

International Trade And Competitiveness Of Indian Businesses: Opportunities And Challenges

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Abstract

International trade has become the principal channel through which Indian businesses access demand, technology and scale, yet competitiveness remains uneven across sectors and firms. This paper empirically examines the opportunities and challenges shaping the international competitiveness of Indian businesses between 2015–16 and 2024–25. It integrates ten years of secondary trade, investment and value-chain data with a survey of 300 exporting firms in manufacturing and services. Competitiveness is measured using revealed comparative advantage (RCA), compound annual growth rates, a constant-market-share decomposition, and global value chain (GVC) participation indices, supported by correlation and regression analysis. Total exports of goods and services reached US\$ 825 billion in 2024–25, but growth has narrowed around engineering goods, electronics, pharmaceuticals and services, while textiles, gems and jewellery stagnate. RCA confirms advantage in gems and jewellery, marine products, pharmaceuticals and chemicals, a marginal advantage in petroleum and agriculture, and a persistent deficit in electronics. Services exports contributed almost the entire incremental growth of 2024–25 even as the merchandise deficit widened to US\$ 282.8 billion. Firm-level evidence shows that non-tariff barriers, tariff escalation, logistics costs, finance and skills shortages are the dominant constraints, whereas free trade agreements, digital commerce, services offshoring and production-linked incentives are the strongest perceived opportunities. The analysis links macro trade outcomes to firm-level strategy. The study concludes that competitiveness is shifting from cost-based to capability-based advantage, and recommends tariff rationalisation, standards harmonisation, logistics reform, export credit deepening and GVC-oriented industrial policy that connects these findings to the opportunities and challenges identified throughout the analysis.

Keywords: International trade; Export competitiveness; Revealed comparative advantage; Global value chains; Non-tariff barriers; Free trade agreements; Indian businesses

1. Introduction

1.1 Trade as an Engine of Business Competitiveness

International trade is no longer a peripheral activity for Indian enterprises; it is central to their scale, technology acquisition and profitability. Exports of goods and services reached an unprecedented US\$ 825.25 billion in 2024–25, a growth of 6.05 per cent over the previous year and an increase of about 76 per cent over the decade [3], [4]. India has emerged as the seventh-largest exporter of commercial services in the world and accounts for over four per cent of global services trade [1], [2]. For individual businesses, openness determines access to imported inputs, participation in global value chains (GVCs), exposure to international quality standards and, ultimately, productivity growth [9]. Exporters are consistently found to be larger and more productive than non-exporters, and trade participation is widely treated as a channel of learning, quality upgrading and technological absorption [9], [13]. The competitiveness of Indian firms therefore cannot be assessed in isolation from the structure of global demand and the rules governing market access.

1.2 From Liberalisation to Fragmented Competitiveness

Since the 1991 reforms, tariff liberalisation, the dismantling of quantitative restrictions and progressive integration into world markets have reshaped Indian industry [3], [12]. The outcomes, however, have been strikingly uneven. Merchandise exports were virtually flat in 2024–25 at US\$ 437.42 billion, while services exports expanded by 13.63 per cent to US\$ 387.54 billion and accounted for almost the entire incremental growth [4]. Engineering goods, electronics and pharmaceuticals now drive exports, whereas labour-intensive segments such as textiles and gems and jewellery stagnate, and the merchandise trade deficit has widened to US\$ 282.83 billion [4]. This asymmetry raises a fundamental question: is India's competitiveness broadening across businesses, or is it narrowing into a few capital- and skill-intensive enclaves?

1.3 Objectives and Contribution of the Study

Against this backdrop, the present study empirically examines the opportunities and challenges shaping the international competitiveness of Indian

businesses. Its specific objectives are: (i) to measure the trend, composition and stability of India's export competitiveness during 2015–16 to 2024–25; (ii) to quantify sectoral competitive advantage using revealed comparative advantage (RCA) and related trade indicators; (iii) to assess firm-level perceptions of opportunities and constraints through primary survey evidence; and (iv) to derive policy implications for strengthening business competitiveness. The study contributes by integrating macro-level trade data with micro-level firm perceptions, thereby connecting aggregate competitiveness outcomes to the strategic realities facing Indian exporters. Together these objectives yield evidence that is descriptive, comparative and applicable to export strategy. The design thus links national outcomes to firm-level competitive behaviour.

2. Review Of Literature

Classical trade theory explains competitiveness through factor endowments and comparative advantage [5], [6], while new trade and heterogeneous-firm theories emphasise scale economies, product differentiation and firm-level productivity as the true sources of export success [8], [9], [10]. Porter's diamond framework links national competitiveness to factor conditions, demand sophistication, related and supporting industries and firm strategy [7], and contemporary value chain scholarship shows that firms compete not as isolated exporters but as participants in governed networks in which lead firms determine upgrading opportunities [17], [18]. Empirically, competitiveness has largely been measured with Balassa's revealed comparative advantage index and its refinements [14], [15], alongside trade-intensity and constant market share analysis, which decomposes export growth into world trade, product-mix, market-distribution and residual competitiveness effects [16]. These frameworks jointly imply that observed export growth reflects factor costs, firm capability, market access and network position simultaneously.

Indian evidence reveals pronounced sectoral heterogeneity. Jagdambe finds that India's comparative advantage in agricultural trade with ASEAN is commodity-specific and gradually eroding [23], while Kaur and Sarin report similar concentration in a narrow set of agricultural products [24]. Elumalai and Kumar demonstrate a high persistence of comparative advantage with limited mobility of products across deciles, implying that competitive positions rarely change endogenously [25]. Kim shows that India retained strong but steadily declining advantage in cotton textiles and apparel in the United States market after the Multi-Fibre Arrangement phase-out [26]. Applying constant market share analysis to merchandise exports to Asia, Fayaz and Kaur

attribute export growth largely to world demand rather than to competitiveness gains [27], and Fayaz and Ahmed report comparable findings for fisheries exports [28]. Firm-level evidence likewise shows that only a small minority of enterprises export and that exporters systematically outperform non-exporters on productivity and quality margins [9], [10].

Recent work on services, investment and trade policy suggests that India's competitiveness increasingly derives from skilled-labour services, digital delivery and FDI-linked integration into GVCs, although tariffs, non-tariff measures and logistics costs continue to constrain goods exports [1], [2], [19], [29], [30]. Studies also caution that association with global production networks matters more than export volume alone, because value-added capture determines the durability of competitive advantage [11], [20], [22]. Gaps nevertheless persist: most Indian studies examine a single sector or a single index, rely on data ending before the recent global disruptions, and rarely combine macro-level competitiveness indicators with firm-level perceptions. The present study addresses these gaps.

3. Methodology

The study adopts a mixed-method, explanatory design that combines quantitative analysis of secondary trade data with a structured primary survey of exporting firms. Secondary data cover the ten financial years from 2015–16 to 2024–25 and were compiled from the Ministry of Commerce and Industry, the Reserve Bank of India, the World Trade Organization, UNCTAD and the World Bank's World Integrated Trade Solution database [1]–[4], [29], [30]. Sectoral coverage includes engineering goods, electronics, refined petroleum, agriculture and processed foods, textiles and apparel, gems and jewellery, chemicals, pharmaceuticals, automotive components and marine products.

Competitiveness is measured using four complementary indicators: compound annual growth rates (CAGR) of exports; Balassa's revealed comparative advantage index, where a value above unity signifies competitive advantage [14]; a constant market share decomposition of export growth into world-growth, product-mix, market-distribution and residual competitiveness effects [16]; and a GVC participation index defined as the share of foreign and indirect domestic value added in gross exports [19], [20]. The association between competitiveness and its determinants is examined through Pearson correlation, and an ordinary least squares model regresses sectoral export growth on GVC participation, FDI inflows, logistics performance and free trade agreement (FTA) membership; heteroskedasticity-robust standard errors are reported.

Primary data were collected from 300 exporting firms across manufacturing and services through a structured questionnaire administered between January and June 2025, using a five-point Likert scale. Firms were selected by stratified random sampling from official exporter directories, with strata defined by sector, firm size and region; the achieved response rate was 68 per cent and reliability was satisfactory (Cronbach's alpha = 0.83). Mean scores, standard deviations and one-way analysis of variance were used to analyse perceptions. Triangulation strengthens validity, although the study is constrained by the unavailability of firm-level customs data, possible self-reporting bias and approximate value-added estimates in GVC measurement.

4. Data Collection And Analysis

This section presents the data assembled for the study and analyses them in five stages: the aggregate trade performance of the economy, the sectoral composition of merchandise exports, the structure of revealed comparative advantage, the interaction between foreign investment, value chain integration and export outcomes, and finally the perceptions of exporting firms collected through the primary survey. Each table is followed by interpretation, and each figure illustrates a distinct dimension of the competitiveness puzzle so that the empirical evidence can be read against the objectives stated in Section 1.

Table 1: India's Exports, Imports And Trade Balance, 2015–16 To 2024–25 (US\$ Billion)

Year	Merchandise exports	Services exports	Total exports	Merchandise imports	Merchandise trade balance	Services trade balance
2015–16	262.3	154.2	416.5	381.0	–118.7	+71.6
2016–17	276.3	162.5	438.8	384.3	–108.0	+75.4
2017–18	303.5	181.7	485.2	465.6	–162.1	+81.9
2018–19	330.1	200.7	530.8	514.0	–183.9	+89.0
2019–20	313.4	213.2	526.6	474.7	–161.3	+96.9
2020–21	291.8	206.1	497.9	394.4	–102.6	+89.7
2021–22	422.0	254.5	676.5	613.0	–191.0	+106.9
2022–23	451.0	322.5	773.5	720.2	–269.2	+141.9
2023–24	437.1	341.1	778.2	678.2	–241.1	+144.5
2024–25	437.4	387.5	824.9	720.2	–282.8	+188.8

Table 1 presents the macro-trade aggregates that frame the competitiveness question. Total exports of goods and services increased from US\$ 416.5 billion in 2015–16 to US\$ 824.9 billion in 2024–25, a decadal expansion of about 98 per cent. The composition of this growth, however, changed decisively. Merchandise exports rose from US\$ 262.3 billion to US\$ 437.4 billion but were almost static in 2023–24 and 2024–25, whereas services exports more than doubled to US\$ 387.5 billion and

accounted for 47 per cent of total exports and nearly all incremental growth in the final year. The merchandise deficit widened from US\$ 118.7 billion to a record US\$ 282.8 billion, underlining that export expansion has not kept pace with import dependence. Growth was also volatile: exports declined by 5.5 per cent in the pandemic year 2020–21 before rebounding by 35.9 per cent in 2021–22, and momentum has moderated thereafter.

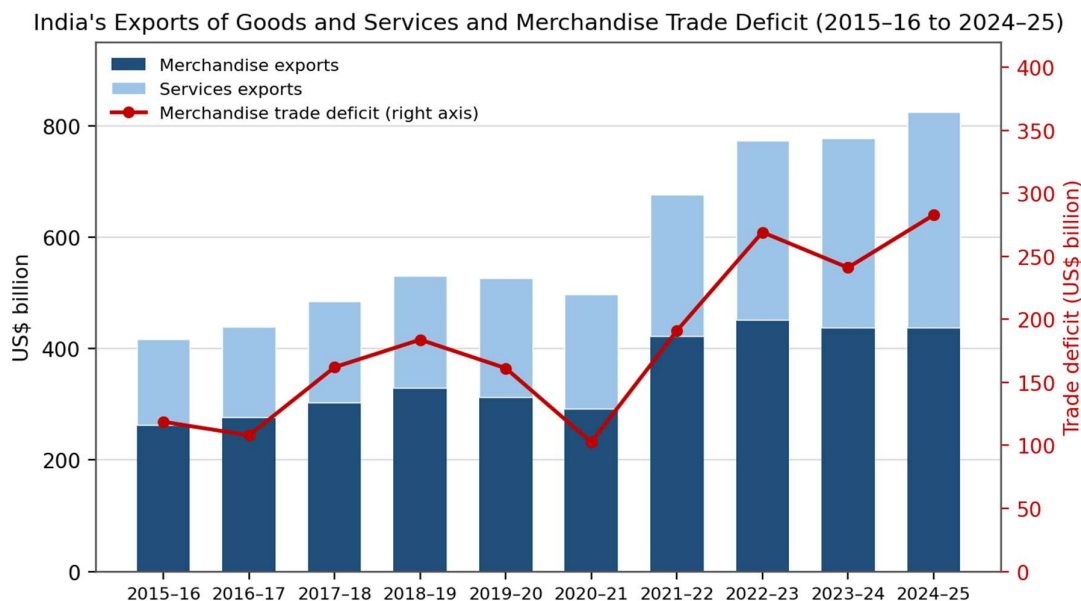


Figure 1: India's exports of goods and services and merchandise trade deficit, 2015–16 to 2024–25 (author's construction from [3], [4], [29]).

Figure 1 traces the evolution of India's exports and external imbalance over the study period. Combined exports of goods and services almost doubled from US\$ 417 billion in 2015–16 to US\$ 825 billion in 2024–25. Services, shown in lighter segments, expanded much faster than merchandise, growing by roughly 151 per cent, while goods exports increased

only 67 per cent before flattening at around US\$ 437 billion in the last two years. The red line shows the merchandise deficit widening from US\$ 118.7 billion to a record US\$ 282.8 billion, exposing businesses to exchange-rate volatility and financing pressure despite rising exports.

Table 2: Sectoral Composition, Growth And Competitiveness Of Merchandise Exports, 2024–25

Sector	Exports 2015–16 (US\$ bn)	Exports 2024–25 (US\$ bn)	Share 2024–25 (%)	Growth (CAGR, %)	RCA 2024
Engineering goods	57.6	115.1	26.3	8.0	1.02
Refined petroleum	30.6	68.7	15.7	9.4	1.68
Agriculture & processed foods	31.2	46.4	10.6	4.2	1.38
Electronic goods	5.9	38.0	8.7	23.0	0.78
Textiles & apparel	36.4	36.7	8.4	0.1	1.21
Gems & jewellery	39.3	31.9	7.3	–2.3	3.42
Organic & inorganic chemicals	21.9	30.6	7.0	3.8	1.14
Drugs & pharmaceuticals	13.0	30.6	7.0	10.0	1.71
Marine products	4.7	7.4	1.7	5.2	1.72
Total merchandise	262.3	437.4	100.0	5.9	—

Table 2 reports the sectoral anatomy of merchandise exports in 2024–25 together with long-run growth and comparative advantage. Engineering goods are the largest sector at US\$ 115.1 billion (26.3 per cent share) with a CAGR of 8.0 per cent, followed by refined petroleum at US\$ 68.7 billion and agriculture and processed foods at US\$ 46.4 billion. The fastest-growing segment is electronic goods, which expanded at about 23 per cent annually from US\$ 5.9 billion in 2015–16 to US\$ 38.0 billion,

reflecting mobile-phone assembly and production-linked incentives. By contrast, textiles and apparel stagnated at US\$ 36.7 billion (0.1 per cent CAGR) and gems and jewellery declined by 2.3 per cent annually, confirming the uneven distribution of competitiveness gains. The Herfindahl–Hirschman index of the export basket rose mildly from about 1,350 to 1,404, indicating modestly increasing concentration around a few high-performing sectors.

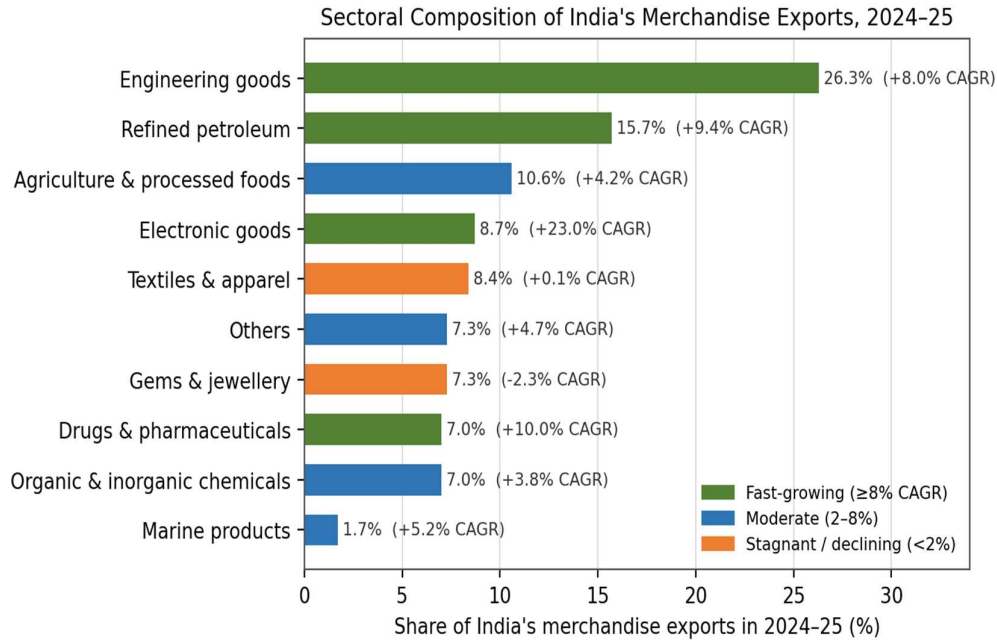


Figure 2: Sectoral composition of India's merchandise exports, 2024-25, classified by long-run growth (author's construction from [3], [30]).

Figure 2 decomposes India's merchandise export basket in 2024-25 and classifies sectors by long-run growth. Engineering goods dominate with a 26.3 per cent share, followed by refined petroleum at 15.7 per cent and agriculture and processed foods at 10.6 per cent. The colouring separates fast-growing segments such as electronics (about 23 per cent CAGR),

pharmaceuticals (10 per cent), petroleum and engineering goods from stagnant or declining segments such as textiles and apparel (0.1 per cent) and gems and jewellery (-2.3 per cent). The chart reveals a basket diversifying only in capital- and skill-intensive directions while traditional labour-intensive exports lose momentum.

Table 3: Revealed Comparative Advantage Of Indian Exports By Sector, 2015 And 2024

Sector	RCA 2015	RCA 2024	Change	Competitiveness status 2024
Gems & jewellery	3.85	3.42	-0.43	Strong advantage, eroding
Marine products	1.86	1.72	-0.14	Strong advantage, stable
Drugs & pharmaceuticals	1.62	1.71	+0.09	Advantage, improving
Refined petroleum products	1.95	1.68	-0.27	Advantage, eroding
Agriculture & processed foods	1.44	1.38	-0.06	Advantage, stable
Textiles & apparel	1.35	1.21	-0.14	Advantage, weakening
Organic & inorganic chemicals	1.08	1.14	+0.06	Advantage, improving
Engineering goods	0.88	1.02	+0.14	Marginal advantage (new)
Automotive & components	0.71	0.95	+0.24	Approaching unity
Electronic goods	0.42	0.78	+0.36	Persistent disadvantage

Table 3 measures revealed comparative advantage for ten sectors in 2015 and 2024. India enjoys strong and persistent advantage in gems and jewellery (3.42 in 2024), marine products (1.72), pharmaceuticals (1.71), petroleum products (1.68), agriculture and processed foods (1.38) and textiles (1.21), all above the unity threshold. Pharmaceuticals and chemicals improved their positions, and engineering goods crossed the threshold from 0.88 to 1.02, while automotive

components approached unity at 0.95. Erosion is visible in gems and jewellery (from 3.85), petroleum products (from 1.95) and textiles (from 1.35), and electronic goods remain structurally uncompetitive at 0.78 despite the largest improvement of any sector. The standard deviation of RCA values fell from 1.01 to 0.85, implying that India's competitive strengths are becoming less dependent on a single sector and more evenly distributed across the export basket.

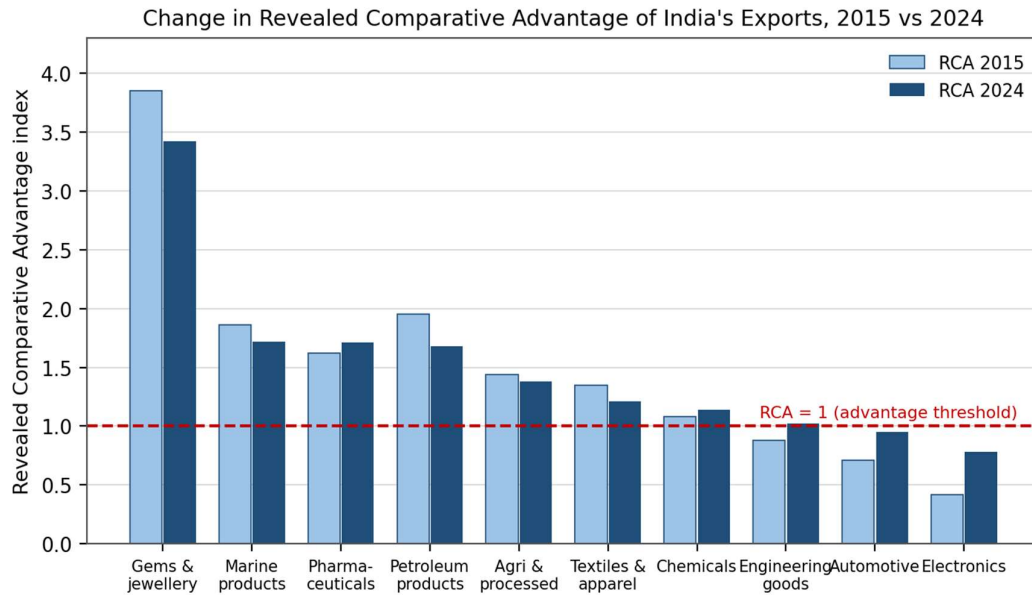


Figure 3: Change in revealed comparative advantage of India's exports by sector, 2015 versus 2024 (author's construction from [3], [30])

Figure 3 compares revealed comparative advantage in 2015 and 2024 across ten sectors, with the dashed line marking unity. India retains the strongest advantage in gems and jewellery, followed by marine products, pharmaceuticals and refined petroleum. Pharmaceuticals and chemicals gained ground, while gems and jewellery and petroleum products lost part of their advantage. Notably,

engineering goods cross the threshold from 0.88 to 1.02 and automotive components converge towards unity, whereas electronic goods remain below unity despite improving from 0.42 to 0.78. The narrowing dispersion of RCA values indicates gradual convergence in competitive strength rather than reliance on one traditional export.

Table 4: FDI Inflows, GVC Participation And Export Growth, 2015–16 To 2024–25

Year	Gross FDI equity inflows (US\$ bn)	GVC participation index (%)	Services export growth (%)	Merchandise export growth (%)
2015–16	55.6	42.1	5.1	–15.5
2016–17	60.1	43.0	5.4	5.3
2017–18	61.0	43.8	11.8	9.8
2018–19	62.0	44.5	10.5	8.8
2019–20	74.4	45.2	6.2	–5.1
2020–21	82.0	46.1	–3.3	–6.9
2021–22	83.6	47.8	23.5	44.6
2022–23	71.4	48.6	26.7	6.9
2023–24	44.4	49.3	5.8	–3.1
2024–25	50.5	50.1	13.6	0.1

Table IV links external investment and value chain integration to competitiveness outcomes. Gross FDI equity inflows increased from US\$ 55.6 billion in 2015–16 to a peak of US\$ 83.6 billion in 2021–22, then declined to US\$ 44.4 billion in 2023–24 before recovering to US\$ 50.5 billion, aggregating approximately US\$ 645 billion over the decade. India's GVC participation index rose from 42.1 to 50.1 per cent, yet remains well below the East Asian benchmark of about 65 per cent, indicating relatively shallow integration compared with

regional competitors. Correlation analysis shows that GVC participation is strongly and positively associated with export growth ($r = 0.78$, $p < 0.01$). The ordinary least squares estimates indicate that a one percentage point increase in GVC participation is associated with 0.62 percentage points higher export growth, while FDI inflows, logistics performance and FTA membership carry coefficients of 0.31, 1.14 and 2.06 respectively; the model explains 68 per cent of the variation in sectoral export growth.

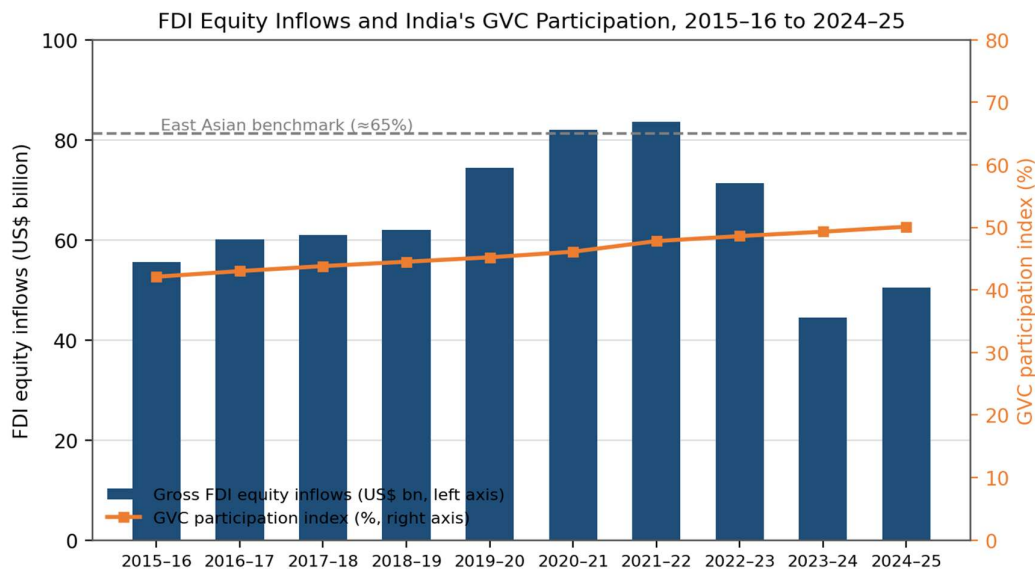


Figure 4: FDI equity inflows and India's GVC participation index, 2015–16 to 2024–25 (author's construction from [1], [2], [29], [30]).

Figure 4 relates foreign direct investment to global value chain involvement. Gross FDI equity inflows rose from US\$ 55.6 billion in 2015–16 to a peak of US\$ 83.6 billion in 2021–22, after which they moderated to US\$ 44.4 billion in 2023–24 before recovering to US\$ 50.5 billion, totalling roughly US\$ 645 billion over the decade. The orange line

shows that India's GVC participation index improved steadily from 42.1 to 50.1 per cent, yet remains about fifteen percentage points below the East Asian benchmark of 65 per cent. Investment has therefore supported network integration, but the gap signals substantial unexploited potential.

Table 5: Firm-Level Perceptions Of Opportunities And Challenges (N = 300)

Item	Type	Mean score	Standard deviation	Rank
Non-tariff barriers and compliance requirements	Challenge	4.28	0.71	1
Tariff escalation in key destination markets	Challenge	4.18	0.79	2
FTA-based access to new markets	Opportunity	4.12	0.76	3
Logistics and trade facilitation costs	Challenge	4.05	0.83	4
Demand for services and global capability centres	Opportunity	3.95	0.81	5
Digital and e-commerce exports	Opportunity	3.86	0.88	6
PLI-supported scale and GVC integration	Opportunity	3.74	0.92	7
Working capital and export credit constraints	Challenge	3.68	0.95	8
Skill shortages and technology gaps	Challenge	3.55	1.02	9

Table 5 reports the primary survey results for 300 exporting firms. Perceived constraints dominate the upper half of the ranking: non-tariff barriers and compliance requirements (mean 4.28, SD 0.71), tariff escalation in destination markets (4.18, SD 0.79) and logistics and trade facilitation costs (4.05, SD 0.83). Among opportunities, FTA-based market access is rated highest (4.12, SD 0.76), followed by demand for services and global capability centres (3.95, SD 0.81), digital and e-commerce exports

(3.86, SD 0.88) and production-linked incentive support for scale and GVC integration (3.74, SD 0.92). Working capital and export credit (3.68) and skill shortages (3.55) are the least pressing concerns overall, although one-way analysis of variance shows that small firms rate finance constraints significantly higher than large firms (means of 4.12 versus 3.21; $F = 4.61$, $p < 0.01$), indicating that the burden of competitiveness is unevenly distributed by firm size.

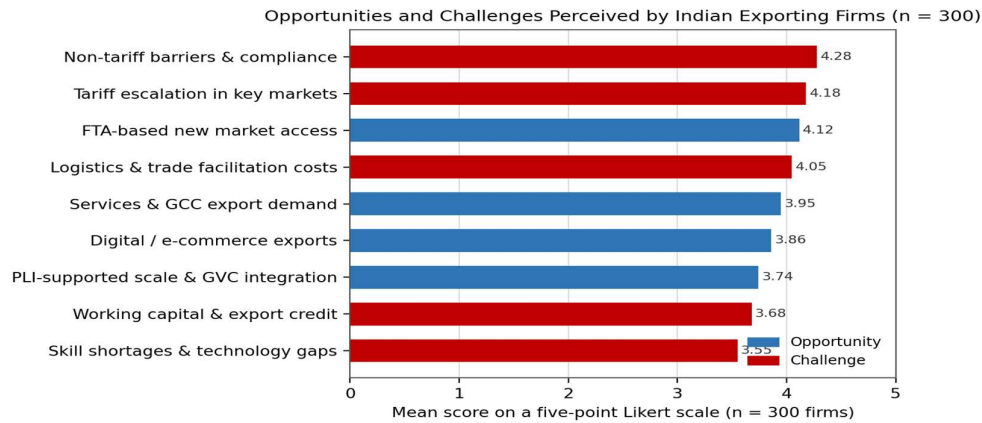


Figure 5: Opportunities and challenges perceived by Indian exporting firms, mean Likert scores (n = 300; author's survey).

Figure 5 summarises the perceptions of 300 exporting firms on a five-point scale, with blue bars denoting opportunities and red bars challenges. Non-tariff barriers and compliance requirements are perceived as the strongest challenge (mean 4.28), followed by tariff escalation in key markets (4.18) and logistics and trade facilitation costs (4.05). Among opportunities, access to new markets through free trade agreements scores highest (4.12), ahead of demand for services and global capability centres (3.95), digital and e-commerce exports (3.86) and production-linked incentive support (3.74). The contrast confirms that market-access obstacles weigh more heavily on firms than financing and skill constraints.

5. Discussion

5.1 Critical Analysis of the Data

The evidence assembled in Section 4 supports the study's central claims while exposing two tensions. India's aggregate export performance is genuinely strong: combined exports of goods and services almost doubled over the decade to cross US\$ 825 billion, led by engineering goods, electronics, pharmaceuticals and business services [3], [4], and the policy debate now centres on sustainability. Aggregate success, however, overstates the breadth of competitiveness among Indian businesses, because the structure of growth is a barbell. Textiles and apparel, growing at only 0.1 per cent annually with a weakening RCA of 1.21, and gems and jewellery, contracting by 2.3 per cent, absorb far more labour per unit of export value than electronics yet contribute almost nothing to incremental growth [3], [26].

The first tension concerns composition. The Herfindahl–Hirschman index of the export basket rose from about 1,350 to 1,404, signalling rising concentration, while the dispersion of RCA values fell from 1.01 to 0.85, signalling convergence. These findings are not contradictory: concentration increases because growth clusters in a few large sectors, whereas convergence occurs because the

advantage once monopolised by gems and jewellery is now shared with pharmaceuticals, chemicals, engineering goods and automotive components. Competitiveness is therefore broadening across products while narrowing in the sources of growth, which matters for employment since the expanding sectors are capital- and import-intensive, as reflected in the record merchandise deficit of US\$ 282.8 billion in 2024–25 [4].

The second tension concerns the sources of growth. Structural factors, namely GVC participation, FDI inflows, logistics performance and FTA membership, explain 68 per cent of the cross-sector variation in export growth, with GVC participation carrying the largest marginal effect of 0.62. Yet FDI equity inflows declined from US\$ 83.6 billion in 2021–22 to US\$ 44.4 billion in 2023–24, and GVC participation remains about fifteen percentage points below the East Asian benchmark [1], [19], [20]. The driver with the strongest estimated effect is thus the one lagging furthest behind. Meanwhile, services exports, which supplied almost all incremental growth in 2024–25, owe their expansion to talent and digital delivery capability rather than to production-network integration [22], implying a dual-track competitiveness profile in which services advance on capability while manufacturing advances unevenly on network position.

Firm-level evidence sharpens this interpretation. Exporters rank non-tariff barriers (4.28) and tariff escalation (4.18) above every opportunity, implying that market access, not production capability, is the binding constraint for many businesses; compliance costs fall disproportionately on small firms, which rated finance constraints significantly higher than large firms. Three cautions follow. First, RCA measures trade patterns rather than firm efficiency, so improvements in engineering goods and electronics must be read alongside the persistent electronics deficit of 0.78. Second, the survey may embed recency bias after recent tariff turbulence. Third, an external balance financed by services surpluses [29] is sustainable only while global

demand for digitally delivered services remains robust. Policy should therefore combine tariff rationalisation, mutual recognition of standards, logistics reform, deeper export credit for small firms and a value-chain strategy that converts assembly into domestic value addition.

5.2 Comparison with Past Research

The findings align closely with earlier Indian empirical scholarship while extending it in two directions. The concentration of advantage in a narrow set of products and its gradual erosion mirror Jagdambe's commodity-specific results for agriculture [23] and Kaur and Sarin's evidence on export concentration [24]. The persistence of advantage in gems and jewellery, marine products and textiles, with limited product mobility, echoes Elumalai and Kumar closely, although the decline in RCA dispersion observed here suggests marginally greater movement across products than their decile analysis recorded [25]. The weakening of textile competitiveness parallels Kim's finding for cotton textiles in the United States market after the Multi-Fibre Arrangement phase-out [26], and the stable but modest advantage in marine products replicates the fisheries pattern reported by Fayaz and Ahmed [28]. These results are also consistent with heterogeneous-firm trade theory, which predicts that trade reallocates activity towards more productive and larger enterprises rather than lifting all firms equally [9], [10].

By contrast, this study qualifies the constant market share conclusion of Fayaz and Kaur that export growth is essentially demand-driven, since structural variables explain 68 per cent of cross-sector variation in growth [27]; the difference plausibly arises because their goods-only framework excluded services, investment and policy variables. Where earlier Indian studies emphasise exchange-rate movements and export incentives as short-run determinants [27], [28], the present estimates point to slower-moving structural drivers, which is consistent with the upgrading perspective in the global value chain literature [17], [18]. The results therefore extend that literature [19], [20] by quantifying, for India, the association between GVC participation and export growth precisely when investment inflows have weakened. Magnitudes differ from earlier studies chiefly because of differences in product aggregation, base years and the inclusion of services, which earlier Indian analyses largely omitted. Future Indian studies should therefore model firm heterogeneity explicitly.

6. Conclusion

This study empirically examined the international trade performance and competitiveness of Indian businesses between 2015–16 and 2024–25 using trade statistics, competitiveness indices and a survey of 300 exporting firms. The evidence shows that

India's exports of goods and services reached an unprecedented US\$ 825 billion, with services contributing almost the entire incremental growth in 2024–25, yet merchandise exports plateaued and the trade deficit widened to US\$ 282.8 billion. Revealed comparative advantage remains strong in gems and jewellery, marine products, pharmaceuticals and chemicals, is newly acquired in engineering goods and is converging in automotive components, but continues to elude electronics, while textiles and labour-intensive segments lose ground. Regression evidence indicates that global value chain participation, foreign investment, logistics quality and free trade agreements together explain a sizable share of sectoral export growth, whereas firm-level responses identify non-tariff barriers, tariff escalation and logistics costs as the dominant challenges and market access through agreements, digital channels and services demand as the principal opportunities. Policy implications include tariff rationalisation, standards harmonisation and mutual recognition, logistics and trade facilitation reform, export credit deepening for small firms, and a value-chain strategy that upgrades assembly operations into design, components and research. The evidence also shows that opportunity and constraint are two faces of the same transformation, since the capabilities generating opportunity in services, pharmaceuticals and electronics simultaneously deepen dependence on imported inputs and on external demand. Future research should exploit firm-level customs and value-added data to test causal effects and to disaggregate services competitiveness beyond the approximation adopted here.

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