

HOW DOES THE GOVERNMENT BUDGET SHAPE BUSINESS CONFIDENCE IN INDIA? INSIGHTS FROM QUANTILE REGRESSION AND THE SETAR MODEL

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Abstract: Using 36 monthly observations, this study empirically examines the relationship between company confidence and the Indian government budget from January 2021 to December 2023. Several econometric tests, including the Self-Exciting Threshold Autoregressive (SETAR) Model, the quantile regression model, and the Phillips-Perron unit root test, are employed in aggregation with descriptive statistics to satisfy the study goal. While the stationarity of the Indian government budget value (IGBV) is confirmed at both levels and at the first difference, the Phillips-Perron unit root test verifies the stationarity of the Indian business confidence (IBC) at the first difference. Using the quantile regression model, which shows a positive correlation between IBC and IGBV over the course of the study period at various quantiles, the non-normal behavior from the Jarque-Bera test is examined. The entire study period is divided into three regimes by the SETAR model, and it is found that as the study period moves toward later regimes, the coefficient value of the self-exciting term rises. Furthermore, during the study period, there was a significant positive correlation between IBC and IGBV, which enables us to verify that IBC experiences a positive shock that raises its value as IGBV rises.

Keywords: Business Confidence, Government Budget, Quantile Regression, SETAR Model, Connectivity, India

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Introduction

The health of a nation's economy is closely tied to the expectations and sentiments of the industry. There are various macroeconomic factors that influence the sentiment, among which the government budget is an important factor. The connection between Business confidence and government budget is direct as well as multidimensional, reflecting how fiscal policies, expenditure patterns, and revenue strategies shape the economic environment of the country where the business operates.

Business confidence refers to the degree of optimism and pessimism that corporate houses feel about the prospects of their companies and the overall economy. It is a reflection of future sales, investment opportunities, employment level, and future profitability. High business confidence generally encourages greater investment, expansion, and hiring, while low confidence results in economic stagnation.

In the context of a dynamic and evolving country like India, the relationship between business confidence and government budget plays a critical role in shaping the country's growth. The sentiment of the corporate sector regarding economic condition, investment climate, and profitability prospects is being captured by the business confidence, which often depends upon the fiscal policies and announcements made by the government in the Union Budget. The Union Budget of India is more than a financial statement. It is like

a roadmap that outlines the government's priorities, reforms, and vision for the economy. It shows how resources will be allocated across sectors and what the sources of revenue are. It reveals the focus of the government on infrastructure, social welfare, and industrial incentives, influencing business expectations, investment planning, and overall economic sentiments.

In India, this connection between business confidence and government budget is particularly significant due to the country's large and diverse economic structure, ongoing development needs, and central role of public spending.

This dynamic relationship implies that the tone and structure of a government budget can either strengthen or undermine business confidence. In economies striving for growth, especially those navigating post-pandemic recovery or structural reforms, understanding this connectivity is very crucial for policymakers, investors, and entrepreneurs. Analysing this interplay will help to assess how fiscal strategies translate into real economic outcomes and influence corporate behaviour.

The interplay between the government budget and business confidence in India underscores the vital role of fiscal policy in guiding economic momentum. As India aspires to become a \$5 trillion economy, a well-designed budget that balances growth, inclusion, and reform will be instrumental in sustaining high levels of business confidence and investment.

Literature Review

Hardi et al. (2024) analyze the prolonged effects of macroeconomic indicators on business confidence in Indonesia, emphasizing the importance of economic conditions in shaping corporate sentiment. Utilizing monthly data spanning from 2009 to 2022, the study employs Dynamic Ordinary Least Squares (DOLS), Fully Modified Ordinary Least Squares (FMOLS), and Canonical Cointegrating Regressions (CCR) to ensure the robustness of the findings. Results indicate that economic growth, inflation, and the composite stock price index positively influence business confidence, while government spending, interest rates, and exchange rates exert a negative impact. Additionally, Granger causality tests reveal directional relationships between these variables, underscoring the necessity for businesses to continuously track economic shifts. By understanding these macroeconomic patterns, companies can make informed strategic decisions and anticipate changes in sentiment that may affect long-term growth and investment planning. The study highlights the critical role of macroeconomic awareness in fostering business stability and resilience in fluctuating economic landscapes

Montes and Salgado (2024) explore how economic policy uncertainty influences business confidence in Japan, addressing gaps in the existing literature on policy-related economic fluctuations. Their study is unique in distinguishing the effects of monetary and fiscal policy uncertainties, analyzing data spanning

from 1987 to 2022 across multiple economic phases, including periods that exclude the COVID-19 crisis and the subprime financial downturn. Using various econometric techniques, the findings indicate that economic policy uncertainty negatively impacts business confidence, with fiscal and monetary policy uncertainties further exacerbating this effect. Moreover, quantile regression results reveal that the impact of uncertainty is more pronounced when business sentiment is already low. This research underscores the significance of stable economic policies in maintaining confidence within Japan's business sector

Yusoff et al. (2021) examine how government financial support services (GFSS) interact with psychological attributes to influence entrepreneurial intentions among Malaysian SMEs. The study explores the impact of risk-taking tendencies and self-assurance on the likelihood of engaging in business activities. Findings indicate that both psychological traits significantly enhance entrepreneurial propensity, although GFSS does not exhibit a substantial moderating role in this relationship. Despite its limited direct influence, GFSS remains crucial for fostering business development, necessitating policy improvements to enhance its effectiveness. The study provides valuable insights for policymakers seeking to refine financial assistance programs to better support emerging entrepreneurs and stimulate business expansion. By bridging existing research gaps, this work underscores the importance of tailored

financial interventions in fostering sustainable entrepreneurial ecosystems.

The 2015 Business Confidence Survey, conducted by the Lahore Chamber of Commerce & Industry and the Lahore School of Economics, identified several crucial factors shaping private-sector expansion. Findings indicated that companies across various industries witnessed an upward trend in revenue, capital infusion, and workforce size, reflecting positive economic momentum. Additionally, enterprises anticipated further advancement in the following year, with plans to enhance investments. However, limited access to external financing emerged as a pressing concern, as businesses primarily depended on internal reserves due to inadequate support from financial institutions. Another significant challenge was the scarcity of trained professionals, highlighting the necessity for structured government initiatives in skill development. Persistent energy shortages and deteriorating security conditions were also recognized as major impediments, emphasizing the need for comprehensive policy measures. Furthermore, firms expressed frustration with cumbersome and inconsistent tax and regulatory frameworks, stressing the urgency of transparent governance and stronger public-private collaboration to drive sustainable industrial progress (Lahore Chamber of Commerce & Industry & Lahore School of Economics, 2015).

Wong et al. (2015) investigate how cooperative interactions between

businesses and regulatory authorities influence corporate confidence in government oversight. Drawing on the theory of cooperation and competition, the study emphasizes the role of social face, mutual recognition of respect, and legitimacy in shaping constructive business-government relationships. Data collected from 146 business managers and government officials in Shanghai reveal that collaborative, rather than competitive or independent, objectives foster mutual social face confirmation, enhancing trust in regulatory bodies. Structural equation modeling suggests that when businesses and regulators align their goals for mutual benefit, confidence in government competency, concern for business interests, and regulatory effectiveness strengthen. In contrast, competitive and independent goals hinder relationship-building and erode trust in governance. These findings underscore the significance of cultural values in economic interactions, illustrating how social face management affects cooperation and policy implementation. The study contributes to broader discussions on regulatory trust by demonstrating that respect-driven interactions, rather than mere policy enforcement, play a crucial role in fostering stable economic environments.

Konstantinou and Tagkalakis (2009) explore the influence of fiscal measures on consumer and business sentiment, focusing on how government expenditure and taxation shape economic perceptions. Analyzing quarterly data from nine OECD nations between 1970 and 2007,

their research highlights those reductions in personal and corporate taxes lead to improved confidence, likely due to increased financial flexibility and temporary economic relief. Additionally, higher non-wage public sector spending positively impacts consumer outlook. In contrast, rising government wage expenditures and public investments diminish confidence, as they may signal a prolonged expansion of the public sector, raising concerns over future tax burdens. The study incorporates various macroeconomic indicators, including employment levels, inflation rates, GDP growth, asset price fluctuations, and interest rates, to assess fiscal policy effects. Their findings suggest that well-structured tax reductions and strategic public spending can enhance economic optimism and encourage private-sector participation, ultimately supporting growth.

It is identified that there is a dearth of existing literature that deals with the empirical association between Indian business confidence (IBC) and the Indian

government budget value (IGBV). Moreover, none of the studies have made an attempt to investigate the effect of IGBV on IBC.

In this context, we decided to finalise the following objectives. First, to study the relationship between IGBV and IBC, and finally, to study the effect of IGBV on IBC, along with how IBC behaves based on its exciting factor.

Research Methodology

This study considers 36 monthly observations of closing returns of Indian business confidence (IBC) and the Indian government budget value (IGBV) from January 2021 to December 2023. The historical data of the select variables are collected from the database of moneycontrol.com. To address the objectives of the study, different econometric tests, namely, the Phillips-Perron unit root test, the quantile regression model, and the Self-Exciting Threshold Autoregressive (SETAR) Model, along with the descriptive statistics, are used.

Empirical Outcome

Descriptive Statistics

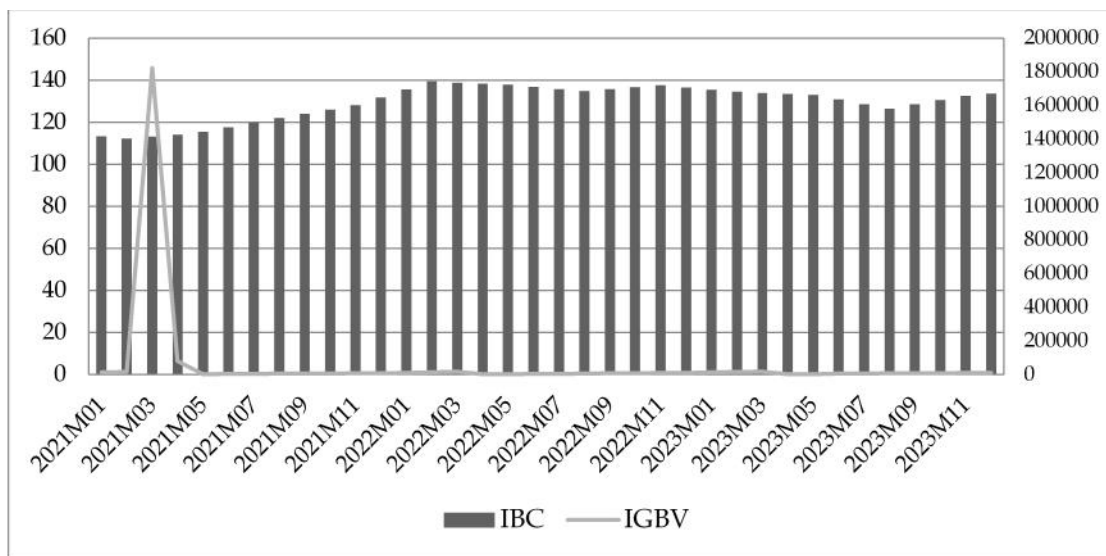
	IBC	IGBV
Mean	129.4535	59691.53
Median	1.33E+02	6987.3
Std. Dev.	8.3705	302282.2
Skewness	-0.8654	5.7314
Kurtosis	2.4559	33.9097
Jarque-Bera	4.9376	1630.212
Probability	0.08***	0.00*

(* indicates significance at 1% level, *** indicates significance at 10% level)

The above table denotes the results of the descriptive statistics of the select variables, namely Indian business confidence (IBC) and the Indian government budget value (IGBV). It is observed that the variables depart from normality, as confirmed by the probability value of the Jarque-Bera

test. For IBC, skewness is found to be negative, indicating a longer left tail. On the contrary, IGBV has a positive skewness, indicating a long right tail. IBC is mesokurtic in nature, whereas IGBV is leptokurtic in nature.

The growth of the select variables from 2021 to 2023 is displayed below graphically:



Phillips-Perron Unit Root Test

Variables	At Level		At 1 st Difference	
	t-Statistic	Prob.*	t-Statistic	Prob.*
IBC	-2.5281	0.3135	-2.8130	0.0202**
IGBV	-6.0705	0.0001*	-9.3627	0.0000*

(* indicates significance at 1% level, ** indicates significance at 5% level)

The above table demonstrates the results of the Phillips-Perron unit root test, where it is observed that IBC does not suffer from the problem of the unit root

at first difference, whereas IGBV does not suffer from the problem of the unit root at both level and at first difference.

Quantile Regression Model

Quantiles	Variable	Coefficient	Std. Error	t-Statistic	Prob.
0.25	IGBV	6.20E-01	3.61E-02	17.187	0.00*
0.50		6.20E-01	4.37E-02	14.1973	0.00*
0.75		6.20E-01	3.61E-02	17.187	0.00*

(* indicates significance at 1% level)

From the above table of the quantile regression model, it is found that there exists a noteworthy positive association between IGBV and IBC at different quantiles that allows us to conclude that as the government budget value increases, there is a reciprocal positive movement noted within the business confidence in India.

The Indian government raised expenditures on welfare, healthcare, and infrastructure following the 2020 pandemic. Increased government spending suggested a fiscal policy that supported growth, which raised

expectations and attitudes among businesses. It is possible that businesses at higher quantiles reacted to these budget increases even more favourably. Furthermore, Capital spending allocations were greatly raised in the Union Budgets of 2021–2023, particularly for energy, digital infrastructure, highways, and railroads. By cutting expenses and enhancing logistics, these long-term investments directly help companies in all industries. Greater optimism among larger or more investment-sensitive enterprises may be reflected through stronger relationships at the upper quantiles.

Self-Exciting Threshold Autoregressive (SETAR) Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Regime 1 (01.01.2021 - 31.07.2021)				
IBC(-1) < 121.89999 – 7 obs				
C	116.8374	1.090662	107.1252	0.00*
Regime 2 (01.08.2021 - 30.04.2022)				
121.89999 <= IBC(-1) < 131.7666 – 9 obs				
C	128.4628	0.881951	145.6576	0.00*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Regime 3 (01.05.2022 - 31.12.2023)				
131.7666 $\leq$ IBC(-1) – 20 obs				
C	135.6658	0.60708	223.4727	0.00*
Non-Threshold Variables				
IGBV	2.13E-02	1.58E-06	1.345583	0.0882***

(* indicates significance at 1% level, *** indicates significance at 10% level)

The above table highlights the result of the Self-Exciting Threshold Autoregressive (SETAR) Model between IGBV and IBC.

The SETAR model is a non-linear time series model that is capable of capturing the changes in the dynamics of a time series based on the level of a threshold. This model, apart from capturing the changing dynamics, also identifies the multi-regime within the dependent variable. The uniqueness lies in the fact that apart from measuring the effects of the independent variable on the dependent variable, the behaviour of the dependent variable based on its own lag is also captured, which is referred to as the self-exciting term.

It is observed that the self-exciting terms denoted by C have a noteworthy positive coefficient in each regime where IBC is regressed on its own past value, which helps us to conclude that past values have a notable self-exciting positive effect on the present values. Moreover, the coefficients are also found to be increasing in the later regimes. Based on the

independent variable, i.e., IGBV, a significant positive relationship is noted between IGBV and IBC, which indicates that as IGBV increases, it leads to a corresponding positive effect on IBC. This finding is in consonance with the results of the quantile regression model to a large extent.

Expectations in business typically follow a path-dependent process. If businesses are feeling upbeat right now, this optimism frequently persists and boosts confidence in the near future. Businesses take time to put choices into action. If they began recruiting or expanding because they were confident in the past, the momentum from those choices keeps them confident now. In India, peer behaviours, market signals, and industry alliances are common ways for emotion to propagate, particularly among SMEs. A self-exciting cycle is maintained when company confidence was high in the past because it inspires others to feel the same way.

A budget that is growth-oriented and well-structured conveys the government's dedication to long-term growth, boosting

confidence in macroeconomic stability. Companies see this as an atmosphere that is conducive to growth and investment. Spending by the government has a multiplier impact, especially in industries like transportation and construction, which raises output and employment and improves business sentiment. Both the influence of fiscal support and the self-reinforcing effect of prior confidence strengthen when the economy recovers or transitions to higher-growth regimes, which explains the rising coefficients in subsequent regimes.

Concluding Annotations

Strong evidence of the dynamic and interconnected relationship between Indian Business Confidence (IBC) and Indian Government Budget Value (IGBV) from 2021 to 2023 is provided by the empirical evidence. The model yields two important conclusions: first, IBC is self-exciting, and second, IGBV significantly improves IBC. A strong path-dependent or self-exciting mechanism in business sentiment is highlighted by the presence of positive and growing coefficients on the lagged values of IBC across several regimes. This suggests that over time, business confidence in India tends to get stronger. When companies are optimistic, this attitude persists into later times, resulting in more optimism. Investment decision lags, cumulative business experiences, and enduring macroeconomic narratives could all be responsible for this occurrence. Furthermore, favourable results from prior confidence, like increased sales,

choices about expansion, or better hiring, create a feedback loop that fortifies expectations for the future. The self-exciting coefficient's growing significance in subsequent regimes emphasizes even more how emotion compounds in more stable or growth-oriented economic periods. A statistically substantial and positive correlation between IGBV and IBC is found in the analysis, indicating that a major factor influencing business sentiment in India is higher government spending. Increased government spending, especially in the infrastructure and capital-intensive industries, not only boosts aggregate demand but also directly opens up new opportunities for companies. Furthermore, a more positive and encouraging climate for private sector activity has probably been facilitated by the government's fiscal interventions during this time, including increases in capital expenditures, Production Linked Incentive (PLI) programs, MSME loan support, and legislative reforms. This illustrates how fiscal policy has a strong influence on corporate confidence, particularly in emerging nations like India, where public investment can have significant multiplier impacts.

Conflict of Interests

The authors declare that there is no conflict of interests that are directly or indirectly related to this research work.

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