.37734	0.025321



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Why Higher Personal Tax Might Reduce GDP Growth

- a. Reduced Disposable Income and Consumption: Higher personal taxes lower household disposable income, reducing consumer spending and slowing economic growth.
- b. Lower Incentives for Work and Productivity: High taxes may discourage labour participation and entrepreneurship by reducing financial rewards.
- c. Negative Impact on Business Investment: Higher personal taxes reduce individuals' ability to invest in businesses, limiting job creation.
- d. Capital Flight and Brain Drain: High personal taxes may encourage skilled workers and investors to relocate to lower-tax jurisdictions.

Why Higher Personal Tax Might Not Strongly Affect GDP Growth

- a. Government Spending Can Offset Impact: Increased tax revenue funds infrastructure, education, and healthcare, stimulating growth.
- b. Impact Depends on Tax Utilization: Efficient public spending can boost long-term GDP growth, while misallocation hinders progress.
- c. Marginal Propensity to Consume (MPC) Effect: Taxing high-income groups and redistributing to lower-income groups can increase overall demand.
- d. Short-Term vs. Long-Term Effects: Short-term: Higher taxes reduce spending. Long-term: Investments in public services enhance productivity.

Regression Analysis Interpretation

- a. Moderate negative correlation between personal tax rates and GDP growth.
- b. $R^2 = 0.4327$: Personal taxes explain 43% of GDP growth variation.
- c. Weak statistical significance ($p = 0.0762$), indicating some uncertainty in results.

Emerging vs. Developed Economies

- a. Emerging Economies: Other factors like industrial growth and governance play a larger role than tax rates.
- b. Developed Economies: High-tax countries sustain growth through strong infrastructure and public investment.

Policy Implications

- a. Balance taxation with economic incentives.
- b. Targeted tax policies can optimize growth.

Conclusion

- a. Personal tax rates moderately affect GDP growth but are not the sole determinant.
- b. Other economic factors, policy efficiency, and investment climate are crucial considerations.
- c. Further research on this topic needs to include broader economic variables and an extended dataset to arrive at more insightful results.

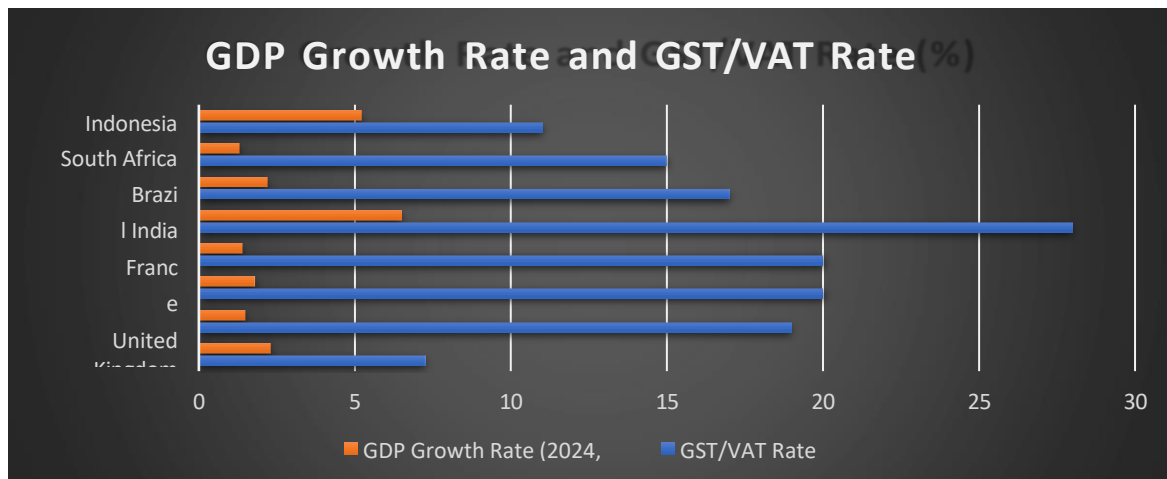


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VIII. GST RATE AND GDP GROWTH RATE

Country	GST/VAT Rate (%)	GDP Growth Rate (2024, %)
United States	7.25	2.3
Germany	19	1.5
United Kingdom	20	1.8
France	20	1.4
India	28	6.5
Brazil	17	2.2
South Africa	15	1.3
Indonesia	11	5.2



SUMMARY OUTPUT

Regression Statistics

Multiple R 0.282009
 R Square 0.079529
 Adjusted R -0.07388
 Standard E 2.033523
 Observations 8

ANOVA

	df	SS	MS	F	Significance F
Regression	1	2.143704	2.143704	0.518402	0.498599
Residual	6	24.8113	4.135216		
Total	7	26.955			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1.268094	2.212966	0.573029	0.587442	-4.14684	6.683028	-4.14684	6.683028
X Variable	0.087834	0.121992	0.720001	0.498599	-0.21067	0.386337	-0.21067	0.386337



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Relationship Between GST Rate and GDP Growth Rate

Theoretical Explanation: Why Higher GST Might Increase GDP Growth

- Higher Government Revenue – Increased GST revenue funds infrastructure, healthcare, and education, boosting economic activity.
- Wide-Based and Efficient Taxation – GST, in contrast to income taxes, provides a stable source of revenue.
- Improved Tax Compliance – Curbs tax evasion and formalizes businesses, thus raising the overall tax collection.

Why Higher GST May Not Dent GDP Growth Much

- Lower Consumer Spending – A higher GST raises prices, thus reducing demand.
- Impact on Business Profitability – A higher cost of production may reduce investment and expansion.
- Regressive Nature: The heavier burden of tax falls on low-income earners.
- Dependence on Other Factors: It also rests on factors like inflation, interest rates, and government policies.

Interpretation of Regression Analysis

- Weak Correlation: $R = 0.2820$ — Very weak positive relationship between GST and GDP growth.
- Low Explanatory Power: $R^2 = 0.0795$ — GST rate explains only ~8% of the variation in GDP growth.
- Weak Statistical Significance ($p = 0.4986$) – There is no strong evidence that GST directly influences GDP growth.

Policy Implications

- Balanced GST Rates – Avoid extreme tax burdens but ensure sufficient revenues.
- Tax Compliance & Efficiency – Simplified collection and refunding processes bring efficiency.
- Complementary Policies – Investments in infrastructure and business incentives can help bring growth to the economy.

Conclusion

- GST has a weak positive relation with GDP growth; however, it has low statistical significance.
- Other economic variables play a far more dominant role in GDP performance.
- Further research on this topic needs to include broader economic variables and an extended dataset to arrive at more insightful results.

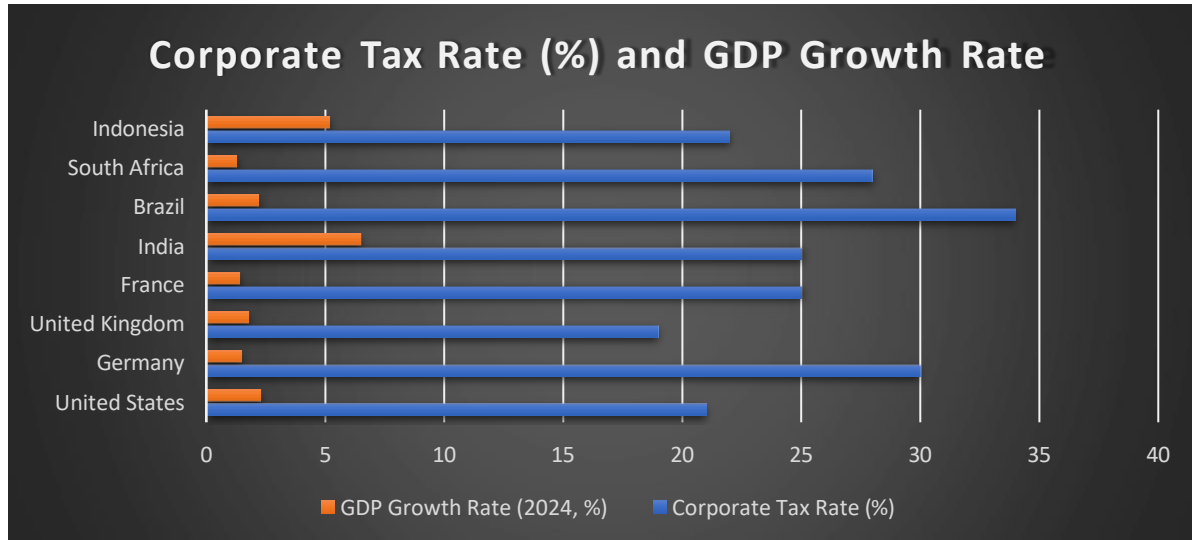
IX. CORPORATE TAX RATE AND GDP GROWTH RATE

Country	Corporate Tax Rate (%)	GDP Growth Rate (2024, %)
United States	21	2.3
Germany	30	1.5
United Kingdom	19	1.8
France	25	1.4
India	25	6.5
Brazil	34	2.2
South Africa	28	1.3
Indonesia	22	5.2



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SUMMARY OUTPUT

Regression Statistics

Multiple F 0.226328
 R Square 0.051224
 Adjusted R Square -0.10691
 Standard Error 2.064552
 Observations 8

ANOVA

	df	SS	MS	F	Significance F
Regression	1	1.380747	1.380747	0.323938	0.589905
Residual	6	25.57425	4.262375		
Total	7	26.955			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	5.046552	4.057288	1.243824	0.259954	-4.88128	14.97438	-4.88128	14.97438
X Variable	-0.08908	0.156513	-0.56916	0.589905	-0.47205	0.293894	-0.47205	0.293894

Corporate Tax Rates and GDP Growth

Analysing corporate tax rates and GDP growth across economies reveals a weak negative correlation ($p = 0.5899$), suggesting tax rates alone do not determine growth.

Emerging Economies

- India: Strong GDP growth, though post-pandemic slowdown led to tax cuts to boost consumption.
- Brazil: Modest GDP growth, affected by political instability and commodity prices.
- South Africa: Sluggish growth due to structural issues and energy shortages.
- Indonesia: Steady growth driven by consumption and investment-friendly policies.

Developed Economies

- United States: Resilient economy with moderate growth, supported by innovation and consumer spending.
- Germany: Stable but modest growth, driven by manufacturing and exports.
- United Kingdom: Slowed GDP growth, impacted by Brexit uncertainties.



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- d. France: Moderate growth supported by diversified industries and government spending.

Interpretation

Data suggests no straightforward link between corporate tax rates and GDP growth. Brazil has high taxes with modest growth, while Indonesia has lower taxes with steady expansion. Developed economies show stability despite varying tax rates. Other factors—political stability, infrastructure, and global conditions—significantly influence growth.

Conclusion

Tax policy is crucial but not singularly decisive. A balanced approach incorporating infrastructure, education, and regulatory stability is key to sustainable economic growth.

X. DISCUSSION

The results of this analysis depict that tax policies, in particular, personal, corporate, and GST rates, have nuanced effects on other economic factors like GDP growth and FDI. The regression results of the personal tax rate analysis depict a moderate negative correlation with GDP growth; however, statistical significance remains low, which postulates that other factors of the economy have a more important role to play. Similarly, corporate tax rates reveal little influence on FDI growth; in fact, market conditions, infrastructure, and labour force are far more important determinants.

GST rates bear a weak positive relation to GDP and FDI growth, though statistical insignificance suggests that consumption behaviour, tax compliance, and government spending efficiency may have more influence in relation to this. Across emerging and developed economies, factors such as governance, stability, and investment climate consistently outweigh the direct impact of tax policies.

It focuses on the balance of taxation with economic incentives, improvement in infrastructure, and efficiency in the use of tax revenue. While tax rates do influence economic growth and investment decisions, they need to be viewed within a larger framework of economic reforms and strategic policymaking.

XI. CONCLUSION AND RECOMMENDATION

This study has shown the important role of tax policy in shaping economic growth for both developed and emerging economies. Although taxation is associated with investment, income distribution, and government revenue, the actual impact is diverse according to economic maturity, governance structures, and fiscal priorities. The findings suggest that developed economies rely on progressive taxation and strong compliance mechanisms to sustain economic stability, while emerging economies rely more on indirect taxation and investment incentives to attract foreign capital. However, statistical analyses indicate that tax rates alone are not the sole determinants of GDP growth and foreign direct investment (FDI). Other factors, like political stability, infrastructure, the state of the labor market, and efficiency in governance, are more important determinants of economic performance. This study has shown how relevant balanced tax policy is to assure revenue generation without discouraging economic activities.

RECOMMENDATIONS

1. Optimize Tax Structures: The design of tax policies by the government should balance direct and indirect taxation, with minimal economic distortions.
2. Enhance Compliance and Enforcement: The use of digital tax systems, AI-driven audits, and automated tax reporting would enhance the collection of taxes and reduce evasion.
3. Encourage Investment-Friendly Taxation: While corporate tax rates do affect FDI, investment incentives, infrastructure, and regulatory stability are far more relevant. Governments need to introduce focused incentives for high-growth industries.
4. Address Income Inequality: Progressive taxation has to be accompanied by social welfare programs in order to offset the regressive tax effects, especially in emerging economies.



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5. Improve Public Revenue Utilization: The transparent allocation of tax revenues to infrastructure, education, and healthcare may lead to better long-term economic growth and productivity.
6. Consider Global Tax Harmonization: Emerging economies should align their tax policies with international frameworks to prevent tax base erosion while maintaining competitiveness.

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