

## Twin Deficits and External Imbalances: A Bibliometric Analysis of Global Research with Insights from India and G7 Economies

Ayesha Bano\*<sup>1</sup>

Research Scholar, Department of Commerce,  
Faculty of Commerce, Integral University, Lucknow City – Lucknow State- Uttar Pradesh (UP) County- India-226022  
ORCID ID- <https://orcid.org/0009-0006-7809-3886>

Dr. Sultan Ahmad\*<sup>2</sup>

\*Corresponding Author

Assistant Professor, Department of Commerce,  
Faculty of Commerce, Integral University, Lucknow City – Lucknow State- Uttar Pradesh (UP) County- India-226022  
E-Mail- [s.ahmadkhan123@gmail.com](mailto:s.ahmadkhan123@gmail.com), <https://orcid.org/0000-0002-3746-8921>  
Contact- +91 7784024285, 8574943348

Dr. Niraj Kumar\*<sup>3</sup>

Assistant Professor, Department of Economics  
C. M. College, Darbhanga (Bihar ) India -846004  
ORCID ID- <https://orcid.org/0009-0009-5161-3599>

Dr Daya Shankar Kanaujia\*<sup>4</sup>

Assistant Professor

Lucknow Public College of Professional Studies (University of Lucknow)  
Vinamra Khand, Opp. Kathauta Lake, Gomti Nagar, Lucknow. UP (India)- 226010

Dr. Anand Kumar\*<sup>5</sup>

Assistant Professor

School of Commerce and Management, Mohan Babu University (India)

### Abstract

This study examines global research on the twin deficit hypothesis and external imbalances, with a focus on India and G7 economies, using bibliometric analysis of 110 peer-reviewed articles published between 2010 and 2025 from Scopus. A Three-Stage analysis of intellectual structures, thematic clusters, and methodological approaches shows that fiscal deficits, current account deficits, and external imbalances remain central research themes. Econometric methods such as ARDL, VAR, and cointegration dominate empirical testing. In India, fiscal policy exhibits a strong and asymmetric relationship with current account outcomes, influenced by oil price shocks, capital flows, and state-level fiscal dynamics. In G7 economies, a more complex triplet deficit framework emerges, integrating fiscal, trade, and savings-investment gaps. These findings highlight that external shocks, structural competitiveness, and policy design significantly shape the persistence of twin deficits. By mapping knowledge clusters and gaps, the study offers insights for policymakers to enhance fiscal sustainability and external stability in a globally integrated economy. This study emphasizes how fiscal, trade, and external imbalances are interconnected globally, with India showing asymmetric fiscal-current account dynamics and G7 economies following a more complex triplet deficit framework. Policymakers can leverage these insights to design targeted strategies that promote fiscal sustainability, external stability, and resilience to global shocks, providing lessons for emerging and developed economies alike.

**Keywords:** Twin Deficit Hypothesis; Fiscal Deficit; Current Account Deficit; External Imbalances; Bibliometric Analysis; India; G7 Economies  
**JEL Codes:** E62, F32, F41, H62.

### 1. Introduction

The relationship between a country's fiscal balance and external trade balance has been widely debated across advanced and emerging economies. The theoretical proposition suggests that a **fiscal deficit**—when government spending exceeds revenue—often leads to a **current account imbalance**, where imports surpass exports (Panousis, 2020). The **twin deficit hypothesis** explains this through higher domestic demand resulting from government spending; when this demand is unmet by domestic production, people buy more foreign goods, increasing imports and widening the current account gap (Furceri, 2018) (Lubna, 2024). According to the **Keynesian view**, fiscal deficits significantly affect current account balances—greater public spending raises income and imports, worsening the trade deficit. In contrast, the **Ricardian Equivalence Hypothesis** argues that forward-looking households expect future tax increases to finance deficits, so they save more, neutralizing the impact on demand and external balance. This means private savings offset government deficits, weakening the twin deficit link (Chowdhury, 2007) (Raji, 2018) (ALAKBAROV, 2020). However, the practical validity of these theories differs across economies, depending on institutional structures, openness, capital mobility, and consumer behavior. In **India**, the twin deficit relationship is more complex. High fiscal deficits are often tied to developmental spending—such as subsidies, public wages, or infrastructure—that have mixed effects on trade. Infrastructure spending may enhance export competitiveness in the long term but raises capital goods imports initially, worsening the current account (Rajakaruna, 2021). Likewise, social welfare expenditure, though vital for inclusive growth, increases consumption without proportionate production growth, heightening import dependency (mallick, 2003). This interaction creates a cycle where fiscal and current account deficits reinforce each other—expansionary fiscal policies raise domestic absorption and imports, deteriorating the current account in the short run, even if long-run export gains emerge (El-Khishin, 2021). India's **current account** is highly sensitive to external shocks such as fluctuations in global crude oil prices, given its heavy dependence on oil imports. A **fiscal stimulus** that boosts domestic demand can indirectly widen the trade gap through higher energy consumption—demonstrating the **twin deficit effect**. This relationship becomes more pronounced when the **rupee depreciates**, raising import costs and adding further strain to the current account (mukherjee, 2010). These dynamics underscore the need for strong **monetary policy coordination and exchange rate management** to address fiscal and external imbalances. As an emerging economy with persistent fiscal pressures and a dynamic external sector, **India provides an important case study**. From the **1991 balance of payments crisis** to the **fiscal consolidation** under the FRBM Act and the **COVID-19-induced fiscal expansion**, the twin deficit issue has remained central to economic policy debates (H.S., P., & P., 2021). India's structural dependence on **oil imports, gold demand, and volatile capital flows** (RBI, 2022), along with fiscal challenges like **subsidy burdens, tax reforms, and rising public expenditure** (Ministry of Finance, 2023), adds further complexity to this relationship. Recent research highlights the crucial role of **capital flows** in shaping India's twin deficit dynamics. A more **liberalized capital account** allows financing of current account deficits through **FDI and FPI inflows**. However, such inflows are often unstable during global uncertainty—sudden **capital outflows** can trigger balance of payments stress, currency depreciation, and inflationary pressures, complicating fiscal and external adjustments (Mohanty, 2019). While empirical evidence using **Granger causality tests** suggests that while capital inflows may temporarily offset the impact of fiscal deficits on the current account, the underlying vulnerability persists (Kubendran, 2018). An often-overlooked aspect is **state-level fiscal behavior**. Indian states possess growing fiscal autonomy—especially after the **GST introduction** and the **14th and 15th Finance Commission** reforms—allowing them to decide spending and borrowing independently. Their collective fiscal stance influences national demand and import patterns, yet most studies aggregate central and state deficits, overlooking subnational effects (Dwivedi, 2023). This gap calls for deeper investigation into how state-level fiscal dynamics contribute to external imbalances.

Persistent questions remain: why do India's deficits tend to move together? Are they driven by **global shocks**, such as oil price hikes and international crises (Goyal & Kumar, 2018). Despite decades of research, evidence on the **causality and magnitude** of India's twin deficits remains mixed—some studies confirm a twin deficit link (D. & M., 2023), while others find **twin divergence**, attributing imbalances to external factors (Goyal & Kumar, 2018). As India transitions toward a **digital and services-led economy**, traditional models explaining twin deficits may no longer suffice—new frameworks are needed to capture these evolving macroeconomic realities.

### 2. METHODOLOGY

This study employs a bibliometric analysis to map and explore the scholarly literature on twin deficit and Indian trade specifically within the context of G7 countries. The goal is to identify the key trends and major topics and overall structure of research in this field. The data for this analysis was systematically collected from Scopus a comprehensive data set of peer reviewed literature. To ensure we capture all relevant research we began with a very broad search of using a long list of related terms like twin deficit ,current account deficit, macroeconomics , trade ,import

, export , and include methodology like ARDL and cointegration etc this initial search returned over 4200 documents we limited our research to article and review published in English from 2010-2025 with the key subject areas and also exclude less formal publication like conference paper and books chapters. The meticulous screening process result in a final robust data set of 110 highly relevant article .

**Table 1. Search standard and Article Nomination**

	REJECT	Accept
<b>Cleaning Standard</b>		
Search engine: Scopus		
Search date		
Search term ( twin deficit OR twin deficit hypothesis OR fiscal deficit OR current account deficit OR double deficit OR budget deficit ) and ( India OR G7 countries OR G-7 countries OR trade ) or( import OR export OR exchange rate OR inflation OR trade OR trade deficit OR macroeconomics ) or ( econometrics OR ARDL OR VAR OR cointegration OR analysis )		4641
Subject area and time frame : “economic , econometric and finance” business management and accounting , social science and study time frame (2010-2025)	3236	1405
Document type : article and review (excluding “conference paper” “book chapters” and) 122	501	904
Article selection Language assessment :- solely incorporated English-language articles.	18	886
QUALITY ASSESSMENT Incorporate articles following content screening if "Titles, abstracts, and keywords" show that they are pertinent to the study's domain.	776	110

This careful step by step filtering allowed us to distil a vast pool of literature down to its most pertinent core. the final dataset may smaller but it provides a sharp and focused lens through which to examine the research landscape. Which build confident that this refined collection of 110 articles accurately represents the key scholarly conversation on this topic. this process ensures our subsequent analysis of trends and themes is built upon a solid and relevant foundation and each retained article contributes directly to understanding the twin deficit dynamic within the specified economic contexts.

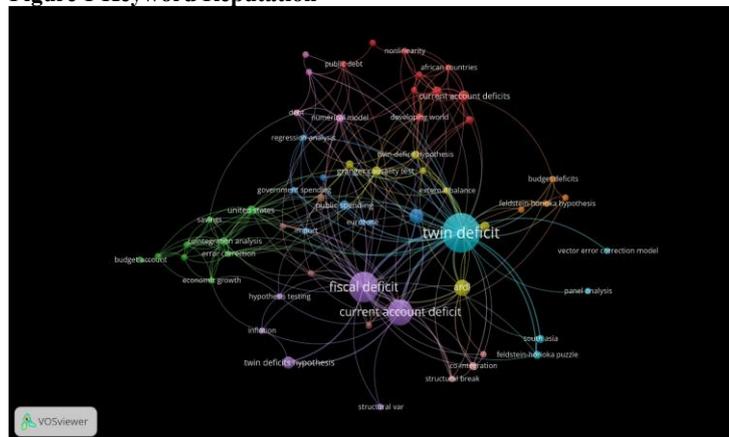
**Table 2: Top 15 keywords repetitions calculated from 110 articles picked between 2010-2025 via the researcher through employing the fractional counting method**

Keywords	Occurrence	Link strength
Twin deficit	50	93
Fiscal deficit	31	75
Current account deficit	23	62
ARDL	10	26
Interest rate	3	11
Developing world	3	13
inflation	2	5
Monetary policy	2	7
Empirical analysis	3	13
Fiscal policy	25	47
Granger causality	4	20
Economic growth	2	10
Twin deficit hypothesis	8	16
Regression analysis	2	11
Cointegration analysis	3	16

SOURCE: - created by author

Table 2 presents the top 15 most frequent keywords, each appearing at least three times between 2010 and 2025. The Link Strength column indicates how often a keyword co-occurs with others, reflecting its centrality and connectivity within the research network. Keywords were drawn from both author and indexed terms, and the network was created using VOS viewer. The prominence of Twin Deficit, Fiscal Deficit, and Current Account Deficit—each with the highest link strengths—confirms the literature’s central focus on the relationship between fiscal imbalances and trade deficits. The frequent appearance of Fiscal Policy further reinforces this dominant theme. Additionally, the presence of methodological terms such as ARDL, Granger Causality, and Cointegration Analysis highlights a strong empirical, time-series–based orientation emphasizing causality testing and long-run equilibrium analysis. The keyword structure illustrates a research field primarily devoted to empirically validating the theoretical linkages within the twin deficit framework, especially across the economic contexts examined in the analyzed studies.

**Figure 1 Keyword Reputation**



Source: - SOURCE:- created by author (Figure 1 keyword reputation calculated from 110 article from 2010-2025)

The Figure 1. Shows most dominant keyword by a significant margin is Twin deficit with 58 occurrences and a strong total link strength of 93. This clearly establishes the twin deficit hypothesis explained as the primary conceptual framework and the central focus of the literature in this domain. Other high occurrence terms such as Fiscal deficit (31) and current account deficit (23) further define the core subject matter examining the relationship between government budgets and the balance of payments.

### 3.Results

#### 3.1 Descriptive bibliometric analysis

The table 3 present an overview of the data collected for this bibliometric study . the final corpus consists of 108 articles publish between 2010-2025 sourced from 110 different academic journals. these article contain a total of 4743 cited reference indicating a well established and interconnected field of research.

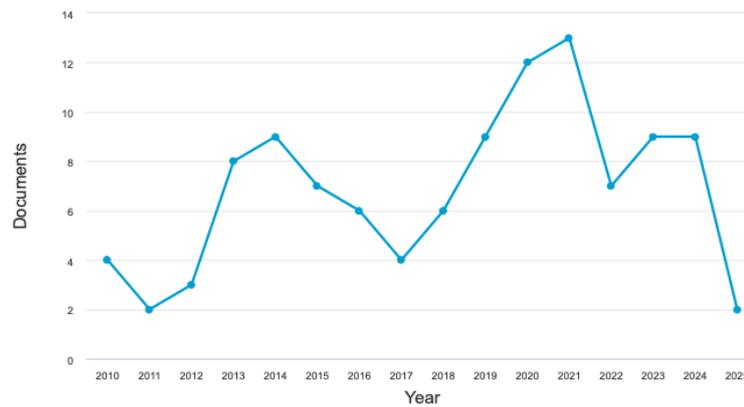
**TABLE 3. INFORMATION ABOUT DATA GATHERED**

Description	Results
<b>Time period</b>	<b>2010-2025</b>
Number of journals	110
Number of article	108
References	4743
Authors	231/y
Authors of single-authored documents	26
Authors of multi-authored documents	204

SOURCE: - created by Authors

This high number of references compared to the number of articles suggests that the research in this field is not being conducted in isolation but is instead deeply engaged with a rich existing body of literature. furthermore, the significant presence of multi authored documents with 204 authors collaborating compared to 26 single authors points to a strongly collaborative research culture. this trend indicates that the study of twin deficits is a complex endeavour often tackled by teams combining expertise which is essential for sophisticated econometric analysis

**Figure 2 Descriptive bibliometric**



SOURCE :- Scopus

The data reveal the vibrant research community with vast majority of authors 204 contributing through multi level of collaboration suggests that the topic is typically investigated by research term an a smaller number of scholar 26 produce single authored works. trend in annual publication which illustrated in the figure 3 shows a clear evolution of research interest. After initial sporadic activity a significant and steady increase in publications begins around 2014, 2015. the number of articles published annually rose markedly peaking in the most recent years of the data range 2023-2025. this trend strongly indicates that academic interest in the twin deficits hypothesis and related macroeconomic issues is not only strong but is also growing rapidly and cementing its status as a contemporary and highly relevant area of economic research.

**TABLE 4. AUTHOR INSTUTIONS AND COUNTRIES**

TC	AUTHORS	TP	TC	ORGANIZATION	TP	TC	COUNTRY	TP
56	Tudyka A.	1	56	University of Hong Kong	1	138		1
56	Nickel C.	1	56	European Central Bank, Germany	1	112	Germany	1
54	Paleologou S.-M.	1	54	National Statistics Office of Greece,	1	108	Greece	1
54	Kalou S.	1	54	University of Thessaloniki, Thessaloniki, 54124, Greece	1	92	Greece	1
46	Katrakilidis C.	1	46	University of Bath, Bath, BA2 7YA, United Kingdom;	1	84	Greece	1
46	Nguyen T.L.	1	46	Universidade de Lisboa, University of Economics, Poland	1	84	Poland	1
46	Sheremirov V.	1	46	Economics, Jinan University, China;	1	68	China	1
46	Miyamoto W.	1	46	University of Colombo, Colombo, Sri Lanka; University, Brisbane, Australia	1	60	Australia	1
46	Trachanas E.	1	46	, Maulana Azad National Urdu University, Hyderabad, India;	1	57	India	
44	Aworinde O.B.	3	44	Tanta University, Said Street, Tanta, Egypt	1	48	Egypt	1
37	Holmes M.J.	1	37	Department of Economics, University of Waikato, Hamilton 3240	1	37	Hamilton	1

SOURCE:- by Authors

This table show the most influential authors ,organization and country on twin deficit the most cited author Tudyka A(56) , Nickel C.(56) , Paleologou S.-M.(54), Kalou S.(54), Katrakilidis C.(54) , Nguyen T.L.(46), Sheremirov V.,with single publication which means there work considered very important and frequently used as reference by other researcher an exception of Aworinde O.B.who has 3 publication out of 44 citation .

**TABLE 5. MOST CITED JOURNALS**

Sources	Tc	Tp
Journal of policy modelling	105	4
journal of international economics	94	3
Empirical economics	91	9
Econometrica	91	1
applied economics	82	1
Journal of econometrics	81	6
Southern asia economic journal	63	2
journal of international money and finance	58	7
journal of political economy	56	3
applied economics letters	56	2
journal of macroeconomics	51	1
economic modelling	43	4
oxford bulletin of economics and statistics	39	2
economic inquiry	37	1
journal of asian economics	37	4

SOURCE:- By Authors

In table 5 the Journal of Policy Modelling is the most prominent source with its articles being cited 105 times across 4 publications. This means it has published several important papers that other researchers use. The other Journal of International Economics and Empirical Economics are also key sources of high-grade research with 94 and 91 citations respectively. Some journals like Econometrics and Applied Economics have high total citations (91 and 82) from just a single publication (TP=1). This means they published one very good and blockbuster article that became extremely influential. On the other side other journals like the Journal of Econometrics and the Journal of International Money and Finance also have a strong record of publishing multiple important papers (6 and 7 publications, respectively) which earning them high total citation counts.

**TABLE 6. Thematic Clusters of Twin Deficit & Fiscal Trade Literature (2010–2025)**

Theme	Authors	Title	TC
Cluster 1: Twin-Deficit Hypothesis (TDH) core theory	Nickel, C Obadić, A al-sawaie, khaled badinger, harald afonso, antónio fichet de clairfontaine kalou, sofia Afonso António, Huart Florence šulíková, veronika	Fiscal stimulus in times of high debt: Reconsidering multipliers and twin deficits	56
		Contradicting the twin deficits hypothesis: The role of tax revenues composition	14
		An Empirical Investigation of the Twin Deficit Problem and the Feldstein-Horeka Hypothesis: A Case Study of Jordan Fiscal Rules and Twin Deficits: The Link between Fiscal and External Balances	2
		Twin deficits through the looking glass: time-varying analysis in the Euro area Fiscal Rules and Twin Deficits: The Link between Fiscal and External Balances.	25
		The twin deficits hypothesis: Revisiting an EMU country. Twin deficits revisited: A role for fiscal institutions?	23
		A review of the state-of-the-art research on the twin deficit hypothesis	25
Cluster 2: Keynesian and Ricardian and FD and CAD	şen, hüseyin Holmes, Mark J Okoli, T. T. Sugozu, I. H Munir, K	Are twin or triple deficit hypothesis applicable to post communist countries?	54
		Threshold cointegration and the short run dynamic of twin deficit behaviour	21
		The analyses of structural vector autoregressive model on twin deficit convergence among the emerging economies does Ricardian equivalence hypothesis matter?	11
		Twin deficits in Turkey: An econometric application for the term of 1990-2009	3
		Dynamics of twin deficits, ricardian equivalence, and Feldstein-Horioka puzzle in South Asian Countries; [Dinámica de los Déficit Gemelos, Equivalencia Ricardiana Rompecabezas de Feldstein-Horioka en los Países del Sur de Asia]	37
Cluster 3: Fiscal Policy, Public Spending & Aggregate Demand Cluster 4: Causality & Direction of Linkages	bouakez, hamedh H.kim. carrière-swallow, yan Klein, M sheremirov, V. Kundu, A., & Goyal, A. K Hassan, M. S Obadić, Alka Marimuthu M. Devi M. bilman, mustafa erhan	Fiscal policy and external adjustment: New evidence	6
		The effects of government spending shocks on the trade account balance in Korea	9
		Macroeconomic Effects of Fiscal Consolidation in Emerging Economies: New Narrative Evidence from Latin America and the Caribbean	2
		Tax and spending shocks in the open economy: Are the deficits twins? The effects of government spending on real exchange rates: Evidence from military spending panel data	23
		Twin deficit or twin divergence in india: An econometric enquiry	12
		Testing relevance of twin deficit for a transition economy like Pakistan	46
		Contradicting the twin deficits hypothesis: The role of tax revenues composition	3
		Is the fiscal deficit of asean alarming? Evidence from fiscal deficit consequences and contribution towards sustainable economic growth	10
		Dynamics of Twin Deficits: An Enquiry of the Mundell–Fleming Proposition for India	14
		Are Budget and Current Account Deficits Twins in Turkey? Evidence from Residual-based Fourier Cointegration and Fourier Causality Analyses; [Türkiye’de Bütçe ve Cari İşlemler Açıkları İkiz Mi? Kalıntı Temelli Fourier Eşbütünlüşme ve Fourier Nedensellik Analizlerinden Kanıtlar]	4
Cluster 5: Infrastructure, Investment & Trade Competitiveness	alshammary, mohammed daher šulíková v. miteza, ilir Bedarkar, Madhura litsios, ioannis	Twin Deficits and the Feldstein-Horioka Hypothesis in the MENA Region: New Evidence Using Panel VAR Analysis	1
		Twin deficits in small open baltic economies	11
		Fiscal deficits, current deficits and investment:	3
		A panel causality framework of 20 OECD countries	1
		Indian twin deficits: The role of inflation and money supply	23
		An empirical analysis of the nexus between investment, fiscal balances and current account balances in Greece, Portugal and Spain	
Cluster 6: External Shocks – Oil Prices & Imports	eldemerdash, hany akanbi, olusegun ayodele el-khishin, sarah Goyal A.; Kumar A. akanbi, olusegun ayodele	Twin deficits: new evidence from a developing (oil vs. non-oil) countries’ perspective	16
		Investigating the twin-deficit phenomenon among oil-exporting countries: Does oil really matter? The twin deficit hypothesis in the mena region: Do geopolitics matter?	10
		The effect of oil shocks and cyclicalities in hiding Indian twin deficits	3
		Fiscal policy and current account in an oil-rich economy: the case of Nigeria	10
			10

Cluster 7: Empirical Evidence from India	M.R.A.R. Nautiyal N. Mohanty R.K. prabheesh, k.p. Sharma V. Sahoo, M. Husain s Mehta D.; Mallikarjun M.	'Twin Deficits' Hypothesis: An Assessment of Relationship and Transmission Mechanism in India Assessment, Interaction and the Transmission Process of Twin deficit Hypothesis: Fresh Evidence from India An Empirical Investigation of Twin Deficits Hypothesis: Evidence from India Drivers of India's current account deficits, with implications for ameliorating them Asymmetric Effect of Fiscal Deficit on Current Account Deficit: Evidence from India Dynamic relationship between fiscal deficit and current account deficit in India: multivariate cointegration and causality analysis Does Twin Deficit Hypothesis Exist in India? A Structural Break Co-integration Analysis Impact of fiscal deficit and trade openness on current account deficit in India: new evidence on twin deficits hypothesis	5 4 17 23 5 1 5 10
Cluster 8 : Cross-country Comparative Studies (G7 & Others)	tang, tuck cheong akbaş, yusuf ekrem Trachanas E.; Katrakilidis C. Ahmad, Ahmad Hassan çatik, abdurrahman nazif tudyka, andreas bolat, suleyman Litsios I.; Pilbeam K. Janko, Zuzana cFarlane	General Equilibrium Perspective on Twin Deficits Hypothesis: An Empirical Study with US Results Current account deficit, fiscal deficit and savings gap: Is the twin or triplet deficit hypothesis valid in G7 countries? The dynamic linkages of fiscal and current account deficits new evidence from five highly indebted European countries accounting for regime shift and asymmetric Revisiting the twin deficits hypothesis: new evidence from nonlinear tests A nonlinear investigation of the twin deficits hypothesis over the business cycle: Evidence from Turkey Fiscal stimulus in times of high debt: Reconsidering multipliers and twin deficits The dynamic linkages of fiscal deficits and current account deficits nexus in EU countries: Bootstrap panel Granger causality test An empirical analysis of the nexus between investment, fiscal balances and current account balances in Greece, Portugal and Spain On the relationship between the current account and the fiscal balance: The case of Canada The dynamics among domestic saving, investment, and the current account balance in the USA: a long-run perspective	9 9 46 35 14 56 8 8 23 8
Cluster 9 : Exchange Rate & Monetary Policy Interaction	Neaime S. sheremirov, Viacheslav rafiq, Sohrab banday, umer jeelanie	twin deficits and the sustainability of public debt and exchange rate policies in lebanon The effects of government spending on real exchange rates: Evidence from military spending panel data Fiscal stance, the current account and the real exchange rate: Some empirical estimates from a time-varying framework Twin deficit hypothesis and reverse causality: a case study of China	33 46 21 19
Cluster 10 : Econometric Modelling Approaches	dey, sima rani Dissou, Yazid sobrinho, césar r. Bhat J.A.; Sharma N.K. Camarero, mariam nurudeen, abu bucevaska, vesna paparas, Dimitrios ravinthirakumaran, Navaratnam trachanas, emmanouil Sharma, Vishal Hussain, Ibrar	Twin deficits hypothesis in Bangladesh: an empirical investigation On the link between current account and fiscal imbalance in the presence of structural breaks: Empirical evidence from Egypt The twin deficits hypothesis and reverse causality: A short-run analysis of Peru The twin-deficit hypothesis: revisiting Indian economy in a nonlinear framework External imbalances from a GVAR perspective An empirical investigation of the twin deficits hypothesis in nigeria: Evidence from cointegration techniques Testing the Twin Deficit Hypothesis: Evidence from the Republic of North Macedonia An Econometric Analysis of the Twin Deficits Hypothesis in Greece during the Period 1960 -2014 The twin deficits hypothesis in the SAARC countries: an empirical investigation The dynamic linkages of fiscal and current account deficits: New evidence from five highly indebted European countries accounting for regime shifts and asymmetries Asymmetric Effect of Fiscal Deficit on Current Account Deficit: Evidence from India A Dynamic Analysis of the Twin-Deficit Hypothesis: the Case of a Developing Country	10 2 22 20 4 11 5 4 20 46 5 6
Cluster 11: COVID-19, Recent Crises & Policy Response	chakrabarty, himadri shekhar	The Covid-19 pandemic and economic stimulus in India: has it been a hostage of macroeconomic complications?	5

**Cluster 1: Twin Deficit Hypothesis core theory**

In this cluster, (Nickel, 2014) (56) presents a key paper questioning the effectiveness of government spending as fiscal stimulus when a country already has high debt, emphasizing that debt levels significantly influence outcomes. When debt is moderate, spending can boost growth; however, when debt is very high, similar spending may harm rather than help the economy, suggesting governments must act cautiously when heavily indebted. (Kalou, 2012) (54) ,a frequently cited study within the European Monetary Union, tested the **twin deficit hypothesis (TDH)** for Greece and found a clear positive link between fiscal and trade deficits. This cluster forms the core of TDH research, focusing on how fiscal deficits drive current account deficits and exploring whether government spending intended to stimulate growth merely expands trade deficits, along with how fiscal rules shape this relationship.

**Cluster 2: Keynesian and Ricardian and FD and CAD**

In this cluster, researchers argue that the relationship between fiscal and trade deficits is not always straightforward. They introduce alternative theories to explain why the “twins” do not always move together. The **Keynesian Theory** supports the twin deficits idea, suggesting that higher government spending increases imports, thereby widening the trade deficit. In contrast, the **Ricardian Equivalence Hypothesis** posits that when the government runs a deficit, rational citizens anticipate future taxes and increase savings, offsetting the budget deficit and preventing a current account deficit. However, the study by (sugozu, 2011) (9) finds a causal link where the budget deficit leads to a current account deficit, supporting the traditional Keynesian view and rejecting the Ricardian argument. Studies focusing on specific contexts—such as post-communist or emerging economies—suggest that structural differences may alter these dynamics. . (Holmes, 2011) (37) confirms a long-term positive relationship between a country’s budget deficit and trade deficit, further supporting the Keynesian perspective. A recent study by (okoli, 2024)(6 citation) examines 15 emerging markets and explains the mixed results of the Twin Deficits Hypothesis (TDH), finding that twin deficits appear only when Ricardian Equivalence does not hold—that is, when people do not increase savings in response to government borrowing. This effect is strongest in countries with highly mobile capital, where money moves freely across borders.

### Cluster 3: Fiscal Policy, Public Spending & Aggregate Demand

In this cluster, (Miyamoto & sheremirov, The effects of government spending on real exchange rates: Evidence from military spending panel data, 2019)(46 citations) conducted a large-scale study across 125 countries and uncovered a striking paradox: increases in government military spending have opposite effects in rich and poor nations. In developing countries, higher spending appreciates the local currency and raises consumption, whereas in advanced economies, the same policy leads to currency depreciation and reduced consumption. The study highlights that structural differences between advanced and developing economies are key to understanding fiscal policy outcomes. This work is one of the most influential in this cluster, demonstrating that even specific expenditures like military spending significantly affect exchange rates and trade balances. Similarly, (carrière-swallow, 2021) (23 citations) found a strong link between the twin deficits—showing that when the budget deficit decreased, the trade deficit also improved, often accompanied by a sharp currency depreciation, particularly in developing nations. (bouakez, 2014)(12 citations) offered three notable conclusions: little evidence supporting the twin deficits hypothesis; tax cut effects that largely defied conventional theory (except in the United States); and confirmation that increased government spending weakens the currency—an effect stronger than previously thought. Overall, this cluster focuses on the fundamental mechanisms of the **Twin Deficits Hypothesis (TDH)**, examining how fiscal policy and public spending shape aggregate demand. When government expenditure rises—whether through infrastructure, defense, or stimulus programs—it boosts income and consumption; if domestic production cannot meet this demand, imports rise, thereby worsening the current account deficit.

### Cluster 4: Causality & Direction of Linkages

This cluster focuses less on whether fiscal and trade deficits are linked and more on the **direction of causality** between them. It explores whether the fiscal deficit drives the trade deficit or vice versa. (Obadić A. , 2014) argues that causality can sometimes run in the opposite direction—where a worsening trade deficit, resulting from higher imports and consumption, may actually improve the budget balance through increased indirect tax revenue. Using advanced statistical models, the study examines whether a trade deficit slows economic growth, reduces tax revenue, and thereby enlarges the fiscal deficit. The central objective is to identify which deficit initiates the problem: poor fiscal management leading to trade imbalances, or external imbalances causing fiscal strain. (hassan, 2015)(14 citations) confirms that, for Pakistan, the **Keynesian proposition** holds—an increase in the fiscal deficit directly worsens the trade deficit in both the short and long run. The study also finds **bidirectional causality**, showing that the two deficits not only move together but also reinforce each other in a vicious cycle: a larger fiscal deficit widens the trade gap, which in turn exacerbates the fiscal imbalance.

### Cluster 5: Infrastructure, Investment & Trade Competitiveness

This cluster examines the **deeper structural factors** that influence both fiscal and trade deficits simultaneously. It argues that the relationship is not merely about short-term government spending but also about long-term national competitiveness and financial stability. The focus here is on **infrastructure, investment, trade competitiveness, and financial variables** such as inflation and money supply. (šulíková, 2016) finds that in developing countries, evidence more often supports the **Current Account–Twin Deficit Hypothesis (CATH)** and reveals **bidirectional causality**, where fiscal and trade deficits reinforce each other. This suggests that a country's level of development—and consequently, the structure of its investments and trade competitiveness—plays a decisive role in how the relationship operates. Researchers in this cluster emphasize that a nation's production and export capacity strongly affects its deficits: when investment is weak, the economy becomes uncompetitive, leading to trade deficits that compel governments to spend more, thereby widening the fiscal deficit. Similarly, (litsios, 2017) highlights a serious warning for **Greece, Portugal, and Spain** after adopting the euro, where massive trade deficits became persistently unstable, breaking the normal long-run link between domestic savings and investment. The study identifies a strong negative relationship between domestic capital expenditure and external balance, indicating that high investment levels financed through foreign borrowing are the main drivers of large deficits. Overall, this research underscores that **twin deficits are symptoms of deeper structural weaknesses**—without improvements in infrastructure, investment, and inflation control, nations will continue to struggle with both fiscal and trade imbalances.

### Cluster 6: External Shocks – Oil Prices & Import

This cluster emphasizes how **external global factors**, particularly **oil prices and geopolitical events**, can amplify twin deficits in developing economies. Rising commodity prices—especially oil—worsen the **trade deficit** by making imports costlier and expand the **budget deficit** as governments increase subsidies or spending to absorb price shocks. (Goyal & Kumar, 2018) , in their study on India, found that while fiscal deficits do worsen the current account deficit, this link is often overshadowed by stronger forces such as oil price fluctuations and domestic growth shocks, which cause the two deficits to move independently. They note that India's current account deficit is **countercyclical**, widening during economic booms as rapid growth boosts oil imports, suggesting that external factors like oil prices and import dependence drive imbalances more than fiscal policy itself.

(eldemerdash, 2014) adds that in **oil-exporting economies** with fixed exchange rates, the **Keynesian view** holds—a rise in fiscal deficit worsens the current account. In contrast, in **non-oil economies** with similar exchange regimes, the **Ricardian hypothesis** prevails, as increased private savings offset government borrowing.

### Cluster 7: Empirical Evidence from India

This cluster focuses on studies examining the **Twin Deficits Hypothesis (TDH) in India**, whose dynamic economy, persistent deficits, and unique structural features make it an ideal case study. (J.A. & N.K., 2018) find that the relationship between the **fiscal deficit (FD)** and **current account deficit (CAD)** is **asymmetric**—increases in fiscal deficits have a strong and lasting negative impact on the current account, while fiscal improvements yield weaker effects. This asymmetry likely stems from inequality and liquidity constraints, as people tend to spend more when fiscal policy is expansionary but cut back less during tightening.

(Garg & prabheesh, 2017) also confirm the TDH for India, identifying fiscal deficits as a key cause of external imbalances. They further find that domestic savings respond to finance investment, suggesting that higher national savings can help narrow the current account gap. Within India's structure, a rising fiscal deficit hurts the external balance more than a falling deficit helps it, reflecting adjustment rigidity. (mohanty, 2019) using data from **1970–2014**, reinforces this view, showing a clear and stable causal link between fiscal and current account deficits in both the short and long run.

### Cluster 8: Cross-country Comparative Studies (G7 & Others)

This cluster is the broadest and most comparative, as it examines how the Twin Deficits Hypothesis (TDH) holds across diverse economic contexts rather than focusing on a single country. Janko (2020), in a study on Canada, strongly confirms the Keynesian TDH, finding a clear long-run relationship—every 1% improvement in the fiscal balance (as a share of GDP) improves the current account by 0.43% of GDP. Extending this view, Trachanas & Katrakilidis (2013) analyzed five highly indebted European economies (Portugal, Ireland, Italy, Greece, and Spain) and confirmed a robust fiscal–external link, also revealing asymmetry: fiscal consolidation significantly improves the current account, while fiscal expansion worsens it less sharply. This suggests that reducing fiscal deficits is an effective tool for correcting external imbalances.

Akbaş (2016) expands the discussion through a cross-country comparison of G7 nations, proposing a “triplet deficits” hypothesis that integrates fiscal, current account, and savings–investment gaps. The study finds that while the traditional twin deficits relationship remains valid, it is part of a broader and more complex macroeconomic framework.

#### Cluster 9: Exchange Rate & Monetary Policy Interaction

This cluster explores the exchange rate and monetary policy channel—a crucial and often volatile link between fiscal and external deficits. Researchers here argue that the twin deficits cannot be fully understood without examining how fiscal policy affects currency values and how exchange rate movements, in turn, influence trade balances. A government deficit can erode investor confidence, triggering capital outflows and currency depreciation, which then makes imports costlier and widens the trade deficit. (neaime, 2015) confirms a unidirectional causal link in the short run, where rising fiscal deficits directly worsen the current account deficit and contribute to national debt accumulation. Similarly, (rafiq, 2010) finds that the impact of fiscal deficits on trade balances is not constant—it varies across countries and over time. In the U.S., fiscal deficit shocks tend to deteriorate the current account, whereas in the U.K., historical data reveal instances where fiscal deficits actually improved the external balance.

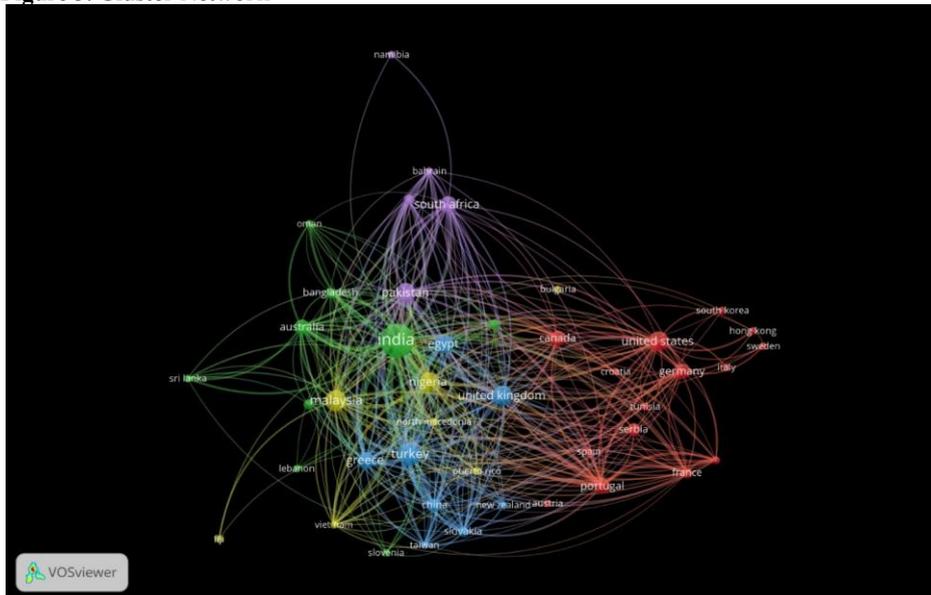
#### Cluster 10 : Econometric Modelling Approaches

This cluster is the most technical, comprising econometricians who focus less on economic theory and more on refining the statistical tools and models used to test the Twin Deficits Hypothesis (TDH). (Sharma & Adil, 2024) in their India-based study, employed the Nonlinear Autoregressive Distributed Lag (NARDL) model and found that fiscal deficits indeed affect current account deficits, but asymmetrically in the long run. Their findings emphasize that simple linear models can be misleading due to structural breaks, such as financial crises, reverse causality, and non-stationary data. To overcome these issues, researchers in this cluster apply advanced techniques like ARDL bounds testing, bootstrap panel Granger causality, and cointegration methods to obtain more robust results. Similarly, (Hussain, 2024)) used the ARDL framework, estimating two separate models—one with the current account balance and another with the trade balance as the dependent variable—and found that a weaker currency (higher exchange rate) significantly worsens the current account balance.

#### Cluster 11: COVID-19, Recent Crises & Policy Response

This cluster represents the latest frontier of twin deficits research, examining the hypothesis through the lens of major real-time economic shocks, particularly the COVID-19 pandemic. The pandemic served as a global natural experiment in fiscal policymaking, offering valuable insights into how large-scale government interventions affect fiscal and external balances. H (H.S., P., & P., 2021) analyzed the effectiveness of India’s economic stimulus package announced in 2020 in response to the crisis. Their study highlights that, unlike many nations that adopted aggressive fiscal expansions, India pursued a cautious and balanced approach, aiming to support recovery while containing long-term risks. The authors argue that this fiscal conservatism stemmed from concerns over India’s twin deficits—the fiscal and current account gaps—and the potential for capital flight or adverse reactions from foreign investors. In essence, this cluster performs a post-crisis assessment of one of the most significant global fiscal experiments in modern history, exploring how pandemic-era policies reshaped the dynamics between fiscal prudence, external stability, and investor confidence.

Figure 3. Cluster Network



Source: - By Author

#### 4. Discussion and Findings

A bibliometric synthesis (Figure 3) of over one hundred studies on the link between fiscal imbalances and external trade deficits reveals that the **twin deficits phenomenon** is neither universal nor constant across countries and time. While the **Keynesian view**—that fiscal deficits directly cause current account imbalances—holds in many cases, its validity depends on macroeconomic structure, income level, and vulnerability to external shocks.

In developing economies like **India**, evidence shows a strong positive association between fiscal and current account deficits. Expansionary fiscal policies raise aggregate demand, leading to higher imports and a wider trade gap, whereas fiscal consolidation helps narrow external imbalances. Yet, **fiscal discipline alone** cannot ensure stability, as external shocks—particularly global oil price spikes—can simultaneously worsen both deficits.

Structural factors such as openness, industrial diversification, and energy dependence critically shape this relationship. In advanced economies, financial integration and flexible exchange rates often cushion the impact of fiscal deficits, while in emerging markets, weak export competitiveness and import dependence amplify it.

Some studies also find **reverse causality**, where persistent current account deficits slow growth, reduce revenues, and trigger fiscal slippages, creating a **twin deficit cycle**. Moreover, defense and capital account variables have **asymmetric effects**—military spending may depreciate currencies in advanced nations but stabilize them in developing ones. Overall, the evidence underscores that the **twin deficits hypothesis** must

be viewed within a broader macroeconomic and institutional context. A balanced policy mix—combining prudent fiscal management with export diversification, productivity growth, and energy security—is essential for sustainable external stability.

## 5. Conclusion

After reviewing over a hundred studies on the link between fiscal imbalances and trade deficits, it is clear that the connection is complex yet insightful. The classic twin deficits theory—that government overspending directly causes trade imbalances—often holds true but is not universal. Its strength varies by economic structure, income level, and exposure to global shocks. In countries like India, the link between fiscal and current account deficits is especially strong: higher government spending raises imports and widens the trade gap. Fiscal consolidation can thus help restore external balance. However, external shocks—particularly oil price surges—can simultaneously worsen both deficits, limiting the effectiveness of domestic policies. The relationship differs across economies. In advanced nations, higher income levels and flexible exchange rates tend to soften the effect, while in developing and oil-importing countries, it is more pronounced. Even military spending yields contrasting results—weakening currencies in rich economies but strengthening them in poorer ones. In some cases, causality reverses, as trade deficits slow growth, reduce revenues, and expand fiscal gaps, forming a feedback loop. The twin deficits relationship extends beyond budgets. Long-term factors such as competitiveness, infrastructure, and investment capacity are equally vital. Weak production and exports often lead to trade deficits that compel governments to borrow more. Hence, understanding twin deficits requires a holistic perspective—considering fiscal policy alongside global oil prices, exchange rates, structural competitiveness, and household behavior.

## 6. Policy Implications

The results of this study show that managing fiscal and external deficits requires practical, well-coordinated action rather than theoretical solutions. Governments should aim to reduce unnecessary expenditure and improve tax collection to maintain fiscal discipline, especially during periods of high import costs. Promoting domestic production—particularly in energy, manufacturing, and technology sectors—can reduce dependence on imports and help narrow the trade gap. Investments in renewable energy and export-oriented industries can also strengthen external balance over time. Policymakers must ensure better coordination between fiscal, monetary, and trade policies so that budget decisions do not unintentionally worsen the current account. For developing economies like India, building stronger institutions, encouraging private investment, and improving infrastructure are practical ways to break the twin-deficit cycle. In contrast, advanced economies should focus on stabilizing capital flows and maintaining competitiveness in global markets.

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The authors declare that there are no conflicts of interest regarding the authorship, research, or publication of this article.

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## Ethical Approval and Informed Consent Statements

This study is based entirely on secondary data extracted from reputable academic databases (Scopus and Web of Science). Hence, ethical approval and informed consent were not required as no human participants were involved in the data collection process.

## Data Availability Statement

The bibliometric data used in this study were obtained from the Scopus and Web of Science databases. Processed datasets and analytical results are available from the corresponding author upon reasonable request.

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