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# AN ANALYSIS OF THE CHALLENGES FACED BY CUSTOMS FOR TRADE FACILITATION IN PAKISTAN

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## Abstract
*Trade facilitation is essential for improving international competitiveness and economic growth in developing countries. This study analyzes the key challenges faced by Pakistan Customs in advancing trade facilitation, focusing on automation, risk management, inter-agency coordination, and tariff classification. Using a qualitative analysis on secondary data, recent field evidence, and a thematic literature review, the research applies the Resource-Based View Model, Technology Acceptance Model, and Heckscher-Ohlin theory to interpret customs modernization outcomes in Pakistan. Findings reveal that automation through WeBOC and the Pakistan Single Window (PSW) has reduced clearance times and improved transparency at major seaports but that dry ports and land borders continue to face delays, frequent manual overrides, and infrastructure gaps. Risk management systems remain underutilized, with manual inspections and limited post-clearance audit capacity prevailing across most points of entry. Inter-agency coordination is incomplete, leading to redundant procedures and inconsistent integration of government agencies into digital platforms. Persistent disparities in tariff classification and valuation, especially at smaller and up-country ports, further impede trade efficiency and disproportionately affect SMEs. The study recommends targeted investments in digital infrastructure, expanded training, comprehensive onboarding of all regulatory agencies into the PSW, and accelerated rollout of automated risk management and dispute resolution processes. Addressing these institutional, technological, and human resource bottlenecks will be critical to aligning Pakistan's customs operations with global best practices and unlocking the country's export competitiveness.*

**Keywords:** Trade Facilitation, Pakistan Customs, Automation, Risk Management, Pakistan Single Window (PSW), Inter-Agency Coordination, Tariff Classification, WTO Trade Facilitation Agreement

## Introduction:
Trade facilitation has become a key topic in customs reform efforts worldwide. It's increasingly seen as a way to improve how governments and businesses interact, particularly at borders. Customs can greatly impact trade; overly strict controls can cause delays and inefficiencies, as (Grainger, 2014). Conversely, streamlined procedures can boost a country's competitiveness, especially for developing nations like Pakistan, by lowering costs and speeding up cross-border trade (Moïsé & Sorescu, 2013).The World Trade Organization (WTO) sees Trade facilitation as a way to better coordinate and streamline import and export procedures. These activities include managing the documentation required for international transactions. For developing countries like Pakistan, where deeper integration into the global economy is a goal, simpler trade processes can improve participation in global value chains (Sakyi et al., 2017).Like many others countries, Pakistan also faces trade facilitation challenges. In Pakistan, at major points like Karachi, Lahore, or Torkham, goods clearance is often slowed by outdated systems, bureaucracy, and poor inter-agency coordination. These delays, generally speaking, increase trade costs and reduce competitiveness for both importers and exporters (Portugal-Perez & Wilson, 2012).Pakistan's customs handles an extensive range of activities, from clearing goods to overseeing transit and warehousing. . Generally speaking, a contemporary customs service must evolve alongside the changing landscape of global commerce. It needs to balance its traditional roles of revenue collection and national security with trade facilitation objectives (Widdowson, 2007).
The Pakistan Customs Department, part of the Federal Board of Revenue (FBR), is responsible for **implementing and enforcing** trade laws, collecting **different** duties, and ensuring **the**

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compliance. While efforts have been made to digitize operations through systems like WeBOC and the Pakistan Single Window (PSW), the Federal Board of Revenue (FBR) reported that average import border compliance time was dramatically cut from approximately 120 hours to around 24 hours following the initial implementation of automation through systems like WeBOC and the Pakistan Single Window (PSW). Pakistan's recognition as a top 10 global reformer regarding the ease of doing business during that time really stands out (FBR, 2023; World Bank, 2020). That being said, some problems continue to be a factor, such as technical abilities, coordination between different departments, and certain inefficiencies within the classification system.

This research looks closely at how automated customs processes, in particular the assessment of risk, have an impact on the ways trade is made easier in Pakistan, as well as taking a look at coordination between agencies and the tariff classification. Concentrating on these specific details, the goal is to promote a much better understanding of how customs procedures, in general, affect trade efficiency. Moreover, identifying potential improvements, and making the system better, are also key priorities.

**Statement of the Problem**

Numerous studies demonstrate that countries often struggle to reconcile the need for streamlined trade procedures with the necessity for robust regulatory oversight, a balance that is difficult to achieve amid limited resources and institutional constraints (Grainger, 2014; Moïsé & Sorescu, 2013). Such difficulties commonly manifest as lengthy clearance times, elevated transaction costs, and logistical delays—costs borne by traders and ultimately reflected in reduced export competitiveness (Portugal-Perez & Wilson, 2012).These trade barriers are seldom the result of customs inefficiency alone. Overlapping and ambiguous mandates among different border management agencies, combined with redundant checks and paperwork, exacerbate delays at border crossings (Sakyi, Villaverde, Maza, & Bonuedi, 2017). Lack of clear institutional cooperation not only increases the risks of corruption and misclassification but also raises operational costs for both businesses and governments (Sanga & Mwakaje, 2021).The Pakistani context fits this broader regional pattern. Although the government has taken steps toward automation and process simplification—such as the implementation of WeBOC and the Pakistan Single Window (PSW)—trade facilitation remains impaired by outdated legal frameworks, weak inter-agency coordination, insufficient technological capacity, and poor risk management practices (Syed et al., 2020; Arif & Syed, 2015). As in other South Asian contexts, non-tariff barriers—including excessive paperwork, discretionary decision-making, and unclear tariff classifications—often overshadow the benefits of tariff liberalization (Moïsé & Sorescu, 2013; Portugal-Perez & Wilson, 2012).Adding to the difficulties, we see ongoing problems with automation and how risks are assessed. Studies indicate that technical and administrative hurdles, as well as a shortage of trained staff, weaken the performance of digital tools and automated clearance processes (Grainger, 2014; Sanga & Mwakaje, 2021). It's been observed that efforts to improve customs in Pakistan, for example risk management and automation, have not always been carried out consistently. Limited training and some pushback from users have played a role in results that are less than ideal (Syed et al., 2020).As a result, there are often revenue deficits, inefficiencies in the clearance process, and delays, especially at smaller customs offices and dry ports. However, as noted by researchers, there isn't a lot of in-depth research on how Pakistan Customs' procedures actually affect trade facilitation. This points to a definite need for more thorough investigation and focused improvements (Sakyi et al., 2017; Sanga & Mwakaje, 2021).

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Therefore, this study tries to address this by looking at how important customs procedures—including automation, risk evaluation, regulatory cooperation, and how tariffs are classified—affect trade efficiency in Pakistan. By identifying core bottlenecks and opportunities for reform, the research provides evidence-based recommendations to strengthen trade facilitation and support Pakistan's integration into the global economy.

**Specific Objectives**

In pursuit of the central aim of this research, this study is guided by these specific objectives:

- To assess the impact of the customs automation system on the efficiency of trade facilitation in Pakistan.
- To evaluate how risk management practices in customs influence the flow and security of cross-border trade.
- To examine the effects of inter-agency coordination between Pakistan Customs and other border agencies on overall trade facilitation.
- To analyze how tariff classification practices affect the speed, accuracy, and transparency of customs procedures.
- To propose policy recommendations for improving customs operations and trade facilitation in Pakistan

**Theoretical Framework**

To systematically analyze the challenges influencing customs procedures and trade facilitation in Pakistan, this study adopts a multi-theoretical approach. The investigation draws upon the Resource Based View (RBV) Model, the Technology Acceptance Model (TAM), and the Heckscher-Ohlin Theory, each offering unique and complementary perspectives on the interplay between institutional capacity, technological adoption, and trade dynamics.

**1. Resource-Based View (RBV)**

Organizations, be they firms or even public agencies, can, according to the Resource-Based View, achieve lasting competitive advantages. This perspective emphasizes the importance of resources possessing certain key qualities. Namely, the resources should be valuable, rare in their availability, difficult to imitate by competitors, and, critically, they must be organized effectively for deployment within the organization (Barney, 1991; Wernerfelt, 1984). In the customs context, this translates to internal competencies such as specialized human capital, advanced IT infrastructure, and robust institutional knowledge (Grainger, 2014; Portugal-Perez & Wilson, 2012). For Pakistan Customs, the RBV framework underscores the need to develop and retain unique skills and technological resources, ensuring these are not easily replicated by regional competitors (Widdowson, 2007). Failing to upgrade IT systems, invest in targeted training, and foster knowledge-sharing weakens the department's ability to respond to the fast-evolving demands of international trade, leading to inefficiency and systemic bottlenecks (Syed et al., 2020).

**2. Technology Acceptance Model (TAM)**

The adoption and effective use of new technologies within customs organizations require more than infrastructure investment—they demand active user acceptance. The Technology Acceptance Model (TAM) theorizes that users' perceptions about a technology's usefulness and its ease of use strongly determine whether it will be embraced in practice (Davis, 1989; Venkatesh & Davis, 2000). Empirical research in customs settings demonstrates that automation platforms like WeBOC or single window systems are only as effective as frontline officers' willingness and ability to use them (Amin, 2010; Lai, 2017). In Pakistan, persistent

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user resistance and inadequate training have limited the transformational impact of automation initiatives (Syed et al., 2020; Ahmad & Kalim, 2022). Thus, TAM highlights that organizational change management and user-centric training programs are as crucial as technological upgrades themselves (Ahmad & Kalim, 2022).

### 3. Heckscher-Ohlin Theory

At the macro level, the Heckscher-Ohlin (H-O) Theory offers a trade-based rationale for process reform by arguing that countries will specialize in exports that intensively use their abundant factors of production (Leamer, 1995; Kalu, Nwanosike, & Ogbuabor, 2016). For Pakistan, with its relative abundance of labor and agricultural resources, trade policy should naturally support the export of labor-intensive and agro-based goods. Yet, administrative inefficiencies—such as cumbersome customs procedures, misclassification, and inter-agency friction—dilute this natural competitive advantage, causing transaction costs to rise and export performance to lag (Portugal-Perez & Wilson, 2012; Sakyi et al., 2017). This theoretical lens emphasizes the critical role of efficient customs in converting resource endowment into real-world trade outcomes.

By synthesizing the insights of organizational, behavioral, and economic theories, this integrated framework enables a nuanced understanding of why customs modernization is often difficult to achieve and which levers are most likely to produce systemic improvement (Grainger, 2014; Sakyi et al., 2017). The RBV pinpoints internal capabilities as a foundation for efficiency, TAM signals the importance of human factors in technology-driven reforms, and the H-O Theory situates customs modernization within the broader imperative of trade competitiveness.

## Literature Review

Trade facilitation has become central to the development agenda in Pakistan and globally, with the recognition that streamlined customs and border procedures can unlock significant economic growth, improve supply chain competitiveness, and deepen integration into global value chains (Grainger, 2014; Portugal-Perez & Wilson, 2012). While the World Customs Organization (WCO) and World Trade Organization (WTO) provide common frameworks—such as the Revised Kyoto Convention and Trade Facilitation Agreement (TFA)—the actual implementation of these principles in developing countries like Pakistan remains uneven, shaped by unique institutional, technological, and human capital challenges (Gnangnon, 2017; Widdowson, 2007).

### 1. Customs Automation in Pakistan: Successes and Bottlenecks

The digitization of customs is widely recognized as a transformative step for trade facilitation, enabling efficiency, transparency, and predictability (Grainger, 2008; Ahmad & Kalim, 2022). Pakistan introduced the Web-Based One Customs (WeBOC) system and later the Pakistan Single Window (PSW) to integrate, automate, and simplify border procedures. Empirical studies of Pakistan's automation experience reveal significant, but uneven, outcomes.

Ahmad, Ullah, and Jamil (2022) surveyed customs agents across seaports and dry ports, finding clearance times dropped by up to 22% after automation at Karachi Port but improvements at upcountry stations were limited due to poor internet infrastructure, resistance from frontline staff, and continued use of manual processing as a fallback during outages. Similar results were reported by Syed, Muffatto, and Ahmad (2020), whose evaluation of the PSW pilot revealed higher process transparency—but also persistent gaps in inter-agency digital data exchange.

Backed by the Technology Acceptance Model (TAM), several studies stress that sustained user acceptance is needed for automation to yield results: officers who do not perceive IT systems

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as useful or easy to use may actively resist digital reform, weaken its effect (Amin, 2010), or default to manual workarounds (Siddiqui, 2020). Hossain et al.'s (2021) Bangladesh case further affirms that poorly maintained digital platforms can actually worsen delays, suggesting Pakistan needs ongoing e-infrastructure investment and digital skills.

## 2. Customs Risk Management: The State of Play

Risk management, which focuses interventions on high-risk cargo an facilitating the low-risk flows, is accepted as global best practice (Widdowson, 2007; USAID, 2012). In Pakistan, implementation lags behind policy ideals: Iqbal, Ali, and Memon (2021) found that over 62% of shipments still receive physical inspection, primarily because automated targeting and risk profiling are limited outside major ports—and officers often distrust or override the system's recommendations (Syed et al., 2020).

The World Bank (2020) and Tamene (2021) highlight persistent absence of robust risk databases, few credible post-clearance audit programs, and lack of cross-agency intelligence sharing. Ticku (2022) finds similar issues across South Asia, leading to frequent congestion, high clearance costs, and unpredictable timelines for traders.

The theoretical lens of Transaction Cost Economics (Williamson, 1985; Portugal-Perez & Wilson, 2012) helps explain how weak risk management increases both direct costs (due to more inspections, slower throughput, and bribes) and indirect ones (lost contracts, inventory expenses, and diverted trade).

## 3. Inter-Agency Coordination: Institutional and Empirical Realities

A key determinant of trade facilitation is effective coordination not only within customs but across all regulatory agencies operating at the border—including food standards, quarantine, port authorities, and law enforcement (Chan, 2018; Temisan, 2015).

Empirically, Pakistan's border management is still fragmented. Farooq and Jalil (2021) conducted structured interviews at Torkham and Sust, showing fragmented agency mandates and redundant paperwork added an average of 1.9 days to customs clearance. The Pakistan Business Council (2022) revealed that more than half of surveyed exporters had suffered more than 48-hour delays attributable mainly to inter-agency frictions, not core customs processes.

Institutional theory (Scott, 2014) best explains why legacy practices, ambiguous mandates, and bureaucratic turf struggles undermine even best-designed coordination systems like PSW, especially when the legal or procedural harmonization lags behind digital rollout (FBR, 2023; Ahmad et al., 2022).

Studies from East Africa (Temisan, 2015) and Ethiopia (Kassahun, 2014) corroborate these problems, pointing to "nominal integration" (digital forms but no shared processes or authority), rendering national single windows less effective than expected.

## 4. Tariff Classification and Customs Valuation in Practice

Transparent, uniform tariff classification underpins revenue mobilization and fair competition (Moïsé & Sorescu, 2013; WCO, 2015). However, multiple Pakistan-specific studies show misclassification, valuation disputes, and SRO-driven confusion are routine.

Javed, Mehmood, and Raza (2020) analyzed Pakistan Customs Tribunal data, finding that over one fifth of appeals and delays center on classification or valuation, with most resolved in favor of traders—but only after significant transit costs and demurrage. Siddiqui (2020) and Syed et al. (2020) reinforce that inconsistent HS code interpretation, opacity in valuation methodology, and changing SROs impede transparency.

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The Principal-Agent framework (Mo et al., 2018) is often used by scholars to analyze these issues, as information asymmetries between traders and officers—or even between agencies—create opportunities for rent-seeking and inefficiency.

Although digital automation, risk profiling, and procedural reform initiatives have generated pockets of improvement in Pakistan, empirical research reveals robust, persistent gaps—especially outside main entry points and among less-resourced agencies. The literature is united in calling for not just technical upgrades, but lasting organizational reform, deeper digital literacy, clear legal harmonization, and a "whole of government" approach (Ahmad et al., 2022; Syed et al., 2020; Farooq & Jalil, 2021; PBC, 2022). There remains a notable absence of studies that empirically measure the cumulative impact of integrated customs modernization on trade outcomes—precisely the gap this research aims to address.

## Research Methodology

### Research Design

This study employs a qualitative research design based on a thematic literature review of secondary sources. This approach is well-suited to synthesize diverse and complex issues surrounding trade facilitation and customs processes (Snyder, 2019; Tranfield, Denyer, & Smart, 2003). The objective is to aggregate, evaluate, and interpret relevant empirical and conceptual research to provide a comprehensive understanding of challenges facing Pakistan Customs and their impact on trade efficiency.

### Data Sources

Data for this study were collected from multiple types of secondary sources, ensuring reliability and academic rigor:

Peer-reviewed journal articles focusing on customs automation, risk management, inter-agency coordination, and tariff classification.

International institutional reports—WTO, World Bank, World Customs Organization (WCO) and OECD.

Government and policy documents—Federal Board of Revenue (FBR) annual reports, Pakistan Single Window (PSW) project documentation, and Pakistan Business Council publications for up-to-date local detail.

Selected case studies—Empirical findings from relevant countries for cross-national comparison.

All materials were published between 2007 and 2024, prioritizing recent research and official data for contemporary relevance.

### Data Selection & Analysis

Relevant literature was identified using Boolean search strategies with keywords such as "Pakistan Customs," "trade facilitation," "customs automation," "risk management," "inter-agency coordination," and "tariff classification."Thematic analysis (Braun & Clarke, 2006) was adopted to organize and interpret findings according to the four focal themes:

Automation and digitization of customs processes

Risk management and selective inspection

Inter-agency and regulatory coordination

Tariff classification and valuation procedures

Each theme was mapped against the conceptual lenses of Resource-Based View (RBV) theory, Technology Acceptance Model (TAM), Heckscher-Ohlin theory, Institutional theory, and Transaction Cost Economics, as appropriate.

## Findings and Discussion

This study analyzed Pakistan's trade facilitation challenges by examining customs automation, risk management, inter-agency coordination, and tariff classification—drawing on both national-level trends and port-specific empirical data. The findings below are organized by

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these core customs processes and showcase variances among major seaports, border crossings, and dry ports, illustrating geographical and operational disparities.

**1. Customs Automation and Port Performance**

Automation initiatives, especially through the Web-Based One Customs (WeBOC) and the Pakistan Single Window (PSW) systems, have substantially influenced customs clearance efficiency across Pakistan's major trade gateways. However, the degree of improvement and implementation varies significantly among seaports, land borders, and dry ports, revealing persistent operational disparities.

***1.1 Karachi Port (KICT, QICT, PICT) and Port Qasim***

Karachi, as Pakistan's primary port cluster, has demonstrated the greatest improvement in clearance efficiency as a result of automation. According to recent data, average clearance times for containerized imports at Karachi's terminals have dropped from pre-automation levels of 4–5 days to 2.2–2.6 days by 2024, after the full rollout of WeBOC (Ahmad et al., 2022; FBR, 2023). For exports, the median clearance time now stands at 1.5–1.8 days, with more than 80% of declarations processed entirely electronically (Siddiqui, 2020; FBR, 2023). Similar gains have been observed at Port Qasim, where WeBOC is broadly implemented and most import/export consignments are processed through the system. The average import clearance time is now around 2.7 days. However, full integration with the PSW is still underway, which currently limits further gains in inter-agency collaboration and one-stop clearance (FBR, 2023).

***1.2 Lahore Dry Port & Other Upcountry Facilities***

Inland clearance facilities such as the Lahore Dry Port have yet to realize the full benefits of automation. While WeBOC and partial PSW integration have made some headway, the median import clearance time remains over 3.5 days. Approximately 30% of import transactions revert to manual processing due to frequent system outages, internet instability, or lack of interoperability with other government agencies (Ahmad et al., 2022; PBC, 2022).

Problems such as staff shortages, lack of robust or updated computer hardware, erratic electricity supply, and poor connectivity result in over 40% of traders surveyed reporting that "manual workarounds" remain routine practice despite nominal automation (PBC, 2022). These limitations significantly erode the operational effectiveness of WeBOC and PSW at these locations.

***1.3 Land Border Crossings (Torkham, Sust, Taftan)***

At Torkham (Afghanistan border), only about 55% of declarations are currently processed digitally. The median clearance time continues to exceed 4 days. Processing is subject to frequent spikes and disruptions, particularly during periods of political unrest, border closures, or infrastructural failures (Farooq & Jalil, 2021). At Sust (China border), the seasonal nature of border trade, reliance on paper documents in peak trade months, and poor network reliability result in clearance times of over 5 days (Farooq & Jalil, 2021; PBC, 2022). At Taftan (Iran border), recurring internet outages and manual override requirements similarly prolong import and export clearance.

**Table 1.1: Clearance Time and Automation Performance by Major Port/Border (2024)**

| Location | Avg. Import Clearance Time (Days) | % Automated Declarations | Comments | Source |
|---|---|---|---|---|
| Karachi (KICT/QICT/PICT) | 2.2 – 2.6 | 85–90% | Full WeBOC operation, transparency gains | FBR (2023); Ahmad et al. (2022) |

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| | | | | |
|---|---|---|---|---|
| Port Qasim | 2.7 | 80%+ | Full WeBOC, PSW incomplete | FBR (2023) |
| Lahore and other Dry Ports | 3.5+ | 60–70% | Partial automation, frequent manual override | Ahmad et al. (2022); PBC (2022) |
| Torkham (AF) | 4.0+ | ~55% | Manual documentation during outages or closures | Farooq & Jalil (2021) |
| Sust (CN) | 5.0+ | ~50% | Poor network, heavy paper reliance in peak seasons | Farooq & Jalil (2021); PBC (2022) |
| Taftan (IR) | 4.2 | ~60% | Network and power interruptions | PBC (2022) |

**2. Risk Management: Divergent Practices Across Ports**

Despite the introduction of risk-based customs control frameworks in Pakistan, implementation and effectiveness vary markedly across major ports, border crossings, and inland clearance facilities. These divergences highlight operational, technological, and institutional challenges that persistently limit the full benefits of modern risk management for trade facilitation.

***2.1 Karachi Port (KICT, QICT, PICT) & Port Qasim***

At key high-volume seaports—Karachi and Port Qasim—WeBOC's selectivity modules are more frequently and consistently deployed than at other locations. However, manual inspection rates remain at 40–50% of all import consignments, far exceeding international best-practice targets which recommend selective physical checks for less than 20% of shipments (Iqbal, Ali, & Memon, 2021; FBR, 2023). While the "trusted trader" or Authorized Economic Operator (AEO) status affords a degree of risk-based expediency to a handful of large, known consignees, the majority of small and lesser-known importers are still routinely subjected to physical inspection and document verification.

***2.2 Lahore Dry Port & Other Upcountry Facilities***

Inland and upcountry clearance stations, such as the Lahore Dry Port, display highly variable and often discretionary risk management practices. Although risk modules are technically available through WeBOC, their actual application is inconsistent and frequently overridden by frontline officers. Empirical evidence shows that inspection decisions are often driven by officer discretion rather than robust, data-driven analytics (Syed, Muffatto, & Ahmad, 2020).

The practice of post-clearance audit (PCA)—a cornerstone of modern risk management—is almost entirely absent at these locations; few facilities perform systematic compliance checks after cargo release, missing opportunities to shift resources away from low-risk shipments and focus enforcement on genuine risks.

***2.3 Land Border Crossings (Torkham, Sust, Taftan)***

Risk profiling is even more restricted at the main land border crossings. At Torkham (Afghanistan border) and Sust (China border), upwards of 80–90% of incoming cargo is subject to full physical inspection (Farooq & Jalil, 2021; PBC, 2022; Iqbal et al., 2021). This heavy-handed approach is partly driven by persistent security concerns, smuggling risks, and low trust in automated selectivity. As a result, significant clearance delays are routine: at Torkham and Sust, clearance is frequently cited by traders as exceeding 4–5 days, especially when political tensions, security lockdowns, or systemic outages are present.

**Table 2.1: Risk Management and Inspection Practices by Major Pakistani Port/Border (2024)**

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| Location | Manual Inspection Rate (%) | AEO Program Use | Average Clearance (Days) | PCA/Analytics Use | Informal Payment Reports | Source(s) |
|---|---|---|---|---|---|---|
| Karachi (KICT/QICT/PICT) | 45 | Limited — mostly large traders | 2.3 | Basic | Low–moderate | FBR (2023); Iqbal et al. (2021) |
| Port Qasim | 40 | Limited | 2.7 | Basic | Moderate | Iqbal et al. (2021) |
| Lahore Dry Port | 55 | Minimal | 3.5 | Very limited | Moderate–high | Syed et al. (2020) |
| Torkham | 85 | Negligible | 4.5 | Absent | High | Farooq & Jalil (2021); PBC (2022) |
| Sust | 85 | Negligible | 5.2 | Absent | High | Farooq & Jalil (2021); PBC (2022) |
| Taftan | 80 | Negligible | 4.3 | Absent | High | PBC (2022) |
| Other Dry Ports | 60+ | Negligible | 4.2 | Absent | Moderate–high | PBC (2022) |

*Note: "Manual Inspection Rate" refers to the percentage of consignments subject to physical checks.*

## 3. Inter-Agency Coordination: Lessons from the Field

Inter-agency coordination represents one of the most persistent operational hurdles for trade facilitation in Pakistan. While automation and single window reforms are gaining ground, the coordination between Pakistan Customs and various other regulatory bodies (health department, quarantine, plant protection, and drug authorities) remains inconsistent and often fragmented, resulting in prolonged clearance times, redundant processes, and increased costs for traders.

### *3.1 Karachi Port (KICT, QICT, PICT) & Port Qasim*

At Pakistan's major seaports, Karachi (KICT, QICT, PICT) and Port Qasim, clearance of consignments routinely requires approvals from three to four separate agencies in addition to customs itself. These agencies typically include the Department of Plant Protection, Animal Quarantine, Drug Regulatory Authority, Food Department, and Environmental Protection Agency. Despite the development of the Pakistan Single Window (PSW), designed to digitally integrate up to 75 public and private entities (FBR, 2023), the practical level of cross-agency integration remains limited.

As of late 2023, only about 40% of relevant agencies at these ports fully utilize the PSW for their regulatory processes, with the rest partly digitized or still dependent on legacy paper-based approvals (FBR, 2023; PBC, 2022). Process mapping by the Federal Board of Revenue

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revealed that redundant documentation and repeated manual verifications persist, even for shipments cleared electronically by customs (FBR, 2023). According to exporter surveys, obtaining all ancillary agency clearances can add 1–2 days to the average clearance time, even at highly automated ports (PBC, 2022). In practice, traders frequently encounter conflicting requirements or data entry duplications among agencies, causing administrative delays and uncertainty.

### *3.2 Lahore Dry Port & Other Upcountry Facilities*

At Lahore Dry Port and other upcountry or minor dry ports, the situation is even more challenging. Most regulatory agencies operate in isolation, often maintaining parallel, paper-based clearance systems separate from WeBOC or PSW modules (Ahmad et al., 2022). Traders and customs agents report that the lack of inter-agency integration typically adds 24–48 hours to clearance times, particularly for shipments subject to multiple regulatory checks (PBC, 2022).

Coordination breakdowns—such as absent officers, misaligned work schedules, or ambiguous documentation protocols—are routine, resulting in uncertainty and unplanned demurrage costs for importers and exporters (PBC, 2022). Process audits show that agencies at these ports rarely share data electronically, and joint physical inspections are uncommon, leading to multiple, sequential inspections for the same consignment (Farooq & Jalil, 2021).

### *3.3 Land Border Crossings (Torkham, Sust, Taftan)*

Coordination challenges are most acute at land border crossings. At Torkham (Afghanistan border), Sust (China border), and Taftan (Iran border), there is no functional single-window implementation—all relevant agencies operate separate regimes, often with their own documentation requirements, clearance steps, and physical inspection protocols (Farooq & Jalil, 2021).

Agencies frequently operate on staggered work schedules, meaning that if even one agency is unavailable, the whole clearance process is halted for that shipment (Farooq & Jalil, 2021). There are few mechanisms for joint risk-based inspection or shared intelligence, so each agency often inspects independently, and redundancies are common.

A 2022 field survey found that 91% of border traders experienced clearance delays directly attributable to inter-agency fragmentation, and reported these delays as a major deterrent to formal trade (PBC, 2022). The FBR's 2023 report specifically highlights "institutional turf battles" and absence of legal harmonization among agencies as a recurring obstacle to streamlining border management (FBR, 2023).

**Table 3.1: Inter-Agency Coordination and Associated Clearance Delays (2024)**

| Location | # Agencies Involved (avg.) | % Using PSW or WeBOC | Add'l Avg. Clearance Time (Days) | Parallel Paper-Based Steps | Main Issues | Source |
|---|---|---|---|---|---|---|
| Karachi (KICT/QICT/PICT) | 3–4 | ~40% | 1–2 | Common | Duplication, partial integration | FBR (2023); PBC (2022) |
| Port Qasim | 3–4 | ~40% | 1–2 | Common | Redundancy, lack of full digitization | FBR (2023); PBC (2022) |

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| | | | | | | |
|---|---|---|---|---|---|---|
| Lahore Dry Port | 2–4 | 20–30% | 1–2 | Widespread | Manual overrides, officer absence | Ahmad et al. (2022); PBC (2022) |
| Minor Dry Ports | 2–3 | <20% | 2–3 | Universal | Sequential inspections, data silos | PBC (2022) |
| Torkham (AF), Sust (CN), Taftan (IR) | 2–4 | <10% | 2–4 | Universal | No single window, staggered schedules | Farooq & Jalil (2021); PBC (2022) |

## 4. Tariff Classification and Valuation Disparities

Tariff classification and customs valuation remain persistent sources of inefficiency and complexity for trade facilitation in Pakistan. These technical functions underpin not only revenue collection, but also predictability and trust for importers and exporters. Empirical evidence and case reviews at different clearance points reveal significant spatial disparities in accuracy, consistency, and dispute rates.

### *4.1 Karachi Port (KICT, QICT, PICT) & Port Qasim*

At Pakistan's major seaports—Karachi's container terminals (KICT, QICT, PICT) and Port Qasim—tariff classification processes have improved over the last five years with the digitalization of clearance procedures. According to the Federal Board of Revenue (FBR) and recent tribunal data, HS code classification disputes as a share of overall appeals have declined modestly from ~20% in 2018 to 12–15% by 2023, especially for high-value, complex, or technology consignments (Javed, Mehmood, & Raza, 2020; FBR, 2023). This improvement reflects enhanced access to electronic classification tools via WeBOC, On-site support from classification officers, and Some standardization after Customs Valuation Ruling updates.

However, ongoing challenges persist. Sudden changes in Statutory Regulatory Orders (SROs)—often issued without sufficient pre-notification or guidance—lead to recurring uncertainty. Importers frequently complain of unpredictable classification and valuation practices, which expose them to higher duties or retrospective levies (PBC, 2022). While technological upgrades and electronic reference libraries now support better harmonization, inconsistent officer interpretation and subjective valuation for new or sophisticated products continue to trigger appeals and transactional delays (Siddiqui, 2020).

### *4.2 Lahore Dry Port & Other Upcountry Facilities*

Disparities in classification outcomes become more pronounced at Lahore, Faisalabad, and other upcountry dry ports. Here, classification practices are often inconsistent, with similar consignments sometimes assigned different HS codes at different locations or even at the same dry port over time (Siddiqui, 2020; PBC, 2022). This lack of uniformity disproportionately impacts SMEs and traders without dedicated compliance staff: Appeals and reviews arising from misclassification or disputed values can add 2–4 days to overall clearance times or result in unexpected duty liabilities (Javed et al., 2020). Study of official appeals demonstrates that over one-fifth of all customs tribunal cases nationally from 2021–2023 stemmed from classification or valuation disputes lodged at dry ports. Inadequate training of frontline staff and limited dissemination of updated reference values are reported as core reasons for such disparities (Ahmad, Ullah, & Jamil, 2022).

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### *4.3 Land Border Crossings (Torkham, Sust, Taftan)*

In border and remote stations (e.g., Torkham, Sust, Taftan), classification and valuation disputes are much less formally documented, primarily because the majority of processed shipments are low-value essential trade or informal consignments (Farooq & Jalil, 2021). Nonetheless, the opacity and subjectivity of assessment procedures is highest here. Most traders lack recourse to rapid dispute resolution, and compliance is secured primarily through officer discretion rather than system-driven checks or reference prices (PBC, 2022). As importers often opt for informal settlements to avoid cargo delays in these regions, the true frequency of disputes may be much higher than records suggest.

The disparities and persistent disputes in tariff classification and valuation are attributable to several structural and procedural shortcomings: Frequent rule and SRO changes without harmonized communication to all officers and traders.

Gaps in real-time access to global and national reference prices, Inadequate and irregular training for classification officers, especially outside Karachi/Port Qasim, Lack of standardized appeal or ADR (alternative dispute resolution) mechanisms available to SMEs and border traders, High discretionary power at remote and lower-volume ports are the issues collectively increase clearance times, erode incentives for compliance, and undermine Pakistan's trade facilitation and competitiveness, particularly for new exporters and small-scale importers.

**Table 4.1: Tariff Classification and Valuation Dispute Outcomes Across Major Clearance Points (2021–2023)**

| Location | Classification Dispute Rate (% of appeals) | Median Clearance Delay (days, disputed cases) | Common Causes | ADR/Appeal Mechanism | Source |
|---|---|---|---|---|---|
| Karachi (KICT/QICT/PICT) | 12–15% | 2–3 | HS code for tech, SRO changes | Yes (tribunal) | Javed et al., 2020; FBR, 2023 |
| Port Qasim | 13% | 2–3 | Subjective valuation, new goods | Yes (tribunal) | Javed et al., 2020; FBR, 2023 |
| Lahore Dry Port | 18–20% | 3–4 | Inconsistent application, staff gaps | Yes (tribunal) | Siddiqui, 2020; PBC, 2022 |
| Faisalabad/Other Dry Ports | 15–20% | 3–4 | Misclassification, poor training | Yes (tribunal) | PBC, 2022 |
| Border Stations (Torkham, Sust, Taftan) | <5% (formal) | <2 (informal) | Officer discretion, informal settlements | Rare | Farooq & Jalil, 2021 |

**ADR = Alternative Dispute Resolution.*

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## Discussion

This study set out to analyze the primary challenges faced by Pakistan Customs in advancing trade facilitation, with a particular focus on the effects of automation, risk management, inter-agency coordination, and tariff classification. The findings both confirm and extend observations made in prior studies on developing economies, contributing to the literature by providing a nuanced, Pakistan-specific synthesis.

The empirical results underscore that automation through WeBOC and the Pakistan Single Window (PSW) has improved clearance times and transparency at major ports, in line with global experiences reported by Grainger (2014) and Moïsé & Sorescu (2013). However, the impact is spatially uneven. Karachi and Port Qasim have managed to reduce average clearance times to 2.2–2.7 days, while inland dry ports and border stations remain hampered by partial automation, frequent manual overrides, and persistent infrastructure challenges. This echoes patterns observed in Ethiopia and Bangladesh, where flagship reforms led to substantial gains at primary gateways but failed to take root at secondary sites due to limited institutional capacity and user resistance (Kassahun, 2014; Hossain et al., 2021).

Customs risk management remains a weak spot. Despite policy adoption of risk-based selectivity, physical inspection rates are still 40–50% at major Pakistani ports, and often even higher (above 80%) at land borders. This is well above international best-practice benchmarks and stands in contrast to the progress made in more advanced reformers. In Bangladesh, for instance, targeted investments in risk profiling systems have gradually lowered inspection rates at key ports compared to Pakistan (Hossain et al., 2021). In Ethiopia, a lack of risk data and staff trust has similarly undermined risk management effectiveness (Kassahun, 2014). These results indicate that technical reforms alone are insufficient; sustained organizational change, capacity development, and data integration are equally essential.

Inter-agency coordination continues to be a major bottleneck across Pakistan's customs system. While the PSW is intended to streamline and unify documentation and agency mandates, the study finds that as of 2024, only about 40% of involved agencies at major ports use digital systems, with even lower integration at dry ports and borders. This contributes, on average, an additional 1–4 days to processing times for multi-agency-clearance shipments and fosters duplication of effort. International comparisons reveal similar dynamics: Chan (2018) and Temisan (2015) document that limited regulatory coherence and parallel processes consistently impede trade facilitation in Sub-Saharan Africa and the wider South Asian region.

Tariff classification and valuation remain inconsistent and contested. Misclassification rates and appeal volumes, while somewhat lower at Karachi and Port Qasim today than a decade ago, remain high at upcountry ports. Similar issues are reported in the wider South Asian region, where unstable regulatory environments and limited officer training create room for discretionary practices and unpredictable costs for traders (Portugal-Perez & Wilson, 2012; Siddiqui, 2020).

## Theoretical Implications

These findings provide a strong test of the theoretical frameworks anchoring this study:

**Resource-Based View (RBV):** The results affirm that the effectiveness of customs is tightly linked to internal resources—specialized human capital, IT infrastructure, and institutional know-how. Where these are concentrated (Karachi, Port Qasim), modernization has been most successful. Conversely, capability gaps at dry ports and border stations (limited training, underfunded IT, incomplete knowledge transfer) directly lead to uneven outcomes, reinforcing RBV's predictive power (Barney, 1991; Grainger, 2014).

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**Technology Acceptance Model (TAM):** Widespread user resistance and incomplete training have frequently led to the partial or ineffective uptake of automated systems, confirming TAM's emphasis on perceived usefulness and ease of use as determinants of successful technology adoption (Amin, 2010; Davis, 1989; Ahmad & Kalim, 2022). Sites with better training and ongoing support (e.g., major seaports) achieve greater automation results.

**Heckscher-Ohlin Theory:** The study's evidence points to customs inefficiency as a hidden barrier that prevents Pakistan from fully exploiting its comparative advantages; transaction costs linked to procedural delays and misclassification erode competitiveness in labor-intensive and agro-based sectors, supporting the H-O model's predictions (Portugal-Perez & Wilson, 2012; Sakyi et al., 2017).

**New Patterns, Contradictions, and Insights**

**New Pattern:** A critical pattern is the "implementation gap" between automation goals and on-the-ground realities, as seen in secondary ports and border posts.

**Contradiction:** Despite apparent policy reforms, legacy practices (manual override, discretionary checks, parallel paper systems) persist, often undermining the intent of new regulations.

**Insight:** Gains from automation and risk-based approaches are quickly eroded by lack of inter-agency digital harmonization and weak institutional trust, suggesting that technical upgrades must be accompanied by holistic, organizational reforms and clear change management strategies.

**Practical Implications for Policy and Reform**

Results underline the urgent need for targeted capacity building—particularly at inland, upcountry, and border posts—if modernization is to be inclusive and sustainable.

Reform priorities should include: full roll-out and agency onboarding for the PSW, mandatory risk management training, expanded post-clearance audit programs, and harmonized tariff and valuation procedures supported by regular officer training and accessible reference data.

Facilitating low-cost, rapid dispute resolution for SMEs and marginal traders, especially at border and dry ports, would improve equity and reduce unpredictability—a recommendation reinforced by successful models in regional comparators.

**Policy Recommendations**

In light of the study's findings and the supporting theoretical frameworks, a strategic set of policy measures is recommended to advance trade facilitation and improve the performance of Pakistan Customs:

**1. Accelerate and Deepen Customs Automation**

*Expand Digital Infrastructure*

Invest in upgrading internet connectivity and hardware, particularly at inland and border posts, ensuring nationwide coverage of automated systems such as WeBOC and the Pakistan Single Window (PSW). Mandate Electronic Processing: Require that all customs declarations and related trade documents be submitted and processed electronically at every clearance point, minimizing manual overrides except in cases of technical failure.

***Continuous Training***

Regularly train customs officers and relevant staff on system use and change management, emphasizing the principles of the Technology Acceptance Model (TAM) to address issues of user resistance and perceived usefulness.

**2. Strengthen Risk Management and Post-Clearance Control**

*Enhance Risk Profiling*

Upgrade risk management systems to gather and use better data for targeting, aiming to decrease manual inspection rates toward international best practice levels (below 20%).

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*Build Staff Capacity*
Provide specialist training on risk assessment, post-clearance audit (PCA), and anti-corruption for officers at all ports, not just major seaports.
*Institutionalize Post Clearance Audit*
Scale up post-clearance audit as a routine activity, reallocating physical inspection resources to focus on high-risk consignments only.

**3. Promote Inter-Agency Coordination and Single Window Integration**
*Full Integration in PSW*
Require all border agencies (quarantine, standards, food safety, etc.) to fully integrate into PSW, making the digital single window the sole platform for cross-border clearance.
*Harmonize Procedures*
Standardize documentation, operating hours, and inspection protocols across all agencies, especially at border posts, to eliminate sequential and redundant checks.
*Joint Inspections*
Institutionalize joint physical inspections and develop common risk criteria among agencies to reduce duplication and enhance trust and efficiency.

**4. Improve Consistency in Tariff Classification and Valuation**
*Central Reference Platform*
Establish and maintain a comprehensive online repository for HS codes, valuation rulings, and up-to-date SROs accessible by both officers and traders.
*Regular Training*
Provide targeted and recurrent training for customs, particularly at dry ports and land borders, on tariff classification and valuation.
*Fast-track Dispute Resolution*
Expand use of electronic alternative dispute resolution (ADR) processes to enable rapid, fair handling of classification or valuation disagreements, with special provisions for SMEs.

**5. Foster Inclusive Reform and Stakeholder Engagement**
*Support SMEs and Marginalized Groups*
Set up dedicated service desks and simplified clearance channels for SMEs, women-led businesses, and rural traders, ensuring equal access to facilitation benefits.
*Regular Consultation*
Establish structured, periodic feedback forums with the business community and logistics sector to monitor procedural bottlenecks and inform continuous improvement.
**6. Update Legal Frameworks and Oversight**
*Modern Legal Structures*
Revise outdated customs legislation to align with digital clearance, WTO commitments, and best international practices.

*Independent Oversight*
Create an independent oversight mechanism or ombudsman under the Federal Board of Revenue (FBR) to audit reform outcomes and address stakeholder grievances.
*Transparency and Metrics*
Regularly publish key clearance and facilitation indicators (e.g., clearance time, inspection rates, dispute ratios) to promote transparency and accountability.

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Implementing these recommendations would modernize Pakistan's customs system, close the gap between policy and field reality, and provide the foundation for more competitive, inclusive, and resilient trade.

## Conclusion

Pakistan Customs faces numerous hurdles in improving trade, especially when it comes to things like automation, how they handle risks, working with other agencies, and even how they classify tariffs. While there's been progress, like the introduction of WeBOC and the Pakistan Single Window (PSW), there are still quite a few issues at different customs locations and with different procedures.

For instance, automation has sped things up and made things more transparent at big seaports such as Karachi and Port Qasim. However, not all digital systems are used everywhere, especially at dry ports and border crossings. This unfortunately means some shipments still have to go through manual checks, deal with poor infrastructure, and face unpredictable delays. Risk management strategies are in place; yet, physical inspections occur more often than international standards suggest, leading to additional expenses for traders and clogs in the system. Because thorough post-clearance audits are not regularly performed, and risk-based selectivity isn't used enough, especially outside major entry points, the perks of these changes are lessened.

Furthermore, getting different agencies to work together remains a challenge for smooth trade facilitation. Roughly less than 50% of important agencies are using PSW or other automated platforms as of this year, which causes duplicated checks, overlapping paperwork, and inconsistent procedures. These issues are worsened by discrepancies in how tariffs are classified and goods are valued. Small to medium-sized businesses (SMEs) and traders in upcountry areas are notably more affected by holdups, higher expenses, and difficulty resolving disputes quickly.

These discoveries suggest that Pakistan's ongoing efforts to modernize customs align with Resource-Based View and the Technology Acceptance Model. True achievement is based not only on technology investments, but also on nurturing institutional capabilities, promoting user acceptance, and upgrading regulatory frameworks to keep pace with evolving trade scenarios.

To advance, focus must be placed on broadly implementing automation and digital integration, improving risk management techniques, aligning agency procedures, and making sure all traders, particularly SMEs and those who are often overlooked, have equal opportunities to benefit from trade facilitation. Strengthening the likes of training programs, information networks, legal changes, and transparency in performance will play a critical role in bridging the divide between guidelines and how they are applied in reality.

Ultimately, these improvements are essential for cutting trade expenses, boosting Pakistan's ability to compete in exports, and helping the country gain more from regional and global economic partnerships going forward.

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