

Decoding India's Quality Control Orders (QCOs)

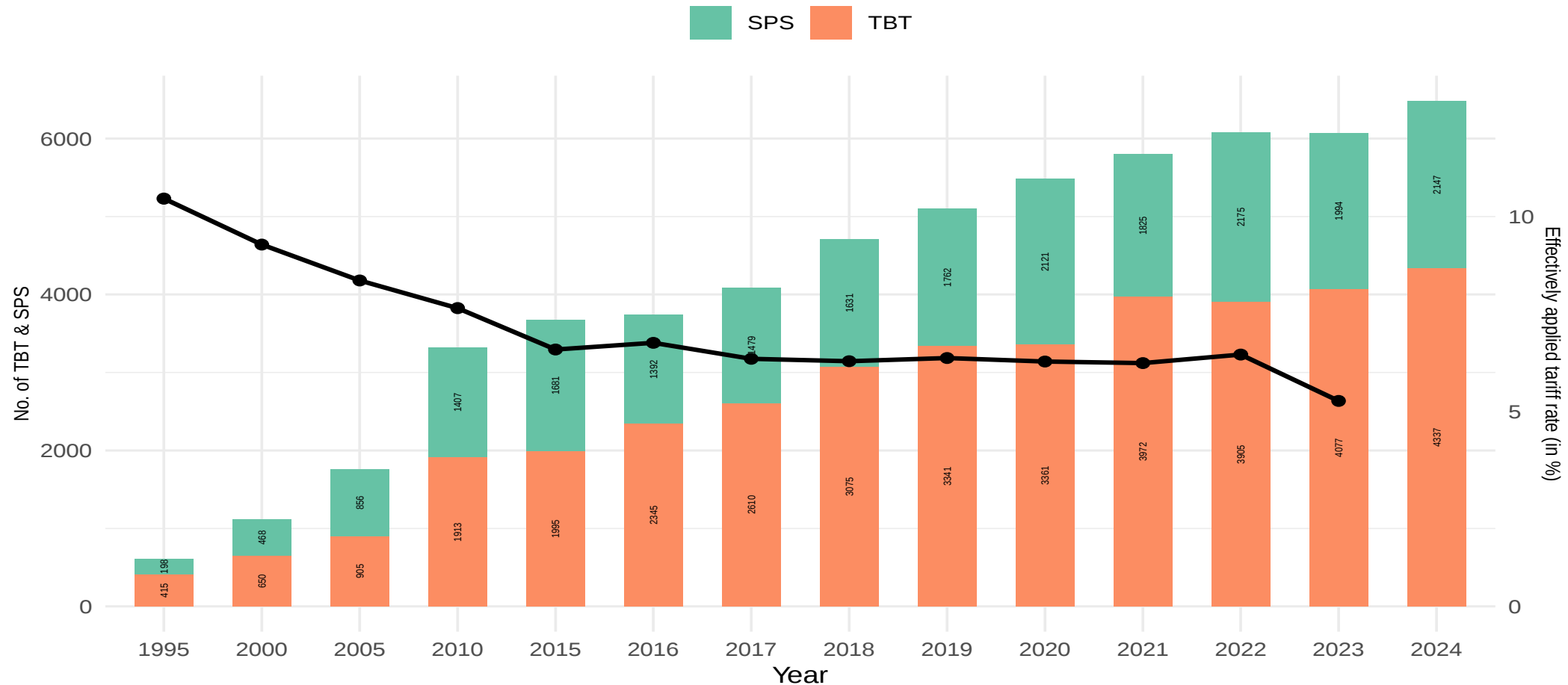
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Outline

1. Global Trends
2. India's QCOs
3. Sectoral Trends
4. Regression Analysis
5. Industry Stakeholder Discussion
6. Policy Recommendations

Global Trends - NTMs and Tariffs



The decline in tariffs globally has been accompanied by an increase in the implementation of NTMs across countries. (Economic Survey, 2025)

India's QCOs

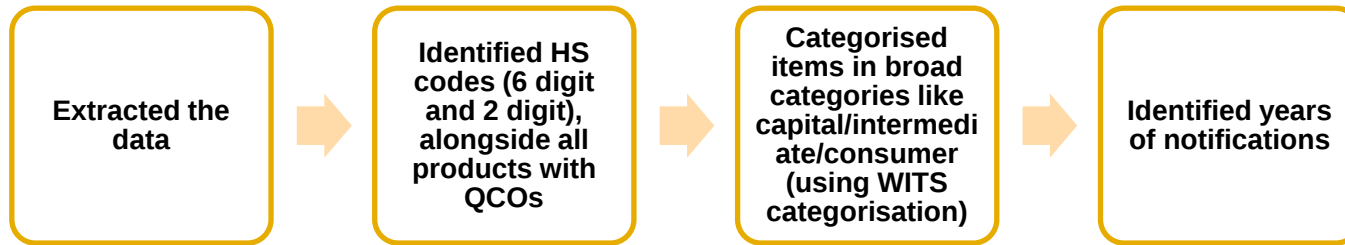
- QCOs are aimed at creating a robust quality ecosystem focused on ensuring the production of superior and safety-compliant products (PIB, 2024)
- While Quality Control Orders (QCOs) are introduced by various ministries, the Bureau of Indian Standards (BIS) is tasked with enforcement.
- However, enforcement faces significant challenges due to the absence of a centralized, publicly accessible list of QCOs and the lack of corresponding HS (Harmonized System) code identifiers.
- This makes it difficult for manufacturers and importers to assess the applicability and potential impact of QCOs on their products.
- While aimed to ensure quality products, QCOs can increase the cost of production, and can lead to supply chain disruptions

Why this Study ?

- Identify HS codes impacted by existing QCOs
- Understand the impact of QCOs on India's Trade flows

Data Challenges

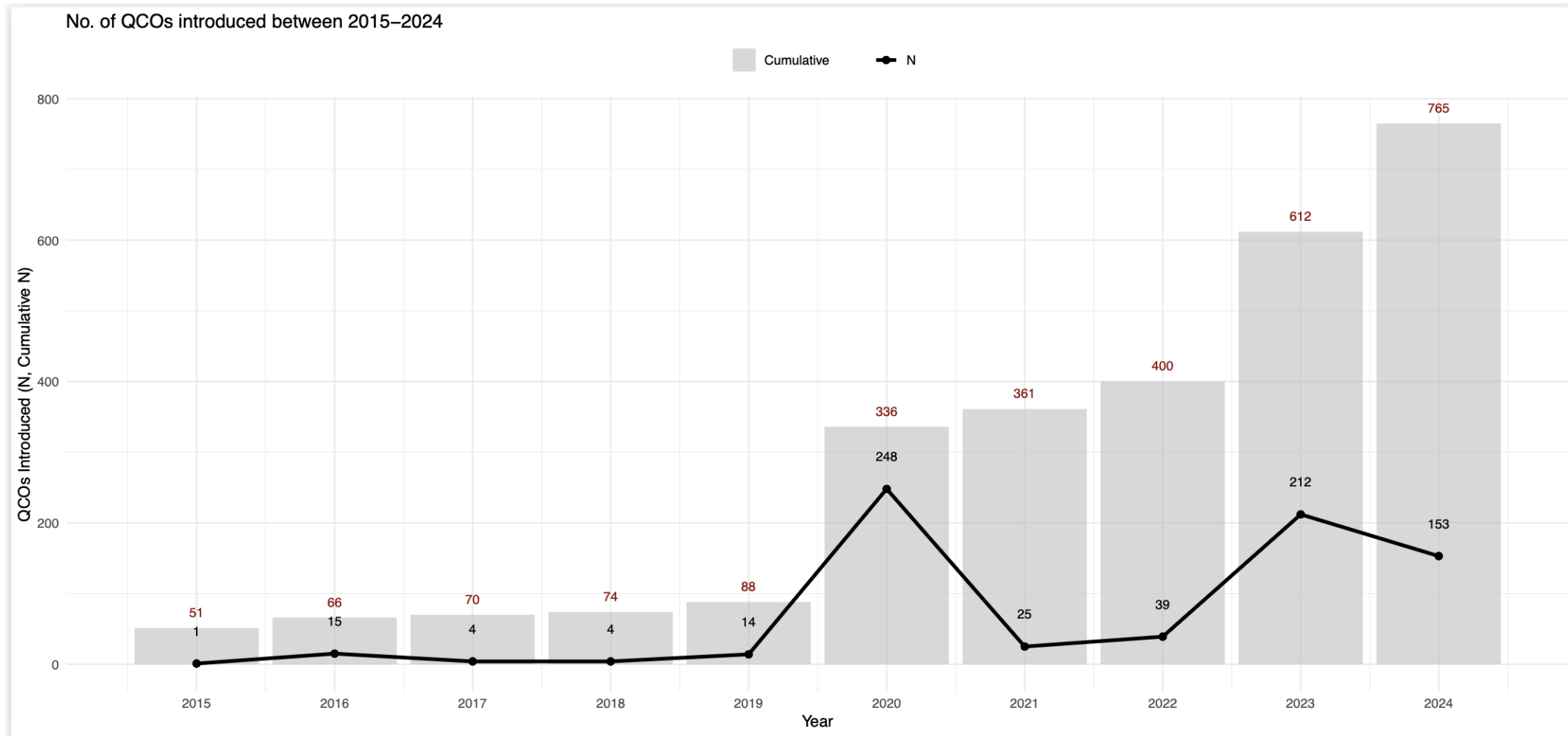
- We relied on the Academy of Business Studies (ABS) publication



NTB10 – BIS QUALITY STANDARDS			
Sr No.	IS No.	Product	For Notification Details Please click on the given link
306.	IS 5950 : 1984	Specification for Shot Firing Cables (for use other than in shafts)	
307.	IS 17048 : 2018	Halogen Free Flame Retardant (HFFR) Cables for Working Voltages Up to and Including 1100 V – Specification	
Rubber Hose for Liquefied Petroleum Gas (LPG)			
308.	IS 9573(Part 1):2017	Rubber Hose for Liquefied Petroleum Gas (LPG)- Specification Part 1 Industrial Application	84. Rubber Hose for Liquefied Petroleum Gas (LPG) (Quality Control) Order, 2020 (S.O. 478(E) dated 28th January 2020)
309.	IS 9573(Part 2):2017	Rubber Hose for Liquefied Petroleum Gas (LPG)- Specification Part 2- Domestic and Commercial Application.	
Aluminium Foil			
310.	IS 15392	Aluminium and Aluminium Alloy Bare Foil for Food Packaging	85. Aluminium Foil (Quality Control) Order, 2020 (S.O. 687 (E) dated 13/02/2020)
Non Electric Toys			
311.	IS 9873 (Part 1) : 2018	Safety of Toys Part I Safety Aspects Related to Mechanical and Physical Properties.	86. Toys (Quality Control) Order, 2020 (S.O. 853(E) dated 25th February 2020) Toys (Quality Control) Amendment Order, 2020 Toys (Quality Control) Amendment Order, 2020-Toys (Quality Control) Second Amendment Order 2020 Toys (Quality Control) Second Amendment Order 2020
	IS 9873 (Part 2) : 2017	Safety of Toys Part 2 Flammability.	

- Upon fetching HS codes for the various products, we downloaded their exports, imports and tariffs from World Integrated Trade Solution (WITS) and United Nations Commodity Trade Statistics Database (UN Comtrade) for further analysis.

Evolution of India's QCOs

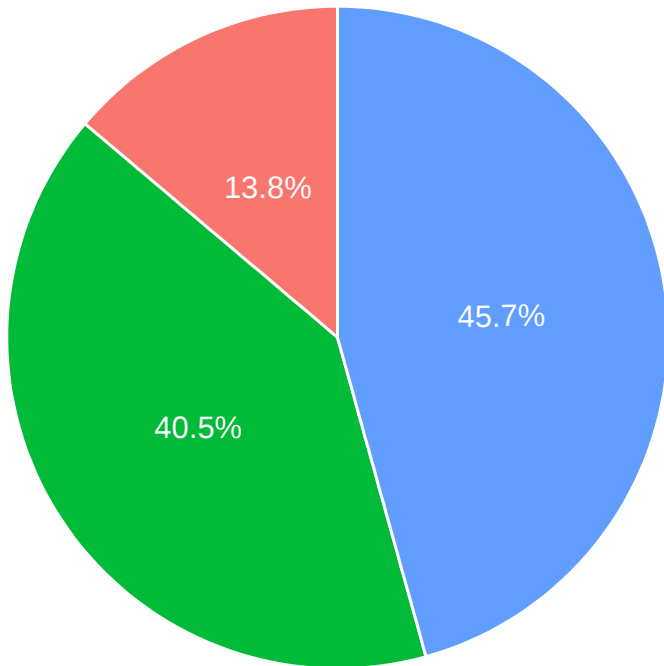


Source: Academy of Business Studies (ABS)

Type and Sectoral Distribution

Distribution of QCOs

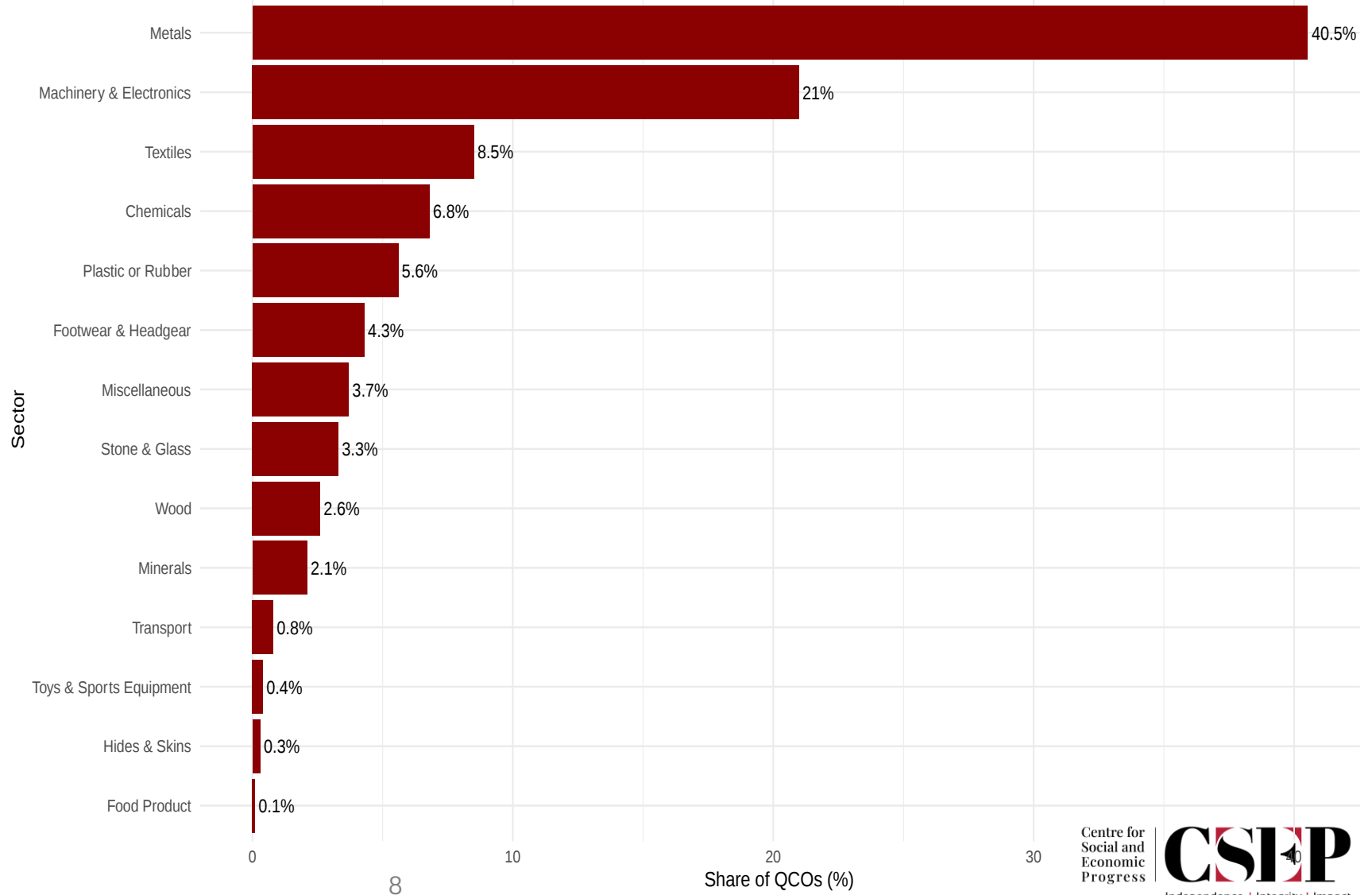
Capital Consumer Intermediate



Note: The classification is based on the WITS categorization of goods.

Source: Academy of Business Studies (ABS); World Integrated Trade Solution (WITS)

Sectoral Distribution of QCOs



Sector-wise preview: No. of QCOs (Cumulative)

Table: Sector-wise No. of QCOs implemented (Cumulative); 2011-2023

Year	Minerals	Chemicals	Plastics & Rubber	Hides & Skins	Wood	Textiles	Footwear	Stones & Glass	Metals	Mach. & Elec.	Transport	Toys
2011	16	0	4	0	0	0	0	0	2	12	0	0
2012	16	0	4	0	0	0	0	0	2	12	0	0
2013	16	0	4	0	0	0	0	0	2	12	0	0
2014	16	0	4	0	0	0	0	0	2	12	0	0
2015	16	0	4	0	0	0	0	0	2	13	0	0
2016	16	0	4	0	0	0	0	0	10	20	0	0
2017	16	0	4	0	0	0	0	0	10	24	0	0
2018	16	1	4	0	0	0	0	0	10	27	0	0
2019	16	6	4	0	0	0	0	1	11	33	0	0
2020	16	33	7	0	1	4	28	4	162	54	5	2
2021	16	40	13	0	1	10	28	4	166	56	5	2
2022	16	48	20	2	1	32	28	4	166	56	5	2
2023	16	48	36	2	20	56	29	9	275	78	5	2
2024	16	52	43	2	20	65	29	25	310	161	6	2

Source: Academy of Business Studies (ABS)

Distribution of QCOs within Sectors

Sector	Consumer (%)	Intermediate (%)	Capital (%)
Minerals	0	100	0
Chemicals	0	100	0
Plastics & Rubber	70	30	0
Hides & Skin	100	0	0
Wood	5	95	0
Textiles	63	37	0
Footwear	90	10	0
Stones & Glass	92	8	0
Metals	26	68	5
Machinery & Electronics	54	2	44
Transportation	0	50	50
Toys	100	0	0

Source: Academy of Business Studies (ABS), WITS

Top 5 exporters to India, 2023 (their share in respective total M (%))

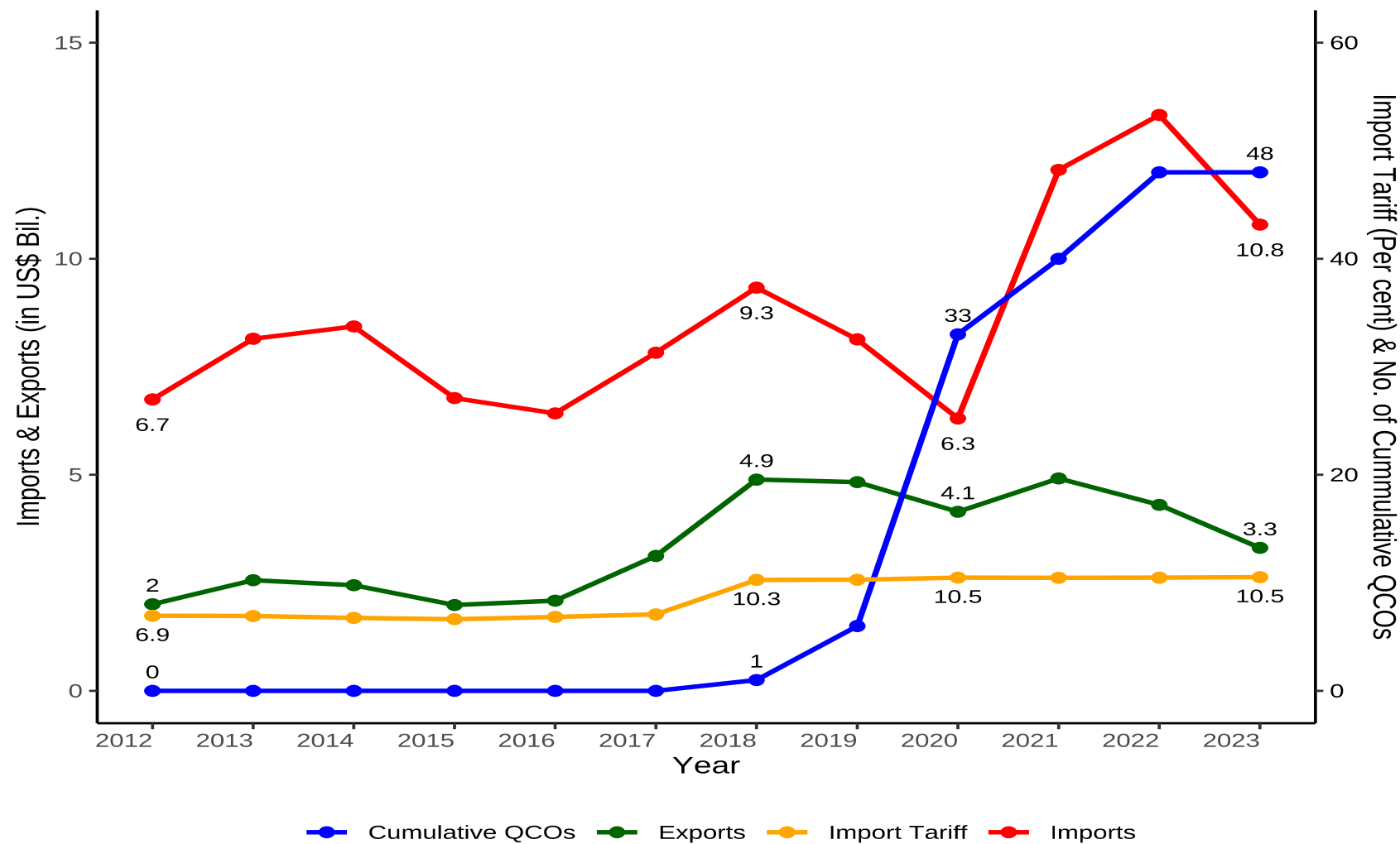
Rank	1	2	3	4	5
Minerals	Indonesia (10)	UAE (9)	Chile (8)	Australia (7)	South Africa (7)
Chemicals	China (31)	USA (8)	Japan (5)	Saudi Arabia (5)	Russian (4)
Plastics & Rubber	China (24)	Korea (10)	USA (9)	Thailand (7)	Japan (6)
Hides & Skins	China (33)	Italy (12)	Bangladesh (12)	Thailand (6)	Viet Nam (5)
Wood	USA (12)	China (11)	Indonesia (10)	Canada (6)	South Africa (6)
Textiles	China (43)	Bangladesh (12)	USA (5)	Viet Nam (5)	Indonesia (3)
Footwear	China (38)	Viet Nam (30)	Bangladesh (8)	Indonesia (8)	Italy (4)
Stones & Glass	Switzerland (22)	UAE (19)	India (9)	South Africa (7)	China (4)
Metals	China (17)	Japan (10)	Korea (9)	USA (7)	Indonesia (5)
Mach. & Elec	China (52)	Japan (5)	Korea (5)	USA (5)	Germany (5)
Transportation	Germany (15)	China (12)	USA (10)	France (8)	Japan (6)
Toys	China (71)	USA (5)	Italy (3)	Indonesia (3)	Other Asian countries (3)

Source: UNCOMTRADE



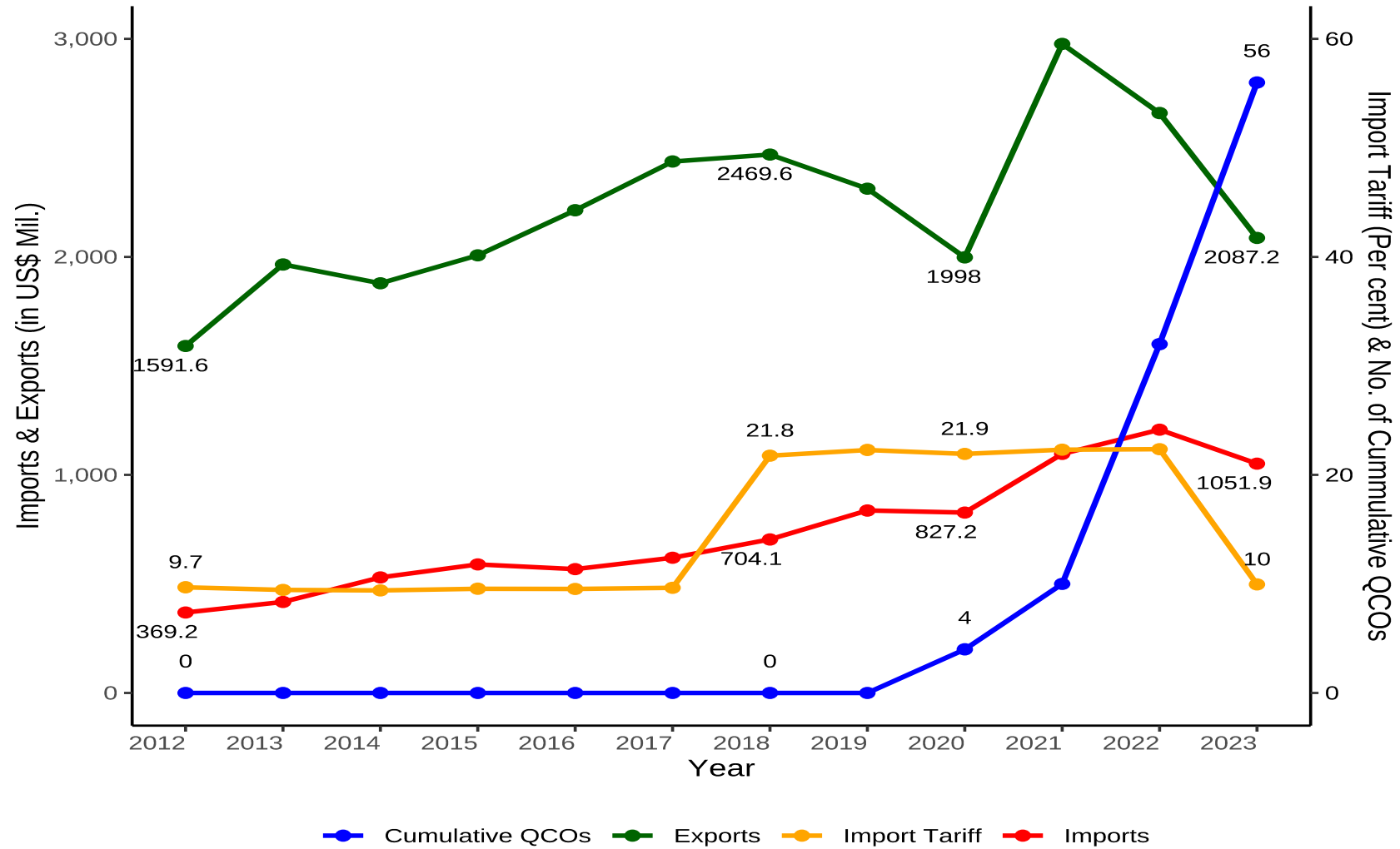
Sector-specific Time Trends: QCOs, Import Tariffs, Imports & Exports

Chemicals



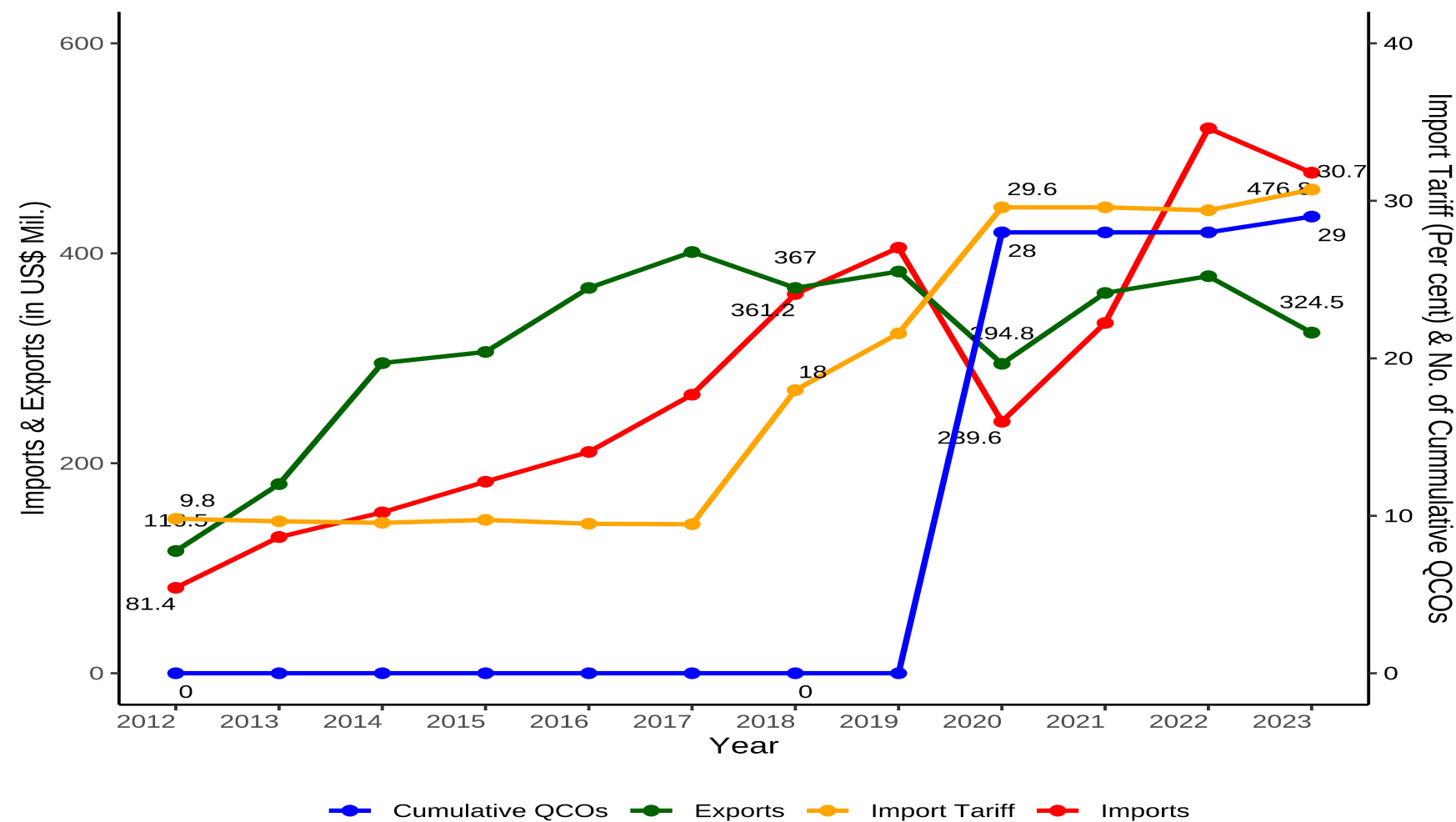
Source: Author’s analysis based on the Academy of Business Studies

Textiles



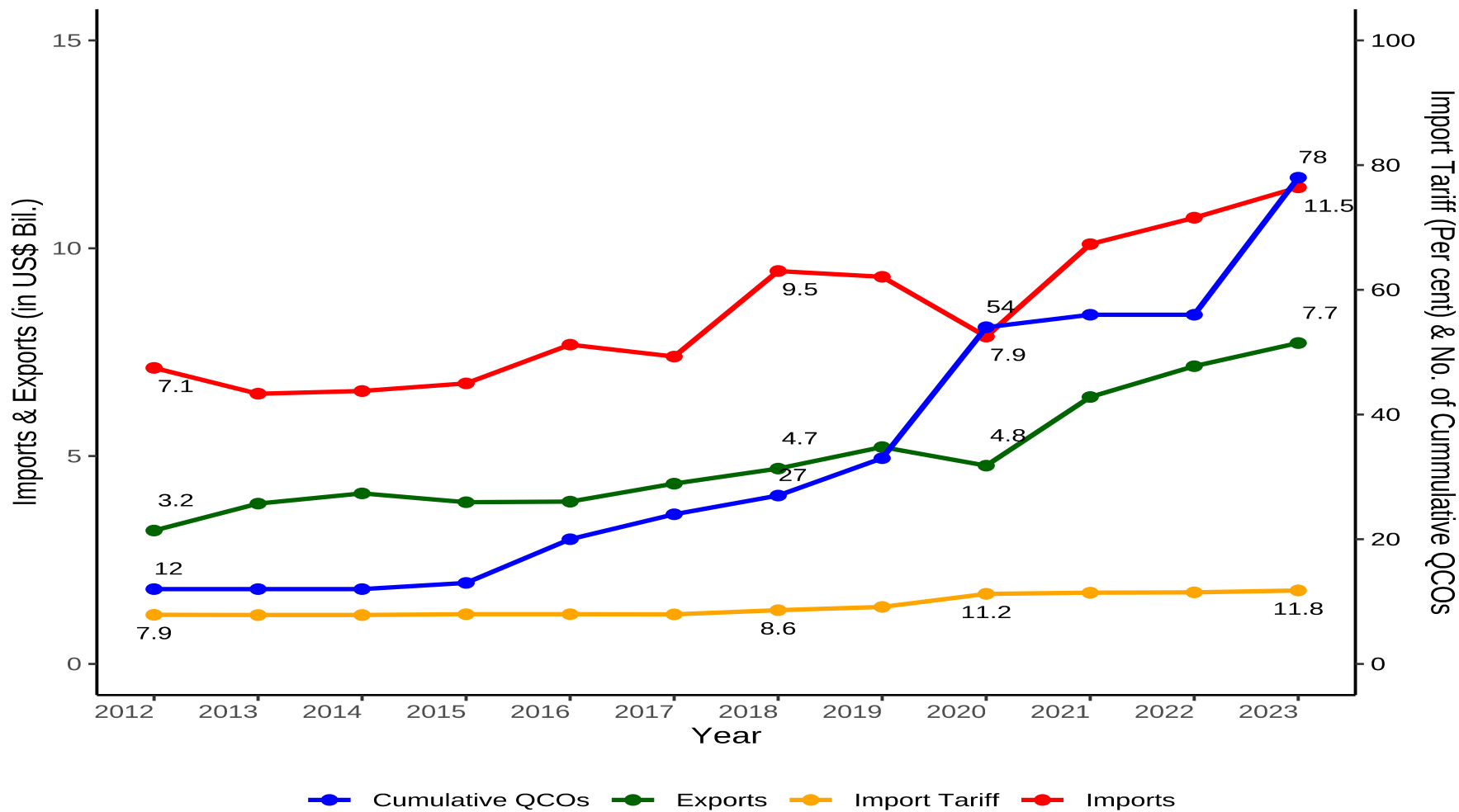
Source: Author's analysis based on the Academy of Business Studies

Footwear



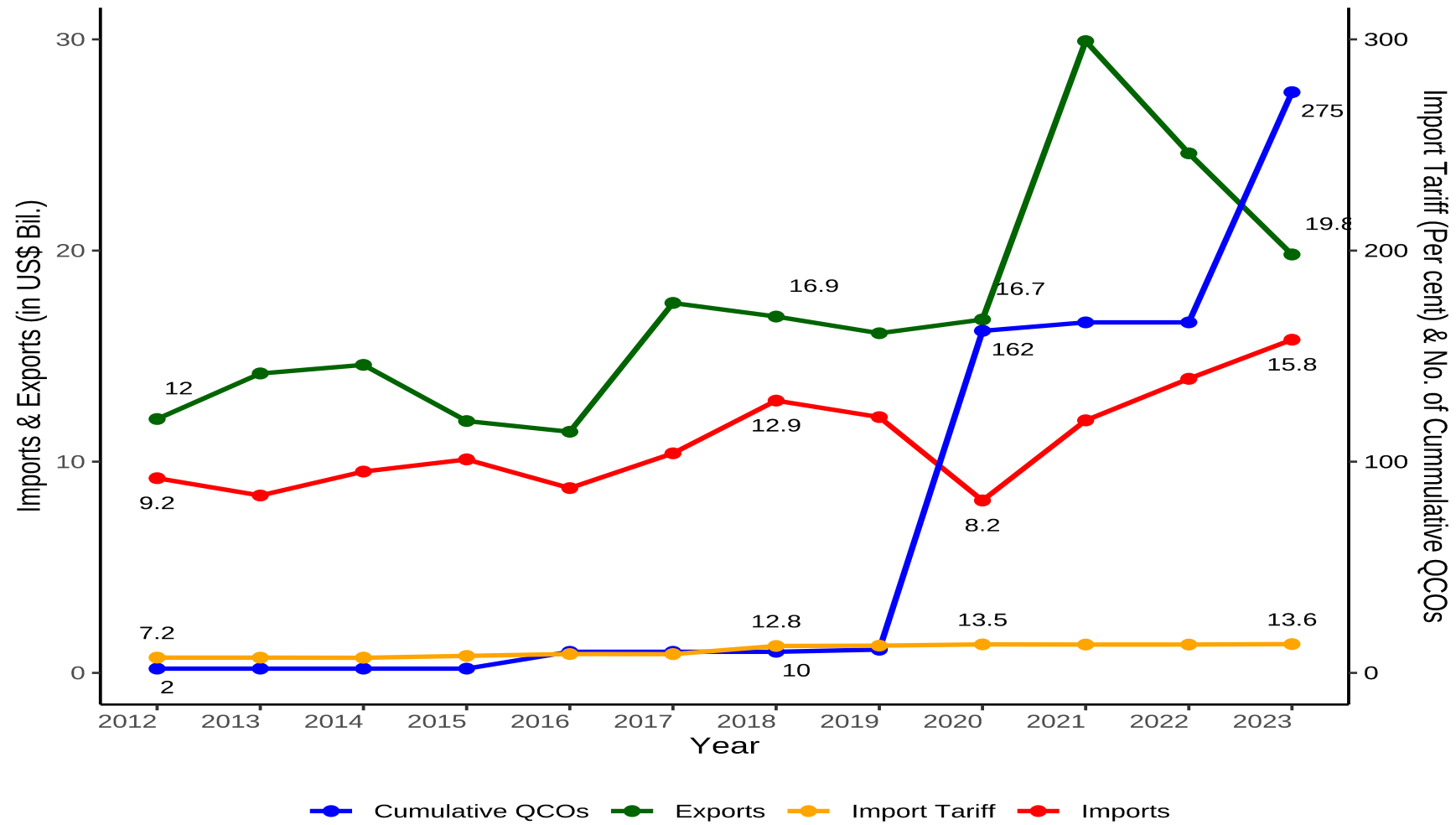
Source: Author's analysis based on the Academy of Business Studies

Machinery and Electronics



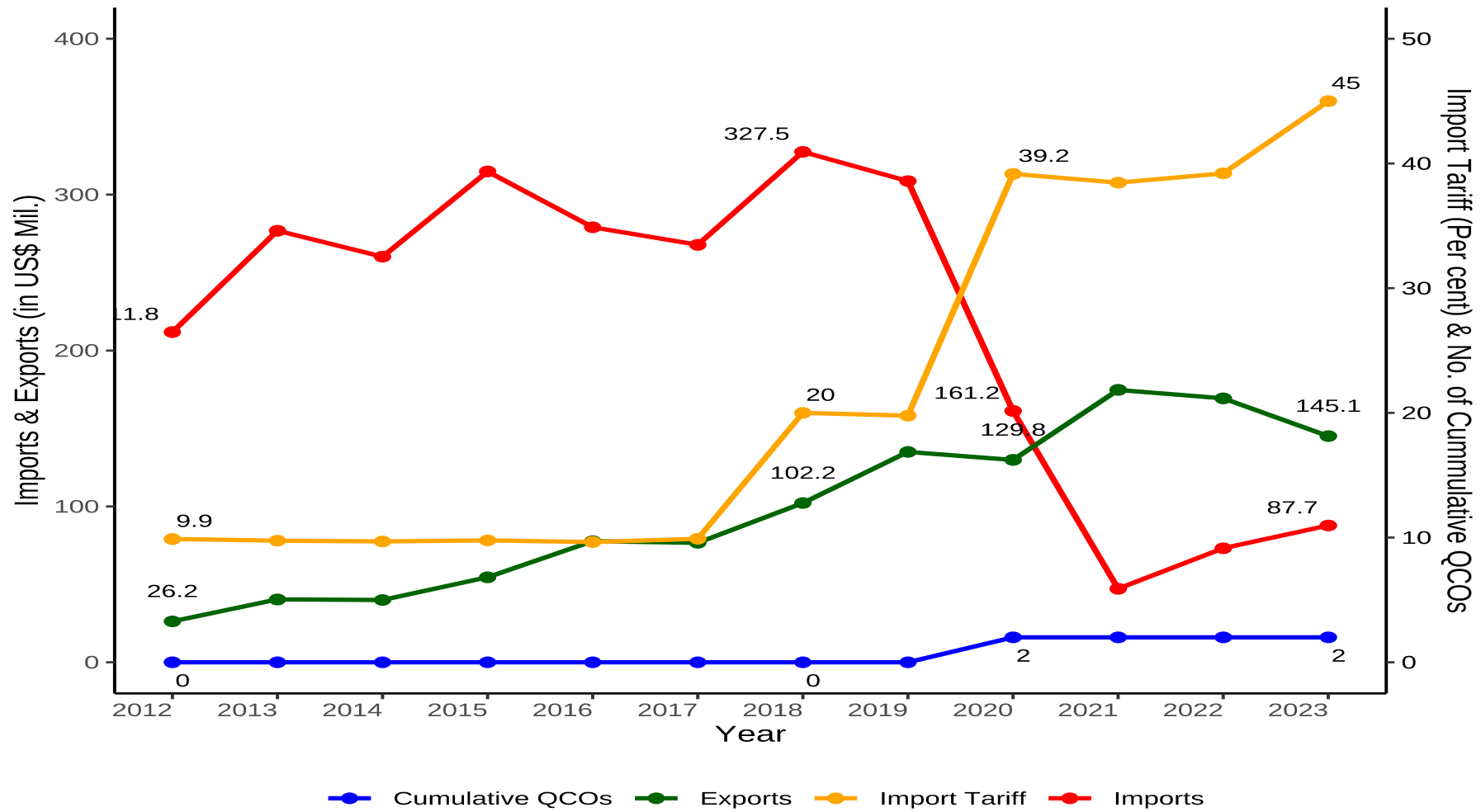
Source: Author's analysis based on the Academy of Business Studies

Metals



Source: Author's analysis based on the Academy of Business Studies

Toys



Source: Author's analysis based on the Academy of Business Studies

Understanding Trade Impact of QCOs : Sector wise

- Identify Affected Product Lines

- Extract all HS 6-digit product lines within key sectors that have been impacted by QCOs.
- Use the first year of QCO notification as the base/reference year for analysis.

- Define Trade Trends:

- Mark as a “fall” if there is a decrease in imports or exports in the current or any of the subsequent 3 years.
- Mark as an “increase” if there is an increase in all 4 years (current year + 3 subsequent years).

- Calculate Sector-wise Proportions:

- For each sector, compute the proportion of product lines showing a fall or an increase in imports/exports following the imposition of QCOs.

- Tariff trends

- Assessed tariff growth rates in the last five years (2019-2023)

Trade Impact of QCOs

S. No.	Sector	M ↓ (%)	M ↑ (%)	X ↓ (%)	X ↑ (X)	No. of QCOs	AHS (last 5 yrs)*
1	Minerals	100	0	75	25	16	Increased by 0.3%
2	Chemicals	92	8	85	15	52	Reduced by 0.3%
3	Plastics & RUBber	68	32	84	16	43	Increased by 0.5%
4	Hides & Skins	100	0	50	50	2	Increased by 0.9%
5	Wood	20	80	70	30	20	Increased by 0.4%
6	Textiles	64	36	91	9	65	Reduced by 12.3%
7	Footwear	86	14	85	15	29	Increased by 9.1%
8	Stones & Glass	100	0	80	20	20	Increased by 2.8%
9	Metals	80	20	86	14	310	Increased by 0.7%
10	Machinery & Electronics	70	30	72	28	162	Increased by 4%
11	Transport	100	0	100	0	6	Increased by 2%#
13	Toys	100	0	100	0	3	Increased by 25.2%

Understanding Trade Impact of QCOs : Regression Analysis

- Panel data: **8473**
- Cross section: **353** HS 6 digit product line
- Period: **2000 to 2023**

Model 1: Equations 1 (and 2) without product and time dummies (Model 1)

Model 2: Equations 1 (and 2) with product and time dummies (Model 2)

Model 3: Model 2 with separate QCO dummies for intermediate, capital, and consumer goods

Diagnostic Tests

- Tests for heteroscedasticity and autocorrelation.
- Likelihood tests for selection across models – Models 2 and 3 recommended

Regression equations

$$\text{Log}(\text{Import})_{it} = \alpha + \beta_1 \text{QCO} + \beta_{12} \text{Tariff} + \varepsilon$$

(1)

$$\text{Log}(\text{Export})_{it} = \alpha + \beta_1 \text{QCO} + \beta_{12} \text{Tariff} + \varepsilon$$

(2)

QCOs dummy = 1 for years after QCO notification on the product

QCO dummy = 0 for years prior to QCO notification

Regression Results

Model B	Log(Imports)	Log(Export)
AHS	-0.4 (0.529)	0.9 (0.125)
QCO --	-3.7 (0.613)	11.3 (0.135)
First lag	-12.9** (0.025)	10.6* (0.087)
Second lag	-5.9 (0.250)	-12.8** (0.023)
Third lag	-1.5 (0.890)	-0.6 (0.955)
Long Term	-24.3* (0.06)	8.6 (0.5)
Year Dummy	✓	✓
Product Dummy	✓	✓

Model C	Log(Imports)	Log(Export)
AHS	-0.5 (0.353)	0.9 (0.129)
QCO X Intermediate --	-16* (0.072)	14.3 (0.149)
First lag	-17.5*** (0.010)	8.5 (0.291)
Second lag	-0.5 (0.935)	-19.5*** (0.009)
Third lag	3.7 (0.820)	5 (0.730)
Long term	-30.3* (0.1)	8.2 (0.6)
QCO X Capital --	0.8 (0.952)	12.2 (0.328)
First lag	-1.2 (0.924)	5.6 (0.569)
Second lag	-12.2 (0.201)	-4.7 (0.424)
Third lag	-0.1 (0.991)	1.2 (0.924)
Long Term	-13.9 (0.3)	14.4 (0.3)
QCO X Consumer --	22.2** (0.043)	4 (0.732)
First lag	6.4 (0.595)	16.6 (0.125)
Second lag	-14.1 (0.131)	4.5 (0.570)
Third lag	-18.5 (0.351)	-20.6 (0.226)
Long Term	-4.1 (0.8)	4.6 (0.8)
Year Dummy	✓	✓
Product Dummy	✓	✓

*: Significant at 10%	
** : Significant at 5%	
***: Significant at 1%	
Note: Coefficients are expressed in %, following by their p value in brackets	

Key Takeaways

- QCOs significantly reduce imports, especially of intermediate goods, indicating import-substitution effects
- Domestic supply chains disrupted when key inputs are not available locally.
- Exports decline two years post-QCO, particularly for intermediate goods, and no impact over the long run .
- No evidence of export gains, raising concerns over QCO effectiveness in boosting competitiveness.
- Policy implication: QCOs need careful calibration to avoid unintended consequences on trade and manufacturing.

Industry Stakeholder Discussion

Supply Chain Disruptions

- QCOs often restrict critical imports (e.g., CRGO steel from China), despite limited domestic alternatives.
- Leads to production delays and capacity gaps in key sectors.

Rising Compliance Costs

- Certification costs ₹10,000–₹15,000 per consignment.
- Increased input costs reduce export competitiveness.

Administrative Delays

- Lengthy certification and testing timelines (up to 6 months).
- Limited testing infrastructure and divergence from global standards worsen delays.

Uneven Impact on Firms

- Large firms manage compliance better and may leverage import barriers.
- SMEs face more regulatory friction, lack access to grievance redressal, and lose market share.



Policy Recommendations

1. Clear Product Identification

- Mandate HS-code tagging in all QCO notifications.
- Create a **centralized, publicly accessible QCO-HS code database.**

2. Criteria for QCO Application

- Qcos should be implemented only for quality [ripises, and for addressing price differences, as it is taken care by e adures like anti dumping dutues
- Exempt products not made or made in insufficient quantity domestically.
- Allow **conditional exemptions** for key non-dumped intermediate goods.
- Example: CRGO steel and specialized fasteners critical for power, auto, defense sectors.

Policy Recommendations

3. Streamline Compliance

- Align BIS standards with international ISO/IEC norms.
- Set up BIS Task Forces for MSME support.
- Enable digital verification
- Facilitate timely inspections, including for foreign suppliers.

4. Address Market Concentration & Prices

- High QCO compliance costs risk MSME exclusion and market capture by large firms.
- CCI should monitor for anti-competitive behavior and price manipulation in QCO-affected sectors.



Thank you