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Trends in Net Barter Terms of Trade and Macroeconomic Indicators in India: 1980-2024

Priya Kaushal

Research Scholar, Department of Economics, Siddharth University, Kapilvastu, Siddharth Nagar Uttar Pradesh- 272202 (India)
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Abstract: *This study examines the relationship between net barter terms of trade (TOT) and macroeconomic indicators in India over the period 1980–2024. This study uses the time-series data to examine the relationship between India's net barter terms of trade and macroeconomic indicators such as GDP growth rate, Inflation (CPI), Exchange Rate and Fiscal deficit. The study concludes that when net barter terms of trade improve GDP growth rate increases, increases investment, fiscal and external pressures are reduced. Conversely, when Net barter terms of trade deteriorate, Inflation increases, Fiscal deficit increases and currency depreciation occurs, which undermine macroeconomic stability.*

Keywords: Net Barter Terms of Trade, GDP Growth Rate, Inflation, Exchange Rate, and Fiscal Deficit.

Introduction

The Terms of Trade is the relative value of export to import, which is fundamental indicator of the external position and purchasing power in international markets. For emerging economies like India, fluctuations in terms of trade have a significant impact on the economic growth parameters. Since the beginning of economic liberalization in 1991, the Indian economy has significantly integrated with the global economy. The fluctuation in economic parameters has become highly sensitive to fluctuation. An increase in trade increases national income and boots the accounts, whereas a negative term of trade can create macroeconomic instability through inflationary pressures, depreciation and fiscal deficit. The objective of this study is to examine the fluctuation in net barter terms of trade and macroeconomic indicators and to identify policy mechanisms that can protect the economy from such instability.

The terms of trade have long been considered a key determinant of economic performance in open economics. Traditionally, economists estimate that a country's terms of trade trend to improve and deteriorate over time.

For a developing economy like India, which is deeply integrated into global trade but heavily dependent on imports of crude oil, natural gas, and high-value manufactured goods, trade stability presents a unique challenge. While a decline in terms of trade reflecting a gradual decline in purchasing power TOT volatility creates unpredictability, complicating ability to make decisions regarding investments, consumption, and trade. The environment of shock in the world impacts the government and the internal economy of India in terms of trade fluctuations. A balance of payment crisis 1991, the global financial crisis 2008, the COVID-19 pandemic, and the Russia–Ukraine war is some of the events that affect the terms of trade. These shocks affect the growth of the GDP and balance macroeconomic stability by increasing the fiscal deficit, raising the inflation rate, pushing the exchange rate down, and dragging the current account down.

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Although it is important, the correlation between terms-of- trade stability and macroeconomic stability in India is a little explored area.

Review of Literature

Steven Deller Theories of Economic Growth: A Brief Overview. Since World War II, theories of economic growth have developed tremendously, as they strive to understand the reasons as to why certain communities thrive and others fall behind. The early methods, including Kuznets and Rostows stage of development, relied on historical data to explain economic changes in the economies in the form of agriculture to industry and finally to services. Such inductive models were being replaced by more formal neoclassical theories, such as the Solow Swan model, which focused on capital accumulation, labor and technological advancement in the context of assumptions such as perfect competition and diminishing returns. These models indicated convergence in the levels of income.

Robert E. Lipsey (1963) Trends in Prices and Terms of Trade - in this chapter terms of trade have been a long-standing debate in the literature about whether the developed countries have sustained gains over the underdeveloped ones. Preliminary research, such as that of Kreps (1926), indicated that the U.S. terms of trade had improved greatly between the years 1880s and 1913. But in the work of Lipsey, new indexes of NBER are presented contradicting this opinion and displaying insignificant change in the long run. The article highlights that the volatility that occurred during wartime and interwar periods caused a fluctuation in the price movements and that both export and import prices were asymmetric before and after World War 1. Contrary to the previous claims about the continued benefits of the industrial worlds, the analysis prepared by Lipsey reveals that the U.K. alone significantly improved, whereas U.S and the European continent failed to do so. The research also criticizes the common belief about the falling prices of primary products against their manufactures and shows more specific and industry-related patterns. This rethinking of existing assumptions is an empirical reconsideration of the complexity in international trade in the long run.

Norbert Funke, Eleonora Granziera, Patrick Imam "Terms of Trade Shocks and Economic Recovery

The macroeconomic literature has paid much attention to the effect of the terms of trade (ToT) shocks on economic growth. Initial research (e.g., Easterly et al., 1993; Sachs, 1981) highlighted the fact that it is common to observe that negative ToT shocks have an adverse impact on the national income, investment, and consumption. As Broda (2004) pointed out, in the case of ToT shocks, the flexible exchange regimes assist the countries in adapting more swiftly. Becker and Mauro (2006) discovered that a 10 percent reduction in ToT would reduce the annual growth by approximately 2.8 per cent especially in developing nations. Rodrik (1999) went ahead to suggest that weak institutions contribute towards the negative effects of the external shocks. Unlike in the neoclassical models where the economies are expected to get back to the long run track once the shock is over, the

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endogenous growth literature (e.g., Matsuyama, 1992) predicts irreversible damage particularly when the tradable sector is of specialization. Recenters (Haussmann et al., 2006; Berg et al., 2006) studied growth accelerations and spells and concluded that ToT shocks have a short-term effect, but their overall effect is mixed. The present paper is based on these premises by uncovering policy and institutional aspects of real exchange-rate depreciation, government stability and aid inflows that can be used to recover more promptly after endemic negative ToT shocks. It provides solid empirical data in 159 countries between 1970-2006 to identify the circumstances under which the recovery of post-shock growth would be possible.

Chetan Ghate, Sargam Gupta and Debdulal Mallick (2016) Terms of Trade Shocks and Monetary Policy in India.

The paper examines how terms of trade shocks affect the monetary policy in India through a three-sector model, which brings implications through effects on inflation, the level of output gap, and allocation of labor in the sectors. The research methodology incorporates a three-sector closed economy NK-DSGE model and comparison of positive procurement shock and negative productivity shock.

Makhlouf, Kellard, and Vinogradov (2023) What Moves Commodity Terms -of-Trade? Evidence from 178 Countries"

Depending on the terms-of-trade in commodities (CTOT), the macroeconomic impacts of the price fluctuations of commodities are widely discussed in existing literature. Previous research, Spatafora and Tytell (2009), as well as Ricci et al. (2013) underline the connection between CTOT and national income, real exchange rates, and fiscal balances. It has also been observed that real interest rates, the exchange rates of U.S. dollar and the aggregate demand across the world have a role to play in the commodity prices (Frankel, 2006; Lombardi et al., 2012). But such studies usually emphasize individual commodities or price indices and not country specific trade structures. The given study will address this gap by estimating the short and long-run impacts of the main macroeconomic variables which are constructed to create a CTOT index on 178 countries between 1962 and 2020. It separates the net importers and exporters and has asymmetric outcomes, where the emerging market growth (especially China, India, and Brazil) produces a more effectual impact on CTOT. This holistic approach provides important information as to what is susceptible to fluctuations in global commodity prices in the nation.

Objectives of the study

1. To examine the long-terms trend and fluctuations in India's Net Barter Terms of Trade from 1980 to 2024.
2. To study the movements of key macroeconomics indicators such as GDP growth rate, inflation (CPI), exchange rate, fiscal deficit in reference to Net Barter Terms of Trade from 1980 to 2024.
3. To identify whether improvements or deteriorations in the terms of trade contribute to enhancing or weakening macroeconomic stability.

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4. To provide policy recommendations aimed at strengthening India's trade position and mitigating the adverse effects of unfavorable terms of trade on the overall economy

Research Methodology:

The present study is descriptive and empirical in nature. Secondary data is used for the study and is collected annually from 1980 to 2024, related to Net barter Terms of trade, GDP growth rate at market price, Inflation (CPI), Exchange Rate, and Fiscal Deficit. The data has been collected from the website of Reserve Bank of India (RBI, Handbook of Statistics). Previous publications of Economic Survey reports have also been considered to cross-check the veracity of the data collected. For the analysis of data, required statistical tools have also been used

Table (1): Net Barter Terms of Trade on Macroeconomic Stability in India (1980-2024)

Year	Net Barter Terms of Trade base year 2012-2013=100	GDP_{MP} Growth (Annual %)	Exchange Rate (LCU per US$, period average)	Fiscal Deficit (% of GDP)	Consumer Price Index (2010 = 100)
1980	97.6	6.73	7.86	6.5	9.73
1981	85.36	6.006	8.65	5.55	11.01
1982	98.46	3.47	9.45	4.93	11.88
1983	102.27	7.28	10.09	5.4	13.29
1984	126.78	3.82	11.39	5.69	14.39
1985	110.93	5.25	12.36	6.79	15.19
1986	113.68	4.77	12.61	7.55	16.52
1987	135.97	3.96	12.96	8.13	17.98
1988	129.001	9.62	13.91	7.34	19.66
1989	132.27	5.94	16.22	7.08	21.05
1990	127.94	5.53	17.5	8.07	22.94
1991	115.47	1.05	22.74	7.9	26.13
1992	126.25	5.48	25.91	7.89	29.21
1993	134.49	4.75	30.5	8.57	31.06
1994	153.09	6.65	31.37	8	34.24
1995	161.014	7.57	32.42	6.81	37.74
1996	145.69	7.54	35.43	6.71	41.13
1997	133.33	4.04	36.31	8.28	44.08
1998	154.041	6.18	41.25	9.74	49.91

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1999	158.47	8.84	43.05	8.7	52.24
2000	158.47	3.84	44.94	8.41	54.33
2001	148.33	4.82	47.18	11.03	56.39
2002	145.8	3.8	48.61	11.07	58.81
2003	131.22	7.86	46.58	11.43	61.05
2004	136.92	7.92	45.31	9.22	63.35
2005	132.17	7.92	44.09	7.49	66.04
2006	123.13	8.06	45.3	6.38	69.87
2007	121.55	7.66	41.34	4.59	74.32
2008	125.19	3.08	43.5	9.17	80.53
2009	128.68	7.86	48.4	9.7	89.29
2010	144.53	8.49	45.72	8.8	100
2011	145.48	5.24	46.67	8.35	108.91
2012	100	5.45	53.43	7.55	119.23
2013	98.09	6.38	58.6	7.00	131.18
2014	103	7.41	61.02	7.07	139.92
2015	108.8	7.99	64.15	7.21	146.79
2016	123.1	8.25	67.2	7.12	154.05
2017	122.6	6.8	65.12	6.23	159.18
2018	119.8	6.45	68.38	6.38	165.45
2019	113.9	3.87	70.42	7.69	171.62
2020	121.3	-5.77	74.09	12.86	182.98
2021	133	9.68	73.91	6.8	192.37
2022	107.6	7.6	78.6	6.4	205.26
2023	101.4	9.2	82.6	5.9	216.86
2024	114.2	6.48	83.6	4.8	227.6

Source: Handbook of Statistics (Various Publications), RBI, India.

The table 1 represents the yearly movement of India's net barter terms of trade and key macroeconomic indicators from 1980 to 2024. The data shown in the table 1 is plotted as graph in figure 1, figure 2, figure 3, figure 4, and figure 5.

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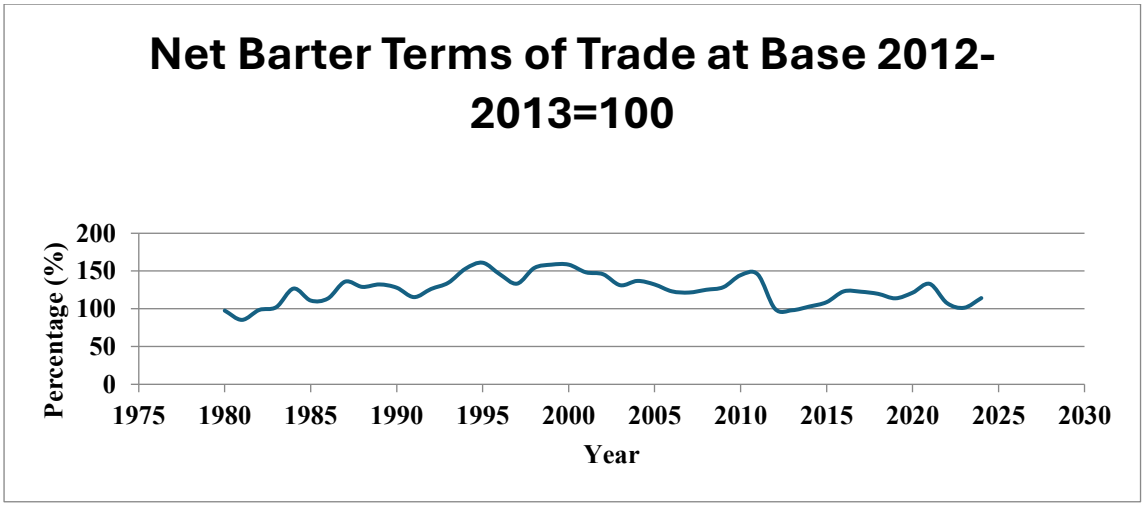

Figure: 1

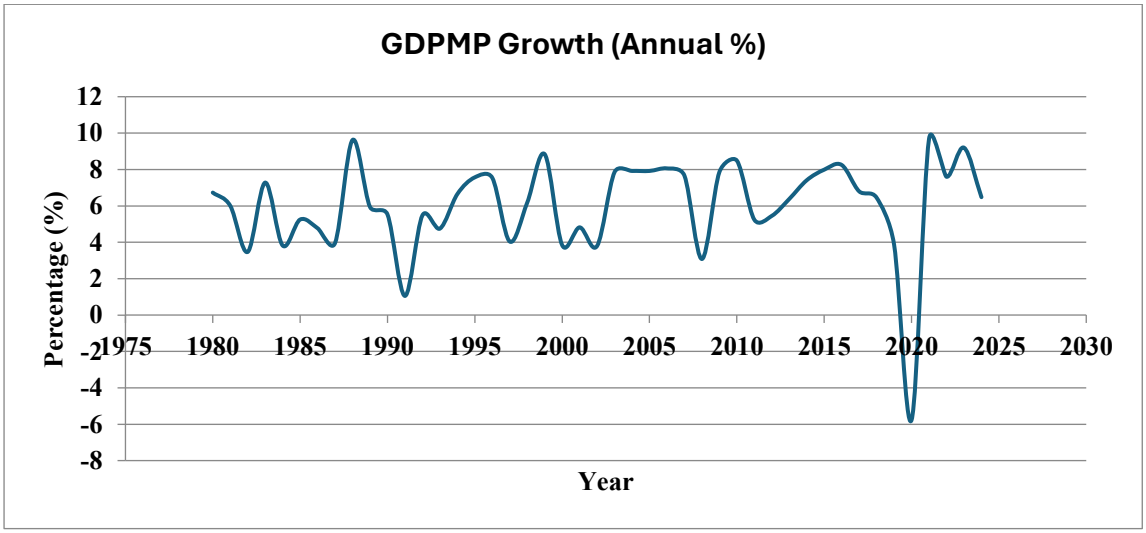

Figure: 2

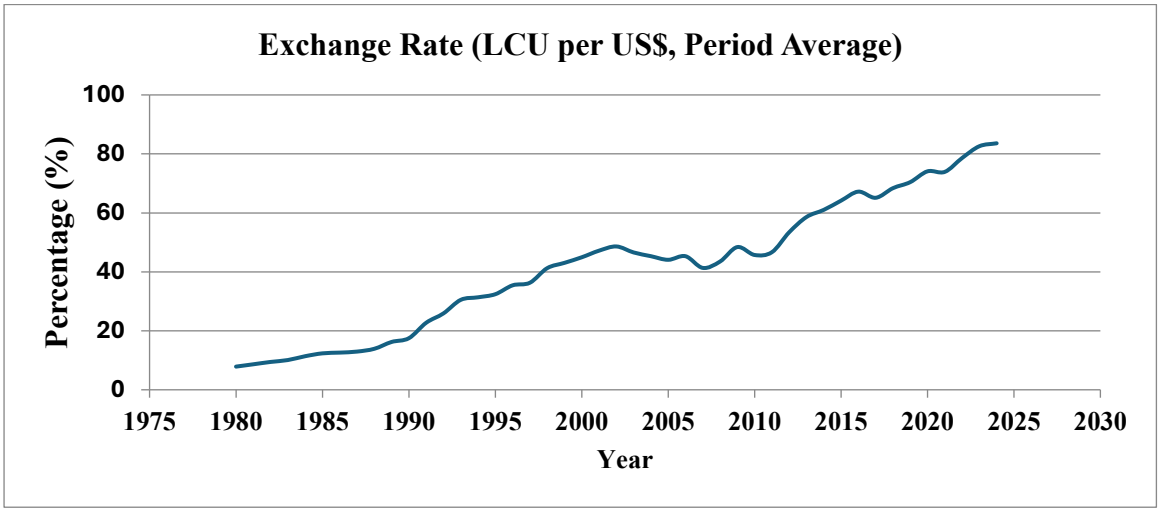

Figure: 3

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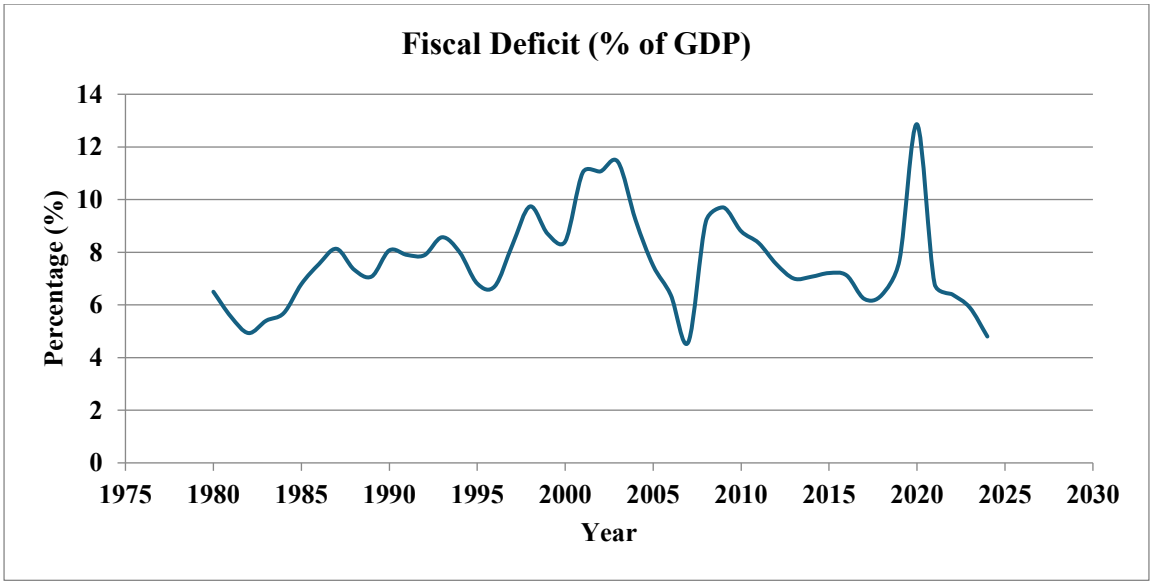

Figure: 4

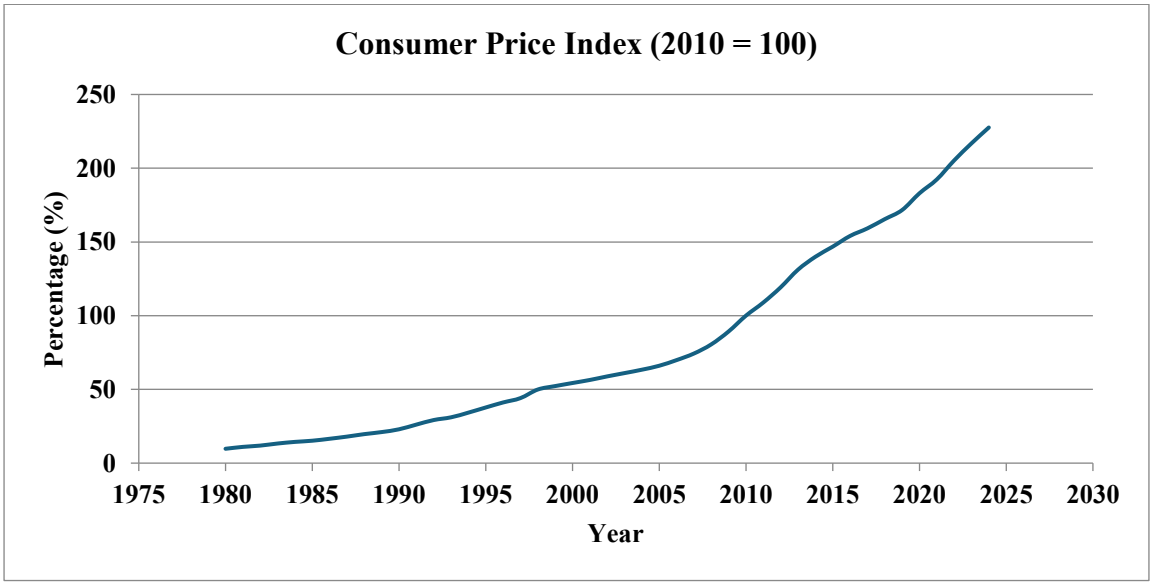

Figure: 5

The data shows the annual changes in India's net barter terms of trade along with significant macroeconomic indicators from 1980 to 2024. The terms of trade vary significantly over time, mirroring shifts in the price relations of exports and imports. In the early 1980s, the terms of trade were quite low but experienced improvement during the mid- and late 1980s, reaching a peak around 1987. The terms of trade highly increased after the economic reform of 1990s. A significant increase occurred in 2000s. Since the financial crisis of 2008, the pattern of terms of trade was of mixed nature. A decline occurred in 2012, and was recovered in 2020.

GDP growth rate is a main measurement of economic growth. The GDP growth rate graph shows that during the economic reform period, i.e., from 1990 to 2003, the GDP growth rate increased, while in 2020, during the COVID-19 pandemic, it decreased. In the long term, the exchange rate is shown to be falling over time

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due to the depreciation of the rupee against the US dollar. Fiscal deficit has been higher in recent years due to pressure on government spending, particularly during the periods of 2001–2009 and 2020. Similarly, CPI has been shown to be increasing in the entire period due to which there are pressures on the monetary situation in the Indian economy. To summarize, the statistics reveals that changes in terms of trade usually correspond to changes in growth rate of GDP , fiscal balance and exchange rate, implying that shocks in external prices and trade dynamics substantially impact the stability of India's macroeconomic.

Conclusion

The fluctuations in economic parameter such as GDP growth, fiscal deficit, inflation, and exchange rate have become highly sensitive to Net Barter Terms of Trade**.** An increases in terms of trade, increases national income and boost the economy leads to increase in revenue from export and income, heavy investment and decline in fiscal as well external pressure on economy. Whereas a negative terms of trade can create macroeconomic instability through inflationary pressures, depreciation and fiscal deficit. This finding suggests that India's trade position and fundamental determinants of competitiveness directly and measurably affect domestic economic performance.

According to all the issues that we have discussed in the classroom, the nations must make policies that not only stabilize their terms of trade, but also improve on the same, particularly to help them to counter the external shocks. Among the lessons is the fact that export diversification of products may assist. With the application of tech innovations to enhance export markets, it is possible to reduce dependency on a limited number of goods. One of the viable options of combating adverse global prices movements is increasing production capacity in the energy sector as well as key imports domestically. Other than this, shock in trade may also be ironed out by ensuring that fiscal policies are sound, flexible exchange rates are applied and that foreign exchange reserves are strong. Lastly, the economy should remain stable by regularly monitoring the prices of commodities and changing trade and monetary policies to enhance long-term development in the context of the changing trade dynamics.

References:

- Lipsey, R. E. (1963). Trends in Prices and Terms of Trade. In Price and Quantity Trends in the Foreign Trade of the United States (pp. 8-35). Princeton University Press.
- Ahmed, Shaghil, and Jae Ha Park. "Sources of macroeconomic fluctuations in small open economies." Journal of Macroeconomics 16.1 (1994): 1-36.
- Funke, N., Imam, P. A., & Granziera, E. (2008). Terms of trade shocks and economic recovery.
- Jawaid, Syed Tehseen, and Syed Ali Raza. "Effects of terms of trade and its volatility on economic growth in India." (2012).

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- Bathla, Seema. "Volatility in agriculture commodity prices in India: Impact and macroeconomic and sector-specific policy responses." Indian Journal of Economics and Development 9.4 (2013): 291-304.
- Verma, N. M. P. "Macroeconomic Instability in Indian Economy: a contemporary short run analysis." Social Science and Development Policy (2017): 7.
- Ghate, C., Gupta, S., & Mallick, D. (2018). Terms of trade shocks and monetary policy in India. Computational Economics, 51(1), 75-121.
- Mo, Di, et al. "The macroeconomic determinants of commodity futures volatility: Evidence from Chinese and Indian markets." Economic Modelling 70 (2018): 543-560.
- Rath, Sudhansu Sekhar, Srinibash Dash, and Mukesh Kumar Sharma. "Dynamic relationship between trade balance and macroeconomics variables in India." Test Enginering and Management 83 (2020): 399-418.
- Sreenu, Nenavath, and K. S. S. Rao. "The macroeconomic variables impact on commodity futures volatility: A study on Indian markets." Cogent Business & Management 8.1 (2021): 1939929.
- Suresh, N. "Impact of Macroeconomic Variables on Exchange Rate Volatility in India." (2022).
- Singh, Tarlok. "Do terms of trade affect economic growth? Robust evidence from India." Economics of Transition and Institutional Change 31.2 (2023): 491-521.
- Makhlouf, Y., Kellard, N. M., & Vinogradov, D. (2023). What moves commodity terms-of-trade? Evidence from 178 countries. Journal of Commodity Markets, 32, 100359.
- Arya, Vijay Vrat, Ayushman, and Sakshi Chauhan. "Exchange Rate Volatility and Its Impact on India's Export–Import Trade: An Empirical Assessment of RBI's Interventions." The Indian Economic Journal 73.5 (2025): 866-877.
- Handbook of Statistics (Various Publications), RBI, India

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