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Pakistan's Dismal Export Performance: A Survey of Empirical Literature

Junaid Ahmed

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CONTENTS

Abstract	v
1. Introduction	1
2. Trade Profile and Policy Indicators	2
2.1. Historical Perspective on Exports	2
2.2. Tariff and Non-Tariff Barriers	4
2.3. Logistics Efficiency or Its Lack Thereof	6
2.4. What Pakistan is Exporting, What the World is Importing?	7
2.5. Export Diversification	9
2.6. Export Destinations	10
3. Methodology	10
4. Review of Empirical Insights on Pakistan's Export Performance	11
4.1. Tariffs and Non-Tariff Barriers	11
4.2. Government Subsidies	13
4.3. Quality and Standards Certifications	14
4.4. Exchange Rate and Competitiveness	15
4.5. Trade Agreements	17
4.6. Barriers to Export Competitiveness	19
4.7. Lack of Diversification	21
Key Points and Recommendations	22
5. Conclusion	23
REFERENCES	24
Appendices	30

List of Table

Table 1 Composition of Merchandised Exports: 2001-2024 in (%)	4
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List of Figures

Fig. 1. Historically Weak Performance of Exports	2
Fig. 2. Lagging Performance vis-à-vis Regional Comparators	3
Fig. 3. Trade in Pakistan: (goods and services in current USD billions)	3
Fig. 4. Import Duty Cascading by the Top 20 Countries Having Highest Cascading Levels	5
Fig. 5. Share of Tariffs in Tax Revenues (%)	5
Fig. 6. Tariff Rate, Average (%)	5
Fig. 7. Pakistan's Ranking in the Logistics Performance Index	6
Fig. 8. Bureaucratic Challenges in the Export Process	7
Fig. 9. Growth Trends in Top 30 Products: Pakistan vs. Global Markets	8
Fig. 10. Global vs. Pakistan: Export Shares of 30 Key Products	8
Fig. 11. Proportion of New Products: 2020 Export Basket	9
Fig. 12. Pakistan's Export Product Space	9
Fig. 13. Pakistan's Top 15 Exports Destinations: % Share	10

ABSTRACT

Pakistan's export performance has remained chronically weak despite numerous trade liberalisation efforts and its strategically advantageous geographic position. This study synthesises over three decades of empirical literature to understand the structural, institutional, and policy-related impediments to the country's lagging exports. The evidence demonstrates that high tariffs on intermediate inputs, limited compliance with international certification standards, energy sector inefficiencies, and exchange rate volatility significantly undermine export competitiveness. These challenges are further exacerbated by a narrow export base concentrated in low-value-added textiles, ineffective subsidy schemes, and limited utilisation of trade agreements. As a result, Pakistan has struggled to diversify into higher-value-added sectors. Addressing these constraints requires coordinated reforms, including tariff rationalisation, development of certification and quality infrastructure, improvement of the business and regulatory environment, and targeted support for sectoral upgrading to facilitate sustainable export growth.

JEL Classifications: F13, F14, F18, F19

Keywords: Exports, Trade barriers, Diversification, Competitiveness, Pakistan

1. INTRODUCTION

Over the past three decades, exports have emerged as a critical growth engine for sustainable and inclusive development in developing nations. However, despite successive policy reforms and a strategically advantageous location, Pakistan has struggled to develop a resilient and diversified export base to support its economy. According to the World Bank (2025), Pakistan's export-to-GDP ratio declined from 15.4 percent in 1999 to 10.4 percent in 2024, indicating stagnation in external competitiveness, even as regional peers rapidly expanded their trade footprints. Bangladesh dominates value-added downstream textile products, India leads in IT and pharmaceuticals, Vietnam excels in high-tech and global value chains, and China is establishing itself as a global manufacturing hub. These countries focused on developing industries capable of competing globally, with substantial investments in the manufacturing and technology sectors. On the other hand, the export basket of Pakistan remains heavily concentrated, with roughly 74 percent of exports comprising low-value-added textile and apparel, leather, and rice products (Pakistan Economic Survey, 2025). From 2001 to 2024, the share of high-skill and technology-intensive exports increased only marginally, from 3.6 percent to 6.4 percent, while Vietnam and China reached 33.9 percent and 41.1 percent, respectively (UNCTAD, 2025). This limited progress reflects a continued dependence on labour-intensive sectors and a limited capacity to move up the value chain. Therefore, drawing lessons from economies such as India, Vietnam, and even Bangladesh is imperative to attain diversification and mitigate the risks associated with sectoral dependence.

A growing body of research highlights several reasons for this underperformance. On top of this, Pakistan has a cascading tariff regime that imposes an implicit anti-export bias, especially for firms dependent on imported intermediate inputs. This discourages firms from upgrading their quality or becoming globally competitive (Varela, et al. 2020; Jamil & Arif, 2019). Similarly, energy sector inefficiencies and inadequate infrastructure constitute major structural constraints, contributing to high production and trade costs. (Siddiqui, et al. 2008; Hussain, et al. 2012). Pakistan also ranks low in logistics performance, placing 122nd globally in the World Bank's Logistics Performance Index, with weaknesses in customs processing, tracking systems, and transport infrastructure (World Bank, 2025). Governance level constraints further limit export growth. Moreover, export subsidies exist to support exporters; studies show that these often benefit large and well-connected firms rather than growing or smaller exporters (Zia, 2008; Defever, et al., 2020). Many firms also struggle to meet international quality standards due to cost and limited awareness, as Wadho & Chaudhry (2025) show that certifications facilitate exports; however, adoption is uneven, and costs remain prohibitive for smaller firms. The European Union's Generalised Scheme of Preferences Plus (GSP+) program has facilitated growth in textile exports, although its long-term benefits depend on compliance with labour, governance, and environmental standards (Nakhoda, 2023).

In addition, Pakistan's export markets remain highly concentrated, with over 62 percent of exports directed to the top 10 destinations as of 2024 (ITC Trade Map, 2025). This limited geographical spread reflects untapped potential in both regional and non-traditional markets. Moreover, product diversification has been modest, mainly due to small volumes and low complexity (Ahmad, et al. 2024).

This review paper synthesises over three decades of empirical research to understand the factors behind Pakistan's stagnant export performance. Drawing on peer-reviewed articles, working papers, and policy reports, it organises evidence across key areas: tariff

and non-tariff barriers, export subsidies, trade agreements, exchange rate dynamics, structural constraints, and sector-specific challenges.

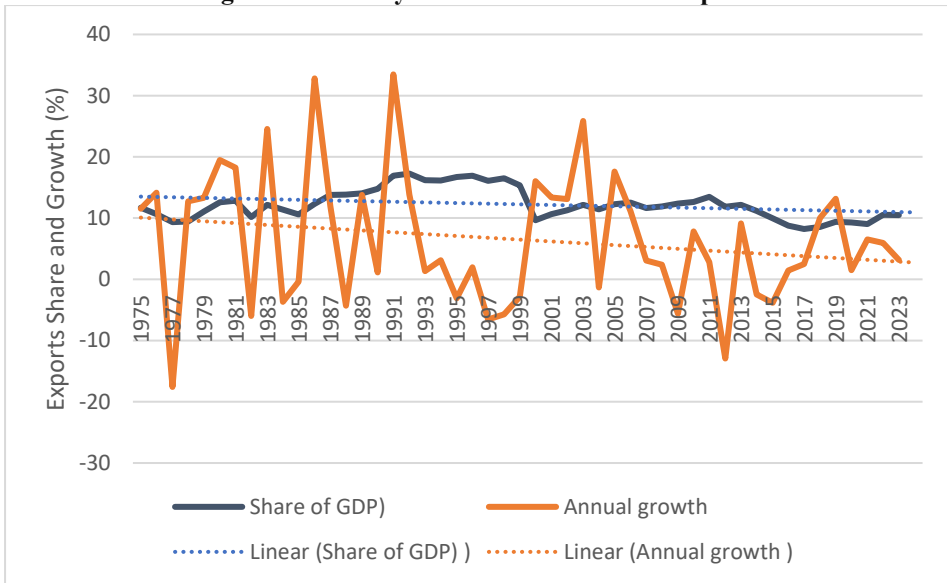
2. TRADE PROFILE AND POLICY INDICATORS

2.1. Historical Perspective on Exports

In 2024, Pakistan exported products and services worth USD 40.19 billion, representing a 10.6 percent increase compared to the previous year (Figure 3). Nevertheless, the growth of exports over the years has been highly volatile, spiking one year and bottoming out the next, reflecting structural gaps (Figure 1).

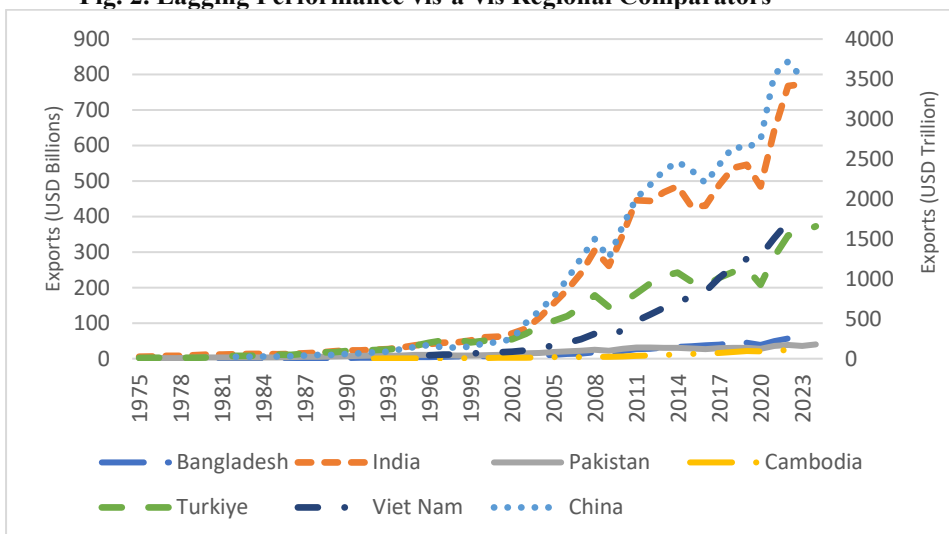
Pakistan's key exports are textiles and related goods, which depend on raw agricultural materials such as Cotton. This dependence links export performance to the volatility of agricultural output and global demand for low-value-added goods. As a result, export growth remains vulnerable, limiting long-term sustainability and contributing to the country's chronic trade deficit (Figure 3).

Fig. 1. Historically Weak Performance of Exports



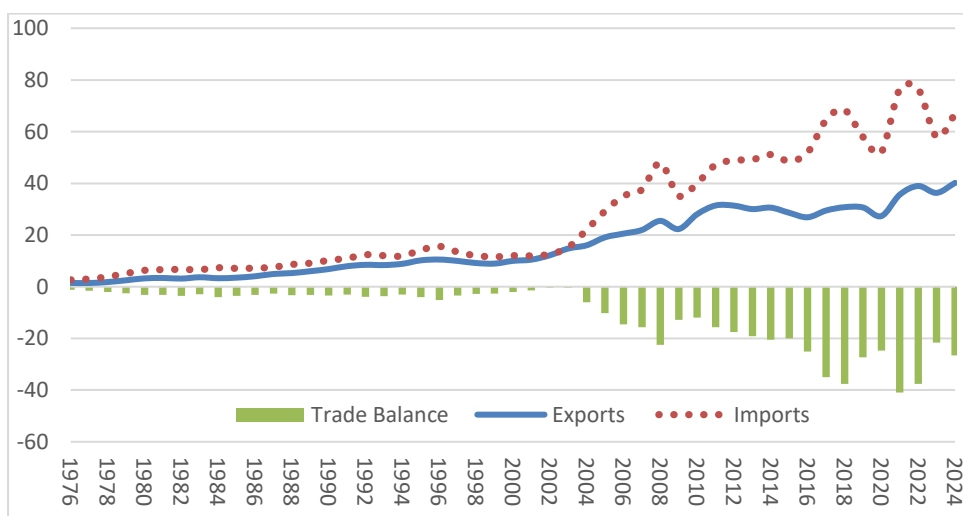
Source: World Development Indicators, World Bank.

Pakistan's exports over the past two decades have not been impressive compared to its comparators, i.e., Bangladesh, India, Vietnam, and China (Figure 2). China's exports skyrocketed from USD 208.6 billion in 2001 to over USD 3.5 trillion in 2023, driven by structural reforms, integration into global value chains, and sustained industrial upgrading. Vietnam followed a similar trajectory, with exports increasing from USD 17.8 billion in 2001 to USD 375.1 billion in 2023, reflecting its transition to a competitive export-led economy. Bangladesh also recorded steady progress, with exports growing from USD 6.8 billion in 2001 to USD 47.3 billion in 2023, largely supported by its garment sector and policy consistency. In contrast, Pakistan's exports increased from USD 10.5 billion in 2001 to USD 36.2 billion in 2023, reaching USD 40.2 billion in 2024, highlighting persistent structural challenges and missed opportunities in competitiveness.

Fig. 2. Lagging Performance vis-à-vis Regional Comparators

Source: World Development Indicators, World Bank.

Note: China is measured using the secondary (right-hand) axis due to the significantly larger export volume (in USD billion).

Fig. 3. Trade in Pakistan: (goods and services in current USD billions)

Source: World Development Indicators, World Bank.

This stagnant performance is evident in Table 1, which, in comparison to Pakistan, shows a substantial shift in the merchandise export structures of comparator countries from 2001 to 2024.

There has been a noticeable decrease in labour intensity in China, indicating a move towards more technology-intensive industries. Remarkably, Vietnam's transformation is prominent, from being primarily labour- and resource-intensive in 2001 to becoming more technology-intensive by 2024. In 2023, Vietnam's key exports

included broadcasting equipment (USD 83.2 billion), integrated circuits (USD 32.5 billion), and computers (USD 15.9 billion). Notably, Vietnam's top export, broadcasting equipment, surpassed the total merchandise exports of Pakistan and Bangladesh combined (OEC, 2025). This transition reflects Vietnam's successful move towards higher value-added and technology-intensive industries, improving its global market competitiveness.

Table 1

Composition of Merchandised Exports: 2001-2024 in (%)

Economy/Year	Labour-intensive and Resource-Intensive		Low-skill and Technology-Intensive		Medium-skill and Technology-Intensive		High-skill and Technology-Intensive	
	2001	2024	2001	2024	2001	2024	2001	2024
Bangladesh	89.68	92.20	0.32	0.90	1.02	0.84	1.55	1.18
Cambodia	88.79	60.86	0.39	2.70	0.45	9.80	4.70	6.01
China	30.57	17.47	9.02	10.66	20.32	31.83	28.47	33.92
India	30.51	11.71	6.82	8.39	7.71	16.32	16.41	27.00
Pakistan	75.68	57.87	1.53	1.00	4.13	2.74	3.61	6.44
Turkey	39.66	18.20	11.62	10.57	19.40	30.53	10.99	14.25
Vietnam	30.95	25.39	2.88	6.15	5.15	13.39	6.13	41.08

Source: Authors' calculations based on UNCTAD data for 2025.

India, too, has made progress in high-skill and technology-intensive sectors, albeit at a slower rate. Meanwhile, Cambodia and Turkey have displayed varying degrees of improvement in these sectors. Despite overall regional progress, Pakistan's growth in medium- and high-tech sectors such as IT, pharmaceuticals, and engineering has remained modest, reflecting untapped potential. This emphasises the need for tailored policies, increased R&D investments, and skill development to improve Pakistan's position in global value chains.

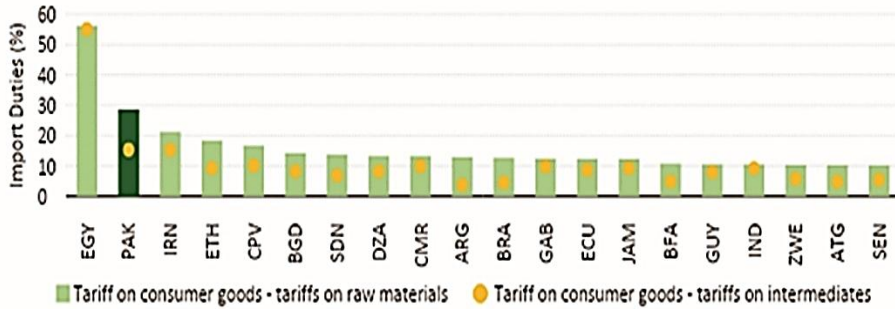
2.2. Tariff and Non-Tariff Barriers

Economic theory tells us that import tariffs are intended to encourage substituting of imports with domestically produced goods. However, when tariffs are imposed on intermediate goods that are not efficiently produced domestically, they increase input costs for firms, reducing their export competitiveness. The effect is further intensified by a cascading tariff structure, where duties accumulate along the production chain. This anti-export bias distorts resource allocation, raises production costs, and weakens firms' ability to compete in the international market (Figure 4).

Pakistan has been following an import substitution policy for a long time through a high import tariff regime. The National Tariff Commission (NTC), an autonomous body established under the NTC Act 2015, regulates the import tariffs in the country. However, the objective seems to be revenue maximisation rather than the trade promotion strategy. Comparing tariff rates in India and Pakistan shows that while import tariffs are broadly similar in both countries, tariff revenues differ significantly (see Figures 5 and 6). On the

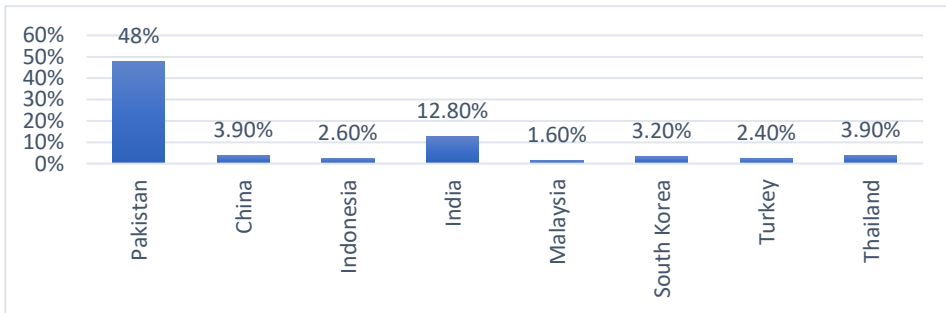
other hand, Vietnam undertook a strategy to sharply slash its import tariffs in the mid-2000s, achieving significant trade liberalisation gains.

Fig. 4. Import Duty Cascading by the Top 20 Countries Having Highest Cascading Levels



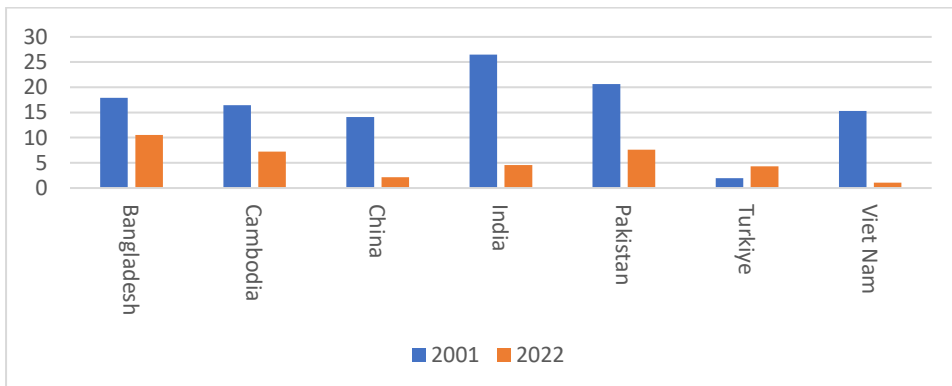
Source: Varela, Gonsalo (2022). Import tariffs as implicit (and powerful) export taxes. *Profit Pakistan Today Opinion*. Published May 1, 2022.

Fig. 5. Share of Tariffs in Tax Revenues (%)



Source: Strategic Trade Policy Framework (2019).

Fig. 6. Tariff Rate, Average (%)

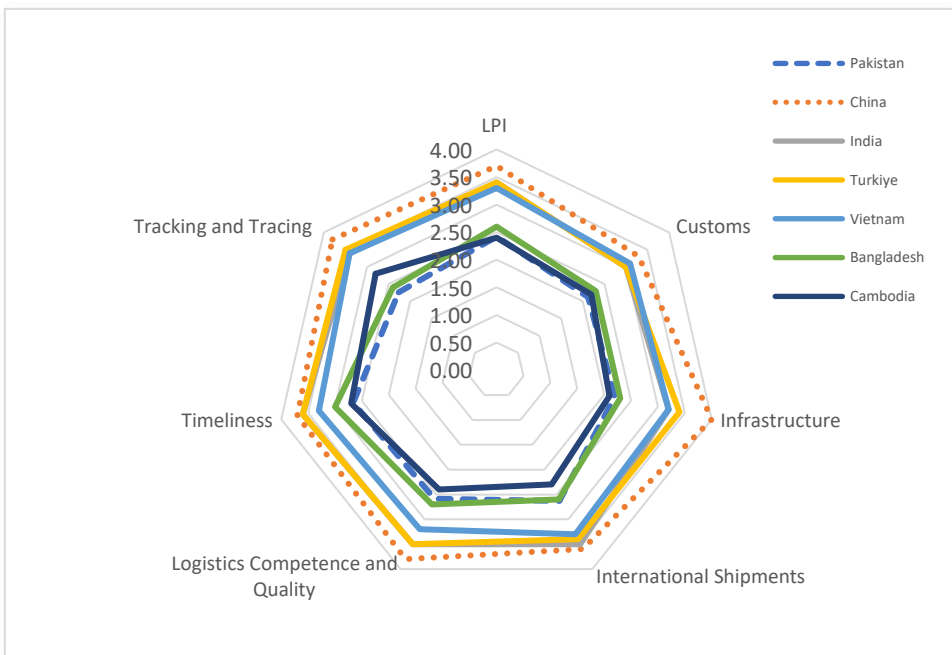


Source: World Bank Development Indicators. World Bank

2.3. Logistics Efficiency or Its Lack Thereof

The Logistics Performance Index (LPI) scores show rankings for China, Vietnam, India, Turkiye, Bangladesh, Pakistan, and Cambodia, reflecting varying degrees of logistics efficiency (see Figure 7). China stands out with a relatively high LPI score of 3.7, securing 19th position globally, indicating a highly efficient logistics system. Vietnam and India also demonstrate better logistics efficiency, with scores of 3.3 and 3.4 and ranks of 43 and 38, respectively. Turkiye falls into the moderate category, with a score of 3.4 and a rank of 38. Bangladesh's LPI score of 2.6 places it in the middle tier, while Cambodia is in the less efficient category, with a score of 2.4. Pakistan lags behind with a score of only 2.4 and a rank of 122.

Fig. 7. Pakistan's Ranking in the Logistics Performance Index



Source: World Bank.

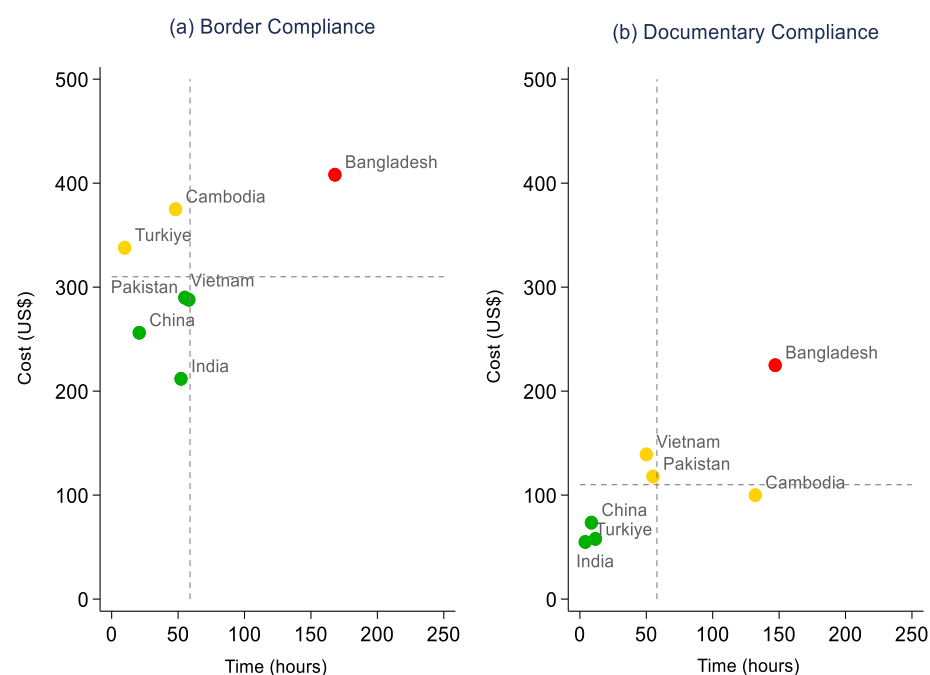
Note: LPI and subcomponent values range from 1 (low) to 5 (high), with 5 indicating the highest efficiency. All data is sourced from LPI 2023, except for Pakistan, where data is taken from the 2018 LPI.

Digging further into logistics performance, the customs score is 2.1 with a rank of 139, indicating potential delays in clearing goods at the border. Addressing this issue requires streamlining procedures, technology automation, and improved coordination between different departments. The infrastructure score of 2.2 and rank of 121 emphasize the need for targeted investments in transport networks and public-private partnerships. Timeliness and tracking, and tracing ranked 136; call for improved coordination, optimised processes, and the adoption of advanced technologies. Despite these challenges, Pakistan demonstrates relative strength in logistics competence and international shipments, positioned at 89 and 97, respectively. Therefore, a comprehensive strategy targeting the weak parameters identified is crucial to promote Pakistan's global logistics standing.

Furthermore, the inadequate logistics infrastructure contributes to excessive costs stemming from border and documentary compliance with the export process (Figure 8). The time and costs required for border and documentary compliance vary across countries. Regarding compliance at the border, China, Pakistan, Vietnam, Cambodia, and Turkiye exhibit significantly lower costs and times. However, Bangladesh stands out with notably high border compliance costs of USD 408 and a relatively high 168 hours in time, indicating bureaucratic hurdles in exporting. Pakistan has made progress in streamlining the border clearance process, as reflected by the reduced clearance time.

Related to documentary compliance, China, Turkiye, and India performed relatively better; Bangladesh, however, has significant costs in terms of time and costs. Similar to Vietnam, Pakistan exhibits relatively moderate average waiting times and costs.

Fig. 8. Bureaucratic Challenges in the Export Process

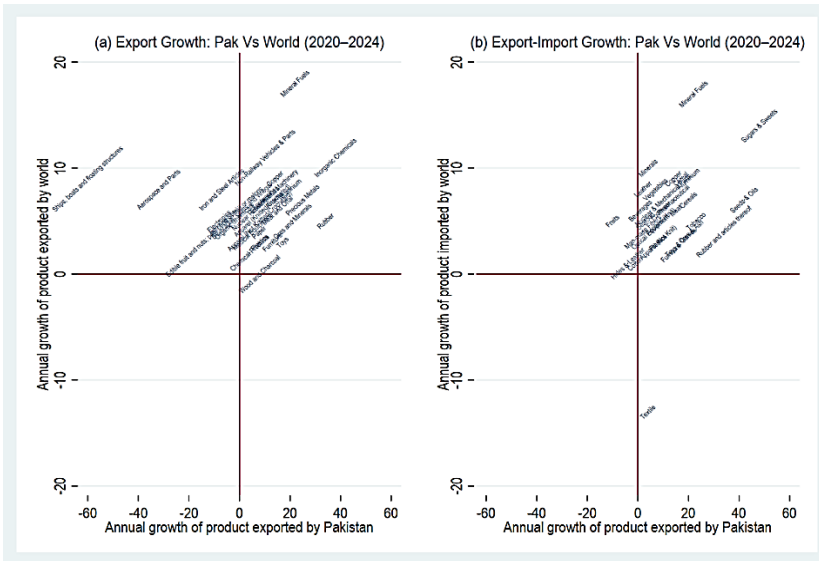


Source: Authors' estimations based on the World Development Indicator database, World Bank.

2.4. What Pakistan is Exporting, What the World is Importing?

Pakistan's export growth is increasingly converging with global trade patterns, particularly in sectors where global demand and supply are growing. As shown in Figure 9, products such as sugar, seeds and oils, rubber goods, meat, pharmaceuticals, minerals, tobacco, ores, and ash recorded strong export growth. Non-traditional sectors, such as cereals, toys and games, furniture, and nuclear and mechanical parts, also reflect the potential for continued diversification. Top-performing sectors offer untapped potential, while newer industries present opportunities for value-added growth. Traditional exports, such as apparel and food products, continue to increase; however, they face rising competition from regional peers.

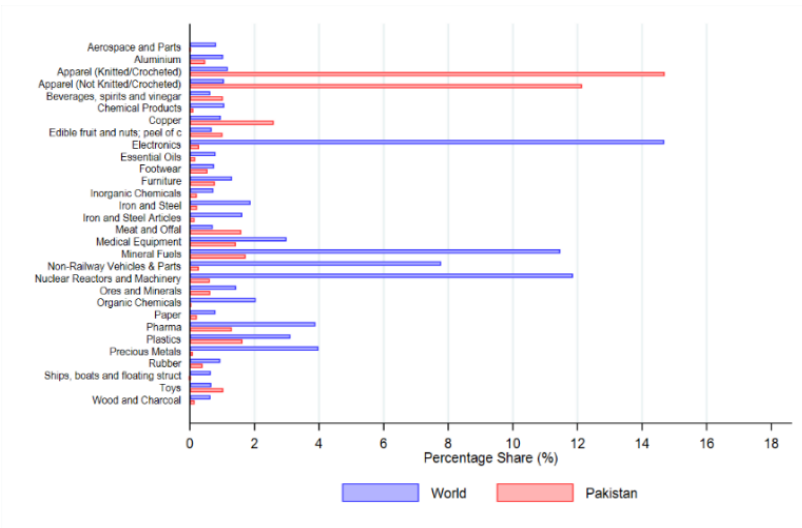
Fig. 9. Growth Trends in Top 30 Products: Pakistan vs. Global Markets



Source: Author calculation based on the International Trade Center (ITC) dataset.

Figure 10 shows Pakistan’s sectoral export performance in global trade. The country has a strong presence in traditional sectors such as apparel, cereals, and meat, while its emerging competitiveness is evident in copper, plastics, medical equipment, pharmaceuticals, beverages, and processed food products. However, its footprint remains limited to high-value sectors, such as electrical machinery, vehicles, and electronics.

Fig. 10. Global vs. Pakistan: Export Shares of 30 Key Products

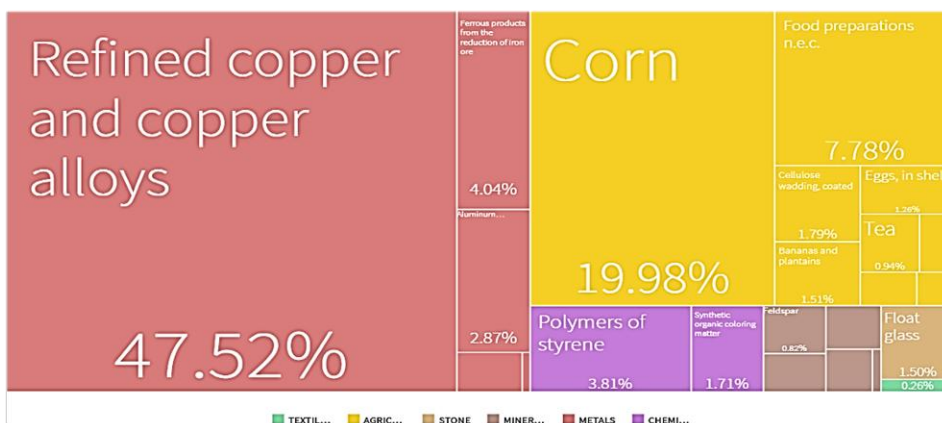


Source: Author calculation based on the International Trade Center (ITC) dataset.

2.5. Export Diversification

Economic growth is driven by diversification into new products that are incrementally more complex. However, Pakistan's export profile remains largely concentrated in low- to medium-complexity sectors, primarily textiles and agriculture, with limited progress into high-value manufacturing. Since 2008, Pakistan has added 23 new products to its export product basket, contributing a total of USD7 in income per capita in 2023 (see Figure 11). This indicates some progress in product diversification; the scale and economic impact of these additions, however, remain modest due to the small volume and low complexity of the new exports.

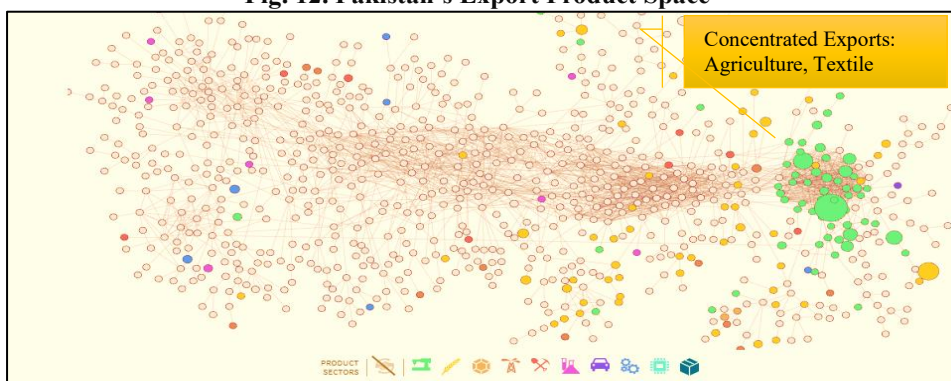
Fig. 11. Proportion of New Products: 2020 Export Basket



Source: Harvard Growth Labs Atlas of Economic Complexity website.

Harvard Growth Lab research suggests that countries tend to diversify by moving into nearby and related products or into those requiring similar inputs, skills and capabilities. Thus, the product space depicts the connectedness between products, highlighting how existing strengths can guide future diversification (see Figure 12).

Fig. 12. Pakistan's Export Product Space



Source: Harvard Growth Labs Atlas of Economic Complexity website

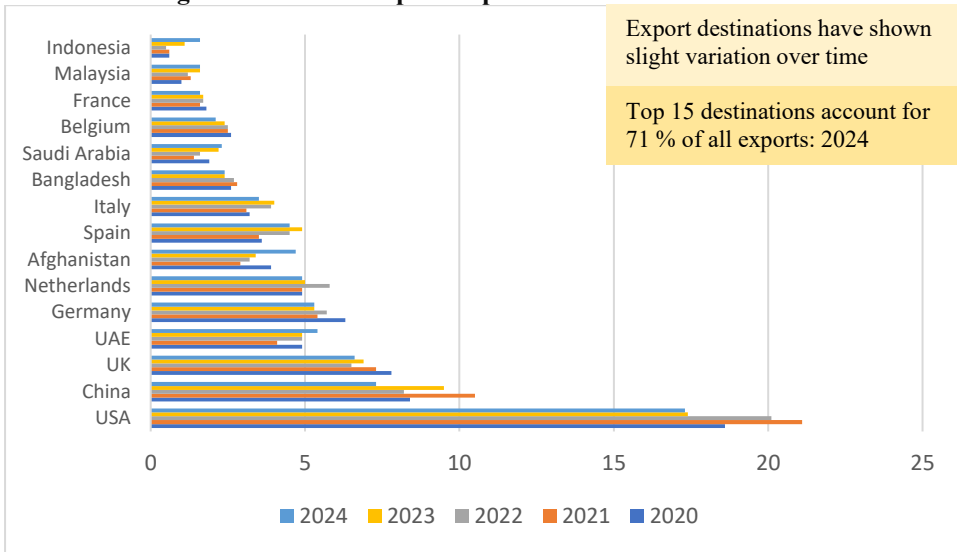
Pakistan produces textiles (green), which suggests strong potential for expansion into related textile products. Nonetheless, diversification into higher-complexity sectors such as machinery (blue) remains constrained by limited industrial capabilities. A phased

diversification strategy should prioritise expansion into moderately more complex, adjacent sectors aligned with Pakistan’s existing strengths.

2.6. Export Destinations

Pakistan’s export market has traditionally been the developed countries of the West (the United States and Europe), regional economies, such as China, Afghanistan, Bangladesh, and the Middle East, particularly Saudi Arabia and the United Arab Emirates (see Figure 13).

Fig. 13. Pakistan’s Top 15 Exports Destinations: % Share



Source: Author’s calculations based on ITC Trade Maps data.

Over time, there has been a modest shift in export destinations away from traditional markets; however, the top 15 destinations still accounted for over 71 percent of total exports in 2024.

3. METHODOLOGY

This review adopts a structured, thematic approach to reviewing empirical insights on Pakistan’s export performance, drawing on studies published between 1990 and 2025. Studies were selected based on rigorous quality filters, in prioritised peer-reviewed journal articles indexed in RePEc, Google Scholar, Scopus, and the HEC Journal Recognition System (Y-category or above). In addition, the review incorporates working and discussion papers from highly reputable institutions, including the World Bank, PIDE, the International Growth Center, among others. "The literature was identified using a combination of targeted keywords: (i) *export performance and competitiveness*; "Pakistan exports," "export competitiveness," and "export diversification"; (ii) *trade policy and agreements*; "trade barriers," "tariffs," "NTBs," "exchange rate and exports," "reciprocal and non-reciprocal trade agreements," "FTA effectiveness," and "GSP+"; and (iii) *structural and institutional constraints* "structural constraints," "export finance and subsidies," and "quality standards.

Complementary data sources, such as the World Bank's World Development Indicators, UNCTAD, Harvard Growth Lab's Atlas of Economic Complexity, OEC, and ITC Trade Maps, were used for macroeconomic and trade-related discussions. For the literature survey, this study classifies existing research into seven thematic domains: tariff and non-tariff barriers, trade agreements, exchange rate dynamics, export-related incentives, sectoral competitiveness (with a focus on textiles and agricultural products), export diversification, and structural constraints. This review integrates both quantitative and qualitative evidence to understand the factors underlying Pakistan's sluggish export performance and to identify the way forward.

4. REVIEW OF EMPIRICAL INSIGHTS ON PAKISTAN'S EXPORT PERFORMANCE

A substantial body of literature has offered valuable insights into key determinants, challenges, and potential solutions in the literature survey. The research findings range from tariff and non-tariff barriers, export subsidies, the significance of trade agreements, quality standards, product diversification, and barriers to export competitiveness.

4.1. Tariffs and Non-Tariff Barriers

Governments worldwide shape cross-border trade using tariffs, quotas, and non-tariff barriers (NTBs). Tariffs, as trade barriers, increase the price of imported goods relative to domestic ones through duties. While these policy instruments aim to shield domestic producers and generate revenue, they eventually burden domestic consumers. This makes imported products relatively costlier for consumers. Besides, if domestic producers depend on imported inputs, they will also pass on the increased costs to consumers. Pakistan initially adopted protectionist policies under the import-substitution strategy for industrialisation, however later shifted towards trade liberalisation in the 1990s. Despite these efforts, Pakistan continue to face challenges with a complex tariff structure that requires streamlining, including reducing maximum tariffs and revising protectionist policies.

Non-tariff measures (NTMs), on the other hand, include measures other than tariffs that restrict trade, including technical and non-technical measures. Technical measures involve standards for packaging, lab tests, labeling requirements, shelf-life restrictions, and certification procedures. In particular, sanitary and phytosanitary requirements (SPS) are highly targeted at the agricultural and food trade to protect plant, animal, and human health. This category also includes pre-shipment inspection and customs clearance processes. Besides, the technical trade barriers (TBT) are often used for non-food manufacturing products, specifically prevalent in machinery and electrical machinery, chemical, and mineral products. Non-technical measures include bureaucratic restrictions, subsidies, inadequate intellectual property protection, licenses, import quotas, voluntary export restraints, and local content requirements, among others. With the lack of capacity to comply with stringent regulations, NTMs can increase trade costs, resulting in trade-distorting effects classified as Non-Tariff Barriers (NTBs).

The empirical literature shows the substantial detrimental effect of tariffs and NTBs on Pakistan's exports. For instance, Varela, et al. (2020) showed that import duties serve a dual role, generating tax revenue for the government and creating a wedge between its world price and the price of its substitute in the domestic economy, thereby diverting resources away from export markets. Therefore, local firms are more incentivised to sell in the domestic market rather than compete globally. This anti-export

bias¹, which adds to Pakistan's structural challenges of export stagnation, was also reported in the studies (Khan & Ali, 1998; Mahmud, et al. 2010; Aleem & Faizi, 2021; Haque & Hussein, 2022; Adil & Nazir, 2023). Furthermore, the challenges stemming from high tariffs on intermediate inputs negatively affect the manufacturing sector by increasing production costs as well as affecting the optimal technological choice availability for firms, thereby posing challenges in promoting exports. Ali (2014) estimated a substantial 20-30 percent dependence on imported inputs across various production stages. Another study, based on customs data, shows that a small fraction of exporting-cum-importing firms (32 percent) contribute a substantial 81 percent to total exports, emphasising the importance of facilitating imports to improve competitiveness (Ali, et al. 2019). Ahmed & O'Donoghue (2010) found that reducing tariff rates positively impacts welfare levels, benefiting exports more competitively through decreased prices of imported raw materials and related inputs. The potential of tariff reductions on intermediate inputs, Jamil & Arif (2019) suggest that focusing on sectors such as textile, rubber and plastic, wood, chemical, glass, electrical appliances, and metal could lead to considerable gains through tariff rationalisation efforts. Likewise, Arif, Jamil, & Chaudhry (2023) suggest that lowering tariffs on high-quality intermediates inputs would strengthen the export performance of Pakistan's textile sector by improving product quality in high-value sectors, while still protecting domestic producers. In line with this, Hamid, et al. (2014) further elaborate on the challenges specifically faced by the textile sector, which are primarily attributed to import policies and customs procedures that dampen the import of crucial materials like Man-made fibers (MMF) yarn, technical textiles, and specialised accessories necessary for advancing along the value chain. The sectors that experienced increased availability of inputs from China improved comparative advantage, export growth, and global market share. A 1 percent increase in China's inputs share (upstreams) in total purchases of inputs improves RCA by 6.9 percent, export growth by 4.7 percent, and the global market share in that sector by roughly 1 percent (Varela, et al. 2020). Hence, lowering import tariffs can foster firms, exports by diversifying inputs, improving quality, expanding into new markets, promoting competition, and increasing productivity (Ali, et al. 2019). Similar concerns about the adverse tariff impacts on exports were identified by Atif, et al. (2017) and Ali (2020) for agricultural exports, Atif, et al. (2019) for chemical exports, and Mustafa and Hussain (2022) for European region exports.

Beyond customs tariffs, other trade policy measures can affect quantities traded, prices, or both. Non-tariff barriers, such as freight, insurance, and other cross-border fees, frequently surpassed the import tariffs. These costs also encompass intangible factors like information expenses, non-monetary barriers (regulation, licensing, etc.), insecure contracts, and weak trade governance, all contributing to uncertainty (Pasha & Kardar, 2018). Aleem & Faizi (2021) observed an increase in overall protection from 18 percent in 2003 to 68 percent in 2015, despite tariffs declining to 12.7 percent. NTMs constituted the remaining 55 percent, indicating their significant role. The rise of average ad valorem equivalents (AVEs) of NTMs from 1 percent in 2003 to 55 percent in 2015 stresses the need to effectively manage NTMs to improve export competitiveness. Abbas, et al. (2023)

¹ When a government imposes import tariffs on a specific sector to shield it from foreign competition, it artificially enhances the profitability of domestic enterprises in that sector compared to unprotected export markets. For instance, the 25 percent tariff on foreign cars in Pakistan → Raises their domestic prices to \$25,000 Discourages exports when competing with lower-priced cars priced at \$20,000 in foreign markets → Ultimately results in an anti-export bias.

reveal that despite the FTA, China maintains significant SPS and TBT measures on imports of cereals, edible fruits, and textiles. Similar findings are reported by Mustafa & Qayyum (2016), highlighting the trade-restrictive impact of TBTs on Pakistan-China trade. Mustafa & Hussain (2022) find that SPS measures generally reduce exports. Likewise, a lack of awareness regarding SPS certification further adds to these challenges (Amjad, et al. 2012). NTMs imposed by countries such as Turkey and the United States, along with costly certification procedures, have diverted Pakistan's textile exports toward regional competitors like China, India and Bangladesh (Manzoor, et al. 2020). Furthermore, stringent environmental regulations continue to constrain trade flows (Yeo & Deng, 2019).

These NTBs continue to impede intra-regional trade, particularly between India and Pakistan (Masood, et al. 2023). For instance, Nabi (2013) identifies logistical inefficiencies and restrictive visa regimes as key constraints, while Taneja (2013) emphasises a liberalised visa policy to facilitate trade flows. Similarly, Gill & Madaan (2015) & Naqvi (2009) highlight inadequate infrastructure, limited banking and customs facilities, labelling inconsistencies, insufficient testing capacity, excessive inspections, and frequent mishandling of goods that together weaken trade efficiency. As a result, despite strong trade complementarities and the presence of regional agreements, like SAFTA, bilateral trade remains limited due to closed trade regimes and high procedural barriers. This stresses the need for India and Pakistan to remove mutual trade restrictions (Mukherji, 2004).

Overall, high tariffs and NTBs continue to constrain Pakistan's top export sectors. Hence, the literature stresses the need for comprehensive reforms addressing both tariffs and NTBs. In this context, the Pakistan Single Window (PSW) is a commendable step, providing traders with a one-stop platform for traders to complete all required documentation and procedures. The initiative is expected to significantly reduce the time and cost of cross-border trade.

4.2. Government Subsidies

Unlike developed countries, the Pakistani government favours subsidies, believing these incentives can effectively support export industries (Defever, et al. 2020). However, empirical evidence, such as that from Haque & Kemal (2007), shows the ineffectiveness of government export subsidies, specifically in financing and rebate schemes, which had adverse long-term impacts on exports. Similarly, Qureshi & Shah (2020) show that government subsidies to specific industries can result in export diversion or a net trade decline, as these incentives to major export-oriented sectors have not proven effective. Instead, they recommend prioritising neglected export-creating industries.

Furthermore, larger exporters and politically influential firms may receive disproportionate export incentives, potentially misallocating resources away from smaller, less politically connected counterparts. Khwaja & Mian (2005) show that politically connected firms receive preferential treatment from government creditors, primarily in government banks, whereas private banks do not extend such political favours. Likewise, the substantial opportunity cost of these misallocated funds is evident, as even highly productive private firms encounter financial limitations. Zia (2008) argues that larger publicly listed and group network firms, which face fewer credit constraints than smaller private firms, possess greater internal reserves and shareholder equity to finance exports. With nearly half of the funds directed to listed firms, this misallocation results in a 0.75 percent GDP output loss for private enterprises. Wadhwa & Chaudhry (2018) provide further evidence that government subsidies may crowd out innovation

investment. Nakhoda (2024) argues that the allocation of these incentives warrants reconsideration, as they frequently target exporters whose products have lower export values across different markets.

A few studies, however, suggest that export incentives can strengthen exports if used effectively. Ahmad (2015) emphasises increasing export incentives for firms to maintain export competitiveness, particularly in the value-added textile sector. In line with this, Defever, et al. (2020) demonstrate that these incentives have a positive impact on the export value of participating firms. For instance, the Export Finance Scheme and Long-Term Finance Facility for Plant & Machinery² resulted in a 7 to 11 percent increase in export sales growth. Nevertheless, the firms benefiting from these incentives are substantially larger than the average exporter and are concentrated in the clothing, textiles, and apparel sectors. Moreover, these initiatives did not substantially diversify the range of exported products or broaden export market coverage. Besides, both schemes imposed considerable financial burdens on the central bank. As a result, the government's export subsidies, mainly through the Export Financing Scheme, incur high administrative costs, favouring established exporters and thereby hindering export diversification (Pursell et al., 2011). In addition, these incentive systems have led to illicit export practices like over-invoicing (Mahmood & Azhar, 2001). This leads to financial losses and undermines the overall effectiveness of export promotion policies.

In conclusion, the larger and well-connected firms benefit from this incentive through lobbying, while new and efficient firms are discouraged from entering the export market. Despite these issues, subsidy programs persist under the current strategy without significant reassessment, as studies indicate a crucial flaw in the design of the subsidy scheme. These schemes should be opened to all sectors to maximise their impact, particularly by prioritising new and growing businesses.

4.3. Quality and Standards Certifications

Empirical evidence illustrates that compliance with quality standards, especially in key sectors like textile, processed food, and agriculture, is associated with higher export shares, indicating the pivotal role of quality certification in promoting firms' access to international markets and driving export growth. For instance, Wadho & Chaudhry (2025) find that certification increases the likelihood of textile and apparel sector exporting by 44 percentage points, raises export volumes by 2.39 log points, and increases annual export growth by 52 percentage points. While certification fosters innovation and productivity, it does not lead to product complexity upgrades, implying horizontal rather than vertical diversification. Similarly, Magsi, Randhawa, & Shah (2021) highlight the importance of standards in facilitating the export of raw and processed halal meat, while Masakure, et al. (2009) link ISO 9000 certification with export performance in the textiles and agro-food sectors. These findings are corroborated in the mango and leather industries by Ghafoor, et al. (2010; 2012). Nevertheless, awareness and adoption remain uneven; a study by Amjad, et al. (2012) reveals that only 40.5 percent of firms were aware of ISO 9000 and a mere 25 percent of ISO 14000, indicating a significant knowledge gap. Although 66.7 percent of firms reported ISO 9000 certification, compliance with other key standards, such as EurepGAP (7.7 percent) and traceability (5.1 percent), remains notably low.

²These SBP programmes aim to give Pakistani exporters short-term financial liquidity and long-term investment in machinery and equipment.

As for adherence to environmental standards, Ortolano, et al. (2014) show that limited adoption of cleaner production practices restricts textile export growth. Hayat, et al. (2020) further stress that eco-label certification is important in promoting sustainable growth. As an EU GSP+ member, Pakistan must adopt strict environmental standards such as the EU's Carbon Border Adjustment Mechanism (CBAM), which discourages carbon-intensive exports (Raschka & Lippitsch, 2024). This requirement poses a substantial risk to textile sector, the country's largest export to the EU. In the short-run, policymakers should focus on diversifying markets and pursuing proactive trade diplomacy. In the long-run strategies need to prioritise investments in energy efficiency, cleaner production, production upgrades, and the development of a domestic carbon market to mitigate the CBAM's impact.

The uneven adoption of certifications across firms and sectors highlights the need for targeted awareness campaigns, capacity-building, and institutional support. Compared to advanced economies, firms in developing countries often face greater technological, financial, and regulatory barriers in meeting international certification requirements. In Pakistan, these challenges limit firms' access to the global trade markets (Ud Din, et al. 2009). While the impact of ISO 9001 on export growth and innovation is well-documented, there is limited evidence on other widely adopted standards such as ISO 14000 (environmental management), SA8000 (social accountability), HACCP (food safety), and GlobalGAP (agricultural practices), as well as industry-specific certifications like Oeko-Tex, WRAP, and BSCI, which are increasingly vital for firms gaining access to global markets.

Government support should focus on creating favourable conditions for certification, considering the varying capacities across sectors. Efforts to reduce certification costs and promote benefits should be tailored to specific markets, shifting from a one-size-fits-all approach (Masakure, et al. 2011). For instance, in horticulture, limited exports stem from compliance issues despite strong production. Targeted support for accredited labs, post-harvest improvements, and trade facilitation is key to accessing high-value markets.

4.4. Exchange Rate and Competitiveness

In standard economic theory, exchange rate depreciation is expected to reduce the relative price of a country's goods (in the importers' currency) in the global market, potentially increasing exports and improving the trade balance. However, the effectiveness of this mechanism depends on the exchange rate elasticity of exports and imports, as per the Marshall-Lerner condition. In the current global economy, currency depreciation's impact is multifaceted. While depreciation makes exports cheaper and more competitive for foreign buyers, potentially increasing demand, it can also raise import prices for industries heavily dependent on imported inputs, likely offsetting gains in export competitiveness. Mahmood & Zahoor (2021) highlighted this phenomenon, attributing the limited export response to currency depreciation, especially in manufactured goods, where imported intermediate inputs play a role.

Several empirical studies have explored the link between exchange rate depreciation and export growth. Kemal & Qadir (2005) show a positive influence of real exchange rate depreciation on exports, implying an improved trade balance. Naveed, et al. (2023) corroborated these findings, indicating that the depreciation of foreign currency relative to Pakistan's currency reduces exports, particularly for high-share partners. In the same vein, Hanif & Jafri (2008) revealed that appreciation of the Pakistani rupee, compared with trading partners, negatively impacted the competitiveness of the textile

sector. Atif, et al. (2017) suggested that agricultural export demand remains elastic amid the depreciation of the Pakistani rupee. Similarly, Abbas & Waheed (2015) argued that exchange rate depreciation has a modest impact on exports. Consistent with this, Abbas & Bhutto (2022) found that a 1 percent depreciation in the real exchange rate increases textile exports by 0.25 percent. Atif, et al. (2019) revealing that depreciation promotes chemical product exports, albeit with lower elasticity. Consequently, very low elasticity makes depreciation more likely to reduce export revenue. Ali (2020) found that agricultural exports did not respond as strongly to currency depreciation as expected. This could be attributed to different exchange rate measures and actual invoicing currencies rather than the bilateral exchange rate between trading partners. Another possible explanation could be the delayed effect on producers who rely on importing inputs for exports.

While depreciation may moderately encourage exports, its effectiveness is constrained by exchange rate volatility. In the manufacturing sector, exchange rate volatility offsets the positive effect of depreciation on exports, resulting in sluggish export growth (Zia & Mahmood, 2013). Researchers have highlighted the role of exchange rate volatility, with Doğanlar (2002), Arize, et al. (2003), and Aqeel & Nishat (2006) showing that it decreases exports, revealing producers' risk aversion. In addition, exchange rate movements negatively affect exports in the short run, although their impact diminishes in the long run (Aurangzeb, et al. 2005). Similar findings were found for different sectors and partners. Aftab, et al. (2012) found a negative relationship between exchange rate volatility and Pakistan's sectoral export demands. Kumar & Dhawan (1991) found that fluctuations in the nominal exchange rate, rather than the real exchange rate, adversely affected Pakistani exports to major partners. Mustafa & Nishat (2004) show that exchange rate uncertainty mainly impacts exports with major developed trading partners in the long run compared to developing partners. Alam, et al. (2017) reveal the heterogeneous impact of exchange rate volatility on exports, indicating varied effects across major partners.

Previous research on exchange rate volatility's impact on Pakistan's trade has suffered from aggregation bias (Bahmani-Oskooee, et al. 2016, 2017, & 2023), prompting a focus on disaggregated trade between Pakistan and Japan, the US, and China to address potential aggregation bias. Bahmani-Oskooee, et al. (2016) found that short-term exchange rate volatility impacts Pakistan's trade across various industries, with lasting effects in some sectors. This may be partly explained by the use of reserve currencies like the USD in Pakistan-Japan trade, minimising the impact of rupee-yen rate volatility. In the case of the US-Pakistan trade, Bahmani-Oskooee, et al. (2017) show that short-term effects persist in 26 exporting and 18 importing industries, with major sectors like made-up articles, clothing, cotton, iron, and steel scrap experiencing positive long-term impacts. This suggests that allowing rupee fluctuations may support export growth.

Studies on exchange rate effects in Pakistan have primarily assumed a symmetric effect on trade flows; however, Bahmani-Oskooee, et al. (2023) have evident asymmetric effects across most sectors, regarding trade with China, where appreciation and depreciation impact trade differently. The rupee's depreciation since the early 2000s, particularly in 2018-19, has not translated into higher exports due to the low predicted aggregate export elasticity. Brun, et al. (2022) further explain the lower export response to real exchange rate depreciations compared to appreciations, attributing it to factors such as information frictions that raise search costs, supply-side constraints like limited access to credit, and declining prices in USD following depreciation. Moreover, Javed, et al. (2016) show that nominal depreciations did not benefit in terms of export growth as they fell short of correcting the currency. Similarly, Ali (2020) finds that export responses

are relatively low for products heavily reliant on imported intermediary inputs. This finding corroborates the results of Akhuand & Abbas (2023), indicating that the continuous depreciation of the exchange rate weakens the export competitiveness of Pakistan's textile industries by increasing the cost of imported oil, capital assets, and other intermediate inputs. Furthermore, Pirzada (2019) argues that the limited impact of devaluations on export growth is partly due to a lagged effect, taking about a year and a half to influence export values positively.

While some studies found significant impacts of exchange rate movements on exports, others reported mixed or inconclusive results. Furthermore, methodological variations and sectoral differences contribute to the complexity of understanding this relationship. In addition, a large part of the reviewed literature employs aggregated rather than disaggregated data to analyse the link between exchange rates and exports, potentially introducing aggregation bias. Some findings suffer from spurious regression, which advanced techniques like vector autoregression and cointegration have addressed. Furthermore, the choice of exchange rate measure (real effective exchange rate vs. bilateral exchange rate) and variations in the time analysed led to heterogeneity in findings. Moreover, some studies focus on bilateral exchange rates between trading partners instead of actual invoicing currencies, suggesting that firms often settle transactions in vehicle currencies (for instance, USD).

4.5. Trade Agreements

Trade agreements are pivotal in shaping global trade by lowering tariffs and NTB's, thereby fostering economic growth and facilitating trade flows³. The trade literature identifies two main effects of trade agreements: trade creation, where lower trade barriers reallocate imports toward more efficient partner suppliers, thereby improving resource allocation and welfare; and trade diversion, where non-members lose market share despite offering cheaper goods, potentially resulting in net welfare losses.

In the Pakistani context, the effectiveness of multilateral, bilateral, and non-reciprocal agreements has yielded mixed outcomes across partners and sectors. Qureshi & Shah (2020) report export gains with China and Mauritius but not with other FTA partners. Similarly, Alam (2018) and Abbas & Bhutto (2022) reveal positive contributions of bilateral FTAs with China, Malaysia, and Sri Lanka. However, Abbas & Bhutto also show a negative impact in the case of the FTA with Mauritius. Abbas & Waheed (2015) reported an overall statistically insignificant and negative effect of FTAs on Pakistan's exports, suggesting utilisations challenges in effectively translating agreements into sustained export growth.

On sector-specific insights, Mahmood & Jongwanich (2018) find that the China–Pakistan FTA (CPFTA) improved Pakistan's export profile, particularly in agriculture, more than other FTAs, due to better compliance with rules of origin. These findings, are supported by Lateef, et al. (2018), show an increase in Pakistan's agricultural exports to China under the CPFTA. In addition, Atif, et al. (2017; 2019) found that PTAs helped facilitate exports in both the chemical and agricultural sectors. Despite these gains, structural asymmetry persists. For example, Uzair and Nawaz (2020) argue that the CPFTA has disproportionately favoured Chinese exports over Pakistani ones. Pakistan's utilisation of the available tariff lines remains critically low; Mukhtar (2019) reports only 5 percent utilisation compared with China's 57 percent, reflecting missed opportunities

³The details of Pakistan's trade agreements are provided in Appendix A10, with agreements pending WTO notification also indicated.

to capitalise on negotiated trade preferences. Accordingly, Shah, et al. (2022) emphasise the need to better utilise available tariff lines and align export strategies with areas of comparative advantages. Nonetheless, the World Bank (2020) finds that sectors reliant on Chinese inputs have benefited from lower input costs and, as a result, have performed better in exporting to third-country markets. Thus, despite bilateral imbalances, some export-oriented industries have gained from improved access to competitive intermediate goods.

Similarly, product sophistication plays a key role. Ahmed, et al. (2021) find that FTAs had a greater positive effect on differentiated products than on homogeneous goods. Jamil, et al. (2023) argue that a strategic focus on higher-value, differentiated exports could result in more equitable trade gains for Pakistan under existing FTA's.

To realise the untapped potential of existing agreements will require addressing persistent NTB's, strengthening domestic business capacity, improving coordination across trade-related institutions, and closely monitoring China's FTAs with competing countries, and negotiating accordingly to maintain a competitive edge in key markets (Afraz & Mukhtar, 2019). In addition, policy efforts should focus on prioritising non-agricultural exports, integrating gender considerations, rationalising tariffs, promoting service exports, and renegotiating the signed FTAs to strengthen market access (Yeo & Deng, 2019).

For plurilateral agreements, a plethora of empirical studies have reported the ineffectiveness of SAFTA in creating sufficient trade among regional countries (Gul & Yasin, 2011; Abbas & Waheed, 2015; Abbas & Bhutto, 2022). Nonetheless, Alam (2018) reported improvements in export value and the number of exporters resulting from SAFTA, indicating the untapped potential of Pakistan's exports. In line with this, the importance of political and diplomatic channels in strengthening cross-border trading volumes with neighbouring countries, particularly India and Pakistan, has been emphasised (Munir & Sultan, 2019). Overall, in the case of Pakistan, the anticipated benefits from regional and bilateral FTAs remain largely underutilised (Abbas & Waheed, 2015; Malik, et al. 2017).

The GSP+ is a non-reciprocal trade arrangement that provides preferential access to European Union (EU) markets to support vulnerable developing countries, including Pakistan. As the country largely relies on the textiles sector for exports, one of the potential markets in the EU, the gains can be substantial; thus, GSP+ is particularly significant for Pakistan. Reducing tariffs on a wide range of products encourages export growth, making products more competitive in the EU market. In return, Pakistan must comply with certain standards and conventions related to human rights, labour rights, and environmental protection to maintain its GSP+ status. Studies have shown its pivotal role in promoting Pakistan's exports, particularly in the textile sector. For instance, Nakhoda (2023) found that the country experienced significant trade growth with the EU during the GSP+ period, and the withdrawal of GSP+ concessions could result in trade losses exceeding USD 3 billion. This impact is pronounced in the export areas of bed linen and men's and women's trousers. This is consistent with Abbas & Bhutto (2022), that the GSP+ scheme has significantly increased Pakistan's exports to the EU, primarily benefiting the textile industry. In a similar unilateral arrangement, EU tariff waivers on Pakistani goods post-2010 floods led to a 45 percent increase in Pakistani exports to the EU (Cheong, et al. 2017). This study highlights significant trade creation effects for Pakistan, without substantial diversion effects observed from major textile exports competing with other countries during the concession period. To sustain this growth, the policymakers must overcome issues such as limited competitiveness, over-dependence on

a few export items, exchange rate volatility, and human rights violations (Malik, 2020). In fully materialising, Khan (2017) identified constraints hindering the utilisation of GSP+ opportunities in the textile sector, such as the lack of indigenous capability to produce textile machinery, which impedes smaller units from investing heavily in imported equipment. Similarly, facing multiple levies and delays in duty drawbacks further reduces working capital.

Despite numerous trade agreements, Pakistan's export sectors have benefited disproportionately due to inadequate market diversification, supply-side constraints, unresolved political issues with neighbouring countries like India and Afghanistan, and heightened competition from similar products (with low trade complementarities). Furthermore, due to the relative effectiveness of the CPFTA, the government should closely monitor China's FTAs with other competing countries and, if necessary, actively negotiate and revise the CPFTA to ensure Pakistan retains competitive market access. Also, as an EU GSP+ member, Pakistan should consider stringent environmental regulations, such as the EU's CBAM, which aims to reduce exports of dirty goods (carbon-intensive), particularly from low-income countries (Raschka & Lippitsch, 2024). To address these challenges, policymakers should prioritise market diversification strategies and actively pursue trade diplomacy to explore new windows of market opportunities. Similarly, the countries should invest in long-term measures such as improving energy efficiency, transitioning to cleaner energy sources, and upgrading production technologies. Besides, establishing domestic carbon pricing and developing local carbon markets are crucial steps towards reducing the adverse impact of the CBAM (Sikdar, 2025).

4.6. Barriers to Export Competitiveness

Domestic competitiveness is pivotal in promoting export-oriented industries and contributes to economic stability by producing goods and services efficiently. In the case of Pakistan, significant challenges persist; for instance, Amjad, et al. (2012) identified several key bottlenecks to export competitiveness, including a shortage of skilled workers, energy-related issues, weak government policies, market imperfections, infrastructure deficiencies, and quality certification issues. Likewise, Hamid, et al. (2014) identify energy shortages, security risks, and misaligned government policies as significant barriers. Safeer, et al. (2019) indicated similar challenges in the ready-made garments industry, like energy crises, the absence of own brands, competition from international industries, lack of innovation, and inadequate government policies. Similarly, Siddiqui, et al. (2008) show that power outages and growing energy prices disrupt industrial output, making the food and beverages, textile, and chemical products globally less competitive.

The lack of suitable education and training in specific export sectors was identified by Magsi, Randhawa, & Shah (2021) and Mubarik, Devadason, & Govindaraju (2020). For instance, one of the primary reasons for the stagnant growth of the textile sector is the skilled labour availability, inadequate training programs, and low-quality education (Amjad, et al. 2012). To address this, investing in education is vital for developing a highly skilled and knowledge-intensive workforce to drive export-led growth.

Furthermore, Ghafoor, et al. (2012) note that the high costs associated with the sustainable supply of raw materials restricted the export of leather products. Furthermore, large kinnow growers face export obstacles, including limited financial resources, skilled labour, market information, export business know-how, and infrastructure, notably cold storage facilities (Mohy-ud-Din, et al. 1993). Akhtar (1997) identifies deficiencies in

post-harvest technology for upland crops, warranting improvements to boost export quality and competitiveness. Analysing firms in Punjab, Hussain, et al. (2012) show that the nationwide energy crisis is the most chronic constraint to industry. The bureaucratic inefficiency, and inadequate labour skills further hinder export growth.

On the role of financial access in facilitating export growth, Hanif & Jafri (2008) indicate the role of financial institutions in addressing liquidity constraints to promote exports. Akhuand & Abbas (2023), Safeer, et al. (2019), & Mohy-ud-Din, et al. (1993) argue that credit facilitation improves export competitiveness. Adil & Nazir (2023) suggest that financial inclusion relates positively to firms' export sales. Anwar & Javed (1997) found that the lack of liberal credit facilities with incentives for higher yarn counts limited their exports. As a result, the limited access to finance has led to limited production capacity and low-value products in small and medium sectors, resulting in limited competitiveness. The government could provide tax incentives or export finance to promote SME exports (Ahmad & Mahmood, 2020). The limited availability of credit hampers investment in technology, leading to diseconomies of scale and potential loss of market share to innovation compared to low-cost producers in China, India, and Vietnam (Hussain, et al. 2012). Therefore, by providing firms with the necessary resources to invest in technology and market expansion, improved financial access enables them to capitalise on export opportunities and maximise their competitiveness in the global market landscape.

Regarding institutional inefficiencies and poor managerial practices, Chaffai, Kinda, & Plane (2012) pointed out that weak institutions and poor management practices limit the technical efficiency of textile firms, exacerbating their struggles to compete in international markets. Ud Din, et al. (2009) highlight that managerial competence is vital for accessing global markets. Firms that invest in technology, establish robust marketing networks, and align their products with market demands are more likely to tap into the export market. Akhuand & Abbas (2023) demonstrate how prioritising R&D improves competitiveness by improving product quality and innovation. To corroborate the findings, Wadho & Chaudhry (2016) show that innovation drives the textile sector's growth and product improvement. Nevertheless, limited access to finance and high innovation costs are barriers to adopting new technologies. The existing incentives primarily benefit large, established textile firms, which have not significantly improved the export value added. Their findings suggested a policy shift to incentivise smaller, innovation-driven firms for long-term competitiveness (Wadho & Chaudhry, 2019). The narrative is reinforced by Mahmud, et al. (2010), indicating the need for government support due to inadequate seed funding for R&D in high-export sectors. Akhter (1997) also emphasises the importance of R&D investments in key crops. These studies urge focused attention on R&D initiatives across sectors. Nevertheless, the uncertainty and risks associated with technological adoption are a major market failure in Pakistan's major export sector. The study indicates targeted industrial policies to address these risks, drawing on international best practices such as learning from the Bangladesh experience, which attained sustained textile export growth despite similar institutional weaknesses (McCartney, 2014). To deepen understanding of export dynamics and effectively address sector-specific challenges, comprehensive firm-level data is crucial for targeted, evidence-based trade policy.

4.7. Lack of Diversification

Product diversification is recognised as a game-changer for export success, increasing a firm's export performance and fostering quality upgrading, particularly benefiting low- and lower-middle-income countries (Solano, et al. 2019; Tanasritunyakul, 2022; Can, et al. 2018). On the contrary, countries with narrow export baskets experience multifaceted challenges, such as exposure to price volatility, demand shifts, supply disruptions, and trade barriers, which in turn affect resilience and growth prospects. Diversification mitigates these potential risks by reducing dependence and spreading economic activity across multiple products and markets.

In Pakistan, the economy's historically heavy dependence on the textile sector, which accounts for over half of its exports, has intensified its vulnerability (Mahmood & Akhtar (1996). Khan (2017) identified Pakistan's reliance on cotton textiles as a key factor in its vulnerability to demand and price fluctuations. Apart from textiles and clothing, Pakistan maintains a competitive advantage in the vegetable, hides, and skin sectors. While product diversification can potentially mitigate variability in export earnings, merely expanding to new partners is not a panacea (Tariq & Najeeb, 1995). Abbas & Waheed (2015) stressed the importance of aligning industry diversification with the market fundamentals of potential exporting economies. For instance, Munir & Sultan (2019) highlighted the need to strengthen the exports of rice, cotton yarn, and cotton fabric in neighbouring markets through both productive upgrading and diplomatic engagement.

Against this backdrop, Pakistan's diversification strategy must extend beyond textiles and focus on diversifying its export portfolio in target niche products and markets (Irshad & Xin, 2017). While specialisation in textiles can be beneficial, firms must be enabled to move up the productivity ladder rather than remain stuck in low-value-added exports. For instance, to boost global competitiveness, prioritise labour-intensive components, especially in textiles with a focus on clothing and value-added products, and gradually advance to skill- and technology-intensive activities (Malik, et al. 2017). This finding is consistent with Khan & Afzal (2016), cautioning that diversification alone may not ensure increased exports, emphasising the importance of productive capabilities and technological sophistication. In this regard, Ahmad, et al. (2024) argue that traditional exports (such as textiles, leather, sports, surgical, carpets, and rice) may increase exports; however, they will not diversify Pakistan's export basket. They suggested diversifying promising sectors, such as pharmaceuticals, chemicals, meat, fish, and dairy. Moreover, various other products, such as citrus (mandarin/kinnow), mangoes, and dates, offer avenues for growth. To unleash this potential, challenges such as low yields and inadequate infrastructure must be addressed through technical improvements and strategic interventions (Riaz & Jansen, 2012). In this regard, the Ministry of Commerce and the Trade Development Authority of Pakistan (TDAP) should actively promote product diversification and explore new markets through initiatives such as trade fairs, exhibitions, and promotional campaigns (Nakhoda, 2023).

Currently, Pakistan's export profile remains concentrated in home textiles and agriculture, with limited integration into higher-value, technology-intensive industries. Compared to regional peers like Bangladesh, which has advanced in garment exports by investing in diversification and export upgrading. Addressing these gaps requires targeted policy measures, including performance-linked financial incentives, technical assistance to upgrade production capabilities, and facilitation of market access for exporters. The recently launched URAAN initiative is a timely effort aimed at promoting diversification into higher-value-added sectors such as food processing, high-end textiles, engineering

goods, pharmaceuticals, and digital services. Sustained support for these sectors can reduce vulnerability to external shocks, improve export sophistication, and support more inclusive and employment-led growth in the economy.

Key Points and Recommendations

Key Points

- a. High tariffs on intermediate inputs raise production costs, reducing export competitiveness. This is important as 20-30 percent of production relies on imports, and exporting-cum-importing firms (32 percent) contribute a substantial 81 percent to total exports, stressing streamlining import processes for competitiveness. NTBs, such as SPS, and bureaucratic restrictions, further restrict trade. Besides, the logistical issues and restrictive visa regime hinder intra-South Asian trade.
- b. Certification hurdles, especially in textile and agricultural exports, drive competition towards other countries. Limited awareness and compliance with international quality standards pose significant barriers.
- c. Government export subsidies have been ineffective, favouring established exporters and incurring high administrative costs. Larger, politically connected firms disproportionately benefit, leading to misallocation of funds and adversely impacting smaller firms. Current subsidies have not been successful in diversifying exports or expanding market coverage. Besides, the subsidy encouraged illicit practices like over-invoicing, which caused financial losses.
- d. Pakistan's experience with various trade arrangements has yielded mixed outcomes. While FTAs with China have driven export growth in certain sectors, they have resulted in an overall trade deficit with China. Furthermore, the limited impact of FTAs on export growth is primarily due to inadequate market diversification and supply-side constraints. The GSP+ policy is effective in promoting trade.
- e. Exchange rate depreciation affects sectors differently, with import-dependent industries encountering challenges due to increased costs of imported input. Furthermore, information frictions, supply constraints, and increased domestic prices further limit export growth post-depreciation. Moreover, the limited impact on export growth is also evident due to the lag effect. In addition, exchange rate volatility can undermine depreciation benefits by creating uncertainty in major export sectors.
- f. Pakistan's export competitiveness is hindered by unavailability and higher energy costs, skilled labour shortages, inconsistent government policies, inadequate infrastructure, credit constraints, low participation of female workers and limited R&D funding. These barriers undermine production efficiency and market competitiveness across sectors like textiles, agriculture, and manufacturing.
- g. Pakistan's heavy dependence on textiles, exposes the country to risks associated with fluctuations in global market demand and prices.

Recommendations

- a. Reduce high tariffs on intermediate inputs to lower production costs. Likewise, improving trade facilitation like liberalising visa regimes, upgrading infrastructure, and streamlining customs procedures via the Pakistan Single Window (PSW) initiative is imperative.

- b. Revise the export subsidies to benefit a wider range of exporters, particularly new and growing firms, with time-bound funding subject to achieving predefined performance metrics. Extend subsidy schemes to all sectors to foster product and market diversification. Moreover, streamline administrative costs and eliminate political favoritism in allocation.
- c. Promote awareness and adoption of standards to increase export performance.
- d. Prioritise trade agreements that allows for duty free import of raw materials and intermediate inputs, and enhanced market access for sectors like textiles, chemicals, and agriculture, ensuring alignment with the country's comparative advantages.
- e. Stabilising exchange rate volatility is crucial to reduce uncertainty for exporters. Providing targeted incentives for essential imported inputs can mitigate increased costs and support production. Similarly, addressing supply constraints through strategic infrastructure investment and improved access to credit is essential to ensure smooth production and export processes.
- f. Prioritise infrastructure in energy and logistics sectors to lower operational costs, thereby improving efficiency in exporting sectors. In addition, targeted training programs should be implemented to bridge skill gaps and equip the workforce with capabilities matched with industry requirements. Improve financial access through tailored export finance schemes and tax incentives for SMEs. Promoting gender inclusivity in export sectors is important to tapping into the potential of a diverse labour force. Moreover, increasing public-private partnerships and funding for R&D initiatives in key export sectors will stimulate innovation, improve product quality, and foster competitiveness against regional peers.
- g. Pakistan should prioritise diversifying its export base into promising sectors such as engineering, pharmaceuticals, chemicals, high-value agriculture and other high-potential sectors. Strategic efforts should focus on improving infrastructure, adopting advanced technology, and implementing targeted export promotion initiatives to effectively tap into new markets and sectors.

5. CONCLUSION

Export promotion remains crucial to Pakistan's long-term economic strategy. Despite its strategic potential, Pakistan's exports continue to face persistent structural and institutional bottlenecks, including high input and energy costs, a cascading and distortionary tariff regime, non-tariff barriers, weak trade facilitation, limited compliance with quality standards, and a concentrated export base dominated by low-valued textiles, leather, and rice exports. Empirical studies highlight these systemic issues as the main obstacles to achieving sustained export growth. The impact of exchange rate depreciation has been limited, partly because export sectors are heavily reliant on imported inputs, while trade agreements and subsidies remain ineffective without structural reforms.

The URAAN initiative, launched under the 5Es Framework, positions exports as a key pillar of national economic recovery, with an ambitious target of USD 60 billion by 2030. Its focus on improving logistics, rationalising tariffs, supporting SMEs, promoting diversification, and advancing digital and energy reforms aligns with the recommendations from the literature. Achieving this target will require consistent implementation, robust institutional coordination, and a shift toward evidence-based and well-sequenced reforms. Aligning URAAN's ambitions with these priorities provides a realistic pathway to unlocking Pakistan's export potential and attaining its 2030 targets.

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Table A1

Exploring Core Focus: A Synthesis of Literature

Authors (Year)	Core Focus	Time Period	No. of Studies	Research Objective	Finding Regarding Key Focus
Masood, et al. (2023); Arif, Jamil, & Chaudhry, 2023; Mustafa & Babar (2022); Ali, et al. (2019); Atif, et al. (2019); Jamil & Arif (2019); Ahmed & O'Donoghue (2010); Abbas, et al. (2023); Gill & Madaan (2015); Taneja (2013); Nabi (2013); Aleem & Faizi (2021); Magsi, Randhawa, & Shah (2021); Manzoor, et al. (2020); Mustafa & Qayyum (2016); Hamid, Nabi, & Zafar (2014); Ghafoor, et al. (2012); Ghafoor, et al. (2010)	Tariff and non-tariff barriers	1995-2023	19	Investigate the impact of tariff and non-tariff barriers on trade flows.	Tariffs reduce trade, while reducing tariff on selected intermediate input promote trade, while NTBs have mixed effects. SPS often reduces, and TBT can enhance export growth. Reforms in infrastructure and visas (e.g., India-Pak) essential. Comprehensive reforms needed.
Nakhoda (2024); Qureshi & Shah (2020); Defever, et al. (2020); Ahmad (2015); Pursell, et al. (2011); Zia (2008); Haque & Kemal (2007); Khwaja & Mian (2005)	Export Incentives	1998-2022	8	Evaluate the effectiveness of export incentives in enhancing export performance.	High administrative costs and risk of misallocation. Prioritising neglected industries and reassessing subsidies could improve competitiveness.
Jamil, et al. (2023); Abbas & Bhutto (2022); Shah, et al. (2022); Ahmed, et al. (2021); Uzair & Nawaz (2020); Atif, et al. (2019); Mahmood & Jongwanich (2018); Alam (2018); Lateef, et al. (2018); Abbas & Waheed (2015); Gul & Yasin (2011); Nakhoda (2023); Abbas & Bhutto (2022); Khan (2017); Cheong, et al. (2017)	Trade Agreements	1991-2023	15	Analyse the impact of FTAs, PTAs, and GSP on export and import growth.	FTAs boost exports with some countries (e.g., China), SAFTA is ineffective for Pakistan, GSP+ boosts textiles. Focus needed on market diversification and better tariff concessions.
Wadho & Chaudhry (2025); Magsi, Randhawa, & Shah (2021); Ghafoor, et al.	Standards and Certifications	2000-2021	5	Assess the role of international standards	Compliance with standards positively impacts export performance. Awareness and

(2012); Ghafoor, et al. (2010); Masakure, et al. (2009)					and certifications in export performance.	compliance need improvement. Government should reduce certification costs.
Naveed, et al. (2023); Bahmani-Oskooee, et al. (2023); Brun, et al. (2022); Ali (2020); Pirzada (2019); Atif, et al. (2019); Alam, et al. (2017); Bahmani-Oskooee, et al. (2017); Bahmani-Oskooee, et al. (2016); Abbas & Waheed (2015); Aftab, et al. (2012); Hanif & Jafri (2008); Aqeel & Nishat (2006); Kemal & Qadir (2005); Aurangzeb, et al. (2005); Mustafa & Nishat (2004); Arize, et al. (2003); Doğanlar (2002); Kumar & Dhawan (1991)	Exchange Rate Dynamics	1974-2018	19		Examine the effects of exchange rate volatility and depreciation on export performance.	Exchange rate depreciation generally stimulates exports, but sector-specific impacts vary. Volatility can diminish potential gains. Asymmetric effects complicate relationships with trade partners. export responsiveness to depreciations remains constrained by factors like information frictions and supply limitations.
Akhund & Abbas (2023); Mubarik, Devadason, & Govindaraju (2020); Safer, et al. (2019); Wadho & Chaudhry, (2019), Malik, et al. (2017); Khan (2017); Mahmood & Ahmed (2017); Wadho & Chaudhry (2016); McCartney (2014); Hamid, Nabi, & Zafar (2014); Chaffai, Kinda, & Plane (2012); Amjad, et al. (2012); Hussain, et al. (2012); Mahmud, et al (2010); Ud Din, et al. (2009), Siddiqui, et al. (2008); Hanif & Jafri (2008); Anwar & Javed (1997); Akhtar (1997); Mohy-ud-Din, et al. (1993)	Structural challenges	1993-2023	20		Identify structural challenges that hinder export competitiveness.	Energy outages, inadequate policy support, lack of innovation, and limited access to finance hinder competitiveness. Targeted policies and infrastructure improvements warranted
Ahmad, et al. (2024); Nakhoda (2023); Munir and Sultan (2019); Khan (2017); Irshad & Xin (2017); Abbas & Waheed (2015); Riaz & Jansen (2012); Akhtar (1997); Mahmood & Akhtar (1996); Tariq & Najeeb (1995)	Lack of diversification	1995-2024	10		Explore the need for diversification in Pakistan's export portfolio	Lack of diversification limits growth. Special measures needed for sectors like pharmaceuticals and chemicals. Expanding into high-value agricultural products (for instance, fruits and vegetables) can mitigate risks and drive growth.

Table A2

Cause and Effect in Pakistani Exports

Author (Year)	Elasticity/Alt. Desc	Cause	Impact
Masood, et al. (2023)	1 percent tariff hike cuts trade by 0.34 percent	Tariff hike	Trade decrease by 0.34 percent
Mustafa & Babar (2022)	Tariff: -0.73, SPS: -0.13, TBT: 0.26	Tariff, SPS, TBT	Exports decrease by 0.73 percent, 0.13 percent, decrease by SPS, and 0.26% by TBT
Atif, et al. (2019)	Tariff: -2.93, PTA: 0.77, ER: 0.07	Tariff, PTA, ER depreciation	Chemical exports decrease by 2.93 percent, boost by 0.77 percent, inelastic by 0.07 percent
Jamil & Arif (2019)	High tariffs on intermediate inputs textile (-0.02%), wood (-0.09%), rubber and plastic (-0.06%), glass (-0.06%), chemicals (-0.04%), pharma (-0.06%), among others	Tariff on intermediate inputs	Export surplus decrease by 0.02, 0.09, 0.06, 0.04, and 0.06 percent.
Atif, et al. (2017)	Tariff: -0.96, PTA: 1.22, ER: 0.67, ER 0.06	Tariff, PTA, ER depreciation	Agri-exports decrease by 0.96%, increased by 1.22, and boosts by 0.67% and 0.06 percent respectively
Arif, Jamil, & Chaudhry (2023)	1% rise in imported inputs in results 0.99% increase in export value	Increase in intermediate input imports	Export value increases by 0.99%
Defever, et al. (2020)	EFS: 0.07, LTFF: 0.08-0.11	Subsidy schemes (EFS, LTFF)	EFS (LTFF) increased export growth by 7% (8-11%) compared to non-participating firms.

Ali (2020)	Intensive: 0.74, Extensive: 0.025	ER depreciation	A 1% depreciation is associated with an increase in agri. IM (EM) by 0.174% (0.025%) on average.
Pirzada (2019)	Exchange rate elasticity of exports: 1.33 by the 6Q	ER depreciation	Increase in exchange rate elasticity from close to zero in the 1Q, up to 1.33 by the sixth quarter
Abbas & Waheed (2015)	ER = 0.04	ER depreciation	A 1% depreciation is associated with a 0.04% increase in exports.
Naveed, et al. (2023); Hanif & Jafri (2008)	Exports: -0.039, Textile Exports: 0.19	ER depreciation of the trade partners (exports, textile exports)	Partner's ER depreciation reduces Pakistan's exports by 0.039 sd, while an appreciation of the partner reduces textile competitiveness by 0.19.
Aqeel & Nishat (2006); Aftab, et al. (2012); Aqeel & Nishat (2006); Arize, et al. (2003); Doğanlar (2002)	Exchange rate volatility may decrease exports	ER volatility	Decrease in exports (0.11 to 1.5)
Ghafoor, et al. (2012); Ghafoor, et al. (2010)	For leather: Germany 0.08, US 0.13; For mango 0.12	ISO certification	Positive influence on mango and leather exports (Germany: 0.08, US: 0.13, Mango: 0.12)
Uzair & Nawaz (2020)	Export: 0.07, Import: 0.20	CPFTAs	FTAs: Export response 0.07; Import response 0.2. Enhance imports more than exports.
Lateef, et al. (2018)	CPFTA: 0.63	CPFTA	Increase agri-exports to China by 0.63
Abbas & Bhutto (2022)	GSP+: 0.21 and CPFTA: 1.6 , ER: 0.25	GSP+, CPFTA, ER	EU textile trade coefficient is 0.21 higher compared to non-EU trade with GSP + and 1.6 by CPFTA. 1% RER increase augments textile exports by 0.25%.

Alam (2018)	SAFTA: 0.73, CPFTA: 0.29	Regional and Bilateral FTAs	Enhance exports by 0.73, and 0.29 respectively.
Akhu & & Abbas (2023)	FD: 0.04-0.03, R&D: 3.5	Financial development, R&D investment	Increase in export competitiveness
Hanif & Jafri (2008)	Finance access: 0.17-0.20	Finance access	Boost textiles competitiveness

Table A3

Tariff and Non-tariff Barriers

Author (Year)	Time Period	Method	DV/IV	Key Finding	Elasticity
Masood, et al. (2023)	2016	Gravity model	Bilateral trade/simple tariff	A tariff rate change reduces Pakistan's trade with South Asian partners.	-0.3
Mustafa & Babar (2022)	1995-2018	Gravity model	Exports/effective tariff rate	A 1 percent increase in tariff rate decreases exports by around 0.73 percent	-0.73
Mustafa & Babar (2022)	1995-2018	Gravity model	Exports/effective Tariff rate	Reduced SPS associated with higher exports, while increased TBT standards boosts export growth	SPS, -0.13; TBT, 0.26
Ali, et al. (2019)	2000-2016	Co-integration		A 1% reduction in tariffs is associated with a 0.013 increase in export intensity. Lower tariffs boost exports via input diversification, quality improvement, and market expansion	
Atif, et al. (2019)	1995-2015	Gravity	Chemical Exports/tariff	A 1% tariff rate increase may result in a 2.93% reduction in chemical exports.	-2.93
Jamil & Arif (2019)	2003-2011	Panel Fixed, IV	Exports/tariff on inputs	High tariffs on intermediate inputs decrease exportable surplus.	textile (-0.02%) wood (-0.09%), rubber and plastic (0.06%),

					glass (-0.06%), chemicals (-0.04%), pharma (-0.06%), among others -0.96
Atif, et al. (2017)	1995–2014	Gravity	Agri exports/tariff	A 1% increase in the import tariff leads to a 0.96% reduction in agricultural exports	
Ahmed & O’Donoghue (2010)	2002	CGE Model		Lower tariffs enhance export competitiveness by reducing raw material import costs	
Abbas, et al. (2023)	2007-2017	Restrictive-ness Index technique	NTB’s	Persistent NTBs in cereals, fruits, and textiles post-China-Pakistan FTAs.	
Masood, et al. (2023)	2016	Gravity Model		Intra-South Asian and India-Pakistan trade barriers, focusing on logistics and visa restrictions.	
Masood, et al. (2023); Gill & Madaan (2015); Taneja (2013); Nabi (2013)				To enhance intra-South Asian trade, studies stress visa reforms and addressing infrastructure and customs obstacles for Pakistan-India trade.	
Alem & Faizi (2021)	1967-2015	AVE	Imports/NTMs	Rising protectionism despite tariff cuts, stressing NTM management for export competitiveness.	
Magsi, Randhawa, & Shah (2021)	Primary	Experts opinion	Halal meat	Standards non-compliance significantly impacts the global meat trade.	

Manzoor, et al. (2020)		Descriptive	Various NTMs	NTM challenges in Pakistan's textile exports, stressing the significance of addressing them in trade negotiations.	
Mustafa & Qayyum (2016)	2002-2015	Tobit model	Dummy Exports/TBT	TBT enforcement boosts Pakistan-China exports (frequency index) yet restricts trade (coverage ratio).	
Hamid, Nabi, & Zafar (2014)		Descriptive	Textile exports	Import policies and customs procedures hampered in developing the value chain.	
Ghafoor, et al. (2012); Ghafoor, et al. (2010)	40 leather exporters, and mango exporters	OLS	Export/marketing cost	The marketing cost coefficients for leather jackets were negative for Germany (-0.24) and the US (-0.21), albeit insignificant for leather exports. However, elastic for mango exports	for leather: Germany -0.24; US -0.21, for mango exports - 1.03

Notes: AVE- Ad valorem equivalent, CGE-computable general equilibrium, OLS-ordinary least square

Table A4

Export Incentives

Author (Year)	Time Period	Method	DV/IV	Key Finding	Elasticity
Nakhoda (2024)	2008-	FE	Unit value of exports /with and without subsidy.	Subsidy found counterproductive, recommends reevaluation.	
Qureshi & Shah (2020)	2003-2017	DiD	Exports/FTA	Government subsidies to specific industries may divert exports, urging prioritisation of neglected export sectors	
Defever, et al. (2020)	2015-2017	PSM	Firms exports/EFS	Both schemes imposed substantial financial burdens on the central bank	EFS: 0.07 and LTFF:0.08-0.11

Wadho & Chaudhry (2018)	2013–2015	Heckman two-step	R&D intensity / national subsidy	National subsidies had a negative and statistically significant effect on R&D intensity.	-3.62
Ahmad (2015)	2001–11	Indicators of competitiveness at the firm, industry, and national level		Enhancing export incentives in Pakistan for firms to maintain export competitiveness, particularly in the value-added textile sector.	
Pursell, et al. (2011)	2011	Descriptive	Trade policy	Incurs high administrative costs, favoring established exporters, and hindering diversification.	
Zia (2008)	1998–2003	DiD	Firms exports/EFS	The misallocation of funds, where nearly half is directed to listed firms, leads to an output loss of 0.75% of GDP for private firms.	
Haque & Kemal (2007)	1974–2005	ARDL	Export_GDP/export Fin_GDP, export rebate	Subsidy schemes persist despite their ineffectiveness	EP: 0.04, ER, -0.01
Khwaja & Mian (2005)	1996–2002	Matching, FE	Loan size, others/pol. connected	Politically connected firms receive preferential treatment exclusively from government creditors, while private banks provide no such favors	

Notes: ARDL-autoregressive distributive lag model, DiD-difference and difference, PSM- propensity score matching, EP-export financing as a percentage, ER-duty drawback as a percentage of total exports, EFS- export financing scheme, LTFF-long term financing facility.

Table A5
Trade Agreements

Author (Year)	Time Period	Method	DV/IV	Key Finding	Elasticity
Jamil, et al. (2023)	CMI, Punjab (2000, 2005, 2010)	System GMM		In CPFTA, Pakistan should prioritise demand-elastic textile sectors like clothing or interior for higher markups.	
Abbas & Bhutto (2022)	2003-2019	Gravity	Exports/FTA	FTAs contributed positive in the case China, Malaysia, and Sri Lanka, whereas FTA with Mauritius shows a significant negative effect.	
Shah, et al. (2022)	2003–2016	CMS	Export, Import/CPFTA	Pakistan must diversify exports basket to maximise benefits from the China-Pakistan FTA	
Ahmed, et al. (2021)	2003-2017.	Gravity	Intensive and extensive Margin/FTA Exports/FTA	Found that the effect of CP-FTA is more pronounced for differentiated products than for homogeneous ones	
Shah (2020) Qureshi &	2003-2017	DiD	Exports/FTA	Exports grew with China and Mauritius after trade agreements, but not with the other seven FTA partners.	
Uzair & Nawaz (2020)	1996-2018	Gravity	Export, Import/CPFTA	China's imports respond more to FTAs than its exports.	export:0.07, import: 0.20
Atif, et al. (2019)	1995–2015	Stochastic Gravity	Chemical Exports/PTA	PTA significantly impacts Pakistan's chemical product exports.	0.77
Mahmood & Jongwanich (2018)	2000–2010	Gravity	Real bilateral Exports/FTA	The Pakistan-China FTA significantly boosts Pakistan's exports, with agricultural exports benefiting more than manufacturing.	

Alam (2018)	2003-2010	Gravity	Export/FTA, PTA	Bilateral agreements with China, Malaysia, and Iran benefit Pakistan's exports	
Lateef, et al. (2018)	2001-2014	Gravity	Agri export/CPFTA	CPFTA increased Pakistan's agricultural exports to China, but not vice versa.	0.62
Alam (2018)	2003-2010	Gravity	Export/FTA, PTA	Bilateral agreements with China, Malaysia, and Iran benefit Pakistan's exports	China: 0.29
Atif, et al. (2017)	1995–2014	Stochastic Gravity	Agri export/PTA	PTA boost agricultural exports, emphasising their importance in enhancing exports.	1.22
Abbas & Waheed (2015)	1991-2011	Gravity	Real export/FTA	negative and insignificant effect of FTA's on bilateral trade	-0.18
Gul & Yasin (2011); Abbas & Waheed (2015); Abbas & Bhutto (2022)		Gravity	Exports/SAFTA	SAFTA's ineffectiveness for Pakistan	
Alam (2018)	2003-2010	Gravity	Exports/SAFTA	SAFTA led to significant export improvements	0.73
Nakhoda (2023)		Trends analysis		GSP+ withdrawal poses a significant \$3+ billion loss for Pakistan	
Abbas & Bhutto (2022)	2003-2019	Gravity	Export/GSP+	GSP+ status significantly creating exports the textile sector	0.21
Khan (2017)		Trends analysis	Textile/EU GSP +	identified hurdles in textile GSP+: no local machinery, levies delay duty drawbacks, impacting small units' capital.	

Cheong, et al. (2017)	2002-2013	Triple-difference and a synthetic control approach	Textile/EU	Pakistan's waiver goods exports surged rapidly without reducing competitors' exports.
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Note: CMS- constant market share, CMI- census of manufacturing industries DiD-difference and difference.

Table A6

Standards and Certifications

Author (Year)	Time Period	Method	DV/IV	Key Finding	Elasticity
Wadho & Chaudhry (2025)	2013–2018 Textile & Apparel	IV (2SLS)	Export / Certification	Certification ↑ exports, growth, innovation; no ↑ in complexity.	2.39 (log points)
Magsi, Randhawa, & Shah (2021)	Primary	Experts opinion	Halal meat	Standards non-compliance significantly impacts the global meat trade.	
Ghafoor, et al. (2012); Ghafoor, et al. (2010)	40 leather exporters, and mango exporters	OLS	Export/ISO	ISO certification has a positive, albeit marginally significant, influence on mango and leather exports, particularly in the US leather market and overall for mango exports.	For leather: Germany 0.08; US 0.13. For mango, 0.12
Masakure, et al. (2009)	2000-2004	Propensity matching	Export/ISO 9000	Firms certified to ISO 9000 exhibit a propensity for higher performance in export sales	

Note: OLS- ordinary least square, ISO-international organisation for standardisation.

A7 Table
Exchange Rate Dynamics

Author (Year)	Time Period	Method	DV/IV	Key Finding	Elasticity
Naveed, et al. (2023)	2007–2018	System GMM	Exports/REER	A one SD depreciation of Pakistan's trading partners' currency relative to its own reduces exports by 0.039 overall and by 0.24 for high partner share.	-0.039, -0.025
Bahmani-Oskooee, et al. (2023)	1980–2018	Bounds testing approach	Commodity export and imports/real BER	Non-linear models showed stronger volatility effects in the case of China-Pak trade.	
Brun, et al. (2022)	2003–17	Cointegration (quarterly)	Product export/real BER	The elasticity of export quantities with respect to BRER depreciations is 22% lower than that of appreciations.	-0.067, 0.015
Ali (2020)	2003–13	OLS-FE/PPML	IM/EM of agri-exports/vehicle currency	Domestic currency devaluation boosts intensive and extensive margins. 1% depreciation leads to 0.17% increase in IM but only 0.025% in EM for firms.	0.74, 0.025
Atif, et al. (2019)	1995–2015	Gravity	Chemical exports/BER	Depreciation is expected to decline the exports revenue because of very low elasticity.	0.07
Pirzada (2019)	q:1994-2018	SVAR	REER/quantity exports	The exchange rate elasticity of exports increases from nearly zero in the first quarter to 1.33 by the sixth quarter.	1.33
Atif, et al. (2017)	1995–2014	Gravity	Agri exports/BER	Depreciation has a promising impact on agriculture exports' revenue.	0.67
Alam, et al. (2017)	q:1982-2013	ARDL	Real bilateral export/REER	Exchange rate volatility affects Pakistani exports differently across major partners.	

Bahmani-Oskooee, et al. (2017)	1980–2014	Bounds testing approach	Commodity export and imports/real BER	Positive long-term impacts on exchange rate fluctuation in the major industries.	
Bahmani-Oskooee, et al. (2016)	1980–2014	Bounds testing approach	Commodity export and imports/real BER	Few industries are affected by exchange rate volatility, both short and long-term.	
Abbas & Waheed (2015)	1991-2011	Gravity	Real export/real BER	Bilateral exchange rate affects exports less due to lower elasticity.	0.036
Aftab, et al. (2012)	q:2003-2010	ARDL bound test	Nominal exports/exchange rate nominal	Exchange rate volatility negatively impacts the majority of sectoral exports.	-0.12
Hanif & Jafri (2008)	1974–2004	ECM	RCA textiles/REER	Appreciation of PKR, as compared with our trading partners, impacts our textile sectors negatively.	-0.19
Aqeel & Nishat (2006)	q:1982-2000	Cointegration	Real export/real exchange rate	Reducing exchange rate volatility may increase Pakistan's exports.	-1.5
Kemal & Qadir (2005)	m:1981-2003	Cointegration	Exports/RER	Sudden movements in the real exchange rate do not affect exports.	
Aurangzeb, et al. (2005)	1985-2001	Cointegration	Real exports/nominal exchange rate	Exchange rate volatility significantly affects real exports in the short-run, but its impact diminishes in the long run.	-0.11
Mustafa & Nishat (2004)	q:199-2004	Cointegration and ECM	Real export/real exchange rate	Exchange rate uncertainty mainly impacts exports with major developed trading partners in the long run.	

Arize, et al. (2003)	q:1973-1998	Cointegration and ARCH	Real/nominal exports/real exchange rate	Rising exchange rate volatility drives risk-averse producers towards domestic trade.	-0.15
Doğanlar (2002)	q:1980-1998	Cointegration	Real exports/real exchange rate	Rising exchange rate volatility drives risk-averse producers towards domestic trade.	-0.79
Kumar & Dhawan (1991)	q:1974-85	OLS	Export/exchange rate	Nominal exchange rate fluctuations rather than real impacted exports.	

Notes: m-monthly; q-quarterly, REER-real effective exchange rate, BER-bilateral exchange rate, ECM-error correction model, ARDL-autoregressive distributive lag model, SVAR,structural vector auto regression, OLS-ordinary least square, PPML- poisson pseudo maximum likelihood.

Table A8
Structural Challenges to Export Competitiveness

Author (Year)	Time Period	Method	DV/IV	Key Finding	Elasticity/percent
Akhuand & Abbas(2023)	2003-2019	GLS/FE	RCA textiles/dcps(%gdp)	FD significantly boosts export competitiveness.	0.04-0.03
Akhuand & Abbas (2023)	2003-2019	GLS/FE	RCA textiles/r&d exp.	Increased investment in r&d is crucial for Pakistan to improve its textile sector's export competitiveness.	3.5
Magsi, Randhawa, & Shah (2021)	Primary	Experts opinion	Halal meat	Comprehensive training programs should be designed for all stakeholders in meat production and export processing.	
Mubarik, Devadason, & Govindaraju (2020)	586 manufacturing sector SMEs	SEM	Export/education, training, experience.	Education and training	

Safeer, et al. (2019)	134 middle and senior marketing managers, Faisalabad		Readymade garments	Energy crisis, government policy, international competition in the textile industry, lack of innovation, and no own brands,	Energy crisis (100%), Absence of own brands (44%), Intensity of international competition, (78%), Lack of innovation, (70%) Government policies, (90%)
Malik, et al. 2017		descriptive		Challenges in labour skills, technology upgrading, and facilitating small and medium businesses' access to finance.	
Khan (2017)		Trends analysis	textile exports	A lack of competitiveness, inadequate energy supply, law and order issues, and weak policy base.	
Mahmood & Ahmed (2017)	2011-2015	Trends analysis	Exportable sectors	Low female participation, limited finance access, and other factors contribute to stagnant export growth.	
Hamid, Nabi, & Zafar (2014)		Descriptive	Textile exports	Energy shortages, security risk, innovation, as well as misaligned/weak government policies.	

Amjad, et al. (2012)	40 firms	Descriptive	Various export sectors	Key bottlenecks to export competitiveness include shortages in skilled labour, energy crises, planning and policy issues, market imperfections, infrastructure deficits, and quality certification challenges.	Lack of institutional training: shortage of skilled labour (35%) and education quality (30%), Poor planning (69.2%), Poor infrastructure (38.2%) Weak government policy (64.1%), electricity (71%), macro stability (8%)
Hussain, et al. (2012)	ICA data/pilot survey in Lahore	Descriptive	Various sectors	Electricity emerged as the top concern for industries, followed by macroeconomic stability at 8%. inadequate workforce, access to raw materials, limited access to raw materials and corruption ranked third, fourth and fifth, respectively.	
Ghafoor, et al. (2012); Ghafoor, et al. (2010)	40 leather exporters, and mango exporters	OLS	Export/average purchase price	A 1% raw material cost increase leads to a 0.63% drop in leather jacket exports to Germany and a 0.82% drop in the USA. Similar effects are seen in mango exports.	in USA market: -.82, in German market: -0.63. Mango:-0.96

Ghafoor, et al. (2012); Ghafoor, et al. (2010)	40 leather exporters, and mango exporters	OLS	Export/marketing cost	The marketing cost coefficients for leather jackets were negative for Germany (-0.24) and the US (-0.21), albeit insignificant for leather exports. However, elastic for mango exports	for leather: Germany -0.24; USA -0.21, for mango exports - 1.03
Mahmud, et al. (2010)				Weak competitiveness, global recession impact, energy shortages, security concerns, low productivity, technology gaps, and skill/R&D deficiencies	
Hanif & Jafri (2008)	1974–2004	ECM	RCA textile/credit to textile sector	Access to external finance significantly improves Pakistan's textile sector competitiveness	elasticity : 0.17-0.2
Anwar & Javed (1997)	1971-1995	ARIMA	Cotton yarn	Educating farmers and ginners for better cotton quality, quality standards and certification, and export finance.	
Akhtar (1997)		Descriptive	Upland crops	Deficiencies in post-harvest technology, low standards, and a lack of diversification	
Mohy-ud-Din, et al. (1993)	Key informed interviews	Descriptive	Kinnow exports	83% of exporters experienced high losses due to the unavailability of refrigerated transport and poor road conditions	lack of refrigerated transport facilities and poor road conditions (83%),

absence of cold storage (17%).

Notes: SEM-structural equation modeling, OLS-ordinary least square, ECM- error correction model, ICA- investment climate assessment, GDP-gross domestic product, DCPS-domestic credit to private sector (percent of GDP), r&d-research and development, FD-financial development, GLS/FE- generalised least square/ fixed effect, ARIMA-autoregressive integrated moving average, USA-united states of America, RCA-revealed comparative advantage.

Table A9
Lack of Diversifications

Author (Year)	Time Period	Method	DV/IV	Key Finding	Elasticity
Ahmad, et al. (2024)	133 partner countries	EPI, PDI	all products	exploring new sectors like pharmaceuticals, chemicals, meat, fish, and dairy to diversify Pakistan's exports.	
Nakhoda (2023)		Trends analysis		The TDAP should promote diversification and explore new markets through trade fairs and exhibitions	
Munir & Sultan (2019)	2014-	RSCA	All products	Need for special measures and productive efforts to enhance the export competitiveness of cotton, textile yarn, and cotton fabric in border-sharing countries	
Khan (2017)		trends analysis	Textile exports	Failure to diversify beyond textiles limits overall exports.	
Irshad & Xin (2017)	2003-2015	RCA		Lack of export diversification, low value addition.	
Abbas & Waheed (2015)	1991-2011	Gravity		Low value-added products and low diversification of products and markets	
Riaz & Jansen (2012)	1999-2008	RCA	Agricultural	untapped potential of bilateral trade, , especially with neighboring	
RCA	1995-2005		Fruits	competitive advantage in producing dates and mangos	

RCA	1996-2006		Footwear	footwear industry promises growth and increased exports with its comparative advantage.
Akhtar (1997)	1972-1995	regression	UCP	Deficiencies in post-harvest technology, low standards, and a lack of diversification
Mahmood & Akhtar (1996)	1985-1993	CMS	Top 12 exports	concentration of exports in traditional commodities with stagnant global demand
Tariq & Najeed (1995)	1970-1991	regression	Instability/cons	Product diversification stabilises earnings, but market diversification doesn't.

Notes: CMS-constant market share, TDAP-trade development authority of Pakistan, EPI- export potential indicator, PDI-product diversification index, UCP, upland crops product, RCA-revealed comparative advantage, RSCA-revealed symmetric comparat

Table A10
Pakistan Trade Agreements

Year	Type	Countries	Agreement Name
2004	FTA*		Pakistan-Philippines FTA
2004	PTA*		Pakistan-Tajikistan PTA
2005	FTA*		Afghanistan-Pakistan FTA
2003	PTA*		Pakistan-Kazakhstan PTA
2006	FTA*		Pakistan-Jordan FTA
2007	FTA*		Brunei Darussalam-Pakistan FTA
2009	FTA*	Pakistan, Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Poland, Portugal, Romania, Malta, Slovakia, Slovenia, Spain, Sweden, United Kingdom, Netherlands	Pakistan-European Union FTA
2009	FTA*	Pakistan, Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam	ASEAN-Pakistan FTA

2009	FTA*		Nepal-Pakistan FTA
2013	FTA*		Republic of Korea-Pakistan FTA
2015	FTA*		Pakistan-Viet Nam FTA
2015	FTA*	Pakistan, Armenia, Belarus, Russian Federation, Kazakhstan, Kyrgyz Republic	Eurasian Economic Union (EEU)-Pakistan FTA
2017	FTA*		Japan-Pakistan FTA
2018	FTA*		Pakistan-Saudi Arabia FTA
2006	PTA**	Pakistan, Argentina, Brazil, Paraguay, Uruguay	Pakistan-MERCOSUR PTA
2017	FTA***		Pakistan-Türkiye FTA
2005	FTA***		Pakistan-Singapore FTA
2022	FTA***		Pakistan-Gulf Cooperation Council FTA
2005	PTA***		Pakistan-Morocco PTA
2003	FTA***		Bangladesh-Pakistan FTA
2015	FTA***		Pakistan-Thailand FTA
2016	FTA***		Pakistan-Iran Free FTA
2022	TPS****	Bahrain, Bangladesh, Cote D'ivoire, Egypt, Guinea, Indonesia, Iran, Islamic Republic of, Jordan, Lebanon, Malaysia, Maldives, Morocco, Nigeria, Oman, Pakistan, Qatar, Kuwait, Saudi Arabia, Senegal, Syrian Arab Republic, Cameroon, Tunisia, Türkiye, Uganda, United Arab Emirates, Benin, Burkina Faso, Chad, Comoros, Djibouti, Gabon, Gambia, Guinea-Bissau, Iraq, Libya, Mauritania, Niger, Palestine, Sierra Leone, Somalia, Sudan	Trade Preferential System of the Organisation of the Islamic Conference
2011	PTA-D8*	Bangladesh, Egypt, Indonesia, Iran, Islamic Republic of, Malaysia, Nigeria, Pakistan, Türkiye	Preferential Tariff Arrangement-Group of Eight Developing Countries

2008	ECOTA	Afghanistan, Azerbaijan, Iran, Islamic Republic of, Kazakhstan, Kyrgyz Republic, Pakistan, Tajikistan, Türkiye, Turkmenistan, Uzbekistan	Economic Cooperation Organisation Trade Agreement
2005	FTA****		Pakistan-Sri Lanka Free Trade Agreement
2003	Pakistan-US Trade and Investment Framework Agreement****		Pakistan-US Trade and Investment Framework Agreement
2009 /2019	FTA****		Pakistan-People's Republic of China Free Trade Agreement
2007	PTA****		Pakistan-Mauritius Preferential Trade Agreement
2008	FTA****		Malaysia-Pakistan Closer Economic Partnership Agreement
2013	PTA/Upgrade from PTA to FTA Negotiations Launched: July 2019****		Indonesia-Pakistan Free Trade Agreement
2006	SAFTA	Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka	South Asian Free Trade Area

Note: *Proposed/Under consultation and study **(FA) signed *** Negotiations launched **** Signed and in Effect.

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