

Evaluating the Impact of Custom Procedures on Trade Facilitation in Pakistan

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Abstract

This study provides a comprehensive empirical evaluation of the impact of customs procedures on trade facilitation in Pakistan. Despite government initiatives, persistent inefficiencies, including protracted clearance times, complex documentation, and a lack of transparency, continue to inflate trade costs and undermine the competitiveness of Pakistani businesses. Employing a quantitative research design, data were collected via a structured questionnaire from 102 Pakistani businessmen, including importers, exporters, manufacturers, and logistics providers. The findings strongly affirm that inefficient and non-transparent customs procedures constitute a significant impediment to trade facilitation. While the introduction of the Pakistan Single Window (PSW) is recognized as a positive step toward digitalization, its perceived effectiveness remains moderate, hampered by usability challenges and limited transformative impact on overall efficiency. The research further reveals that the burden of customs inefficiencies is not uniform, disproportionately affecting smaller and newer enterprises. A critical finding underscores those businesses with a stronger understanding of customs regulations experience fewer delays, highlighting the paramount importance of knowledge and capacity building. The study concludes with targeted policy recommendations, urging the government to enhance transparency, simplify regulatory frameworks, invest in technological infrastructure, and prioritize stakeholder training to better integrate Pakistan into global value chains and unlock its full economic potential.

Keywords

Customs Procedures, Trade Facilitation, Trade Costs, Pakistan Single Window (PSW), Competitiveness, SMEs

1. Introduction

One of the most important aspects of Pakistan's economic growth and international integration is its commercial environment. Since gaining independence in 1947, Pakistan's trade patterns have experienced significant changes. Agricultural, industrial, and service exports have all grown in importance as the nation has diversified away from its focus on agriculture and basic commodities. Despite these achievements, obstacles such as a lack of infrastructure, bureaucratic red tape, and geopolitical tensions continue to hinder the effectiveness of regulatory frameworks and trade policies. Pakistan's pivotal location between pivotal Asia, the Middle East, and South Asia makes it a major actor in the dynamics of regional and global business. Over time, Pakistan's expanding partnerships with surrounding countries and regional trading blocs like SAARC and ECO have had a considerable impact on the country's economic environment.

However, Pakistan's neighbors, especially China and India, whose relations are always changing, present both opportunities and challenges to its commerce. The trade environment is greatly impacted by the efficacy of regulatory frameworks and policies. Pakistan's trade policies, tariff structures, and regulatory environment all have a big influence on how competitive its imports and exports are.

Despite Pakistan's efforts to liberalize trade, enduring barriers like infrastructure limitations, bureaucratic inefficiencies, and geopolitical concerns have prevented the country from fully realizing its trading potential.

This is especially true for customs processes, which make it easier to move goods across international borders. Customs procedures have a major impact on the efficiency of trade processes, which in turn affects how competitive imports and exports are. Pakistan must improve its customs processes to support trade and economic integration because of its important location at the meeting point of South Asia, Central Asia, and the Middle East.

1.1. Importance of Custom Procedures in Trade Facilitation

Inadequate infrastructure, fragmented government entities, and complicated customs procedures define Pakistan's trade facilitation environment. These problems have led to a significant rise in trade prices, which has limited Pakistan's capacity to participate in international trade and hampered economic expansion. Since customs processes have an impact on global value chains, economic efficiency, regional integration, and international trade links, they are crucial for trade facilitation. It is crucial to evaluate the impact of these procedures in order to locate bottlenecks, streamline operations, and improve the general effectiveness of cross-

border trade activities.

Reducing commercial transaction costs and removing bureaucratic roadblocks require effective customs processes. By looking at how inefficiencies affect processing times and trade costs, Pakistan may find them and put reforms in place to improve economic efficiency and growth. This reform can entail modernizing some areas through digitization, improving interagency integration, and digitizing and automating some activities. Pakistan can assess its adherence to international accords, expand market access, attract foreign direct investment, and build trust via more predictability and transparency, in addition to fostering international trade partnerships and guaranteeing adherence to WTO norms. Evaluations can help strengthen Pakistan's position in regional trade, find ways to work with trade agreements to create more effective corridors and standardized policies, and ultimately lead to more equitable growth, more jobs, and less poverty in South Asia. Furthermore, traditions have a vital role in advancing regional integration and sustainable development. The effectiveness of the supply chain and the cost of commerce are impacted by customs processes, which also affect a nation's ability to engage in global value chains (GVCs). By assessing and changing these practices, Pakistan may improve its supply chains and make itself a more appealing player in international manufacturing networks. In conclusion, to fully realize Pakistan's economic potential, a thorough evaluation and specific adjustments to its customs processes are necessary. As a result, Pakistan will become more competitive, have easier access to global value chains, encourage international trade, and strengthen regional integration.

1.2. Problem Statement

The degree of success of Pakistan's trade facilitation efforts is not well documented, especially when it comes to the effect that customs processes have on different merchants' financial performance (Ahmed, 2019). However, more people are realizing how important trade facilitation is to Pakistan's economy. Further research is required to address the difficulties encountered by importers, exporters, and customs officers throughout the customs procedure (Iqbal & Shahzad, 2021b). Customs procedures must be well-oiled machines that enable the quick and easy movement of goods across borders in order for international trade to run smoothly. However, because of the many challenges that customs procedures still face, trade facilitation is still ineffective and burdens economies and businesses. The main problems with customs procedures and the need for all-encompassing remedies will be covered in this section.

The lengthy and time-consuming paperwork and form duplication needed for customs clearance are the first major challenge that customs operations must overcome. Delays and higher costs are the results of this. Because of the lack of consistency and harmony between jurisdictions, businesses already face challenges in complying with legislation. The fact that different nations have different frameworks and approaches makes this scenario worse. In addition, an over-reli-

ance on human processes and a poor use of automation and technology lead to inefficiencies and a higher risk of mistakes. Generally speaking, these problems hinder the effective processing of goods at border crossings due to a lack of skilled workers, outdated equipment, and insufficient inspection facilities. Lastly, unclear laws and opaque decision-making further exacerbate the lack of transparency, leading to price increases and the unjust distribution of advantages to certain. Ultimately, overcoming these significant barriers to effective goods movement will require a multifaceted approach that includes regulatory harmonization, technology integration, capacity building, and enhanced transparency in order to fully realize the potential of global trade and promote economic development.

1.3. Purpose of the Study

Although the Pakistani government has worked to improve customs procedures, problems including long wait periods, complicated paperwork, and unanticipated costs still exist. Trade expenses rise, trade volume falls, and competitiveness is lost as a result of these inefficiencies. This study will assess the effects of these inefficiencies on different economic sectors, pinpoint the obstacles and reform prospects, and draw recommendations in order to support the creation of policies that encourage more effective customs procedures. The main goals of the study are to assess the current status of Pakistan's customs procedures, determine the difficulties faced by traders as a result of these procedures, determine how these procedures affect the trade costs and competitiveness of Pakistani businesses, and, finally, determine the efficacy of the government's ongoing trade facilitation programs.

1.4. Aims and Objectives of Study

This study aims to provide a comprehensive evaluation of customs procedures in Pakistan by pursuing the following key objectives:

Examining clearance delays, documentation, transparency, and dealer-experienced challenges as part of a diagnostic inquiry into bottlenecks and process efficiency. Examine how customs processes affect supply chain dependability, trade expenses, and market position in order to determine how they affect trade competitiveness to evaluate the technological integration and regulatory frameworks, paying particular attention to automation, regulatory harmonization, and infrastructure. It is possible to assess the effectiveness of policies and stakeholder engagement by mapping players and analyzing trade facilitation projects. To create a workable policy framework that will increase productivity and foster cooperation, we will compile reform recommendations that are supported by data.

Research Questions

- How efficient are the current customs procedures in Pakistan in facilitating international trade?
- What are the primary bottlenecks and challenges faced by traders in Pakistan due to customs procedures?
- What is the impact of customs procedures on trade costs and the competitive-

ness of Pakistani businesses?

- How effective are the existing trade facilitation initiatives implemented by the Pakistani government in improving customs processes and enhancing trade efficiency?

1.5. Hypotheses of Research

H1: In Pakistan, trade facilitation is greatly impacted by ineffective and onerous customs procedures, which raise trade prices, reduce competitiveness, and impede trade volume.

H2: The Pakistan Single Window (PSW) and other e-Customs systems have significantly improved the efficiency and transparency of customs procedures, thereby simplifying the process of commerce.

H3: Customs procedures in Pakistan have varying impacts on trade facilitation for various types of enterprises and industries.

H4: Businesses with a stronger understanding of customs procedures and regulations experience fewer delays and challenges during the customs clearance process (**Figure 1**).

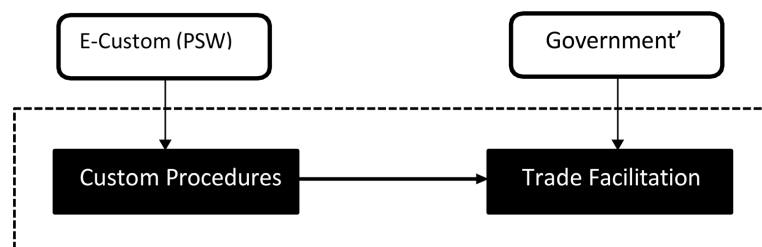


Figure 1. Customs procedures and trade facilitation.

2. Literature Review

2.1. Conceptual Framework

Since trade promotes innovation, healthy competition, and general economic progress, it is essential for all economies. In the current globalized world, it is imperative that nations execute effective trade facilitation in order to participate in international commerce and reap its benefits. The *World Trade Organization (2015)* states that the trade facilitation framework includes customs clearance, logistics, and other bureaucratic processes and is intended to facilitate and expedite international business. Trade volume and competitiveness can rise when trade inefficiencies and barriers are removed (*Johns, Kerswell, & McLinden, 2018*). Trade facilitation, according to *Raven (2001)*, is a group of measures done to simplify, standardize, and expedite the processes and procedures related to international commerce. The overall goal is to increase the effectiveness of global trade by cutting down on the time, expense, and inconvenience involved in moving goods from one nation to another (*Baldwin & Robert-Nicoud, 2001*).

For trade facilitation to promote economic development and growth, it must be successful. The ease with which businesses can import and export commodities

is directly related to the decrease of trade costs and the removal of delays (Williamson, 2002). By encouraging innovation, opening up new markets, and boosting competition, this leads to economic growth (Krueger, 1997). Businesses can profit from commerce facilitation in a variety of ways. Commodities become more profitable and competitive when they are imported and exported in a more efficient and economical manner (Bhagwati, 1993). Additionally, it makes customs procedures more predictable and transparent, which makes it easier to make educated judgements and lessens uncertainty (UNCTAD, 2015). Trade facilitation benefits economies, companies, and society at large. According to the World Trade Organization (2013), this promotes trade, creates new job possibilities, and increases productivity, all of which help the economy grow. In addition to reducing poverty, it lowers commodity costs and encourages inclusive growth (Wilson & Gamble, 2007).

2.2. Role of Custom Procedures

Despite being aware of the benefits, many countries struggle to adopt effective trade facilitation measures (Raven, 2001). The main obstacles to advancement are outdated technology, lengthy and complicated procedures, a lack of cooperation across government entities, and a lack of training for customs officials (Grainger, 2008). Ineffective customs processes can limit economic growth by negatively affecting trade costs, volume, and competitiveness (Khan & Zubair, 2022). Businesses, especially those in the SME sector, can be greatly impacted by delays, complex documentation requirements, and unforeseen costs (Johns, Kerswell, & McLinden, 2018).

There are many different approaches that countries might take to deal with these issues. While streamlining and simplifying trade procedures can lower costs and delays, modern technology, such as computerized customs clearance systems, can increase efficiency and transparency (OECD, 2004). Wilson et al. (2009) argue that trade facilitation measures can be further improved by increasing the institutional competence of customs personnel as well as the degree of accountability and openness. When these barriers are successfully overcome, nations can profit from the many advantages of trade facilitation, such as expanded international commerce, lower trade costs, enhanced economic competitiveness, and better social, economic, and business welfare (UNCTAD, 2015; WTO, 2013). In the 21st century, promoting global economic growth and development requires improving trade facilitation processes through the adoption of streamlined customs procedures.

The rules, methods, and technologies that control the flow of products across international boundaries are collectively referred to as customs procedures (Wilson et al., 2009). These procedures are designed to facilitate compliance with customs laws and regulations while also protecting the nation's economic and national security interests (UNCTAD, 2015). Trade facilitation, which is the simplification and harmonization of procedures related to international trade, is greatly

enhanced by effective and streamlined customs procedures (United Nations Conference on Trade and Development, 2023). A key element of global trade, customs procedures control the flow of goods across international boundaries and guarantee adherence to laws, levies, and trade restrictions. The development of economic growth and the continuous flow of commodities through cross-border trade depend on the painstakingly designed procedures (World Customs Organization WCO, 2021a). Ensuring compliance with regulations, tariffs, and trade restrictions, customs processes govern the movement of products across borders and are a cornerstone of international trade. Through seamless cross-border trade, the meticulously planned procedures are essential to guaranteeing the smooth flow of commodities and fostering economic progress (World Customs Organization WCO, 2021b).

2.3. Global Best Practices in Trade Facilitation

Trade facilitation encompasses a myriad of processes aimed at simplifying cross-border trade to reduce transaction costs and enhance efficiency. Examining global best practices provides a benchmark for evaluating national systems and highlights the pivotal role of customs modernization.

2.3.1. World Trade Organization (WTO) Trade Facilitation Agreement

The WTO Trade Facilitation Agreement, a seminal initiative adopted in 2013, stands as a cornerstone in promoting global best practices in trade facilitation. This agreement provides a comprehensive framework for expediting the movement, release, and clearance of goods. However, the effective implementation of its provisions relies heavily on the optimization of custom procedures. Research demonstrates the substantial economic gains associated with full compliance with the TFA, underscoring the significance of custom procedures in realizing its benefits.

2.3.2. Single Window Systems

Single Window Systems (SWS) emerge as a key facilitator of trade, exemplifying global best practices. SWS integrates various regulatory procedures into a unified electronic platform, mitigating duplication of efforts and minimizing delays in customs processes. Studies have consistently highlighted the positive impact of SWS on trade facilitation, particularly in terms of time and cost savings. However, the efficacy of SWS is contingent upon efficient custom procedures, emphasizing their pivotal role in facilitating seamless trade operations.

2.3.3. Ports and Logistics Infrastructure

Efficient port and logistics infrastructure are indispensable for effective trade facilitation. Countries boasting well-developed transportation networks and modern logistics hubs experience smoother trade flows. The importance of infrastructure quality cannot be overstated, particularly concerning custom procedures' efficiency at port facilities. However, without streamlined custom procedures, even the most advanced infrastructure may fail to optimize trade facilitation efforts.

2.3.4. Efficient Customs Procedures

Efficient custom procedures play a vital role in trade facilitation endeavors. Global best practices advocate for the adoption of risk management systems, simplification of documentation requirements, and automation of customs processes. These measures substantially contribute to reducing trade costs and enhancing overall trade performance. However, the effectiveness of these practices hinges on the optimization of custom procedures tailored to specific national contexts. In Pakistan, custom procedures have emerged as a significant challenge to trade facilitation. The country grapples with complex and outdated customs procedures, alongside inadequate infrastructure and coordination among government agencies. These inefficient and cumbersome custom procedures impede trade facilitation, resulting in escalated trade costs, diminished competitiveness, and hindered economic growth.

Therefore, evaluating the impact of custom procedures in Pakistan becomes imperative to address these challenges effectively. On the base of these problems in other words, we can say it as a motivation of this research which is to evaluate the current custom procedures impact on the trade facilitation of Pakistan, through a data analysis which is collected from different Businessmen of country. The data for quantitative analysis will be collected through an open-ended questionnaire, and SPSS will be used to analyze qualitative data, identifying recurring patterns and themes related to the implementation. This mixed-methods approach enhances the study's depth and breadth in examining the multifaceted aspects of trade facilitation.

2.4. Pakistan Customs Procedures and their Impact on Trade Facilitation

Customs administrations globally play a crucial role in trade facilitation, revenue collection, and community and ecosystem protection. In the current era of widespread consumption of foreign goods, their role in societal protection is vital. Globalization emphasizes the need for infrastructure modernization and capacity building in customs administration for digital transformation. Pakistan Customs, the country's oldest institution, has been dedicated to its role, adopting automation reforms in the 80s and consistently upgrading. The transition from One Custom to Pakistan Single Window showcases their abilities and successes. They've established dedicated formations and departments to combat smuggling and exploitation of formal procedures. Most customs clearance processes are now conducted through internet-based software, reflecting modernization and a futuristic outlook driven by a unique administrative culture. Pakistan, with its strategic location and diverse economy, has the potential to be a major player in global trade. However, its economic growth has been hampered by inefficiencies in its trade facilitation system, particularly cumbersome and time-consuming customs procedures (Iqbal & Shahzad, 2021a).

This has led to increased trade costs, reduced competitiveness, and ultimately, hindered Pakistan's ability to fully capitalize on its economic potential (Khan &

Zubair, 2022). Pakistan faces challenges in streamlining customs procedures, which hinder its economic potential. A 2018 study by Johns, Kerswell, and McLinden found that Pakistan's customs clearance times are significantly longer than the global average, costing businesses an estimated 2.7% of their import value (Johns, Kerswell, & McLinden, 2018). A study by Khan and Zubair 2022 found that Pakistan's trade facilitation index is lower than that of other developing countries in the region, such as India and Bangladesh (Khan & Zubair, 2022). The Pakistani government has recognized the importance of trade facilitation and implemented several initiatives to streamline customs procedures. The Pakistan Single Window (PSW) is a unified online platform that aims to reduce paperwork and expedite customs clearance (Azhar, 2022). Additionally, the government has implemented e-Customs solutions to automate and digitize customs processes (Khan, 2023).

A study by the World Bank (2016) cited in later analyses (World Bank, 2020) found that inefficient customs procedures in Pakistan cost the economy approximately 3.5% of GDP. This is equivalent to a loss of approximately \$12 billion per year. The study also found that these inefficiencies disproportionately affect small and medium-sized enterprises (SMEs), which are the backbone of Pakistan's economy.

2.5. Pakistan Single Window (PSW) and Trade Facilitation

The Pakistan Single Window (PSW) is a government initiative designed to streamline trade by creating a single platform for businesses to interact with all relevant agencies. It has demonstrated potential to reduce costs, improve transparency, and increase the efficiency of customs clearance. However, the PSW's full impact remains limited. Many businesses are still unfamiliar with the system and encounter challenges using it effectively.

Research indicates that trade facilitation measures like the PSW positively impact cross-border e-commerce. They reduce clearance times and costs, improve data reliability, and increase the predictability of customs processes (Figure 2). Therefore, continued improvement and implementation of such systems are crucial to support e-commerce growth and enhance the competitiveness of involved firms.

2.6. Impact on Trade Costs

The high transaction costs associated with inefficient customs procedures in Pakistan increase the cost of doing business for Pakistani businesses, making them less competitive in global markets. This is particularly problematic for SMEs, which often lack the resources to navigate complex customs procedures and comply with burdensome regulations.

2.7. Gaps in Existing Literature

There are still a lot of gaps in the literature, even while there is a lot of research that highlights the value of tech-driven customs procedures that effectively

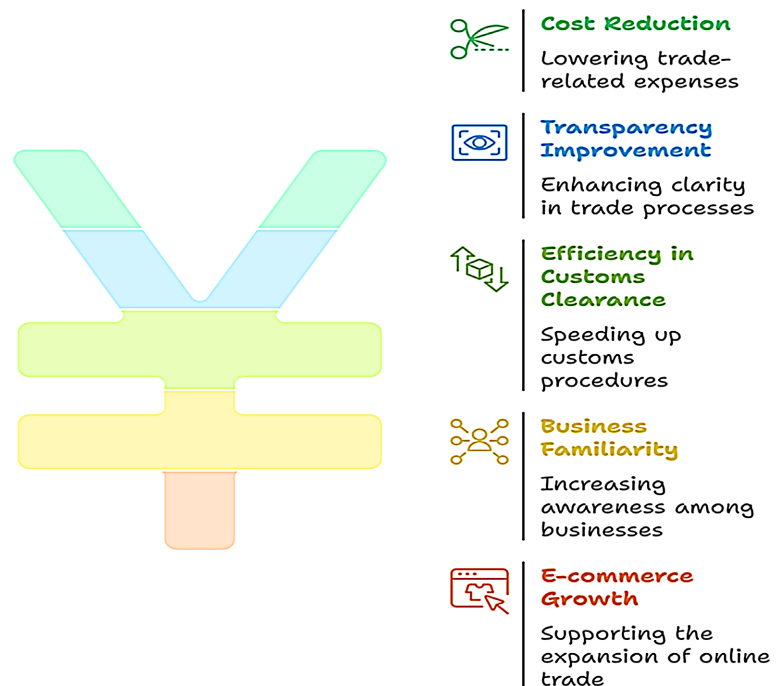


Figure 2. Enhancing trade efficiency with PSW.

facilitate trade. Micro-level research that looks at the unique difficulties faced by individual businesses, especially SMEs, is extremely scarce compared to the large number of macro-level studies. Furthermore, very little is known about how institutional and cultural factors affect efficiency and compliance. Longitudinal studies that evaluate the long-term financial effects of modernization changes are also few. Lastly, in this age of sustainability, there is a conspicuous lack of knowledge about the environmental effects of customs procedures and the function of green logistics in promoting trade. More sophisticated, context-specific, and forward-looking research is necessary to fill in these gaps and gain a thorough understanding of the dynamics of customs efficiency.

3. Customs Procedures and Trade Facilitation Landscape in Pakistan

3.1. Overview of Procedures

Importers and exporters are required to declare their goods to the customs authorities, including information such as the description of goods, quantity, value, and origin. Customs officers use import values to calculate taxes and fees, where the price paid or owed for the goods, or their transaction value, is usually what determines how much to value them. After the declaration of goods, customs authorities assess the applicable customs duties, taxes, and other charges, which may include customs duty, sales tax, federal excise duty, and additional customs duties. Customs officials may examine the goods to verify the accuracy of the declaration and ensure compliance with customs regulations, subjecting goods to physical inspection, x-ray scanning, or other inspection methods. Importers are required to

pay the assessed customs duties, taxes, and other charges before the release of goods from customs custody, with various payment methods, such as electronic funds transfer or bank drafts, accepted. Once all necessary customs procedures have been completed and duties/taxes paid, the goods are cleared for importation or exportation, with authorities issuing a customs clearance certificate or release order allowing the goods to be released.

Customs authorities may conduct post-clearance audits to verify the accuracy and compliance of customs declarations, which may involve reviewing import/export documents, and records, and conducting on-site inspections. Importers and exporters need to adhere to customs regulations and procedures to avoid delays, penalties, or other enforcement actions, while specific customs procedures may vary depending on factors such as the type of goods, mode of transport, and trade agreements.

3.2. Institutional Framework

Customs procedures in Pakistan are governed by the Federal Board of Revenue (FBR) under the Act of 1969. The FBR is responsible for formulating and implementing customs policies, procedures, and regulations across the country.

3.3. SWOT Analysis (Figure 3)

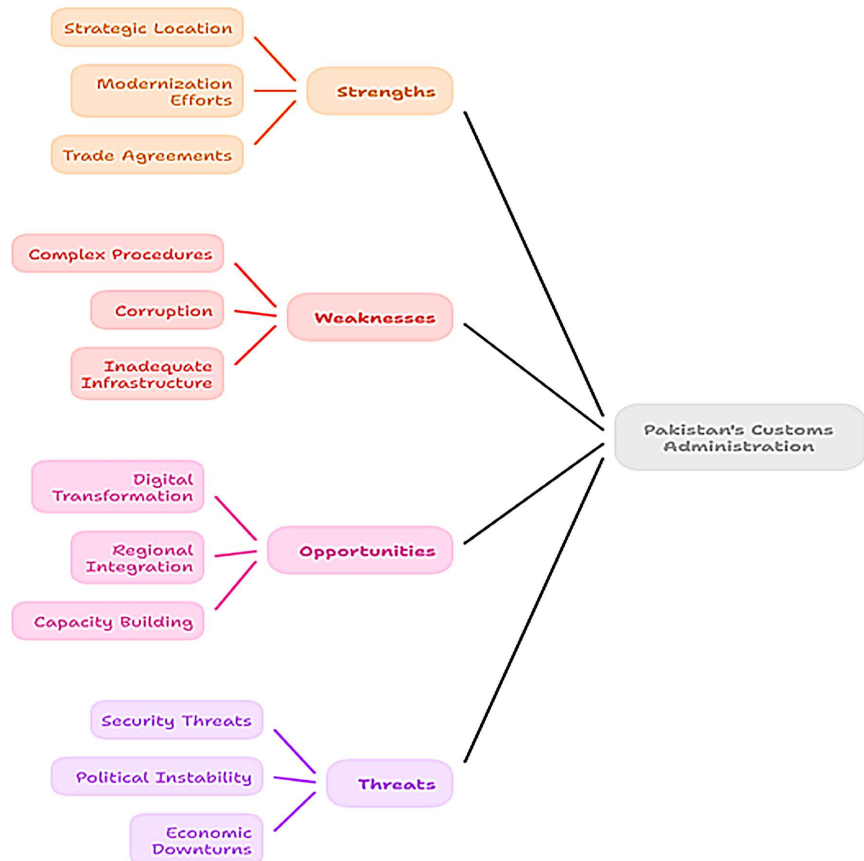


Figure 3. SWOT analysis of Pakistan customs administration.

3.4. Government Initiatives

Trade facilitation in the customs areas of Pakistan refers to the measures and processes implemented to streamline and expedite the movement, clearance, and release of goods across borders while ensuring compliance with customs regulations. These efforts aim to reduce trade barriers, enhance efficiency, and promote economic growth by facilitating international trade. Key aspects of trade facilitation in the customs areas of Pakistan include:

3.4.1. Electronic Customs System

Pakistan has implemented electronic customs systems such as the Pakistan Customs Computerized System (PACCS) to automate customs processes, including customs declarations, clearance, and payment of duties and taxes. These systems improve efficiency, transparency, and accuracy in customs operations.

3.4.2. Single Window System

The Pakistan Single Window (PSW) initiative aims to provide a single point of access for submitting trade-related documents and obtaining approvals from various regulatory agencies involved in trade processes. The PSW simplifies procedures, reduces paperwork, and enhances coordination among government agencies, thereby facilitating trade. The Pakistan Single Window (PSW) is a transformative digital initiative designed to streamline and modernize cross-border trade processes. Its primary goal is to serve as a unified national platform that integrates all stakeholders involved in trade—including traders, customs authorities, and other regulatory agencies—into a single electronic interface. By doing so, the PSW aims to eliminate fragmented and redundant procedures, significantly reducing the time, cost, and documentation required for import, export, and transit transactions. Key functions of the PSW include enabling electronic submission and processing of trade-related documents, providing a centralized portal for applications and approvals, automating risk-based inspections, and facilitating real-time information exchange among government departments such as customs, port authorities, and standards organizations. The system also supports online payment of duties and taxes, enhances transparency through trackable application statuses, and promotes data-driven decision-making.

Ultimately, the PSW seeks to improve Pakistan's trade competitiveness, enhance ease of doing business, reduce opportunities for corruption, and align the country's processes with international best practices such as the WTO Trade Facilitation Agreement. By creating a more efficient, transparent, and coordinated trade ecosystem, the PSW is expected to play a critical role in boosting economic growth and integration into global supply chains. However, the PSW system proposed in this paper lacks a comprehensive introduction and explanation. To address this gap, we provide a detailed overview of the PSW system, including its objectives, functionalities, and potential impact on trade facilitation. Additionally, to ensure an objective analysis, we will conduct a systematic comparison of the PSW system with similar systems implemented in other countries. This compar-

ative analysis will provide insights into the strengths and weaknesses of the PSW system and identify areas for improvement.

3.4.3. Risk Management

By implementing risk management strategies, Pakistani customs agents expedite the clearance of low-risk commodities while conducting inspections on high-risk ones. Risk-based approaches help optimize resources, improve compliance, and facilitate legitimate trade flows.

3.4.4. Customs Cooperation and Coordination

Pakistan collaborates with international organizations, neighboring countries, and trading partners to promote customs cooperation and harmonization of customs procedures. Bilateral and regional agreements facilitate mutual recognition of customs procedures, exchange of information, and capacity-building initiatives, thereby enhancing trade facilitation.

3.4.5. Trade Infrastructure Development

Pakistan invests in developing trade infrastructure such as ports, border crossings, and customs facilities to enhance the efficiency and capacity of trade-related operations. Infrastructure improvements enable smoother movement of goods, reduce congestion, and lower transaction costs for traders.

3.4.6. Capacity Building and Training

Customs officials receive training and capacity-building support to enhance their skills, knowledge, and professionalism in customs procedures, risk management, and trade facilitation techniques. Training programs improve the competency of customs personnel and promote consistent application of customs rules and procedures.

These trade facilitation measures improve the competitiveness of Pakistani businesses, attract foreign investment, and stimulate economic growth by facilitating cross-border trade and reducing trade costs.

3.5. Problem Analysis

The analysis of problems between customs procedures and trade facilitation in Pakistan revolves around several key challenges that hinder the efficient movement of goods across borders and impede trade facilitation efforts. These challenges are Inefficient Customs Procedures, despite efforts to modernize customs procedures, inefficiencies persist in customs clearance processes due to bureaucratic hurdles, manual documentation requirements, and outdated infrastructure. Delays in customs clearance contribute to increased transaction costs, trade uncertainty, and reduced competitiveness for businesses. As well as Lack of Coordination among Government Agencies: Inadequate coordination and collaboration among different government agencies involved in trade processes, such as customs, port authorities, and regulatory bodies, lead to duplication of efforts, delays, and inconsistencies in regulatory requirements. This lack of harmonization un-

dermines trade facilitation initiatives and complicates compliance for traders.

Moreover, Transparency and Corruption are also main challenges, Transparency issues and corruption within customs administrations create uncertainties and barriers for traders, affecting the predictability and reliability of customs procedures. Bribery, informal payments, and rent seeking behaviors among customs officials increase compliance costs for businesses and erode trust in the customs system. There are some other problems that exist like Limited Infrastructure and Technology, due to Inadequate trade infrastructure, including ports, border crossings, and customs facilities, coupled with a lack of investment in technology and automation, hinders the effectiveness of customs procedures and trade facilitation efforts. Insufficient infrastructure capacity leads to congestion, delays, and inefficiencies in cargo handling and customs clearance processes (Figure 4).

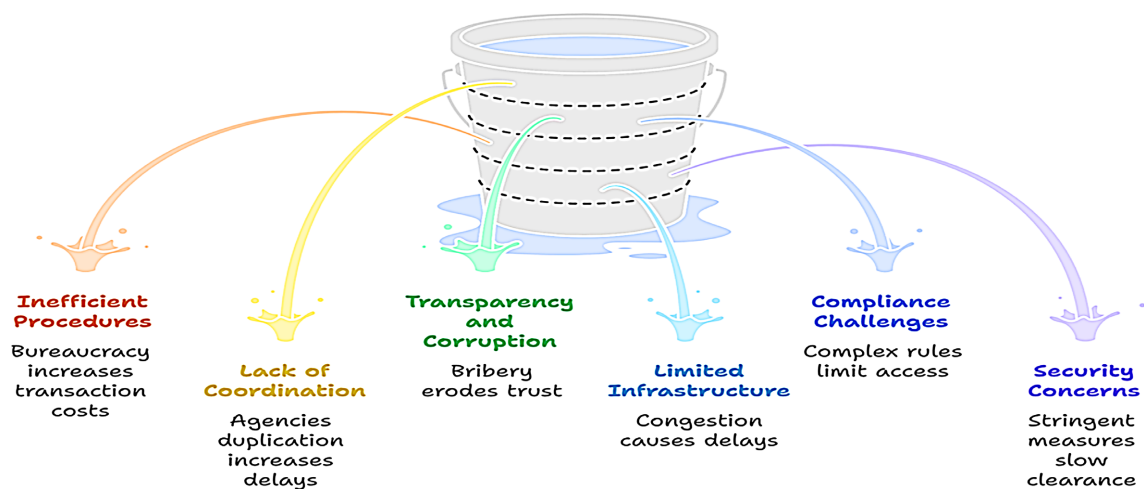


Figure 4. Pakistan trade facilitation challenges.

As a Compliance Challenge, Complex regulatory requirements, ambiguous customs rules, and frequent changes in trade policies pose challenges for traders in understanding and complying with customs procedures. Compliance costs associated with navigating regulatory complexities deter businesses, particularly small and medium-sized enterprises (SMEs), from engaging in international trade and limit market access opportunities. The lack of qualified personnel and specialized expertise affects the effective implementation of trade facilitation measures, risk management practices, and enforcement of customs regulations. Security Concerns are also important to consider, Security threats, including terrorism, smuggling, and illicit trafficking, necessitate stringent security measures at borders and ports, which may inadvertently slow down customs clearance processes and impede trade facilitation efforts. Balancing security imperatives with trade facilitation objectives requires comprehensive risk management strategies and investment in advanced screening technologies.

Addressing these challenges requires concerted efforts from the government, private sector, and international partners to reform customs procedures, en-

hance coordination among regulatory agencies, invest in infrastructure and technology, improve transparency and integrity in customs operations, simplify regulatory frameworks, and strengthen capacity-building initiatives for customs officials.

4. Methodology

4.1. Study Population

The study population for investigating the impact of ECA on export efficiency in Pakistan is limited to Pakistani businessmen which are associated with the imports and exports as well as customs administration. The target audience would be importers, exporters, freight forwarders and manufacturers. In this case, the study would target 102 respondents across Pakistan.

4.2. Data Collection Methods

The data for this study on the impact of customs procedures on trade facilitation in Pakistan were collected using a structured online questionnaire distributed via Google Forms, which was completed by 102 respondents. The questionnaire was designed to gather data on various aspects of trade facilitation and customs procedures, and the resulting data were quantitative in nature. The online questionnaire was created using a platform of Google Forms, which allowed the researcher for easy distribution and data collection. The questionnaire was comprised of closed-ended structured questions to collect qualitative data.

Closed-ended questions included questions related to the frequency of responses by the targeted audience, familiarity with custom procedures, Pakistan Single Window (PSW), government's initiatives for trade facilitations and custom procedures. For these enquiries, we implemented multiple-choice responses. Before the questionnaire was distributed, the participants were informed of the study's objectives, guaranteed that their responses would be kept confidential, and informed that their participation was wholly voluntary. Statistical programs were employed to analyze the data collected following the distribution of each survey in order to identify patterns and trends.

4.3. Data Analysis Technique

To conduct the study on the Impact of Customs Procedures on Trade Facilitation in Pakistan, 102 participants were asked to fill out an online questionnaire.

After that, SPSS and a data visualization tool were used to analyze the data. The use of SPSS for generating frequency tables and the data visualization tool is a standard quantitative data analysis technique. The study questions, data types, and research strategies all influenced the analysis. To display the study's results in a clear and understandable way, tables can be used in data visualization approaches. The study on the Impact of Customs Procedures on Trade Facilitation in Pakistan uses the data analysis results to answer the research questions and draw conclusions.

4.4. Ethical Considerations

Prior to data collection, participants were apprised of the study's goals and objectives, and their permission was sought. We ensured that the data was handled with utmost confidentiality and solely utilized for research purposes. It was important to ensure that participants were fully informed about the study's purpose and their role before they gave their consent. Respondents' responses were anonymized and data was stored securely to maintain their privacy. Additionally, participants could withdraw from the study at any time without any consequences, so it was voluntary.

4.5. Expected Outcomes

From the point of view of customs administration, this study seeks to determine the impact of customs procedures on trade facilitation in Pakistan. The study's goal is to reveal the pros and cons of employing (PWS) and Electronic Customs Administration (ECA). The results will help customs officials and lawmakers in Pakistan make better decisions about implementing ECA to boost trade efficiency.

5. Results and Discussion

5.1. Demographics of Respondents

Table 1. Gender.

	Frequency		Percent	Valid Percent	Cumulative Percent
Valid	Female	40	39.2	39.2	39.2
	Male	62	60.8	60.8	100.0
	Total	102	100.0	100.0	

Table 1 indicates that 40% of the participants are female and 60% are male. It is imperative to conduct additional research to determine the veracity of the gender distribution as a representation of the target population and the potential for gender biases in the dataset. Furthermore, it would be advantageous to conduct additional interviews or qualitative research with female respondents in order to gain a more comprehensive comprehension of their unique perspectives and experiences with trade processes and customs.

Table 2. Age.

	Frequency		Percent	Valid Percent	Cumulative Percent
Valid	18 - 25	58	56.9	56.9	56.9
	26 - 32	31	30.4	30.4	87.3
	33 - 40	11	10.8	10.8	98.0
	41 - 48	2	2.0	2.0	100.0
	Total	102	100.0	100.0	

As detailed in **Table 2**, the largest age group falls within the 26 - 32 range (30.4%), followed by 18 - 25 (21.6%) and 33 - 40 (19.6%). The importance of knowing how respondents' views on trade and traditions change with age cannot be overstated. For example, compared to more established companies, startups may lack the necessary expertise to navigate the customs clearance process. Furthermore, it would be beneficial to study business difficulties by age group in order to develop age-specific solutions or support programs.

Table 3. Business type.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Importer	15	14.7	14.7
	Exporter	13	12.7	27.5
	Manufacturer	19	18.6	46.1
	Freight forwarder	6	5.9	52.0
	Other	49	48.0	100.0
	Total	102	100.0	100.0

Manufacturers represent the most common business type (18.6%), followed by other industries (23.5%) (**Table 3**). It's imperative to analyze how the challenges and needs of different business types vary. For example, manufacturers may face more complex customs clearance requirements than service providers. Additionally, exploring the specific challenges encountered by businesses in different sectors, such as documentation requirements or regulatory compliance, could provide valuable insights into sector-specific needs and inform policy interventions.

Table 4. Experience.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 5	79	77.5	77.5
	6 - 10	15	14.7	92.2
	11 - 15	3	2.9	95.1
	16 - 20	3	2.9	98.0
	21 above	2	2.0	100.0
	Total	102	100.0	100.0

As detailed in **Table 4**, the majority of respondents (77.5%) have 1 - 5 years of experience, suggesting that a significant portion may be relatively new to international trade and customs procedures. Conducting further analysis to understand how the level of experience correlates with perceptions of customs procedures and compliance challenges could help identify areas where targeted support or training programs are needed. Additionally, exploring whether there are any differ-

ences in the experiences of businesses with varying levels of experience (e.g., new startups vs. established firms) could provide valuable insights into the evolving needs of businesses at different stages of development.

Table 5. Industry.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manufacturing	21	20.6	20.6
	Textile	18	17.6	38.2
	Agriculture	20	19.6	57.8
	Technology	19	18.6	76.5
	Other	24	23.5	100.0
	Total	102	100.0	100.0

Table 5 presents the sectoral distribution of the businesses surveyed. The data indicates a diverse and relatively balanced sample across key industries in Pakistan. The “Other” sector (23.5%) represents the largest group, suggesting a significant portion of respondents operate in niches beyond the predefined categories, such as services, logistics, or retail. This is closely followed by Manufacturing (20.6%) and Agriculture (19.6%), two traditionally vital sectors for the Pakistani economy. The Technology (18.6%) and Textile (17.6%) sectors are also well-represented, indicating the sample captures a mix of both traditional and modern industries.

The cumulative percentage shows that nearly three-quarters of the sample (76.5%) is accounted for by these five sectors. This diverse representation is crucial for the study, as it allows for a comparative analysis of how customs procedures and trade facilitation impact a wide range of industries, each with potentially unique challenges and perspectives.

Table 6. Annual value.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than \$1 million	57	55.9	55.9
	\$1 - 5 million	30	29.4	85.3
	\$5 - 10 million	6	5.9	91.2
	\$10 - 15 million	5	4.9	96.1
	\$15 million+	4	3.9	100.0
	Total	102	100.0	100.0

A significant percentage of businesses (55.9%) report an annual turnover of less than \$1 million (**Table 6**). Understanding how the challenges and needs of smaller businesses differ from larger ones is crucial. For example, smaller businesses may have fewer resources to dedicate to customs compliance. Finding out if compa-

nies' opinions of customs processes vary according to their yearly turnover could provide light on how smaller businesses are treated unfairly and guide initiatives to create a more equal business environment.

5.1.1. Inefficient and Cumbersome Custom Procedures

Table 7. Familiarity with customs procedures.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at All Familiar	27	26.5	26.5
	Slightly Familiar	32	31.4	57.8
	Familiar	28	27.5	85.3
	Somewhat Familiar	7	6.9	92.2
	Very Familiar	8	7.8	100.0
	Total	102	100.0	100.0

As shown in **Table 7**, nearly two-thirds of people who took the survey said they had some familiarity with customs processes. This suggests that firms can benefit from additional training and materials to help them comprehend and adhere to customs rules. Educational activities or training programs may be prioritized to overcome knowledge gaps and improve compliance levels if further analysis could uncover specific areas of confusion or uncertainty among respondents. To further understand the unique requirements of various business groups, it would be instructive to investigate whether familiarity levels vary according to variables like company size or industry.

Table 8. Efficiency of customs procedures.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	9.8	9.8
	Neutral	43	42.2	52.0
	Agree	38	37.3	89.2
	Strongly Agree	11	10.8	100.0
	Total	102	100.0	100.0

Table 8 illustrates that the effectiveness and transparency of customs procedures are the subject of varying opinions, with 38.2% of respondents expressing satisfaction and 37.3% expressing dissatisfaction. Additional research is required to identify the specific components of the customs process that individuals find challenging or ineffective. Qualitative interviews or focus groups could be implemented to ascertain the reasons for the dissatisfaction of respondents and to determine what they can do to alleviate it.

Moreover, analyzing whether there are any differences in satisfaction levels

based on factors such as business size, industry sector, or level of experience could provide insights into the factors influencing perceptions of customs efficiency and transparency and inform targeted interventions to address key pain points.

Table 9. Delays in customs clearance.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	16	15.7	15.7
	Neutral	19	18.6	34.3
	Agree	37	36.3	70.6
	Strongly Agree	30	29.4	100.0
	Total	102	100.0	100.0

As presented in **Table 9**, respondent attitudes skew overwhelmingly positive. When combined, a clear majority of 65.7% of respondents either Agree (36.3%) or Strongly Agree (29.4%) with the statement mentioned the statement here, e.g., that current customs procedures facilitate trade. This positive consensus suggests that recent trade facilitation measures or customs reforms are being perceived favorably by a significant portion of the business community. However, the presence of a neutral cohort (18.6%) indicates that these improvements may not be universally felt or clearly communicated. Furthermore, the perspective of the minority who Strongly Disagree (15.7%) should not be overlooked, as it may point to persistent, sector-specific challenges or areas where reform has been less effective.

Table 10. Complex customs regulations.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	7.8	7.8
	Neutral	29	28.4	36.3
	Agree	45	44.1	80.4
	Strongly Agree	20	19.6	100.0
	Total	102	100.0	100.0

The data from the frequency table (**Table 10**) reveals a clear and strong consensus among respondents, with a combined 63.7% of participants either agreeing or strongly agreeing with the statement. This indicates widespread recognition or experience of the problem. The depth of conviction is further emphasized by the fact that nearly 20% of respondents expressed strong agreement. Conversely, only a small minority (7.8%) strongly disagreed, suggesting that the issue is not perceived as isolated or insignificant. The relatively large neutral group (28.4%) may include those who are less affected, uncertain, or only partially impacted. Overall, these results underscore that this is a salient and pressing concern for the majority

of stakeholders surveyed.

Table 11. Lack of transparency.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Major Hindrance	21	20.6	20.6
	Somewhat Hindrance	32	31.4	52.0
	Neutral	33	32.4	84.3
	Somewhat No Hindrance	10	9.8	94.1
	No Hindrance at all	6	5.9	100.0
	Total	102	100.0	100.0

Table 11 shows that the data indicate that a significant majority of respondents perceive the issue at hand as a hindrance. More than half (52.0%) reported that it is either a “Major Hindrance” (20.6%) or a “Somewhat Hindrance” (31.4%). This demonstrates that the problem substantially impacts stakeholders, with one-fifth considering it a major obstacle. An additional 32.4% remained neutral, possibly reflecting uncertainty or a moderate effect. In contrast, only a small minority (15.7%) felt the issue was not a hindrance (“Somewhat No Hindrance” and “No Hindrance at all” combined). These results strongly suggest that this factor is a critical and widely recognized barrier that requires targeted intervention to mitigate its negative effects.

Table 12. Efficiency and transparency.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Dissatisfied	11	10.8	10.8
	Dissatisfied	28	27.5	38.2
	Neutral	33	32.4	70.6
	Satisfied	24	23.5	94.1
	Strongly Satisfied	6	5.9	100.0
	Total	102	100.0	100.0

The data presented in **Table 12** reveals a clear trend of dissatisfaction among a significant portion of respondents. When combining the two categories expressing negative sentiment, 38.2% of participants reported being either “Dissatisfied” (27.5%) or “Strongly Dissatisfied” (10.8%). This indicates that more than one-third of stakeholders are unhappy with the subject in question. A sizable group (32.4%) remained “Neutral,” suggesting they may be ambivalent, moderately content, or lacking a strong opinion on the matter. On the positive side, less than one-third of respondents (29.4%) reported being “Satisfied” (23.5%) or “Strongly Satisfied” (5.9%).

5.1.2. Impact of E-Customs Solutions

Table 13. Functionality of PSW.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very difficult	13	12.7	12.7
	Somewhat challenging	33	32.4	45.1
	Neutral	28	27.5	72.5
	Relatively easy	26	25.5	98.0
	Extremely efficient	2	2.0	100.0
	Total	102	100.0	100.0

The data indicates a predominantly negative user experience with the system or process being evaluated. A combined 45.1% of respondents found it “Very difficult” (12.7%) or “Somewhat challenging” (32.4%), suggesting that nearly half of the users faced significant difficulties (Table 13). An additional 27.5% remained “Neutral”, which may imply they encountered moderate challenges or had no strong opinion. On the positive end, only 27.5% of users reported a favorable experience, describing the system as “Relatively easy” (25.5%) or “Extremely efficient” (2.0%).

Table 14. PSW improved customs.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Improvement	18	17.6	17.6
	Minimal Improvement	32	31.4	49.0
	Moderate Improvement	29	28.4	77.5
	Substantial Improvement	17	16.7	94.1
	Significant Improvement	6	5.9	100.0
	Total	102	100.0	100.0

The data reveal a mixed perception regarding the effectiveness of the improvement initiative among respondents. A notable portion, constituting 49.0% of participants, reported little to no positive change, with 17.6% indicating no improvement and 31.4% observing only minimal improvement (Table 14). This indicates that the project was ineffective for almost half of the stakeholders. On the flip side, 28.4% said they saw some improvement, which indicates they were somewhat successful in some areas. Nevertheless, a mere 22.6% of participants acknowledged a substantial or significant improvement, highlighting that the project has failed to provide revolutionary outcomes for the majority. In order to attain more effectiveness and satisfaction, it is necessary to make targeted improvements, improve implementation tactics, and boost stakeholder participation. This is because these data show that there is a large disparity between expected and actual outcomes.

The data indicate a generally positive perception of increase, though the extent varies significantly among respondents. A combined 43.1% of participants re-

ported little to no increase, with 16.7% observing no increase and 26.5% noting only a minimal increase (Table 15). This suggests that a substantial portion of stakeholders perceived limited progress or effectiveness in the area assessed. However, a majority (56.9%) reported at least a moderate increase, with 37.3% acknowledging a moderate increase, 12.7% a substantial increase, and 6.9% a significant increase. While these results reflect a trend toward improvement, the fact that over 40% of respondents perceived minimal to no increase highlights persistent gaps or inefficiencies. This underscores the need for further enhancements to ensure broader and more impactful outcomes for all stakeholders.

Table 15. PSW increased the transparency.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Increase	17	16.7	16.7
	Minimal Increase	27	26.5	43.1
	Moderate Increase	38	37.3	80.4
	Substantial Increase	13	12.7	93.1
	Significant Increase	7	6.9	100.0
	Total	102	100.0	100.0

Table 16. PSW reduced the need for paper.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Reduction	14	13.7	13.7
	Minimal Reduction	24	23.5	37.3
	Moderate Reduction	28	27.5	64.7
	Substantial Reduction	29	28.4	93.1
	Significant Reduction	7	6.9	100.0
	Total	102	100.0	100.0

Based on the provided frequency distribution table, the data illustrate the varying degrees of a “reduction” experienced by a total of 102 respondents (see Table 16). The results show that the experiences are widely distributed across the spectrum of severity. The most common outcome was a “Substantial Reduction,” reported by 29% of the respondents, closely followed by a “Moderate Reduction” at 27.5%. A “Minimal Reduction” was the next most frequent category, chosen by 23.5% of participants. Notably, only a small minority reported the most extreme outcome, with 6.9% experiencing a “Significant Reduction.” At the other end of the scale, 13.7% of respondents reported “No Reduction” at all. Cumulatively, nearly two-thirds (64.7%) of all cases reported either no, minimal, or moderate reduction, indicating that a majority experienced a change that was less than substantial. However, a considerable combined 35.3% of respondents did report ei-

ther a substantial or significant reduction, highlighting that this was a notable outcome for a significant portion of the sample.

Table 17. PSW in trade facilitation.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Effective	34	33.3	33.3
	Moderately Effective	26	25.5	58.8
	Effective	25	24.5	83.3
	Very Effective	17	16.7	100.0
	Total	102	100.0	100.0

Based on the frequency distribution in **Table 17**, the data presents the perceived effectiveness of a particular intervention, treatment, or product among 102 respondents. The results indicate a generally positive perception of effectiveness, with the majority of respondents reporting favorable outcomes. The most common response was “Somewhat Effective,” chosen by 34 respondents (33.3%). This was followed closely by “Moderately Effective” (25.5%) and “Effective” (24.5%). The highest rating, “Very Effective,” was selected by 17 respondents, representing 16.7% of the sample. The cumulative percent column reveals that a significant 83.3% of all respondents found the intervention to be at least “Effective” or higher. This indicates a strong consensus towards positive efficacy. In essence, while the experience was spread across the positive end of the scale, the findings strongly suggest that the intervention was well-received and considered effective by a large majority of the participants.

5.1.3. Variation across Business

Table 18. Challenges of customs administration.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Barely any difference	15	14.7	14.7
	Slight difference	29	28.4	43.1
	Moderate difference	32	31.4	74.5
	Substantial difference	14	13.7	88.2
	Major difference	12	11.8	100.0
	Total	102	100.0	100.0

Table 18 presents the perceived level of difference or change reported by 102 respondents. The distribution reveals that the experience of a difference is widespread, but its intensity varies considerably across the sample. The most common outcome is a “Moderate difference,” reported by nearly one-third of respondents (31.4%). This is closely followed by those who noticed a “Slight difference”

(28.4%). Combined, these two middle categories account for 59.8% of all responses, indicating that for most people, the perceived change was noticeable but not extreme. At the higher end of the spectrum, a combined 25.5% of respondents reported a strong or dramatic change, split between a “Substantial difference” (13.7%) and a “Major difference” (11.8%). Conversely, at the lower end, 14.7% of respondents reported “Barely any difference.” The cumulative percentage shows that 74.5% of the sample reported at least a moderate difference, highlighting that a clear majority experienced a noticeable change. However, the concentration of responses in the middle categories suggests that while the difference was real for most, it was typically not transformative in nature.

Table 19. Impact of customs procedures.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Difference	11	10.8	10.8
	Very Slight Difference	22	21.6	32.4
	Moderate Difference	39	38.2	70.6
	Significant Difference	23	22.5	93.1
	Very Significant Difference	7	6.9	100.0
	Total	102	100.0	100.0

Based on the provided frequency distribution table, the data illustrate the perceived level of difference or change reported by a total of 102 respondents (see **Table 19**). The results indicate a strong positive trend, with a clear majority of respondents reporting a noticeable and meaningful difference. The most common response was “Moderate Difference,” reported by 39 respondents (38.2%). This is the central tendency of the data, showing that for more than a third of the sample, the change was clear and discernible. When combined with the “Significant Difference” category (22.5%), these two groups alone account for 60.7% of all responses, indicating that for most people, the experience was beyond just slight. Critically, the cumulative percentage reveals that 93.1% of all respondents reported at least some level of difference (from “Very Slight” to “Very Significant”). This means that the intervention or event was perceptible to almost the entire sample. Only a small minority (10.8%) reported “No Difference” at all. While the most extreme positive outcome (“Very Significant Difference”) was reported by a smaller group (6.9%), the overall distribution is positively skewed, with 70.6% of respondents reporting at least a “Moderate Difference” or greater.

Table 20. Challenges for new businesses

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	12	11.8	11.8

Continued

	Neutral	47	46.1	46.1	57.8
Agree	32	31.4	31.4	89.2	
	Strongly Agree	11	10.8	10.8	100.0
	Total	102	100.0	100.0	

It presents the distribution of attitudes or opinions among 102 respondents toward a specific statement or concept. The data reveal a generally favorable view, but one that is characterized more by agreement than by strong conviction, with a notably large portion of the sample remaining neutral (**Table 20**). The most striking finding is the high level of neutrality, with 46.1% of respondents (47 people) selecting this middle option. This indicates a significant portion of the sample either has no strong opinion, is undecided, or feels ambivalent about the topic. Among those who expressed an opinion, agreement is significantly more common than disagreement. A combined 42.2% of respondents either Agree (31.4%) or Strongly Agree (10.8%). In contrast, only 11.8% Strongly Disagree; notably, there is no category for “Disagree,” suggesting that outright disagreement, if it exists, is captured solely by the strongest negative option. The cumulative percentage shows that 89.2% of the sample falls into the “Strongly Disagree,” “Neutral,” or “Agree” categories. This means that only 10.8% hold the most positive view (“Strongly Agree”).

Table 21. Importance of specialized resources and expertise.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Important	14	13.7	13.7
	Slightly Important	14	13.7	27.5
	Moderately Important	27	26.5	53.9
	Important	38	37.3	91.2
	Very Important	9	8.8	100.0
	Total	102	100.0	100.0

It displays the perceived importance of a specific item, concept, or issue among 102 respondents. The results reveal a strong consensus that the subject is important, with a clear majority of respondents attributing moderate to high levels of importance to it (**Table 21**). The most common response was “Important,” selected by 38 respondents (37.3%), making it the central tendency of the data. When combined with the “Moderately Important” category (26.5%), these two groups account for nearly two-thirds (63.8%) of all responses, indicating that for most people, the subject holds substantial value. A crucial finding from the cumulative percentage is that 86.3% of respondents attributed at least some level of im-

portance to the subject (from “Slightly” to “Very Important”). This means only a small minority of 13.7% found it “Not Important.” Furthermore, over half of the sample (53.9%) found it at least “Moderately Important” or greater. While the highest level of endorsement (“Very Important”) was chosen by a smaller group (8.8%), the overall distribution is positively skewed, with the overwhelming majority of respondents recognizing its significance.

Table 22. Access to information.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	12	11.8	11.8
	Neutral	48	47.1	58.8
	Agree	33	32.4	91.2
	Strongly Agree	9	8.8	100.0
	Total	102	100.0	100.0

Table 22 presents the distribution of opinions from 102 respondents regarding a specific statement or concept, measured on an agreement scale. The data reveal a landscape of general but cautious agreement, heavily characterized by a large neutral segment. The most prominent feature is the high level of neutrality, with 47.1% of respondents (48 people) selecting this middle option. This indicates that nearly half the sample is either undecided, lacks a strong opinion, or does not have enough information to agree or disagree on the topic. Among those who expressed a definitive opinion, agreement is significantly more prevalent than disagreement. A combined 41.2% of respondents either Agree (32.4%) or Strongly Agree (8.8%). In contrast, only 11.8% Strongly Disagree; it is noteworthy that there is no “Disagree” category, meaning all outright disagreement is concentrated in the strongest negative response. The cumulative percentage shows that 91.2% of the sample falls into the “Strongly Disagree,” “Neutral,” or “Agree” categories, leaving only 8.8% who hold the most positive view (Strongly Agree).

5.1.4. Understanding Customs Procedures

Table 23. Importance of having understanding of customs procedures.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Important	14	13.7	13.7
	Slightly Important	16	15.7	29.4
	Moderately Important	24	23.5	52.9
	Important	25	24.5	77.5
	Very Important	23	22.5	100.0
	Total	102	100.0	100.0

The following (Table 23) displays the perceived importance of a specific item, concept, or issue among 102 respondents. The results reveal a strong and clear consensus that the subject is important to the vast majority of the group, with a significant portion attributing a high or very high level of importance to it. The responses are distributed across the scale, but the data is positively skewed toward the higher end. The most common response is “Important,” chosen by 25 respondents (24.5%), followed very closely by “Very Important” at 22.5% (23 respondents) and “Moderately Important” at 23.5% (24 respondents). This shows that no single category dominates, but the weight of opinion is concentrated in the mid-to-high importance range.

A crucial finding from the cumulative percentage is that 86.3% of respondents attributed at least some level of importance (from “Slightly” to “Very Important”) to the subject. This means only a small minority of 13.7% found it “Not Important.” Furthermore, a full 70.5% of the entire sample found the subject to be at least “Moderately Important” or higher (Moderately Important + Important + Very Important = 23.5% + 24.5% + 22.5% = 70.5%). Most notably, nearly half (47%) of all respondents rated it as either “Important” or “Very Important,” underscoring its significant value to a large segment of the group.

Table 24. Training employees.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	11.8	11.8
	Neutral	40	39.2	51.0
	Agree	37	36.3	87.3
	Strongly Agree	13	12.7	100.0
	Total	102	100.0	100.0

It presents the distribution of opinions from 102 respondents on a specific statement or concept, measured using a Likert agreement scale. The data reveal a clear trend toward agreement, though a substantial portion of the sample remains neutral (Table 24). The most significant finding is the strong level of agreement with the statement. A combined 49% of respondents either Agree (36.3%) or Strongly Agree (12.7%). This indicates that nearly half of the sample holds a positive view on the topic. However, a notable 39.2% of respondents selected a “Neutral” stance. This large neutral block suggests a significant portion of the sample may be undecided, ambivalent, or lacking a strong opinion on the matter. In contrast, outright disagreement is the least common position. Only 11.8% of respondents “Strongly Disagree”; it’s noteworthy that there is no “Disagree” category, meaning all disagreement is concentrated in the strongest negative response. The cumulative percentage shows that 87.3% of the sample falls within the “Strongly Disagree,” “Neutral,” or “Agree” categories.

Based on the provided frequency distribution table, the data illustrate the atti-

tudes or opinions of 102 respondents toward a specific statement or concept. The results indicate a strong and clear consensus in favor of the statement, with a majority of respondents expressing agreement. The most common response was “Agree,” selected by 37 respondents (36.3%), making it the modal category (**Table 25**). When combined with the “Strongly Agree” category (15.7%), these two groups account for 52% of all responses. This demonstrates that over half of the sample holds a positive view of the statement. A notable 33.3% of respondents selected a “Neutral” stance. While this represents a substantial portion, it is smaller than the combined agreement groups. This neutrality could indicate uncertainty, a lack of strong feelings, or that the statement was not relevant to all respondents. In contrast, disagreement is the least common position. Only 14.7% of respondents “Strongly Disagree”; the absence of a “Disagree” category suggests that any opposition is concentrated in the strongest negative response. The cumulative percentage shows that 84.3% of the sample falls within the “Strongly Disagree,” “Neutral,” or “Agree” categories, meaning that only 15.7% hold the most positive view (Strongly Agree).

Table 25. Businesses stay informed.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	15	14.7	14.7
	Neutral	34	33.3	48.0
	Agree	37	36.3	84.3
	Strongly Agree	16	15.7	100.0
	Total	102	100.0	100.0

Table 26. Lack of Understanding leads to delays.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	11.8	11.8
	Neutral	35	34.3	46.1
	Agree	32	31.4	77.5
	Strongly Agree	23	22.5	100.0
	Total	102	100.0	100.0

Based on the provided frequency table, the data reveal a strong and positively skewed consensus among the 102 respondents regarding the specific statement or concept being measured. A clear majority of participants, totaling 53.9%, expressed agreement with the statement, comprising 31.4% who selected “Agree” and 22.5% who indicated “Strongly Agree” (**Table 26**). This not only demonstrates widespread approval but also highlights a notable intensity of conviction among a substantial portion of the sample. Conversely, outright disagreement is minimal, with only 11.8% of respondents selecting “Strongly Disagree,” indicating

that opposition is both limited and strongly held by a small minority. A significant segment of the participants, 34.3%, reported a neutral stance, which may reflect uncertainty, ambivalence, or a lack of strong feelings on the issue. Overall, the distribution suggests that the statement is viewed favorably and decisively by most, with polarized disagreement being rare and a considerable neutral bloc indicating that the topic may not be highly divisive or that further engagement could sway undecided opinions.

Table 27. Government helping businesses understand customs.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	12.7	12.7
	Neutral	44	43.1	55.9
	Agree	33	32.4	88.2
	Strongly Agree	12	11.8	100.0
	Total	102	100.0	100.0

Based on the data from 102 respondents, opinions on the statement are mixed but lean toward agreement. A plurality of 43.1% remain neutral, indicating uncertainty or no strong opinion. However, among those with a definite stance, agreement is more common than disagreement: 44.2% agree (32.4% Agree + 11.8% Strongly Agree) compared to 12.7% who Strongly Disagree. This shows a generally favorable but cautious consensus, with a significant portion of the audience yet to be fully persuaded (**Table 27**).

5.1.5. Government's Commitment to Trade Facilitation

Table 28. Pakistani government is improving trade facilitation.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Dissatisfied	19	18.6	18.6
	Dissatisfied	12	11.8	30.4
	Neutral	35	34.3	64.7
	Satisfied	30	29.4	94.1
	Strongly Satisfied	6	5.9	100.0
	Total	102	100.0	100.0

Table 28 reveals a predominantly neutral to dissatisfied customer sentiment among 102 respondents. While a combined 35.3% are satisfied (29.4% Satisfied + 5.9% Strongly Satisfied), a larger combined 30.4% are dissatisfied (18.6% Strongly Dissatisfied + 11.8% Dissatisfied). The largest single group is neutral (34.3%), indicating a significant portion lacks strong feelings. Overall, the results point to a clear need for improvement, as dissatisfaction and neutral ambivalence outweigh

strong satisfaction.

Table 29 displays perceptions of how effectively a particular issue is being addressed, based on responses from 102 individuals. The results indicate a divided and generally pessimistic outlook. A significant portion of respondents feel the issue is not being adequately addressed, with 34.3% believing it is either “Not Addressing at all” (13.7%) or only “Somewhat not Addressing” (20.6%). In contrast, only a small minority (3.9%) feel the issue is being “Effectively Addressing,” while 31.4% believe it is only “Somewhat Addressing.” The largest single group is “Neutral” (30.4%), suggesting uncertainty or a lack of strong opinion. Cumulatively, while 35.3% see at least some effort (“Somewhat” or “Effectively Addressing”), the overall sentiment leans toward inadequacy, highlighting a significant perception gap and a critical need for more effective action or communication.

Table 29. Government is adequately addressing the challenges of customs.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Addressing at all	14	13.7	13.7
	Somewhat not Addressing	21	20.6	34.3
	Neutral	31	30.4	64.7
	Somewhat Addressing	32	31.4	96.1
	Effectively Addressing	4	3.9	100.0
	Total	102	100.0	100.0

Table 30. Investments in infrastructure for improving trade.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Important at all	14	13.7	13.7
	Somewhat Unimportant	12	11.8	25.5
	Neutral	27	26.5	52.0
	Somewhat Important	25	24.5	76.5
	Very Important	24	23.5	100.0
	Total	102	100.0	100.0

Table 30 reveals a strong consensus on the importance of a specific issue or item among 102 respondents. A clear majority of participants view it as important, with a combined 48% rating it as either “Somewhat Important” (24.5%) or “Very Important” (23.5%). An additional 26.5% remain neutral, indicating they may not have strong feelings or are uncertain. In contrast, only 25.5% perceive it as unimportant, consisting of those who selected “Not Important at all” (13.7%) or “Somewhat Unimportant” (11.8%). The cumulative percentage shows that over three-quarters of respondents (76.5%) attribute at least some level of importance to the

topic. Overall, these results highlight that the issue is widely regarded as significant by the majority of the sample, though a quarter of respondents remain unconvinced or indifferent.

Table 31. Key Government Policy Initiatives and Their Primary Focus Areas.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Highly Ineffective	14	13.7	13.7
	Ineffective	14	13.7	27.5
	Neutral	35	34.3	61.8
	Effective	34	33.3	95.1
	Highly Effective	5	4.9	100.0
	Total	102	100.0	100.0

As shown in **Table 31**, based on the data from 102 respondents, perceptions of effectiveness are divided but lean slightly toward a positive assessment, albeit with significant reservations. A combined 38.2% of respondents view the subject as effective (33.3% Effective + 4.9% Highly Effective). However, an equal proportion (27.4%) perceive it as ineffective (13.7% Highly Ineffective + 13.7% Ineffective), indicating a polarized view. The largest single group is Neutral (34.3%), suggesting a lack of strong conviction or uncertainty among a third of participants. Cumulatively, while more respondents find it at least somewhat effective (95.1% when including neutral and positive ratings), the low “Highly Effective” score (4.9%) and the substantial neutral and negative responses highlight concerns about its overall efficacy or impact. These results suggest the subject may need improvements to win broader confidence and reduce skepticism.

Table 32. Measures government should take to improve trade.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	12.7	12.7
	Neutral	34	33.3	46.1
	Agree	33	32.4	78.4
	Strongly Agree	22	21.6	100.0
	Total	102	100.0	100.0

Data reveal a strong and clear consensus of agreement with the statement or concept among the 102 respondents. A combined 54% of participants either Agree (32.4%) or Strongly Agree (21.6%), indicating that a majority holds a favorable view (**Table 32**). This positive sentiment is further emphasized by the fact that the percentage of strong agreement (21.6%) is notably higher than strong disagreement (12.7%). While a significant portion of the sample (33.3%) remains Neutral,

likely reflecting uncertainty or ambivalence, the overall distribution is positively skewed. The low level of strong disagreement (12.7%) underscores that opposition is limited. In summary, the results demonstrate robust support for the subject, with agreement being both widespread and strongly held by a substantial segment of the audience.

5.2. Hypothesis Testing and Discussion

This section evaluates the study's findings against the four pre-defined research hypotheses.

5.2.1. Testing Hypothesis

H1: *In Pakistan, trade facilitation is greatly impacted by ineffective and onerous customs procedures, which raise trade prices, reduce competitiveness, and impede trade volume.*

Result: H1 is Strongly Supported.

The data provides overwhelming evidence that inefficient customs procedures are a major impediment to trade in Pakistan. A significant majority of respondents identified key pain points that directly align with H1:

The data provides overwhelming evidence that inefficient customs procedures are a major impediment to trade in Pakistan, strongly supporting H1. This is demonstrated by a confluence of critical failures: widespread *delays* in clearance (65.7% agreement, **Table 9**), *complex regulations* (63.7% agreement, **Table 10**), and a *significant lack of transparency* (52.0% perceive it as a hindrance, **Table 11**). Together, these issues create a cumbersome system that increases costs through storage fees, higher compliance burdens, and the need for specialized expertise (70.5% attest to its importance, **Table 21**), while also fostering unpredictability and rent-seeking. The net result is a systemic problem, reflected in the fact that overall dissatisfaction with customs efficiency (38.2%, **Table 12**) outweighs satisfaction (29.4%), directly harming the competitiveness and trade volume of Pakistani businesses.

Discussion: These findings confirm H1. The triad of delays, complexity, and opacity creates a cumbersome customs environment that acts as a non-tariff barrier. This aligns with the literature, such as **Khan & Zubair (2022)**, who found that such inefficiencies limit Pakistan's trade potential. The high costs and unpredictability directly harm the competitiveness of Pakistani businesses, particularly SMEs who lack the resources to navigate these challenges effectively, as reflected in **the World Bank (2020)** study cited in the literature review.

5.2.2. Testing Hypothesis

H2: *The Pakistan Single Window (PSW) and other e-Customs systems have significantly improved the efficiency and transparency of customs procedures, thereby simplifying the process of commerce.*

Result: H2 is Partially Supported, but with Major Caveats.

The data on the PSW presents a nuanced picture. While its introduction is recognized as a positive step, the perception of its *significant improvement* is moderate at best.

Moderate Improvement, Not Significant: **Table 14** is pivotal here. Only 22.6% of respondents reported a “Substantial” or “Significant” improvement from the PSW. The largest group (49.0%) perceived either “No Improvement” or only “Minimal Improvement.” This directly challenges the word “significantly” in H2. *Positive Impact on Transparency and Paperwork:* There is more support for the PSW’s role in enhancing transparency and reducing paperwork. **Table 15** shows that 56.9% reported at least a moderate increase in transparency. More strikingly, **Table 16** indicates that 63% of respondents acknowledged a “Substantial” or “Moderate” reduction in the need for paper, a key goal of digitalization. *Usability Challenges:* The effectiveness is hampered by usability issues. **Table 13** shows that 45.1% of users found the PSW “Very difficult” or “Somewhat challenging” to use. This adoption barrier prevents the system from realizing its full potential.

Discussion: H2 is only partially confirmed. The PSW is correctly perceived as an effective tool for trade facilitation in principle (**Table 17**, where 83.3% found it at least “Somewhat Effective”). However, the data suggests its impact has not been *transformative* for a majority of users due to implementation challenges, a lack of comprehensive training, and perhaps technical limitations. This finding is consistent with the problem analysis in the manuscript, which cited challenges in usability and the need for improvement. Therefore, while the direction of H2 is correct, the magnitude of improvement claimed is overstated based on the current user experience.

5.2.3. Testing Hypothesis

H3: *Customs procedures in Pakistan have varying impacts on trade facilitation for various types of enterprises and industries.*

Result: H3 is Supported.

The data clearly indicates that the burden of customs procedures is not felt equally across the business landscape.

Challenges for New Businesses: **Table 20** shows that 42.2% of respondents Agree or Strongly Agree that new businesses face greater challenges, while a large neutral group (46.1%) may also tacitly acknowledge this disparity. This suggests that newcomers with less experience and established networks are at a distinct disadvantage. *Perceived Variation in Impact:* **Table 19** is the strongest evidence for H3. A full 70.6% of respondents reported at least a “Moderate Difference” in how customs procedures impact different types of businesses, with 29.4% reporting a “Significant” or “Very Significant” difference. This overwhelming consensus confirms that the impact is not uniform. *Sector-Specific Challenges:* The demographic data (**Table 5**) shows a diverse sample across manufacturing, textiles, agriculture, and technology. While this study’s quantitative data doesn’t break down results by sector, the high-level agreement on

varied impact (**Table 19**) strongly implies that sector-specific requirements (e.g., perishable goods in agriculture, high-tech components in technology) lead to different customs experiences.

Discussion: The findings strongly support H3. Smaller, newer, and potentially sector-specific businesses (like SMEs) are disproportionately affected by cumbersome customs procedures. They have less capacity to absorb delays, hire specialized brokers, or navigate complex regulations. This aligns with the literature gap identified in Section 2.7, which calls for more micro-level studies on specific business types. The results confirm that a one-size-fits-all approach to trade facilitation is insufficient.

5.2.4. Testing Hypothesis

H4: *Businesses with a stronger understanding of customs procedures and regulations experience fewer delays and challenges during the customs clearance process.*

Result: H4 is Strongly Supported.

The data underscores the critical value of knowledge and capacity in navigating the customs system.

High Value Placed on Understanding: **Table 23** shows that 86.3% of respondents believe understanding customs procedures is at least “Slightly Important,” with 70.5% rating it “Moderately Important” or higher. This consensus highlights that the business community itself recognizes knowledge as a key success factor. Training is Key: Reflecting this, **Table 24** shows that 49% of respondents Agree or Strongly Agree that training employees on customs procedures is important for reducing clearance times. *Lack of Understanding Causes Delays:* The most direct evidence for H4 comes from **Table 26**. Here, 53.9% of respondents Agree or Strongly Agree that a lack of understanding directly leads to delays. This establishes a clear perceived causal link between knowledge deficits and operational inefficiencies. Government’s Role in Capacity Building: The mixed but leaning-positive response in **Table 27** (44.2% agreement vs. 12.7% strong disagreement) on whether the government is helping businesses understand customs procedures indicates a recognized area for further intervention.

Discussion: H4 is confirmed. The customs clearance process in Pakistan is perceived as a knowledge-intensive activity. Businesses that invest in understanding the regulations and procedures are better equipped to comply correctly the first time, thereby avoiding costly errors, requests for additional information, and physical inspections that cause delays. This finding reinforces the importance of the study’s policy recommendation regarding capacity building not just within customs authorities, but also among the trading community. It argues for more accessible information, training programs, and help-desks to level the playing field.

6. Conclusion

This study sought to evaluate the impact of customs procedures on trade facilita-

tion in Pakistan by testing four central hypotheses. The findings, drawn from a survey of 102 Pakistani businesses, lead to the following conclusive determinations: First, the study strongly confirms Hypothesis (H1), demonstrating that inefficient and cumbersome customs procedures—characterized by delays, complex regulations, and a lack of transparency—significantly hinder trade facilitation by raising costs and reducing the competitiveness of Pakistani businesses. Second, the role of the Pakistan Single Window (PSW) presents a nuanced finding. While its introduction is a step in the right direction, the data only partially support Hypothesis (H2). The PSW is perceived as a positive initiative, particularly in reducing paperwork and enhancing transparency, but its impact on overall efficiency is viewed as moderate, with significant usability challenges preventing it from delivering transformative improvement thus far. Third, the analysis supports Hypothesis (H3), revealing that the burden of customs procedures is not felt uniformly across the business community. Newer and smaller enterprises, in particular, face disproportionately greater challenges, indicating that a one-size-fits-all approach to trade facilitation is inadequate. Finally, the study strongly confirms Hypothesis (H4), underscoring that knowledge is a critical asset in navigating the customs landscape. Businesses that possess a stronger understanding of customs regulations experience fewer delays, highlighting the paramount importance of capacity building.

In light of these findings, the report suggests that Pakistan enact a number of policy adjustments to promote trade. Included in these efforts are the following: lowering tariff rates, increasing transparency, advancing technology, and streamlining customs processes. Implementing policies to fight corruption and enhance the general business climate is essential for facilitating commerce. All things considered, the findings of this study highlight how vitally important efficient customs processes are to promoting trade and Pakistan's economic development. By carefully resolving the issues raised and following the relevant legal procedures, Pakistan may improve its trade facilitation environment, draw in more corporate investments, and promote sustainable economic growth. Even though our study provides insightful information, there is undoubtedly a need for more research. Future studies should thoroughly examine the complexities of questionnaire design and the root causes of the problems that have been found. Feasible solutions should be recommended. Policy debates and actions on trade facilitation and customs procedures can be enhanced by looking at micro-level dynamics, institutional and cultural effects, long-term effects, and environmental factors. Effective infrastructure, streamlined procedures, and comprehensive agreements are the world's best practices for trade facilitation.

Trade facilitation initiatives on a worldwide scale rely on the World Trade Organization's Trade Facilitation Agreement, Single Window Systems, optimized customs procedures, and strong infrastructure. It will be critical for countries to implement and improve upon these best practices as they aim to increase their competitiveness and integration into the global economy. Improvements in Paki-

stan's competitiveness and global economic integration can be achieved by adopting international standards for trade facilitation, which include thorough agreements, simplified procedures, and strong infrastructure. To unlock its full economic potential and build sustained prosperity, Pakistan must take a holistic and strategic approach to trade facilitation as it navigates the complexity of global trade.

Authors' Contribution

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