



EXPLICATING THE INTERPLAY OF TAX, SUBSIDIES, AND INTEREST PAYMENTS ON THE FISCAL DEFICIT OF INDIA

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Abstract

This research paper comprehensively analyses fiscal deficits and their principal components, embracing government expenditure and revenue streams. The study scrupulously anatomizes the intricate framework of public finances, subsidies, interest payments, and government income from direct and indirect taxes. Employing advanced Correlation and Multiple Regression Analysis, we aim to shed light on the interrelationships among these elements and their consolidated impact on fiscal deficits.

By decomposing government expenditure into its core components, we aim to delineate the distinct influences of subsidies and interest payments on fiscal deficits. Additionally, we probe the intricacies of government revenues, differentiating the diverse effects of direct and indirect taxes on the overall fiscal balance.

The study upshots censorious insights for policymakers, economists, and stakeholders, enabling enhanced decision-making regarding fiscal policies. The perspicacity of these results is pivotal for fostering a prosperous and stable economic future.

Keywords: Fiscal Deficits, Government Expenditure, Subsidies, Interest Payments, Direct Taxes, Indirect Taxes, Fiscal Policy

1. INTRODUCTION

The fiscal deficit, an essential facet of a nation's financial health, is a pivotal indicator of its economic stability. It emerges due to the divergence between the government's expenditures and revenues over a given period, revealing the intricate balance between state financial activities. The fiscal deficit's importance lies in its far-reaching implications for a nation's economic well-being, influencing both immediate fiscal dynamics and long-term prospects. (University of Wales Institute, 2024)

The fiscal deficit's impact on the economy is profound and multifaceted. An expanding fiscal deficit can give rise to a cascade of repercussions, from heightened borrowing costs and a reduction in public investments to potential inflationary pressures. To fully understand the fiscal deficit, it is essential to break down and analyze its intricate components. (Syracuse University, 2023)

These components can be divided into two primary categories: government expenditures and revenues. On the expenditure side, we find a range of financial outflows, including subsidies and interest payments on government debt. Subsidies, while serving as a sectoral support tool, can substantially influence the fiscal deficit. Interest payments, incurred as the cost of servicing the national debt, represent a significant portion of government spending, often diverting resources away from more productive investments.

On the revenue side, the government generates Income primarily through direct and indirect taxes. These revenues are central to managing and reducing the fiscal deficit, enabling the government to fund essential public services and infrastructure. This research paper focuses on a nuanced examination of these components and their intricate interplay with the fiscal



deficit.

In the subsequent sections, we will investigate the relationship between government expenditures, including subsidies and interest payments, and government revenues derived from direct and indirect taxes. This analysis will illuminate the complex dynamics involved, offering valuable insights into how these components collectively influence the fiscal deficit and, consequently, the broader economic landscape. (University of Western Ontario, 2023)

Objectives of Study

1. Evaluating the relationship between fiscal deficit and direct and indirect tax
2. We are evaluating the relationship between fiscal deficit subsidies and interest payments.
3. Develop policy recommendations for fiscal deficit reduction.

2. LITERATURE REVIEW

2.1. Fiscal deficit composition and economic growth relation in India: A time series econometric analysis

This research examines the nexus between India's fiscal deficit and economic growth over 33 years, from 1980-81 to 2012-2013. The study evaluates various economic paradigms, including Keynesian, Ricardian, and Neoclassical theories, providing a comprehensive analysis of the factors that critically influence economic growth, such as national savings, education, infrastructure development, and governmental policies. The paper's distinctive focus on India offers an in-depth exploration of how varying fiscal conditions affect the nation's GDP growth. The study concludes that judicious and strategic investment significantly contributes to economic expansion. (M R & Gayathri, 2016)

Null and Alternate Hypotheses:

1. Null Hypothesis (H21): There is no significant relationship between India's fiscal deficit and economic growth (GDP) from 1980-81 to 2012-2013.
2. Alternate Hypothesis (H22): There is a significant relationship between India's fiscal deficit and economic growth (GDP) from 1980-81 to 2012-2013.

2.2. Fiscal Deficit and Inflation: An Empirical Analysis for India

This study investigates the relationship between government borrowing (fiscal deficit) and inflation in India. An analysis of the underlying factors influencing the increase in government borrowing reveals that it is not predominantly driven by inflation. Instead, the growth in borrowing is attributed to a rise in the money supply and increased government expenditures. A comprehensive literature review indicates a lack of consensus on the interplay between fiscal deficits, money supply, and inflation. While some studies suggest that significant government borrowing may contribute to inflation, particularly in the context of an expanding money supply, there is a paucity of research specifically examining the direct correlation between inflation and government borrowing in the Indian context. (Tiwari & Tiwari, 2011)

Null Hypothesis (H23): There is no significant relationship between government borrowing (fiscal deficit) and inflation in India.

Alternate Hypothesis (H24): There is a significant relationship between government borrowing (fiscal deficit) and inflation in India.



2.3. A Study on Central Government's Developmental and Non-Developmental Expenditure with Special Reference to Selected Variables

This study critically examines government expenditure, focusing on two primary categories: development projects designed to stimulate national growth and non-development expenditures. The analysis reveals that allocations for non-development projects surpass those for development initiatives. This finding underscores the imperative of strategic prioritization in government spending to promote overall economic prosperity and growth. Investment in development projects is highlighted as a crucial mechanism for driving economic growth and reducing poverty. Conversely, expenditures in non-development areas are often perceived as less productive and may impose a fiscal burden on the government. This study emphasizes the necessity of meticulous oversight in public spending and provides critical insights for informing policy decisions.

Null Hypothesis (H25): There is no significant difference between government spending on development and non-development projects regarding their impact on economic growth and poverty reduction.

Alternate Hypothesis (H26): There is a significant difference between government spending on development projects and non-development projects, with development spending having a more positive impact on economic growth and poverty reduction compared to non-development spending. (Eswaran & Selvamurugan, 2018)

2.4. Subsidies and Fiscal Deficit in Post Reforms India

This study investigates the influence of various government subsidies in India on the country's fiscal deficit, particularly following key policy reforms. The research explores whether substantial subsidies provided by the Indian government, specifically for food, fertilizers, and fuel, consistently exacerbate the fiscal imbalance. The analysis reveals that subsidies for food and fertilizers experienced a more rapid growth than fuel subsidies from 1992-1993 to 2012-2013, based on annual data. The findings indicate that food and fertilizer subsidies significantly contribute to the fiscal deficit, whereas the impact of fuel subsidies appears more complex. The study underscores the necessity for a comprehensive national policy on subsidies, advocating for an integrated approach to mitigate the fiscal challenges associated with these subsidies. (Jena & Nayak, 2015)

Null Hypothesis (H27): Subsidies (food, fertilizer, and fuel) have no significant impact on India's fiscal deficit.

Alternate Hypothesis (H28): Subsidies (food, fertilizer, and fuel) significantly impact India's fiscal deficit.

2.5. Fiscal Deficit and Taxes in India: Some Observations

This study investigates the complex interplay between India's taxation, government borrowing, and fiscal management. It emphasizes the significant role of taxation in shaping economic outcomes while noting that a considerable share of tax revenue is directed toward government spending. The research analyzes the evolution of tax policies over three distinct periods, drawing on data from the Government of India and the Reserve Bank of India. The findings indicate that the share of direct taxes in the gross domestic product (GDP) has fluctuated over time, whereas indirect taxes have consistently exceeded 5% of GDP. The study calls for sound fiscal management and strategic tax policy reforms to support sustainable economic growth. (Parmar, 2023)

Null Hypothesis (H29): India has no significant relationship between tax policies, government

borrowing, and money management.

Alternate Hypothesis (H30): There is a significant relationship between tax policies, government borrowing, and money management in India, influencing economic growth.

2.6. Need to Rationalize Rising Interest Burden on Public Debt of the Central Government

This research paper investigates the impact of increasing borrowing costs, specifically the rising interest rates on government bonds, on the fiscal burden of debt servicing. As a substantial portion of government expenditures is allocated to interest payments, it is critical to devise strategies to mitigate these costs. The study underscores the necessity of harmonizing fiscal planning with interest expenditures to facilitate uninterrupted economic progress. By evaluating the government's bond issuance strategies and interest payment frameworks, the research seeks to develop a comprehensive strategy to reduce interest costs. This includes exploring various approaches, such as the issuance of inflation-linked bonds, debt restructuring, and alternative financing mechanisms. (Kanagasabapathy, Singh, & Shimpi, 2016)

Null Hypothesis (H31): The rise in interest rates on government bonds does not significantly affect government debt servicing costs.

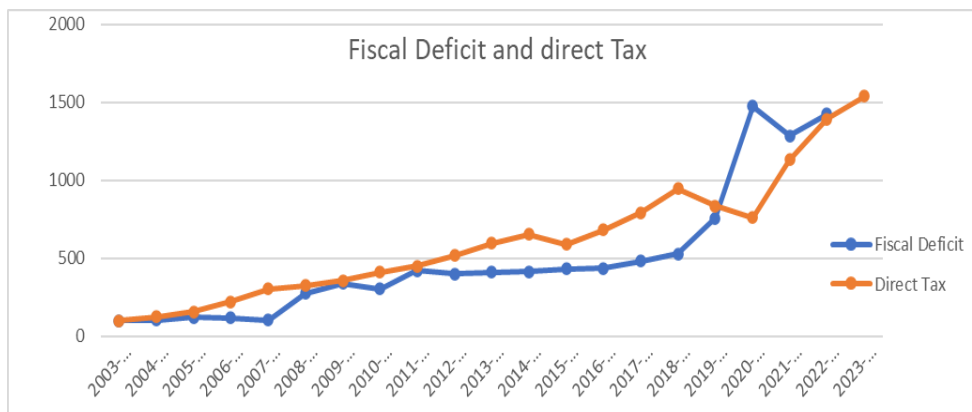
Alternate Hypothesis (H32): The rise in interest rates on government bonds significantly increases government debt servicing costs.

3. METHODOLOGY

This paper is based on secondary data extracted from the Reserve Bank of India (RBI) reports and various research papers based on India's fiscal deficit. The period from 2003-4 to 2023-24 has been taken into consideration. The index number of the data is used to show proper comparison and growth. In order to study the relationship between fiscal deficit and its components, statistical methods such as graphs, Correlation analysis, which measures the strength and direction of the relationship between two variables and Multiple Regression analysis, which is a statistical technique that models the relationship between a dependent variable and two or more independent variables have been used.

3.1 Graphical study

GRAPH 3.1.1: Relation between Fiscal Deficit and Direct Tax

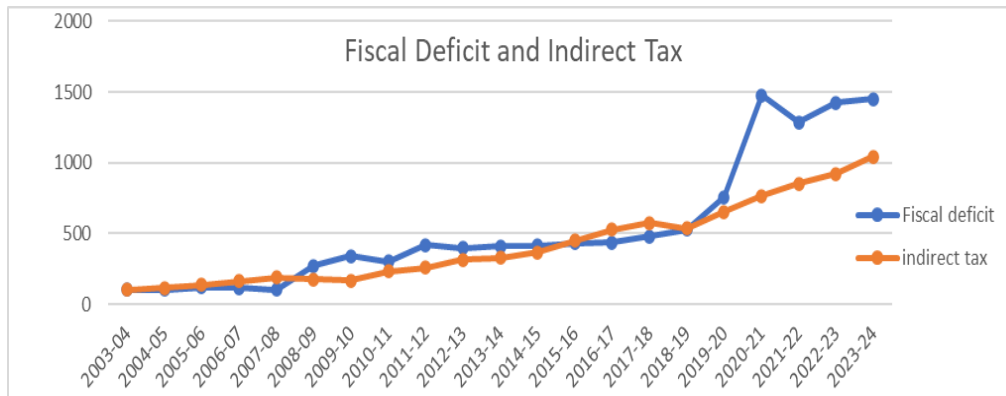


Source: Author's work

This graph shows the interdependent movement of the index numbers of two variables - Fiscal

Deficit and Direct tax over the financial years 2003-04 to 2023-24.

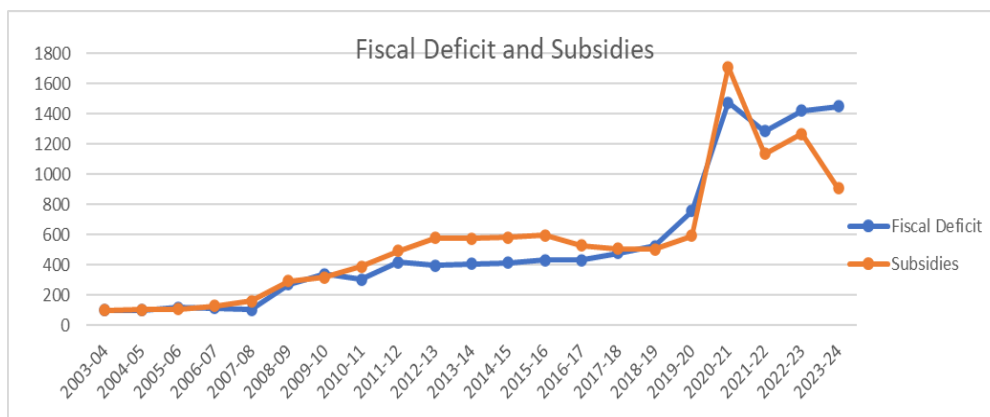
GRAPH 3.1.2: Relation between Fiscal Deficit and Indirect Tax



Source: Author's work

This graph shows the interdependent movement of the index numbers of two variables - Fiscal Deficit and Indirect Tax over the financial years 2003-04 to 2023-24

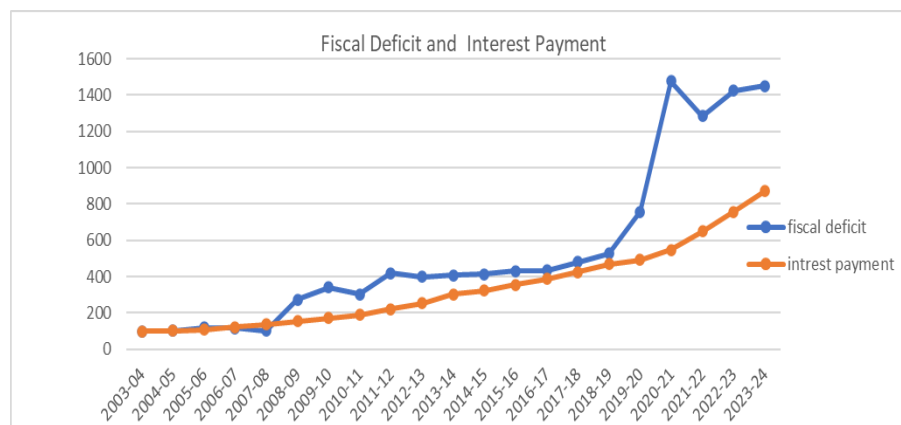
GRAPH 3.1.3: Relation between Fiscal Deficit and Subsidies



Source: Author's work

This graph shows the interdependent movement of the index numbers of two variables - Fiscal Deficit and Subsidies over the financial years 2003-04 to 2023-24.

GRAPH 3.1.4: Relation between Fiscal Deficit and Interest Payment



Source: Author's work



This graph shows the interdependent movement of the index numbers of two variables - Fiscal Deficit and Interest Payments over the financial years 2003-04 to 2023-24.

3.2 Time Series Analysis

2003-04 to 2007-08

The fiscal deficit shows a cyclical trend during this period. It started from 1,23,273 crore in 2003-04 and grew till 1,46,435 crores in 2005-06. It again fell back to 1,26,912 crores in 2007-08. The reason for this was that during 2006-07, the growth percentage of direct and indirect taxes was more than the growth rate of subsidies, Interest Payments, etc. During the period, the consolidated government reserve rose from 15% of GDP to 18.5% of GDP.

2008-09 to 2011-12

The fiscal deficit showed a rising trend during this period. However, there was a slight fall in 2010-11. The reasons for the rise were nullifying the increasing growth rate of direct tax by the decreasing growth rate of indirect taxes. During this period the subsidies were also on a rising trend.

2012-13 to 2018-19

During this period the fiscal deficit shows a constant trend because it can be observed that one factor keeps on nullifying each other for example higher tax revenues were nullified by high subsidies and increasing growth rate of indirect tax was cut down by a constant increase in interest payment.

2019-20 to 2023-24

This period has shown tremendous growth in the fiscal deficit. It has jumped around 2 times as compared to 2019-20, and the reason for the same is the massive COVID-19 pandemic. During that time, the subsidies rose to a large extent as the government provided all the basic amenities at free or minimal charges, such as vaccinations, oxygen, medications, free food grains, etc. On the other hand, revenues were highly affected due to less collections of taxes and other receipts. The Public Sector Undertakings (PSUs) were also shut down, leading to revenue loss and constant salary payments to their employees. In the years 2022-23, 2023-24, the reasons for the high deficit are the post-pandemic effects and global supply crunch due to the Russia-Ukraine war and the recession-like situation in Western countries.

4. EMPIRICAL ANALYSIS

This section quantitatively assesses the relationship between direct taxes, indirect taxes, subsidies, and interest payments with India's fiscal deficit. The empirical analysis was conducted using Excel software, where we employed both correlation and multiple regression techniques.

4.1.1 Correlation table

Different components of Fiscal Deficit	Correlation with fiscal deficit
Direct tax	0.88
Indirect tax	0.94
Interest Payment	0.93
Subsidies	0.93

We have computed the correlation coefficients to determine the strength and direction of the linear relationships between each independent variable—direct taxes, indirect taxes, subsidies, and interest payments—and the dependent variable, fiscal deficit. This analysis provides an

initial understanding of how each factor individually influences the fiscal deficit, revealing whether they exhibit a positive or negative relationship, and to what extent.

4.1.2 Summary Output

Regression Statistics	
Multiple R	0.983264162
R ²	0.966808412
Adjusted R ²	0.958510515
Standard Error	94.24623763
Observations	21

The regression analysis shows a strong model with a Multiple R of 0.9832, indicating a high correlation between observed and predicted fiscal deficit values. An R² of 0.9668 means the model explains 96.68% of the variance in the fiscal deficit. The Adjusted R² of 0.9585 confirms its robustness, and a standard error of 94.24 reflects minimal deviation in predictions based on 21 observations.

4.1.3 ANOVA

	df	SS	MS	F	Significance F
Regression	4	4139619.467	1034904.867	116.515	1.29E-11
Residual	16	142117.6529	8882.353307		
Total	20	4281737.119			
	Coefficients	Standard Error	t Stat	P-value	Lower 95%
Intercept	-124.2954334	39.49180692	-3.147372659	0.00629	-208.014
Direct Tax (X ₁)	-0.737078325	0.378331486	-1.948234161	0.06919	-1.53911
Indirect Tax (X ₂)	-0.884786491	0.755589105	-1.170988949	0.25878	-2.48656
Interest Payment (X ₃)	3.51442272	1.409207759	2.493899638	0.02396	0.527036
Subsidies (X ₄)	0.535832465	0.100537803	5.329661547	0.00007	0.322702

The ANOVA table reveals the impact of each variable on the fiscal deficit. The coefficients show the expected change in the deficit per unit change in each variable. The standard errors indicate the reliability of these estimates, while the t-statistics and p-values assess the significance of each variable's effect, highlighting which factors significantly influence the fiscal deficit.

4.2 Regression Equation

$$\text{Fiscal Deficit (Y)} = -124.29 - 0.737X_1 - 0.884X_2 + 3.51X_3 + 0.535X_4$$

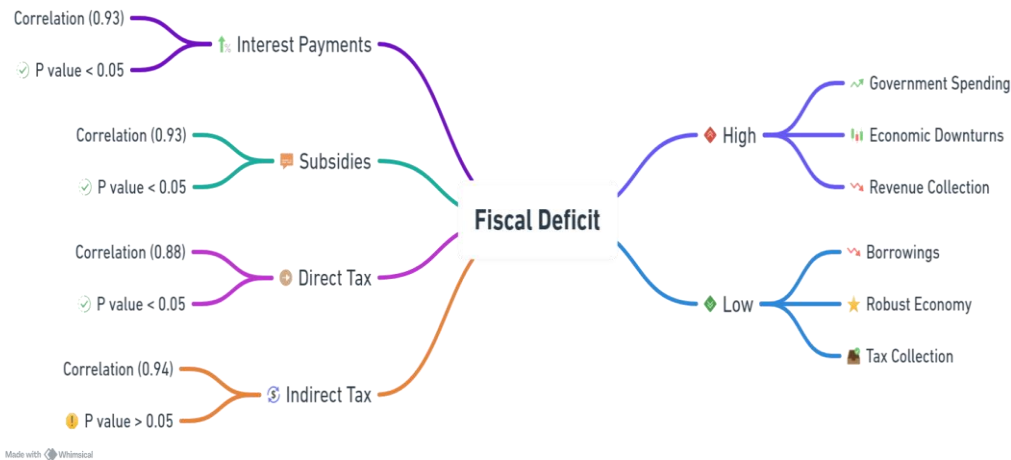
The coefficients show the expected change in the deficit per unit change in each variable. The intercept -124.29 serves as the base line value of fiscal deficit when all predictors are zero. X₁, X₂, X₃ and X₄ are serving as independent variable for the base line equation.

The negative direct and indirect tax coefficient proves the inverse relationship between tax collection and fiscal deficit.

P-value Analysis

Here, the P-values of intercept, Direct tax, Interest Payment, and Subsidies are less than or near 0.05, which shows that these factors have a large impact on the Fiscal Deficit. However, the P-value of Indirect Tax is much higher than 0.05, which shows that the effects of this variable on Fiscal Deficit cannot be proven properly.

CONCEPTUAL MODEL



Source: Author's work

4.3 CORRELATION ANALYSIS

4.3.1 Interest payments

Interest payments constitute the expenditure associated with servicing government debt. The observed high positive correlation of 0.93 between interest payments and the fiscal deficit signifies a robust relationship wherein an increase in interest payments correlates with an escalation in the fiscal deficit.

The compulsion to allocate substantial resources towards interest payments often necessitates additional borrowing by the government, thereby exacerbating the debt load and entrenching a cycle of escalating interest liabilities. This dynamic significantly exacerbates the fiscal deficit.

The allocation of resources towards servicing interest payments embodies an opportunity cost, as these financial resources could otherwise be directed towards investments in economic growth or social welfare programs, yielding positive returns and enhancing fiscal health.

Furthermore, a persistently elevated level of interest payments can signal to financial markets that the government is heavily dependent on debt financing. This perception can lead to an increase in the cost of borrowing for the government, thereby further amplifying the fiscal deficit.

4.3.2 Subsidies

Subsidies represent a form of government expenditure designed to support targeted sectors, demographic groups, or economic activities. The pronounced correlation of 0.93 between fiscal deficits and subsidy outlays suggests a significant relationship, wherein fluctuations in fiscal deficit levels markedly influence government subsidy expenditures. This correlation may be attributable to the increased deployment of subsidies during periods of economic distress or as part of specific governmental policy objectives.

In certain instances, subsidies may suffer from suboptimal targeting or experience leakage, wherein the intended beneficiaries still need to receive the allocated benefits. Such inefficiencies within the subsidy framework can exacerbate the overall fiscal burden, contributing to increased fiscal deficits.



If subsidy programs are managed with fiscal prudence and allowed to expand unchecked, they may precipitate sustainable expenditure trajectories. This can lead to persistent fiscal deficits and engender financial instability. Additionally, certain subsidies, especially those on essential goods, can exacerbate inflationary pressures within the economy. As the fiscal outlay on subsidies escalates, it may indirectly influence the fiscal deficit by driving up inflation, thereby compounding the economic strain.

4.3.3 Direct and Indirect Tax

At first glance, the high positive correlations between tax revenues and fiscal deficits—0.88 for direct taxes and 0.94 for indirect taxes—might seem paradoxical. This phenomenon can be attributed to the nation's rising income levels over time, which have resulted in increased collections of direct and indirect taxes.

This persistent upward trend in tax revenues generates an apparent positive correlation, yet it is imperative to recognize that this does not denote a direct causal relationship. Instead, broader macroeconomic dynamics influence this correlation, which affect both tax revenue streams and government expenditure patterns.

The inference is that, despite the escalation in government revenues through tax collections, these revenues may still need to catch up to accommodate the expanding expenditure requirements. This underscores the necessity for astute fiscal governance and the implementation of sustainable budgeting practices to mitigate fiscal imbalances.

5. POLICY RECOMMENDATIONS

5.1 Interest Payment

With a correlation coefficient of 0.93, interest payments demonstrate a strong relationship with the fiscal deficit. This suggests that adjusting interest payment policies could be a crucial strategy for addressing the deficit. Some recommendations are proposed below.

One of the valuable measures to cut public expenditure is to reduce interest payments on past debt. In India, interest payments account for about 40 percent of expenditure on the revenue account of the central government. In our view, funds raised through disinvestment in the public sector should be used to retire a part of old public debt rather than financing current expenditures. Retirement of public debt quickly will reduce the burden of interest payments in the future.

The government can negotiate with lenders to refinance debt at lower interest rates. For instance, if India has a significant portion of debt at higher interest rates, it can approach those creditors to negotiate more favorable terms. This could lead to substantial savings on interest payments.

India can explore issuing bonds in international markets. By diversifying its sources of debt, India might access funding at lower interest rates compared to relying solely on domestic borrowing.

5.2 Subsidies

The correlation coefficient for subsidies being 0.93, is notably high, underscoring their substantial impact on the fiscal deficit. This suggests that strategic changes to subsidy policies could effectively contribute to reducing the fiscal deficit. Some recommendations are outlined below.

Subsidies have sizable fiscal consequences (leading to higher taxes, borrowing or lower



spendings) promote inefficient allocation of an economy's resources (hindering growth), encourage pollution (contributing to climate change and premature deaths from local air pollution), and are not well targeted at the poor (mainly benefiting higher income households). Removing ill-targeted subsidies and using the revenue gain for better-targeted social spending, reductions in inefficient taxes, and productive investments can promote sustainable and equitable outcomes.

A considerable sum of money is spent on significant subsidies for food, fertilizers, and export promotion by the central government. Many subsidies offered by the government are inefficient such as subsidies on essential goods such as food and fuel which are ineffective because they often benefit all income groups, including the wealthy, leading to inefficient resource allocation and budgetary strain and subsidies for corporations, such as tax incentives and loopholes, can be ineffective because they may not lead to the intended economic growth or job creation. With a drastic cut in subsidies over time it is easier to reduce public expenditure to an appreciable degree.

To avoid ineffective subsidy investments, the government can conduct cost-benefit analyses to weigh subsidies' economic and social benefits against their costs, helping determine their overall effectiveness.

It can be helpful to gradually phase out subsidies as the targeted beneficiaries become more self-reliant or as the market becomes more competitive. The government can also collaborate with relevant stakeholders, including businesses, NGOs, and international organizations, to ensure a coordinated and effective approach to subsidies.

5.3 Tax-Related Implications

The correlation coefficients of direct and indirect tax are found to be 0.88 and 0.94 respectively which demonstrates significant impact on the fiscal deficit, hence alterations in taxes will help combat fiscal deficit. Some of the suggestions are given below.

Experience has demonstrated that different tax exemptions granted in taxable Income and indirect taxes to promote jobs, the manufacturing sector of backward regions, and other similar social objectives do not truly fulfill the stated reasons and are mainly exploited for tax evasion. As a result, these privileges should be abolished to increase tax income, and social objectives should be fulfilled by using more effective policy tools.

The government should conduct a comprehensive review of tax rates and structures to ensure they are fair and efficient and incentivize compliance. For instance, India may consider periodic revisions of income tax slabs to align with economic realities and inflation rates.

Another measure to increase revenue collections can be to streamline and simplify the GST structure, which would involve reducing the number of tax slabs, minimizing exemptions, and improving compliance mechanisms.

Voluntary compliance programs can be implemented by providing amnesty or reduced penalties for those who come forward to correct their tax affairs. For example, a problem may arise in the case of a property conversion and transfer of old properties, so the government may introduce a time-bound error correction scheme to speed up the further process.

India can work to bring more taxpayers into the formal tax net. For instance, the government can identify sectors with high cash transactions and implement mechanisms to encourage tax compliance. This may include stricter reporting requirements and better utilization of data analytics to detect tax evasion.



6. CONCLUSION

This research paper examined the Income and Expenditure imbalance, particularly in India. We concentrated on a concept known as the "Fiscal Deficit," which indicates the extent to which government expenditure exceeds revenue. This is critical to a nation's future and fiscal health.

We looked at the data from 2003 to 2023 and discovered some noteworthy trends. As we have seen, a significant portion of government spending is determined by factors like interest payments, which are essentially the costs associated with borrowing money, and subsidies, which are targeted financial aid packages for specific businesses or individuals. We also found that taxes play a role in direct taxes like income taxes and indirect taxes like WAT, GST, etc. Tax revenue increased throughout time, but occasionally it was insufficient to pay for all expenditures.

We have some recommendations for how the government may better manage its finances based on what we have learned. They may consider making the tax system more straightforward and equitable. They could also figure out how to lower the interest they pay on their loans. Furthermore, they must ensure that subsidies are allocated wisely and for the intended purposes.

If the government thoroughly understands all these data, it can make better decisions about how to spend and save money. Leaders, economists, and everyone interested in ensuring the stability and strength of our nation's finances can benefit from this research.

References

1. Adam, C. S., & Bevan, D. L. (2005). Fiscal deficits and growth in developing countries. *Journal of Public Economics*, 89(4), 571-597.
2. Adegboyo, O. S., Efuntade, O. O., & Efuntade, A. O. (2020). Fiscal deficit and growth in Nigeria economy. *KIU Interdisciplinary Journal of Humanities and Social Sciences*, 1(3), 146-160.
3. Ahmadi, M. H. (2021). India's Fiscal Deficit and its Impact on Gross Domestic Product: An Analysis.
4. Bakarr, T. A. (2014). Fiscal deficits and current account imbalances: Evidence from Sierra Leone. *International Journal of Business and Social Science*, 5(8).
5. Basu, S., & Datta, D. (2005). Does fiscal deficit influence trade deficit?: An econometric inquiry. *Economic and Political Weekly*, 3311-3318.
6. Behera, B. K., & Mallick, H. (2023). Does the Composition of Fiscal Deficit Matter for Economic Growth at the Sub-National levels? An Empirical Analysis for India. *Public Finance and Management*, 22(1), 35-64.
7. Blejer, M. I., & Cheasty, A. (1991). The measurement of fiscal deficits: analytical and methodological issues. *Journal of Economic Literature*, 29(4), 1644-1678.
8. Blejer, M., & Cheasty, A. (1992). How to measure the fiscal deficit. *Finance and Development*, 29(3), 40-42.
9. Castro, V., & Martins, R. (2018). Politically driven cycles in fiscal policy: In-depth analysis of the functional components of government expenditures. *European Journal of Political Economy*, 55, 44-64.
10. Chakraborty, L. S. (2002). Fiscal deficit and rate of interest: An econometric analysis of the deregulated financial regime. *Economic and Political Weekly*, 1831-1838.
11. Chugunov, I., & Makohon, V. (2019). Fiscal strategy as an instrument of economic growth. *Baltic Journal of Economic Studies*, 5(3), 213-217.
12. Cimadomo, J. (2016). Real-time data and fiscal policy analysis: A survey of the literature. *Journal of Economic Surveys*, 30(2), 302-326.



13. Das, P. (2017). Debt dynamics, fiscal deficit, and stability in government borrowing in India: A dynamic panel analysis. In *Central and local government relations in Asia* (pp. 371-394). Edward Elgar Publishing.
14. Dholakia, R. H., & Karan, N. (2005). Consistent measurement of fiscal deficit and debt of states in India. *Economic and Political Weekly*, 2577-2586.
15. Elgie, R., & McMenamin, I. (2008). Political fragmentation, fiscal deficits and political institutionalization. *Public Choice*, 136, 255-267.
16. Erceg, C. J., Guerrieri, L., & Gust, C. (2005). Expansionary fiscal shocks and the US trade deficit. *International Finance*, 8(3), 363-397.
17. Eslava, M. (2011). The political economy of fiscal deficits: a survey. *Journal of Economic Surveys*, 25(4), 645-673.
18. Ezeabasili, V. N., & Mojekwu, J. N. (2011). Analysis of fiscal deficits and interest rates in Nigeria. *Journal of Economics and International Finance*, 3(4), 236.
19. Ezeabasili, V. N., Mojekwu, J. N., & Herbert, W. E. (2012). An empirical analysis of fiscal deficits and inflation in Nigeria. *International Business and Management*, 4(1), 105-120.
20. Fatima, G., Ahmed, A., & Rehman, W. (2011). Fiscal deficit and economic growth: An analysis of Pakistan's economy. *International Journal of Trade, Economics and Finance*, 2(6).
21. Folorunso, B. A. (2013). Relationship between fiscal deficit and public debt in Nigeria: An error correction approach. *Journal of Economics and Behavioral Studies*, 5(6), 346-355.
22. Fukuda, S. I., & Yamada, J. (2011). Stock price targeting and fiscal deficit in Japan: Why did the fiscal deficit increase during Japan's lost decades?. *Journal of the Japanese and International Economies*, 25(4), 447-464.
23. Hussain, M. E., & Haque, M. (2017). Fiscal deficit and its impact on economic growth: Evidence from Bangladesh. *Economies*, 5(4), 37.
24. Iya, I. B., Aminu, U., & Gabdo, A. Y. (2014). An empirical analysis of fiscal deficits' effects on Nigeria's economic growth. *International journal of emerging technology and advanced Engineering*, 4(8), 1-9.
25. Kopits, G. (2014). Coping with fiscal risk: Analysis and practice. *OECD Journal on Budgeting*, 14(1), 47-71.
26. Kryeziu, N. H., & Hoxha, E. (2021). Fiscal deficit and its effects on economic growth: Empirical evidence. *International Journal of Finance & Banking Studies* (2147-4486), 10(1), 62-70.
27. Kuştepli, Y., & Önel, G. (2005). Fiscal deficit sustainability with a structural break: An application to Turkey. *Eastern Mediterranean University, Review of Social, Economic and Business Studies*, 5(6), 1-20
28. Madni, G. R. (2014). Taxation, fiscal deficit and inflation in Pakistan. *The Romanian Economic Journal*, 53, 41-60.
29. Makin, J. H. (1983). Genuine interest, money surprises, anticipated inflation and fiscal deficits. *The Review of Economics and Statistics*, 374-384.
30. Mawejje, J., & Odhiambo, N. M. (2020). The determinants of fiscal deficits: a survey of literature. *International Review of Economics*, 67(3), 403-417.
31. Odhiambo, S. O., Momanyi, G., Othuon, L., & Aila, F. O. (2013). The relationship between fiscal deficits and economic growth in Kenya: An empirical investigation. *Greener Journal of Social Sciences*, 3(6), 306-323.
32. Ogunmuyiwa, M. S. (2011). Does fiscal deficit determine the size of external debt in Nigeria?. *Journal of Economics and International Finance*, 3(10), 580.
33. Omojimite, B. U., & Iboma, G. E. (2012). Fiscal deficit and the productivity of the Nigeria tax system, 1970-2010. *Journal of sustainable development*, 5(4), 116.
34. Onwioduokit, E. A. (1999). Fiscal deficits and inflation dynamics in Nigeria an empirical investigation of causal relationships. *Economic and Financial Review*, 37(2), 1.
35. Raju, S., & Mukherjee, J. (2010). Fiscal deficit, crowding out and the sustainability of economic growth. *Asia Visions*, 31, 1-31.



36. Rangarajan, C., & Srivastava, D. K. (2005). Fiscal deficits and government debt: implications for growth and stabilization. *Economic and Political Weekly*, 2919-2934.
37. Sanya, O., & Abiola, L. N. (2015). Fiscal deficit and economic growth, Nigeria experience. *International Journal for Innovation Education and Research*, 3(11), 6-15.
38. Umaru, A. D., & Gatawa, A. U. (2014). Fiscal deficit and economic growth in Nigeria (1970-2011): A disaggregated approach. *Journal of Research in National Development*, 12(1), 01-09.
39. Velasco, A. (1997). A model of endogenous fiscal deficits and delayed fiscal reforms (No. 6336). Cambridge, Massachusetts: National Bureau of Economic Research.
40. Zakharova, D., & Medas, P. A. (2009). A primer on fiscal analysis in oil-producing countries.

APPENDIX

Year	Direct Tax	Indirect Tax	Interest Payment	Subsidies	Fiscal Deficit
2003-04	76590	110392	124088	44323	123273
2004-05	95944	128854	126934	45957	125794
2005-06	120692	149572	132630	47522	146435
2006-07	169738	181444	150272	57125	142573
2007-08	231574	207972	171030	70926	126912
2008-09	248152	195169	192204	129708	336992
2009-10	271623	184913	213093	141351	418482
2010-11	313501	256367	234022	173420	373591
2011-12	343310	286454	273150	217941	515990
2012-13	396585	345292	313170	257079	490190
2013-14	455829	360025	374254	254632	502858
2014-15	500531	403085	402444	258258	510725
2015-16	449296	494469	441659	264106	532791
2016-17	521287	580085	480714	234809	535618
2017-18	606216	636272	528952	224455	591062
2018-19	723492	593719	582648	222954	649418
2019-20	638365	718537	612070	262304	933651
2020-21	583210	843077	679869	758165	1818291
2021-22	865386	939407	805499	503907	1584521
2022-23	1066827	1019835	940651	562080	1755319
2023-24	1178268	1152363	1079971	403084	1786816

Source: Handbook of Statistics On Indian Economy (Issued by Rbi)