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CHINA–PAKISTAN BILATERAL MERCHANDISE TRADE, 2010–2024: TRADE COVERAGE, EXPORT CONCENTRATION AND POLICY IMPLICATIONS

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ABSTRACT

This study examines the trends and structural characteristics of bilateral merchandise trade between China and Pakistan from 2010 to 2024, focusing on trade imbalances, export performance, and export concentration. Using secondary trade statistics, the study employs descriptive analysis to calculate annual trade balances, growth rates, and export-to-import coverage ratios. The findings reveal that Pakistan consistently experienced merchandise trade deficits with China throughout the study period. The export coverage ratio declined from 27.36% in 2010 to 14.85% in 2024, indicating a widening imbalance relative to import values. The trade deficit peaked at USD 17.66 billion in 2021 and reached USD 13.62 billion in 2024. Furthermore, three major commodity groups accounted for approximately 43.3% of Pakistan's exports to China in FY2024, highlighting export concentration. The study emphasizes the importance of export diversification, industrial competitiveness, and effective utilization of bilateral trade agreements to improve Pakistan's trade performance.

Keywords: *China–Pakistan trade, trade imbalance, export diversification, bilateral trade, export competitiveness.*

1. INTRODUCTION

Trade policy debates frequently interpret the bilateral merchandise balance as a measure of the benefits of a trading relationship. Yet a bilateral deficit is an accounting outcome shaped by domestic spending, the composition of production, access to intermediate inputs, and conditions in third markets. Imports of capital equipment and intermediate goods can raise domestic productivity, even when the short-run bilateral balance deteriorates. Research on imported inputs finds productivity gains following reductions in input tariffs, which argues against equating import growth with economic loss (Amiti & Konings, 2007). The central research problem is therefore not simply the negative sign of Pakistan's trade balance with China, but the limited ability of Pakistan's exports to offset the expanding value of its imports over time.

This study examines the period 2010–2024 because it includes years before and after the implementation of the second phase of the China–Pakistan Free Trade Agreement (CPFTA). The second phase entered implementation on 1 January 2020 (Pakistan Business Council [PBC], n.d.). The time span also captures the trade disturbance around 2020–2021 and the subsequent adjustment. The analysis neither treats these periods as controlled experiments nor attributes changes in trade values directly to the agreement. Instead, it uses the policy chronology

to organize an interpretation of observable annual statistics.

The research question is consequential for trade-development policy. Access to tariff concessions does not generate export growth when domestic producers lack consistent supply, standards compliance, financing, or market information. Conversely, an increase in imports of machinery may enable more competitive production and exports in subsequent years. The article therefore evaluates export coverage alongside the trade deficit, then uses a limited commodity snapshot to identify areas where market access and production capacity might interact. This pairing of aggregate time trends and product structure permits a more careful descriptive diagnosis than the headline deficit alone.

China is a major source of machinery, intermediate goods and consumer manufactures for Pakistan. Pakistan's exports to China encompass a more limited range of textile inputs, agricultural commodities and seafood. These exchanges take place within a bilateral relationship shaped by the China–Pakistan Free Trade Agreement (CPFTA) and related investment cooperation. Trade growth need not entail proportional export gains for each partner. For an economy importing capital equipment and manufacturing inputs, larger imports could coexist with gains to production, yet sustained weaknesses in export receipts pose questions about market access, product upgrading and external-sector resilience.

The first phase of CPFTA began in 2007 and a second phase was implemented in 2020 (Pakistan Business Council [PBC], n.d.). Prior research concludes that bilateral trade liberalization expanded both trade flows but was associated with a larger rise in Pakistan's imports than exports (Shah et al., 2022). Evidence of a bilateral deficit is therefore established. A useful contribution from a short, updated article is not a claim to newly discover the deficit, but a transparent evaluation of its evolution and of whether annual export coverage improved over the 2010–2024 interval.

The article addresses three questions. RQ1: How did Pakistan's reported merchandise exports to and imports from China change over 2010–2024? RQ2: How did Pakistan's export-to-import coverage ratio vary across the period? RQ3: To what extent were recent Pakistani exports to China concentrated in three leading reported commodity groups? This narrow design avoids attributing the observed changes to policy interventions without a counterfactual.

The study has two practical contributions. First, it supplies a full annual trade table with consistently defined calculations for a short descriptive paper. Second, it combines a time-series coverage indicator with a recent product-concentration snapshot while flagging differences in reporting basis that often weaken comparisons of bilateral statistics.

2. Literature review and conceptual framing

The literature relevant to China–Pakistan trade falls into three related strands: preferential trade liberalization, export specialization and diversification, and the role of exchange rates and imported inputs. Each strand highlights a different reason why the bilateral balance alone does not establish whether a trade agreement produces net economic gains. This section positions the descriptive indicators used in the present study within those debates and distinguishes findings from mechanisms requiring additional causal testing.

2.1 Trade agreements and unequal bilateral responses

Empirical work on preferential trade agreements generally expects tariff reductions to lower trade costs and alter sourcing decisions. Nevertheless, the size and composition of the response vary across sectors, partners, and levels of production capability. The empirical evaluation by Shah et al. (2022) concluded that CPFTA was associated with increases in Pakistan's exports to and imports from China, with the import response larger than the export response. Their evidence is more directly concerned with the economic consequences of the agreement than the descriptive exercises performed here. The current paper complements, rather than substitutes for,

such estimation by documenting the subsequent pattern of merchandise flows.

PBC (2024) reports that Phase II preferential concessions remained unevenly utilized. Its evaluation identifies lower utilization of available concessions among Pakistani exporters than among Chinese exporters and emphasizes concentration in relatively few commodity lines. These findings reveal an implementation problem. Tariff access is a necessary commercial condition for some products, but it is insufficient when production, certification, shipment volumes, and buyer relationships constrain export supply. The present study therefore avoids interpreting post-2020 changes in the balance as proof of either the success or failure of Phase II.

An FTA reduces selected border barriers but does not equalize productive capacities or import demand across partners. The PBC's review of CPFTA Phase I notes that bilateral trade expanded markedly after the agreement, while Pakistan's merchandise deficit widened (PBC, n.d.). Its evaluation of Phase II also documents gaps between Pakistan-reported imports and China-reported exports, highlighting the need for consistent reporting conventions (PBC, 2024). These analyses show why gross trade expansion and improved export performance should be evaluated separately.

Shah et al. (2022), using an empirical approach, report positive effects of CPFTA on Pakistan's exports and imports, with a greater import increase. Their study provides a reference point, but the present research does not replicate their identification strategy. Instead it documents what happened in the recorded flows and avoids assigning particular annual changes to the agreement, exchange rates, Chinese demand or Pakistani supply factors.

2.2 Export structure, concentration and coverage

Export diversification is relevant because excessive dependence on a narrow basket exposes export receipts to product-specific price and demand fluctuations. Cadot et al. (2013) review the connections among trade diversification, income, and growth and explain why the choice of diversification metric and the stage of development matter for interpretation. Hausmann et al. (2007) likewise argue that the type of goods exported has implications for development, drawing attention to differences in the productive knowledge embedded in exports. These studies motivate an examination of the composition of Pakistan's sales to China rather than relying only on aggregate values.

A three-product concentration ratio is intentionally simpler than a Herfindahl–Hirschman Index (HHI). The latter requires a consistent and sufficiently exhaustive product-level distribution, whereas the former reports the share of the three leading categories in total sales. The ratio is informative about a single year but cannot identify changes in diversification without similarly classified historical commodity data. For this reason, the study reports a 2023–2024 fiscal-year concentration snapshot and does not claim that concentration has increased or decreased over 2010–2024.

The export-to-import coverage ratio is an accounting indicator measuring the share of a partner-specific import bill matched by exports to that partner. It complements the dollar deficit: a narrowing deficit can arise because imports contract even when exports do not become more competitive. Product concentration provides another descriptive perspective. A larger share accruing to a few categories may indicate exposure to sector-specific shocks, but a three-category share cannot substitute for a complete product-level concentration index or establish a causal connection with trade deficits.

The PBC identifies market-access opportunities under CPFTA Phase II alongside the challenges of exploiting tariff concessions. The distinction matters because nominal preferential access does not ensure exporters meet standards, scale or delivery requirements (PBC, n.d.). The Pakistan Bureau of Statistics (PBS, 2024) supplies a commodity breakdown useful for describing which products dominate recent exports. These official and institutional sources motivate a tightly scoped analysis rather than a broad, unsupported model of export determinants.

The empirical literature on bilateral market access provides competing assessments of the Pakistan–

China agreement. Irshad et al. (2018) estimated trade potential using a gravity framework and identified unrealized opportunities for Pakistan. Mahmood and Jongwanich (2018) found positive export effects from preferential tariffs, whereas Abbas (2019) reported a stronger bilateral import response. Haq and Saeed (2021) evaluated trade creation, diversion and revealed comparative advantage, highlighting differences between China's capital-intensive products and Pakistan's primary and semi-manufactured goods. These contrasting approaches caution against interpreting a growing deficit as a direct estimate of the agreement's welfare effect.

Recent sector-specific evidence strengthens this caution. Khan et al. (2024) examined Pakistani vegetable exports through a gravity model, while Ayaz and Akram (2024) studied China's wider agreement-related trade flows. Their designs differ from annual bilateral accounting, as they explain trade outcomes using policy and partner variation. The present article does not replicate those causal claims. Instead, it supplies an observable annual benchmark for the magnitude, coverage, and reported product concentration of bilateral trade.

Product diversity is a distinct dimension of export development. Balassa (1965) established a widely used revealed-comparative-advantage approach, while Hummels and Klenow (2005) distinguished extensive and intensive export margins. Cadot et al. (2007) and Klinger and Lederman (2011) studied diversification and export entry. An and Le (2026) emphasize that top-product concentration and distribution-wide diversification measures need not describe the same feature of an export basket. Accordingly, this study reports only the share of the top three product groups, avoiding the unsupported interpretation of this statistic as an economy-wide Herfindahl index.

Firm-level research also explains why tariff access does not translate mechanically into export growth. Melitz (2003) modeled productivity-related exporter selection, Bernard et al. (2007) summarized differences between exporters and non-exporters, and Helpman et al. (2008) emphasized intensive and extensive trade margins. Product quality (Khandelwal, 2010), variety (Broda & Weinstein, 2006), and the cost of reaching markets (Eaton et al., 2011) provide further explanations for heterogeneity across bilateral trade flows. These studies support treating supply capacity as a plausible mechanism rather than an estimated cause in the present research.

The use of a descriptive approach is also a methodological choice. Gravity models require data for multiple trading partners and suitable controls (Anderson & van Wincoop, 2003; Evenett & Keller, 2002). Econometric choices such as multiplicative estimators and country-pair effects matter for causal comparison (Santos Silva & Tenreyro, 2006; Baldwin & Taglioni, 2006). The data used here are insufficient for these designs. Moreover, theoretical research shows that trade values alone are not sufficient for measuring welfare gains (Arkolakis et al., 2012).

2.3 Research positioning

A related literature emphasizes that macroeconomic and sectoral conditions mediate bilateral trade. Bahmani-Oskooee et al. (2023) analyze exchange-rate volatility for disaggregated Pakistan–China commodity trade and report asymmetric responses across industries. Their results warn against attributing all changes in bilateral values to a trade agreement or export capacity. Exchange-rate movements, world commodity prices, input demand, and sectoral specialization are credible alternative explanations. The descriptive design adopted here cannot rank those explanations; instead, it identifies patterns for future structural modeling.

The specific contribution is threefold. First, the paper provides a reproducible annual export-coverage series alongside conventional trade balances. Second, it explicitly uses reporter-defined merchandise flows and explains how mirror-data discrepancies affect comparability. Third, the study juxtaposes the aggregate outcome with a narrowly defined export-concentration measure. These are incremental empirical contributions, not evidence of an entirely new theoretical mechanism. Their value lies in making the evidence transparent and the policy inferences proportionate to the available data.

Studies of the bilateral FTA have examined trade performance and economic consequences. A short article using publicly accessible data has modest novelty if it only repeats aggregate trade deficits. The present contribution is therefore deliberately incremental: it reports a consistent coverage series with annual observations, quantifies the proportion of recent exports in the leading categories and describes data reconciliation choices. A stronger causal evaluation would require an appropriate comparison group and disaggregated panel data and is beyond this paper's scope.

3. Data and methods

The design follows a secondary-data, longitudinal descriptive approach. The country pair is fixed, the reporting economy is Pakistan, and the observation unit is a calendar year. The study estimates no regression coefficients and formulates no causal hypotheses. Consequently, patterns around a policy change or major shock are treated as temporal associations rather than treatment effects. Calculations are reproducible from the accompanying data file, while unresolved source issues are disclosed before results are interpreted.

3.1 Data provenance and sample

For the years 2010–2011, the aggregate values correspond to the bilateral table in the Trade Development Authority of Pakistan (TDAP, 2021), whose figures derive from Trade Map. For 2012–2022, the values match the Pakistan-reported exports and imports reproduced in PBC (2024). The 2024 trade totals are anchored to the WTO country profile, which draws on UN Comtrade and reports exports of USD 2,375.6 million to China and imports of USD 15,992.6 million from China (World Trade Organization [WTO], n.d.). The 2023 observation in the inherited dataset comes from a secondary UN Comtrade-based aggregation and has not been independently reconciled to a directly downloaded primary reporter-specific extract. The row is identified as provisional and should not be used to support year-on-year claims until verified.

The data are expressed in current US dollars, without inflation adjustment. They measure gross border transactions rather than domestic value added, profits, or net economic welfare. Goods in transit, informal trade, under-invoicing, and inconsistent partner attribution are possible measurement concerns. Because Pakistan's imports are commonly customs-valued differently from the partner's exports, replacing one reporter's import data with China's mirror-export figures would introduce a structural inconsistency. The PBC (2024) provides direct evidence that bilateral mirror discrepancies are material, reinforcing the decision to maintain a Pakistan-reported basis throughout.

The unit of analysis is Pakistan's annual merchandise trade with China, expressed in current USD billion for calendar years 2010–2024. The source compilation accompanying this manuscript uses Trade Development Authority of Pakistan/ITC material for 2010–2011, Pakistan Business Council tables based on ITC statistics for 2012–2022, and secondary UN Comtrade-derived aggregates for 2023–2024. The 2024 endpoint was cross-checked with WTO country trade data. The 2023 aggregated values are retained as provisional until an original UN Comtrade or WTO download confirms the same reporter, partner, valuation and calendar-year basis. This qualification is important when interpreting the 2023 rebound in coverage.

Reported imports are Pakistan's imports from China, not China's mirror exports to Pakistan. Customs valuation (often CIF for imports versus FOB for exports), routing, classification and reporting differences mean those series need not agree. All data are nominal merchandise values. Services, inflation adjustments, trade in value added and price-versus-volume decomposition are excluded. The FY2024 product breakdown uses the PBS fiscal year and is intentionally analyzed separately from calendar-year totals.

For independent data replication, researchers should obtain reporter-defined annual series from UN Comtrade (n.d.), ITC Trade Map (n.d.), or World Bank WITS (n.d.), documenting reporter, partner, flow direction, valuation, revision date and commodity classification. World Bank World

Development Indicators (n.d.), UNCTADstat (n.d.), the WTO Data Portal (n.d.) and the WTO regional trade agreements database (n.d.) provide complementary macroeconomic and policy context. These supplementary databases are cited as replication resources; they were not independently merged into the reported numerical series.

3.2 Indicators and calculations

The export coverage indicator should be read alongside both export and import levels. For example, a higher ratio does not necessarily mean improved export capacity: coverage rises when imports fall more rapidly than exports. To reduce misinterpretation, the results separately discuss the numerator and denominator as well as the ratio. In addition, annual growth rates are calculated only when adjacent observations are comparable, and changes involving the provisional 2023 row are not interpreted as confirmed changes in trade performance.

The study further calculates the share of each selected export category in the total reported FY2024 merchandise exports to China. The concentration ratio of the three largest reported categories is CR3 = (X1 + X2 + X3) / XT × 100, where XT denotes the total merchandise exports to China over the same fiscal-year reference period. Calendar-year aggregate statistics and fiscal-year product statistics are deliberately not merged in the same numerator or denominator. The concentration calculation is a level measure, not an estimated trend or an index of export sophistication.

Let X(t) denote Pakistan's merchandise exports to China and M(t) its merchandise imports from China in year t. The bilateral balance is TB(t) = X(t) − M(t). Total bilateral trade is TT(t) = X(t) + M(t). Export coverage is EC(t) = 100 × X(t)/M(t). The year-on-year growth rate of a flow V is g(t) = 100 × [V(t)/V(t−1) − 1]. The difference in coverage between two years is expressed in percentage points, not percent. For a separate fiscal-year distribution, CR3 = 100 × (exports in the largest three listed groups)/(total exports to China).

CR3 relies on reported groups and is not a full Herfindahl–Hirschman Index. The 2024 product denominator is fiscal-year exports, not calendar-year exports. Data calculation used the accompanying CSV, with values rounded only for display. Figures provide visualization, without trend-break tests, hypothesis tests or regression coefficients.

4. Empirical results

The results are organized around three dimensions of asymmetry: the absolute value of the bilateral trade gap, the relative capacity of exports to cover imports, and concentration in the export basket. All dollar results are presented as descriptive observations, with no statistical significance tests because the analysis is not designed to estimate treatment effects. Rounded values in the manuscript may produce small arithmetic differences relative to the underlying unrounded CSV.

4.1 Aggregate trade flows and balance

Three distinct phases emerge in the annual sequence. During 2010–2013, the absolute import bill rose but exports also increased, producing coverage ratios above one-quarter and close to two-fifths by 2012–2013. During 2014–2017, imports grew substantially while Pakistani export receipts declined, creating a sharp deterioration in the bilateral balance. Between 2018 and 2020, imports were below their 2017 level, and the deficit narrowed relative to the 2017 peak. The jump in 2021 and decline in 2022 show why a simple linear characterization of the series would be misleading (PBC, 2024; TDAP, 2021).

In 2024, the WTO-reported values imply total Pakistan–China merchandise trade of about USD 18.37 billion and a deficit of USD 13.62 billion. China supplied 28.3% of Pakistan's global merchandise imports, while absorbing 7.3% of Pakistan's global merchandise exports (WTO, n.d.). These shares are asymmetric in two senses. China accounted for a larger proportion of Pakistan's imports than of exports, and Pakistani sales to China were small relative to Chinese sales to Pakistan. The figures indicate bilateral

imbalance, not the net welfare effect of international trade.

Table 1 shows the available series. Merchandise trade deficits appear in every recorded year. Imports climbed from USD 5.25 billion in 2010 to USD 15.99 billion in 2024; exports increased from USD 1.44 billion to USD 2.38 billion. Imports reached USD 20.71 billion in 2021, creating the largest observed deficit of USD 17.66 billion. Annual changes were substantial in both directions, so the long-run deficit should not be represented as steadily rising each year.

Table 1. Pakistan-reported merchandise trade with China, 2010–2024

Year	Exports, USD bn	Imports, USD bn	Balance, USD bn	Coverage, %
2010	1.44	5.25	-3.81	27.36
2011	1.68	6.47	-4.79	25.95
2012	2.62	6.69	-4.07	39.18
2013	2.65	6.63	-3.97	40.03
2014	2.25	9.59	-7.34	23.50
2015	1.93	11.02	-9.08	17.56
2016	1.59	13.68	-12.09	11.63
2017	1.51	15.40	-13.89	9.81
2018	1.83	14.60	-12.77	12.53
2019	2.04	12.42	-10.38	16.44
2020	1.87	12.50	-10.64	14.94
2021	3.04	20.71	-17.66	14.70
2022	2.56	16.34	-13.78	15.67
2023	2.74	11.69	-8.95	23.44
2024	2.38	15.99	-13.62	14.85

Source: Compiled from TDAP/ITC (2010–2011), PBC/ITC (2012–2022) and secondary UN Comtrade-derived aggregates (2023–2024); 2024 checked with WTO.

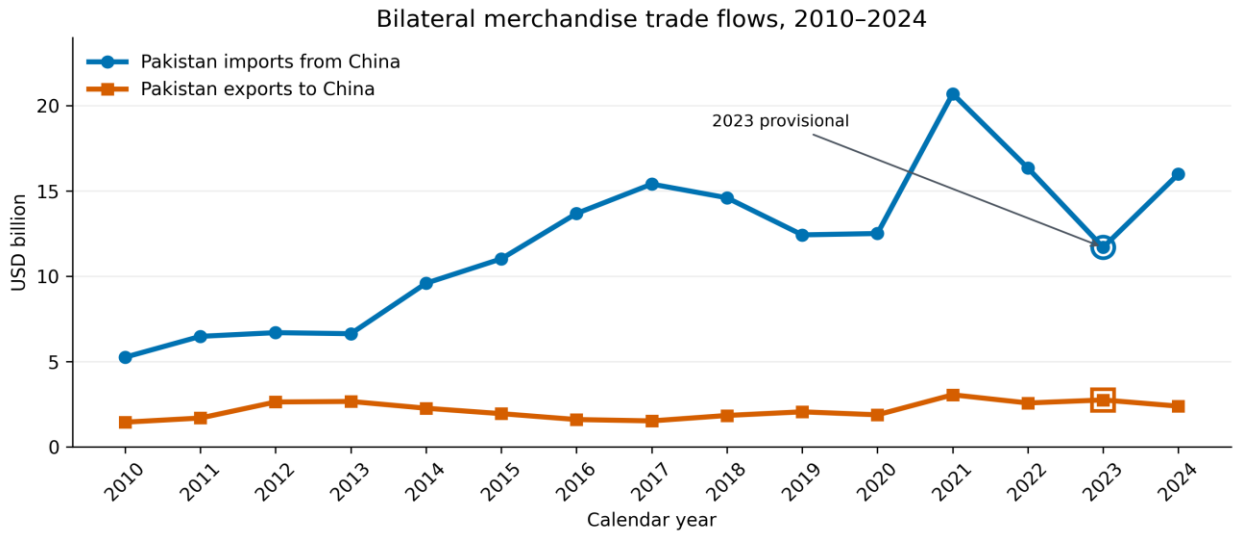


Figure 1. Pakistan's reported bilateral merchandise exports and imports (USD billion).

4.2 Export coverage: level and variation

The coverage path is more revealing than the endpoints alone. Coverage climbed from 27.36% in 2010 to 40.03% in 2013 before dropping to 9.81% by 2017. The subsequent recovery to 16.44% in 2019 coincided with a decline in imports relative to their earlier high, illustrating that improved coverage can reflect lower import demand instead of a strong expansion in exports. Following a reading of 14.70% in 2021, the ratio was 15.67% in 2022. These changes document substantial volatility in the relative size of the two trade flows and caution against evaluating the trade relationship from an isolated year.

The 2024 ratio of 14.85% indicates that USD 0.15 in Pakistan's exports to China corresponded to each USD 1.00 of Pakistan's imports from China. The difference from the 2010 value is approximately 12.51 percentage points. This comparison is informative as a long-period descriptive contrast, but it does not identify why the ratio changed. A formal explanation would require consistently measured commodity-level data, exchange rates, demand variables, domestic production indicators, and a model accounting for confounding macroeconomic changes.

Export coverage fell from 27.36% in 2010 to 14.85% in 2024, a reduction of 12.51 percentage points. The series was uneven: coverage was close to 40.03% in 2013, fell to 9.81% in 2017 and recovered to 16.44% in 2019. It was 14.70% in 2021 despite an increase in exports, because imports expanded even more. The provisional 2023 value is 23.44%; its apparent improvement mostly reflects a sharp import decline and should not be called evidence of export-led upgrading.



Figure 2. Export-to-import coverage ratio for Pakistan's merchandise trade with China (%). Source: Table 1; 2023 provisional pending original-source verification.

The coverage measure thus clarifies the difference between export performance and import compression. A rise in coverage is compatible with exports stagnating if imports decline faster. The indicator is descriptive and does not measure profitability, competitiveness or bilateral welfare.

4.3 Product concentration in FY2024

The export basket is important because aggregate performance is constrained by the products that firms are capable of supplying competitively. The three reported categories together represented about USD 1.115 billion of Pakistan's approximately USD 2.574 billion fiscal-year merchandise exports to China. Their combined share, roughly 43.32%, signals material reliance on a small number of commodity groups. In particular, cotton yarn is a textile intermediate input, while oilseeds and fish preparations are closely connected to agricultural and resource-

based sectors (Pakistan Bureau of Statistics [PBS], 2024).

This concentration statistic is not equivalent to a full classification-based index. A complete HHI would require values for all export lines using consistent HS classifications and an unambiguous denominator. Nor does a high CR3 independently show low product quality or weak profitability. A limited concentration profile nevertheless identifies practical candidates for market research, value-added processing, technical certification support, and supply-chain upgrading. Comparing CR3 across years should be a priority once harmonized product detail becomes available.

PBS (2024) reports approximately USD 2,574 million in Pakistan's fiscal-year merchandise exports to China. Cotton yarn (USD 648 million), oilseeds, nuts and kernels (USD 286 million) and fish and fish preparations (USD 181 million) together contributed USD 1,115 million. Therefore CR3 = 100 × 1,115/2,574 = 43.32%. Table 2 presents these categories; their grouping follows PBS reporting labels.

Table 2. Leading merchandise export categories to China, FY2024

Commodity group	USD million	Share of total (%)
Cotton yarn	648	25.17
Oilseeds, nuts and kernels	286	11.11
Fish and fish preparations	181	7.03
Top three combined	1,115	43.32
Other merchandise	1,459	56.68
Total exports to China	2,574	100.00

5. Discussion

The empirical pattern raises a distinction between trade imbalance and trade dependence. A persistent deficit indicates a difference between the recorded values of goods exchanged, whereas dependence concerns the substitutability, essentiality, and concentration of imported supplies. The annual aggregates cannot reveal which Chinese imports are irreplaceable inputs, which are final consumption goods, and which are substitutes for domestic output. Industry-specific import-use tables would be necessary before concluding that the observed deficit undermines domestic industry. Evidence from Indonesia, for example, shows that liberalizing access to imported intermediate inputs increased firm productivity (Amiti & Konings, 2007), suggesting a channel through which imports might support long-term export capacity.

The combination of weak export coverage and product concentration points to the importance of the supply side. Where exports comprise a relatively narrow set of products, improvements in preferential access might have limited immediate effect if firms do not produce the eligible products, lack standards documentation, or struggle to meet consistent order volumes. PBC (2024) reaches a related policy conclusion in its detailed tariff-line examination. The present aggregate series is compatible with that interpretation but does not directly test the causal weight of supply constraints.

The macroeconomic environment is an additional source of uncertainty. Bilateral trade values respond to exchange rates and international commodity prices as well as tariff schedules. Bahmani-Oskooee et al. (2023) show that sector-level Pakistan–China trade reactions to exchange-rate volatility need not be symmetric. Moreover, a higher import bill might reflect larger quantities or rising prices, effects impossible to separate using values alone. For this reason, shifts around the start of CPFTA Phase II in 2020 are presented as descriptive context, without claims of a policy-generated structural break.

A final interpretive concern involves statistical discrepancies. PBC (2024) documents substantial gaps between China-reported exports to Pakistan and Pakistan-reported imports from China. The data support the use of a single reporter-based

convention but also show why uncertainty and data provenance belong in the main analysis. A stronger follow-on study should compare the same HS products under Pakistan and China reporter definitions, quantify the discrepancy by year, and examine whether valuation differences, routing, or reporting quality account for observed divergences.

The principal finding is persistence, not a linear trajectory. Pakistan's bilateral goods balance remained negative and its export coverage ended below the starting level. This accords with the broader concern in PBC reports and with the earlier empirical findings of Shah et al. (2022), while adding annual coverage measurements through 2024. The data support descriptive continuity with that literature but do not establish whether the CPFTA caused the decline in coverage.

A second finding is sectoral concentration among the three largest reported FY2024 export groups. The CR3 of 43.32% indicates a sizeable portion of total export receipts originated in cotton yarn, oilseeds and seafood. These sectors offer a practical starting point for trade facilitation, quality certification and processing investment. Yet the absence of a product-level panel prevents testing whether concentration explains variation in the bilateral deficit or whether diversification has strengthened since 2010.

Several alternative mechanisms might generate the observed trade asymmetry. Pakistan's investment and intermediate-input demand, relative productive capacities, variations in world prices, exchange rates, Chinese consumer or industrial demand and transportation costs all potentially influence bilateral flows. Establishing their relative importance requires additional variables and econometric identification. Similarly, bilateral deficits are not direct indicators of national welfare: imports can be productive inputs, and a bilateral balance has no necessary one-for-one relation to the overall current account.

Data comparability is a material limitation rather than a footnote. The PBC documents sizable discrepancies between Pakistan-reported imports and China-reported exports. The mixed institutional publications used here reproduce Pakistan's reporting direction, but published secondary aggregations may still differ in revisions and rounding. Accordingly, major causal or fine-grained year-to-year claims should await a fresh, uniform download from one statistical platform.

6. Policy implications

A first priority is to identify export products for which Pakistan has demonstrable production capacity and China has large, stable import demand. Product-level opportunity assessments should compare Pakistani supply, Chinese import growth, tariffs, sanitary and phytosanitary requirements, technical standards, and competing suppliers. This approach connects market access to commercial feasibility rather than presuming that the number of preferential lines measures policy success. Targeted assistance for firms entering large buyer networks may have greater impact than broad incentives detached from market conditions (PBC, 2024).

Second, export support should distinguish commodity expansion from value addition. For cotton yarn, policy analysis might explore higher-value textile inputs and finished products; for seafood and agricultural products, improved cold chains, traceability, inspection capacity, and processing could support entry into higher-value market segments. These are propositions requiring industry feasibility studies, not quantified effects established by the present dataset. The underlying concern is consistent with scholarship relating export composition and diversification to economic development (Cadot et al., 2013; Hausmann et al., 2007).

Third, transparent trade monitoring would improve policy evaluation. Public agencies should maintain downloadable annual bilateral trade files with consistent calendar-year coverage, explicit reporter definitions, product codes, and revised-series annotations. Dashboards should show absolute exports, imports, trade coverage, and a classification-consistent concentration index. Such reporting would make performance under CPFTA easier to assess and enable researchers to separate nominal trade movements from changes in quantities, prices, and product diversity.

The evidence favors policies emphasizing export capacity and verified market opportunities rather than arbitrary targets for lowering imports. Pakistan's trade-promotion agencies should identify Chinese import demand at the HS six-digit level, match that demand to competitive Pakistani exporters and communicate applicable CPFTA tariff preferences and origin requirements. Agricultural and seafood exporters would benefit from targeted work on inspection, sanitary standards, packaging and cold-chain logistics. Textile firms would benefit from greater emphasis on processing, quality upgrading and downstream products where commercial demand exists.

Monitoring should distinguish three policy indicators: the value of bilateral exports, export coverage and product diversity. Authorities should release consistent reporter-defined annual tables with documented revisions and maintain separate tracking of preference utilization. Evaluating whether specific CPFTA concessions improve exports would require a matched product-level comparison, not simple before-and-after trends.

7. Conclusion

The descriptive contribution is deliberately bounded. The study documents the persistence of merchandise deficits, substantial volatility in export coverage, and concentration in three leading fiscal-year export categories. These observations are consistent with concerns identified in earlier examinations of CPFTA, but neither a deficit nor a coverage ratio is sufficient evidence about the agreement's effect on welfare, output, or employment (Shah et al., 2022). The policy interpretation therefore emphasizes stronger export capability and reliable data rather than bilateral balance targets in isolation.

The immediate research agenda is to replace the provisional 2023 observation with an independently downloaded Pakistan-reported primary extract, construct a full annual product-level panel, and calculate consistent concentration measures for multiple years. Future causal research could then investigate tariff preference utilization, exchange-rate exposure, productivity, and sector-specific export responses. Such an extension would connect the transparent descriptive evidence developed here with a more comprehensive explanation of the bilateral trade relationship.

Pakistan reported a bilateral merchandise trade deficit with China in every year of the compiled 2010–2024 series. Exports covered 27.36% of imports in 2010 and 14.85% in 2024, with substantial intervening volatility. The three largest reported export categories accounted for approximately 43.32% of FY2024 bilateral exports. Together these findings identify persistent asymmetry in the recorded goods flows and a concentration of recent exports among a few leading sectors. They do not establish the welfare effects of bilateral trade or the causal effect of any trade agreement. Policy priorities include expanding export supply capability, product-level market intelligence and consistent trade-data reporting.

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