# Effect of trade barriers on export performance during COVID-19 pandemic: a comparative study among South Asian textile industries

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## ABSTRACT – REZUMAT

**Effect of trade barriers on export performance during COVID-19 pandemic: a comparative study among South Asian textile industries**

*The study focused on determining essential government policies and trade barriers affecting the textile industry's export performance during the COVID-19 pandemic. This study has analysed the effect of government export policies on the export performance of the textile industry. This study has also compared factors among three South Asian textile industries, including Pakistan, India, and Bangladesh. The study identified nine essential government export policies and trade barriers based on Industrial Organization View (I/O View). A panel regression model was used to analyse the significance of each government policy and trade barrier affecting textile export performance. Results of the study showed that currency exchange rates, the cost to export, time to export, political stability of the country, quality of infrastructure in the country, freedom from corruption, business cost of terrorism and economic stability in the country have a significant effect on export performance of the industry. In contrast, taxes on doing business have an insignificant effect on export performance. The Seemingly Unrelated Estimation (SUEST) test compared the differences in export performance of Pakistani, Indian and Bangladeshi textile industries due to government policies. The results showed that a higher level of time to export, cost to export and business cost of terrorism lead to the low export performance of the textile industry. At the same time, a higher level of currency exchange rates, political stability of the country, quality of infrastructure, freedom from corruption and economic stability in-country lead to the high export performance of the textile industry. Further, taxes on doing business have an insignificant effect on export performance.*

*This study is among the few contributing to the textile industry during the COVID-19 pandemic. Due to uncertain circumstances, it becomes hard for the government to identify important factors which could help textile exporters to survive and grow during the COVID-19 pandemic. The study has identified important government policies and trade barriers affecting textile exports based on strong theoretical support and has also compared and elaborated on the importance of each factor across three South Asian countries. This study will help policymakers reconsider export-related factors to enhance their textile exports and revive their economy after the COVID-19 pandemic.*

*Keywords: COVID-19 pandemic, export performance, textile industry, industrial organization view*

**Influența barierelor comerciale asupra performanței exporturilor în timpul pandemiei de COVID-19: un studiu comparativ între industriile textile din Asia de Sud**

*Studiul s-a concentrat pe determinarea politicilor guvernamentale esențiale și a barierelor comerciale care afectează performanța exporturilor industriei textile în timpul pandemiei de COVID-19. Acest studiu a analizat influența politicilor guvernamentale de export asupra performanței la export a industriei textile. Acest studiu a comparat, de asemenea, factori din trei industrii textile din Asia de Sud, respectiv Pakistan, India și Bangladesh. Studiul a identificat nouă politici guvernamentale de export esențiale și bariere comerciale bazate pe vizualizarea organizației industriale (Vizualizarea I/O). A fost utilizat un model de regresie de tip panel pentru a analiza semnificația fiecărei politici guvernamentale și barierele comerciale care afectează performanța exporturilor de produse textile. Rezultatele studiului au arătat că ratele de schimb valutar, costul de export, timpul de export, stabilitatea politică a țării, calitatea infrastructurii din țară, libertatea din corupție, costul de afaceri al terorismului și stabilitatea economică în țară au un efect semnificativ asupra performanței la export a industriei. În schimb, taxele pentru desfășurarea afacerilor au un efect nesemnificativ asupra performanței la export. Testul de Estimare aparent fără legătură (SUEST) a comparat diferențele de performanță la export ale industriilor textile din Pakistan, India și Bangladesh datorate politicilor guvernamentale. Rezultatele au arătat că un nivel mai ridicat de timp pentru export, costul de export și costul pentru desfășurarea afacerilor terorismului duc la performanța scăzută la export a industriei textile. În același timp, un nivel mai ridicat al cursurilor de schimb valutar, stabilitatea politică a țării, calitatea infrastructurii, libertatea din corupție și stabilitatea economică în țară duc la performanțe ridicate la export ale industriei textile. Mai mult, taxele pentru desfășurarea afacerilor au un efect nesemnificativ asupra performanței la export.*

*Acest studiu este printre puținele care abordează industria textilă în timpul pandemiei de COVID-19. Din cauza circumstanțelor incerte, va fi greu pentru guvern să identifice factori importanți care ar putea ajuta exportatorii de textile să supraviețuiască și să se dezvolte în timpul pandemiei de COVID-19. Studiul a identificat politici guvernamentale importante și bariere comerciale care afectează exporturile de textile pe baza unui sprijin teoretic solid și a comparat și a elaborat, de asemenea, importanța fiecărui factor în trei țări din Asia de Sud. Acest studiu va ajuta factorii de decizie să-și reconsidere factorii legați de export pentru a-și spori exporturile de textile și pentru a-și relansa economia după pandemia de COVID-19.*

*Cuvinte-cheie: pandemie de COVID-19, performanță la export, industria textilă, vizualizarea organizației industriale*

## INTRODUCTION

The COVID-19 pandemic has hit the economies of countries all over the world. Overall, industries and businesses worldwide have been suffering during the COVID-19 pandemic. The textile industry is the most affected industry, along with tourism and hoteling, due to the forced change in the consumption behaviour of consumers during the COVID-19 lockdown. Currently, selling and buying habits have changed. At the organisational level, the governments have also reacted and changed their trade policies in reaction to the international scenario [1].

The global sales of textile and fashion brands decreased by 11% in 2020–2021 compared to 2019. It is further expected that the industry will experience a decline of up to 30% in the coming six months. The export volume for almost every country is noticeably decreased during the COVID-19 pandemic, as shown in figure 1. Even China and the European Union, the leading textile and clothing exporters, have faced an export decline of 6.6% and 8.2%, respectively, from 2020 to 2021. Customers' purchase behaviour has also changed; they focus more on primary clothing products than fashion brands. In addition, the Work From Home (WFH) culture has changed the clothing preferences of consumers [2]. South Asian countries, including India and Pakistan, significantly contribute to world export, as shown in figure 2. The share of India is 4.2%, and Pakistan contributes 2% in overall words textile exports. Still, while many countries are well-positioned in the raw materials or the production stage of the textile and apparel Global Value Chain (VGC), they are only playing a limited role in the absence of retail (comprised of marketing, branding and sales). Thus, they have the potential waiting to be unlocked to reap more benefits from the global markets [3].

Many countries are well-positioned in the raw materials or the production stage of the textile and apparel
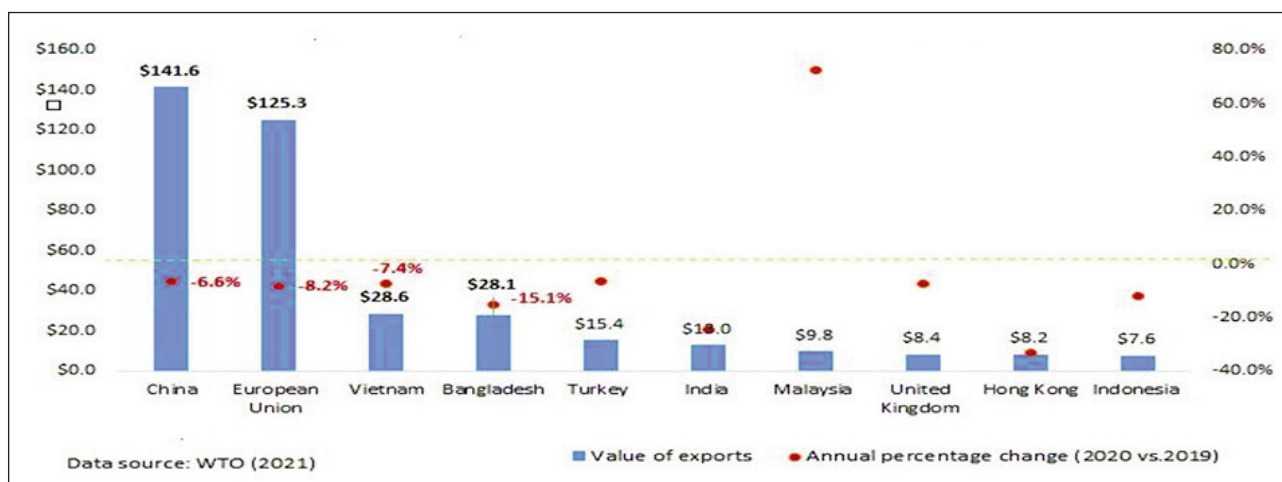


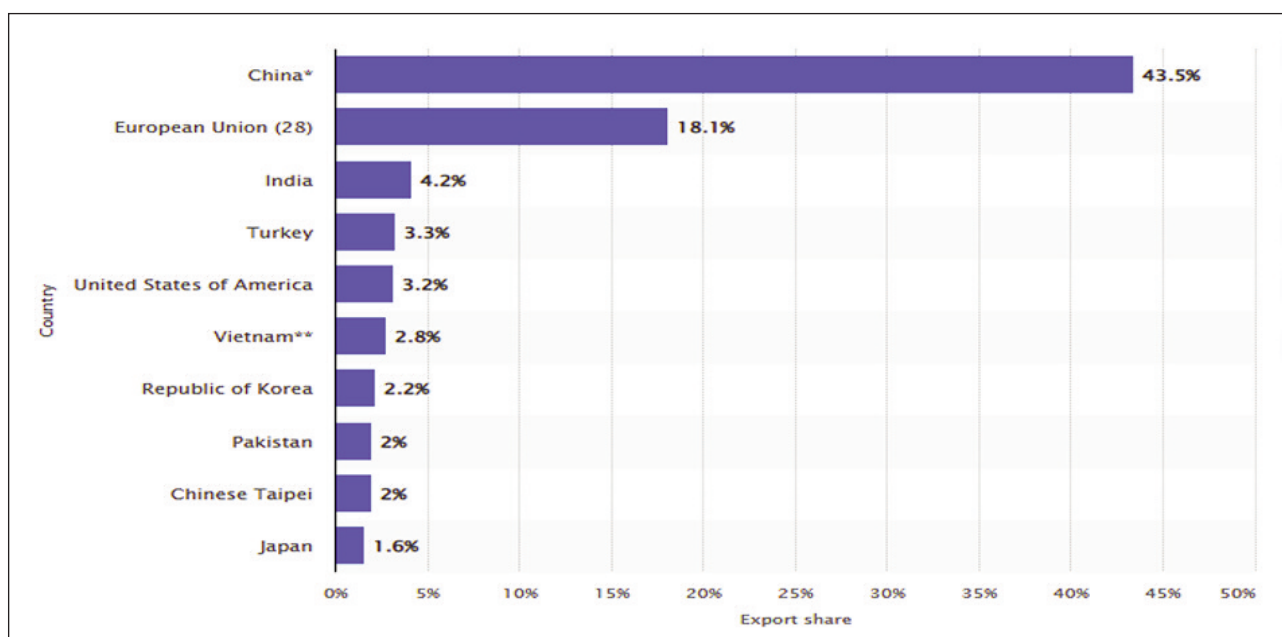Fig. 1. Percentage change in exports during 2020–2021 [1]



Fig. 2. Share in world exports of the leading clothing exporters in 2020, by country

Global Value Chain (GVC); they are only playing a limited role in the absence of retail (comprised of marketing, branding and sales). Thus, they have the potential waiting to be unlocked to reap more benefits from the global markets [3].

Now, governments are trying to influence industry-related factors to ease the pressure on the export industry. Textile export-dependent countries like Pakistan, China, India, and Bangladesh are developing more export-friendly policies in the region. Different government policies and trade barriers, including the cost of doing business, tax on exports, time to export, and other factors, have been changed. Countries are trying to develop export-friendly policies in reaction to the international business scenario as exports assist in the economic development and growth of a country. Countries interact and make relationships through international trade to achieve their economic goals [4]. Exports help improve foreign exchange reserves and increase economic growth and expansion opportunities. Exports enhance the level of competition, enhance technology acceptance and enhance the knowledge and skills of the workforce in a country [5].

Exports-led growth of East Asian countries and India and China's recent high export achievements have brought export promotion to the forefront in the development policy agendas of most developing countries [6]. The behaviour of the Asian textile industry is uncertain because of differences in economic levels, trade policies and political uncertainty. Initially, cheap labour and low cost of production were supposed to be the critical determinants of export performance. Asian countries such as Bangladesh, China and Thailand have achieved the lowest production cost and earned high positions as international textile exporters [7].

It has become hard for exporting firms to work in the international market because of high international trade barriers during the COVID-19 pandemic. Now exporting firms from developing countries are asking for export subsidies. In this downturn of economies, it is hard for developing countries to offer subsidies. The only solution is to make export-friendly policies and reduce trade barriers for textile exporters. The current study identifies essential government policies and trade barriers affecting export performance. The study focused on determining important textile-related government policies and trade barriers contributing to the industry's export performance during the COVID-19 pandemic. The study has identified nine government policies and trade barriers based on Industrial Organization View (I/O View).

## LITERATURE REVIEW

Coronavirus SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2, COVID-19) has drastic impacts on the economy and global health. According to WHO, over 274M cases were confirmed across the globe, and 5.35M deaths were reported cumulatively on 29th December 2021. The pandemic of COVID-19 has shown a severe impact concerning transmissibility and mortality compared to previous viruses such as influenza in countries worldwide. COVID-19 impacted international trade significantly and in various ways. In exporting countries, the COVID-19 damage manifested as a reduction in the production scale and the export supply. Exports are expected to drop, particularly in manufacturing industries and specifically in countries where remote work/operation is less feasible. The COVID-19 damage in an importing country is mainly due to the decrease in aggregate demand. Reduced people's earnings and limited visits to retail outlets led to low demand [8].

At the beginning of the first wave, it was not known how to "behave" during the COVID-19 pandemic. Many countries forced people to stay at home, and all operational activities were suspended [9]. COVID-19 has increased trade costs among countries. For instance, high infection and death cases reduced the workforce, including port workers and truck drivers in the transport and shipping sectors. Lockdown policies and port restrictions reduce air flights and marine transportation between countries [10]. According to Lau et al. [11], container transportation through ships decreased by 29% compared to 2019 in the first week of April 2020. These issues in the transportation industry have decreased export performance.

## Theoretical framework and hypotheses

The I/O view explains the critical determinants of export performance across industries. It focuses on the characteristics of industry (external factors of the firm) such as tariffs, political stability, technological change, export promotion program, barriers to market entry and infrastructure of the country [9]. According to the Industrial Organization View, government policies and trade barriers substantially influence export performance [12]. Mason has proposed a strong relationship between the industry's structure and firm performance.

The Industrial Organization View has four underlying assumptions. First, top management must have a high commitment to developing and implementing export strategies. Second, firms competing within an industry must have common relevant resources and should develop similar strategies with the help of those resources. Third, the resources and capabilities of firms must be highly mobile across firms. Fourth, government policies and trade barriers create pressure and constraints, which lead to high export performance strategies [13].

Researchers have also paid good attention to government policies and trade barriers affecting the industry's export performance [14]. LiPuma and Park found that trade barriers, including tax and corruption in a country, harmed export performance [15]. Government policies and trade barriers, including the cost of doing business, availability of electricity, road facilities and economic situation in a country, are considered significant determinants of industry export performance [16]. Researchers have considered the

Industrial Organization View a reliable predictor of high export performance [17]. Athukorala found exporting firms cannot survive in the international market without having a complete analysis of the industry [18]. This study has given great importance to government policies and trade barriers and considers the following determinants of export performance derived from the Industrial Organization View.

### Currency exchange rates

The currency exchange rate is a significant determinant of export performance and predicts the industry's export performance. The currency exchange rate is essential in enhancing the industry's export performance [19]. Limao and Venables found that depreciation in currency results in low prices of products in the international market and high export performance of the industry [20]. Depreciation of currency offers high profits to exporters and vice versa [21]. The COVID-19 pandemic has also affected the currency market [22]. The dollar gained strength at the beginning of the pandemic, and the currency of developing countries depreciated over time. Though international trade declined during the pandemic due to the depreciation in currency against the dollar, many developing countries got benefited from exports [23]. Therefore, based on the previous literature, the following hypotheses are proposed:

H1 (a): Depreciation of currency in a country positively affects the industry's export performance.

H1 (b): High depreciation of the currency in a country will lead to the high export performance of the industry

### Cost to export

Hummels and Klenow [24] estimated the cost to export for developing countries, and their findings revealed that developing countries have a 55% higher cost to export than developed countries. These findings show that the high cost to export slows down a country's export growth. Yasar [25] pointed out some reasons for the high cost to export, including poor infrastructure, poor law and order situations and energy crises in the country. Cost to export remained a significant trade barrier to the high export performance of industry [26]. During the COVID-19 pandemic, countries failed to provide sufficient infrastructural facilities to exporters, which resulted in low export performance [27]. Moreover, the lack of international transportation services, including air cargo and ship cargo services, cost almost three times during the COVID-19 pandemic, which increased the cost of exports significantly [28]. Therefore, based on the previous literature, the following hypotheses are proposed:

H2 (a): Cost to export in a country has a negative effect on the industry's export performance.

H2 (c): High cost to export in the country will lead to the low export performance of the industry.

### Time to export

Researchers have suggested time to export as a significant determinant of industry export performance [29]. Differences exist in the time required to perform export activities across countries. For China, Indonesia and Australia, the average time to export a 20-foot container from the production unit to the port, including all formalities, is 18 days. For Bangladesh and Sri Lanka, the average time to export is 32 days [30]. Time delay due to the unavailability of international transportation services during COVID-19 has created problems for exporters [31]. According to Hummels [32], the time to export has increased by almost 30% because of the unavailability of transportation services and trade restrictions during COVID-19 spreads. Therefore, based on the previous literature, the following hypotheses are proposed:

H3 (a): Time to export in a country has a negative effect on the export performance of the industry.

H3 (b): The requirement for more time to export in a country will lead to the low export performance of the industry.

### Political stability in the country

According to Kessides [33], political instability is when the government is forced to go or is taken over following a coup, and the machinery of governance is confronted by groups working from outside the normal process of the political system. Political stability plays a vital role in the international trade of a country. The country's political conditions mainly depend on high-quality control by the government [34]. Political consistency in a country portrays an excellent image to the rest of the world, and political instability adversely affects exports [35]. Almost all countries have redefined their international trade policies during the COVID-19 pandemic [36]. Travelling restrictions, quarantine policies, and trade policies have influenced exports negatively [37]. Therefore, based on the previous literature, the following hypotheses are proposed:

H4 (a): Political stability in a country positively affects industry export performance.

H4 (b): High political stability in a country will lead to high export performance of the industry.

### Quality of infrastructure in the country

Valbona et al. [38] argued that a potent infrastructure in a country reduces export costs and improves international trade. Export growth depends on tariff liberalisation and the quality of infrastructure and related services [39].

Arize et al. [40] have pointed out the reasons for the low export performance of the industry. According to them, poor transportation facilities and interrupted supply of electricity and gas to the industry are the main reasons for low export performance. Poor infrastructure in a country makes it difficult for firms to compete in the international market, as they cannot

ensure low-cost and timely delivery [41]. Ocampo and Guerra [42] suggest that most firms do not even think to participate in international trade because of poor infrastructure. Countries can improve their export performance by improving electricity supply, telephonic services and road facilities [43]. Due to economic crises during the COVID-19 pandemic, most developing countries are trying to improve their country's health infrastructure. As a result, trade infrastructure has been ignored [44]. Therefore, based on the previous literature, the following hypotheses are proposed:

H5 (a): The quality of infrastructure in a country positively affects industry export performance.

H5 (b): High quality of infrastructure in a country will lead to the high export performance of the industry.

### Freedom from corruption

According to Marks et al. [45], corruption exists in a country whenever an official has discretion in granting the distribution of a "good" or avoidance of a "bad" in the public sector. Warr [46] has argued that corruption in both tangible (such as ineffective government administration) and intangible (such as the loss of trust in the economy) forms negatively affect the industry's export performance. According to the Corruption Perceptions Index 2021(CPI) report, the corruption level in developing countries has increased during the COVID-19 pandemic. Due to instability in the government export policies during COVID-19, it has been reported that in some developed countries, government officials are asking for bribes to facilitate the export process [47]. Therefore, we propose the following hypotheses:

H6 (a): Freedom from corruption positively affects the industry's export performance.

H6 (b): High level of freedom from corruption will lead to the high export performance of the industry.

### The business cost of terrorism

According to Hamzah [48], terrorism is a planned political or non-politically influenced aggression against non-militants. The COVID-19 pandemic has created health-threat in the security workforce, and security workers are hesitant to contact other persons personally. Due to a less secure workforce and the risk of COVID-19 transfer, security workers are not as effective as in the pre-COVID-19 situation. Therefore there is more threat of terrorism, which could affect exports negatively [36]. Ackerman and Peterson [49] described terrorism as an activity of violence against people or government to achieve social, political or ideological objectives. Terrorism incidents affect the export performance of countries in the long run. In developing countries, the adverse effects of terrorism activities are seen immediately after the incident [50]. According to Valbona [51], an uncertain security situation negatively affects importers' purchasing behaviour. Therefore, based

on the previous literature, the following hypothesis is proposed:

H7 (a): The business cost of terrorism in the country has a negative effect on the export performance of the industry.

H7 (b): High business cost of terrorism in a country will lead to low export performance of the industry.

### Economic stability of the country

Espinosa-Méndez and Arias [52] have suggested that economic instability has a negative effect on the export performance of countries in both the short run and the long run. Arize et al. [53] investigated the effect of financial instability across developed and developing countries, including Chile, Colombia, Denmark, Japan, Kenya, Malaysia and Uruguay. Their findings indicate that financial instability negatively affects the export performance of developing countries [41]. Another group of studies on developing countries showed the negative effect of economic instability on countries' export performance. After examining economic instability in 21 African countries, Ocampo and Guerra [52] concluded that unstable economic indicators affect export performance negatively. COVID-19 has hit the economies of many developed and developing countries [54]. Padhan and Prabheesh [55] have categorised the economic effect of COVID-19 into two categories, decreased supply due to a reduction in the business working hours and decline in aggregate demand due to unemployment because of lockdowns which ultimately affects export negatively. Liu et al. [56] claimed that COVID-19 has affected the economy by reducing employment and increasing international transaction costs, and demand reduction. So, we propose the following hypotheses:

H8 (a): Economic stability in a country positively affects industry export performance.

H8 (b): High economic stability in a country will lead to high export performance of the industry.

### Taxes on doing business

Researchers have studied the effect of taxation on export performance [44]. Marks et al. [45] studied the direct effect of taxation on export performance. Their results showed that tax on doing business significantly affects countries' export performance. Warr [46] examined the effect of tax on doing business and found that tax had a negative effect on countries' export performance. Zulkarnaen et al. [57] conducted a similar study and calculated economic gains and losses due to taxes on businesses. His results showed that export drops in periods of high taxation. Countries have changed their tax policies during COVID-19 because of limited trade activities. Many countries offered tax relaxation for the business community to survive during a pandemic [58]. For exporters, subsidies were offered, and many countries reduced monetary trade barriers to encourage international trade [58]. Therefore, based on the previous literature, the following hypothesis is proposed:

H9 (a): Taxes on doing business in the country have a negative effect on the export performance of the industry.

H9 (b): High taxes on doing business in a country will lead to low export performance of the industry.

## RESEARCH METHODOLOGY AND METHODS

The research employed a quantitative method to test hypotheses empirically. Country-level secondary data for three countries' government policies and trade barriers have been used. Monthly base data from November 2020 to November 2021 has been considered to explain government policies and trade barriers regarding exports. Data for currency exchange rates, cost to export, time to export, political stability of the country, quality of infrastructure, freedom from corruption, business cost of terrorism and economic stability of country and Taxes on doing business is purchased from the Global Competitiveness Index, 2021.

To test the model, Panel Regression Models were used for panel data. Panel Regression models included Pooled OLS Model, Random Effect Model and Fixed Effect Model. Panel diagnostic tests, including the Chow test, Breusch-Pagan test and Hausman Specification Test, were used to choose the appropriate model. The white test was used to examine the problem of heteroscedasticity in the data. The Variance Inflation Factor test (VIF) was used to examine the multicollinearity problem of the data.

The difference in export performance of Pakistani, Indian and Bangladeshi textile industries was compared due to differences in government policies and trade barriers. Differences in the effect of government policies and trade barriers on export performance were compared with the Seemingly Unrelated Estimation (SUEST) test in Stata software.

## RESULTS AND ANALYSIS

### Analysis of government policies and trade barriers affecting the export performance of the industry

The Panel Regression model examined the significance of nine government policy-related factors of export performance.

### Panel diagnostic tests

The study used Panel Regression models for the panel data. Diagnostic tests such as the Chow test, Breusch–Pagan test and Hausman specification test were used to find the appropriate Panel Regression model. Panel diagnostics tests are explained below.

*Chow test*
To select the most suitable model between a pooled regression and a fixed-effect model, the Chow test was used. If P's value is greater than 0.05, then the pooled Ordinary least squares are considered the appropriate model. The minimum P-value required for the model is given below. The results from table 1

show that the P-value (0.173073) is greater than 0.05; hence we conclude that the pooled Ordinary least squares model is better than the fixed effect model.

Table 1

| SUMMARY OF THE PANEL DIAGNOSTIC TESTS | | | |
|---|---|---|---|
| **Tests** | **Null hypothesis (H0)** | **P-Value** | **Recommended model** |
| Chow test | Pooled Ordinary least squares model is better than Fix Effect Model | 0.17308 | Pooled OLS model |
| Breusch-Pagan test | Pooled Ordinary least squares model is better than Random Effect Model | 0.34692 | Pooled OLS model |

*Breusch–Pagan test*
Breusch–Pagan test was used to decide the best model between Pooled OLS model and the random effect model. The results from table 1 show that the P-value (0.346917) is greater than 0.05; hence pooled OLS is better than the random-effects model. Thus, based on the Chow and Breusch–Pagan test, we concluded that the pooled OLS model is better than the random effect and fixed-effect models.

**Assumptions for the Panel Regression model**

Assumptions for the Panel Regression model (heteroscedasticity and multicollinearity) were satisfied through the following tests.
*Test for heteroscedasticity*
A heteroscedasticity problem occurs when variance is not constant for all observations. The basic assumption of ordinary least square is constant variables, i.e. the variables must be homoscedastic. To check this assumption, the White test was used. The P-value of the White test must be greater than 0.05.

Table 2

| WHITE'S TEST OF HETEROSCEDASTICITY | |
|---|---|
| **Chi$^2$** | **P-Value** |
| 20.549695 | 0.302737 |

The variance in the data is constant. As shown in table 2, P-value is greater than 0.05. So, there is no problem of heteroscedasticity in the data.
*Test for multicollinearity*
To check the multicollinearity among the independent variables in the data, the Variance Inflation Factor (VIF) was used.

| VIF FOR GOVERNMENT POLICIES AND TRADE BARRIERS AFFECTING EXPORT PERFORMANCE OF INDUSTRY | |
|---|---|
| **Government Policies and Barriers** | **VIF** |
| Currency exchange rates | 2.086 |
| Cost to export | 1.539 |
| Time to export | 2.137 |
| Political stability in the country | 1.829 |
| Quality of infrastructure in the country | 1.058 |
| Freedom from corruption | 2.294 |
| Business cost of terrorism | 1.666 |
| Economic stability in the country | 2.753 |
| Tax on doing business | 2.971 |

Results of VIF in table 3 indicate that all the variance inflation factor test values are below 10. So, there is no problem with multicollinearity in the model.

**Hypotheses testing**

The pooled regression model was used to examine the significant effect of government policies and trade barriers on the industry's export performance.

*Analysis of Pooled Regression Model*

Table 4 reports the results of the pooled regression. The R-square value of 38.96% reflects that a reasonable proportion of variance in export performance is explained by currency exchange rates, the cost to export, time to export, political stability of the country, quality of infrastructure, freedom from corruption, business cost of terrorism and economic stability of the country. In table 4, F-value and its underlying P-value show the overall fitness of the model. Since the P-value is less than 0.05 (0.000), it indicates a good model fit.

*Hypotheses results*

Results in table 4 show that Currency exchange rates (H1a), Political stability of the country (H4a), Quality of infrastructure in the country (H5a), Freedom from corruption (H6a) and Economic stability in the country (H8a) have a significant positive effect on export performance. While the cost to export (H2a), time to export (H3a), and business cost of terrorism (H7a) has a significant negative effect on export performance. Tax on doing business (H9a) has an insignificant effect on export performance. Therefore except for Taxes on doing business, all hypotheses are accepted.

**Comparative analysis of government policies and trade barriers and export performance**

Results in table 5 show that the mean coefficient value of the currency is more depreciated for Pakistan and has a high positive effect on the export performance of the Pakistani textile industry compared to the Bangladeshi and Indian textile industries. So, we accept H1 (b).

Results in table 5 show that the mean coefficient value of cost to exports is high for Bangladesh and also has a high negative affects on the Bangladeshi textile industry's export performance compared to the Pakistan and Indian textile industry. Therefore, we accept H2 (b).

Results in table 5 show that the mean coefficient value of time to exports is high for Bangladesh and has a higher negative effect on the Bangladeshi textile industry's export performance than the Pakistan and Indian textile industry. Therefore, we accept H3 (b).

Results in table 5 show that the mean coefficient value of political stability is high for Indian and has a higher positive effect on the export performance of the Indian textile industry as compared to Bangladesh and Pakistan. Therefore, we accept H4 (b).

Results in table 5 show that the mean coefficient value of the quality of infrastructure is higher for India and has a higher positive effect on the export performance of the Indian textile industry. Hence, we accept H5 (b).

Results in table 5 show that the mean coefficient value of freedom from corruption is higher for India

| POOLED OLS MODEL GOVERNMENT POLICIES AND TRADE BARRIERS AFFECTING EXPORT PERFORMANCE OF INDUSTRY | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Firm's external factors** | **Coefficient** | **Std. Error** | **t-ratio** | **p-value** | **R-square** | **F** | **P-value** |
| Constant | 23.5926 | 0.330416 | 71.402 | 0.0000 | | | |
| Currency exchange rates | 0.0104114 | 0.0014836 | 7.0174 | 0.0000 | | | |
| Cost to export | −0.0004054 | 0.0001551 | −2.614 | 0.0165 | | | |
| Time to export | −0.0305705 | 0.0035951 | −8.503 | 0.0000 | | | |
| Political stability of the country | 0.609771 | 0.0437238 | 13.946 | 0.0000 | 0.389 | 29.3 | 0.000 |
| Quality of infrastructure in the country | 0.248317 | 0.0467149 | 5.3156 | 0.0000 | | | |
| Freedom from corruption | 0.0057723 | 0.0020482 | 2.8183 | 0.0106 | | | |
| Business cost of terrorism | −0.0498401 | 0.0222966 | −2.235 | 0.0369 | | | |
| Economic stability in the country | 0.0098918 | 0.0046291 | 2.1368 | 0.0451 | | | |
| Taxes on doing business | −0.0003122 | 0.0009051 | −0.345 | 0.7337 | | | |

Table 5

| COMPARATIVE ANALYSIS OF GOVERNMENT POLICIES AND TRADE BARRIERS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **External factor** | **Countries** | **Coefficients** | **T** | **Sig.** | **SUEST Test for comparison of coefficients** | | |
| | | | | | **Differences In coefficients** | **Chi²** | **SIG.** |
| Currency exchange rates | Bangladesh | 0.0551384 | 5.49 | 0.00 | Bangladesh: India | 1.21 | 0.230 |
| | India | 0.0155939 | 3.41 | 0.00 | Pakistan: Bangladesh | 15.80 | 0.00 |
| | Pakistan | 0.1077742 | 6.53 | 0.00 | India: Pakistan | 14.41 | 0.00 |
| Cost to export | Bangladesh | −0.0953443 | −9.22 | 0.00 | Bangladesh: India | 5.89 | 0.00 |
| | India | −0.0546394 | −8.05 | 0.00 | Pakistan: Bangladesh | 9.22 | 0.00 |
| | Pakistan | −0.0113381 | −7.05 | 0.00 | India: Pakistan | 5.52 | 0.00 |
| Time to export | Bangladesh | −0.119794 | −9.97 | 0.00 | Bangladesh: India | 7.18 | 0.00 |
| | India | −0.0523489 | −8.56 | 0.00 | Pakistan: Bangladesh | 11.52 | 0.00 |
| | Pakistan | −0.0310657 | −3.37 | 0.00 | India: Pakistan | 0.16 | 0.875 |
| Political stability in the country | Bangladesh | 0.1627201 | 5.29 | 0.00 | Bangladesh: India | 9.15 | 0.00 |
| | India | 2.49915 | 4.19 | 0.00 | Pakistan: Bangladesh | 0.323 | 0.747 |
| | Pakistan | 0.1247469 | 6.19 | 0.00 | India: Pakistan | 10.21 | 0.00 |
| Quality of infrastructure in the country | Bangladesh | 0.2079503 | 3.84 | 0.00 | Bangladesh: India | 8.28 | 0.00 |
| | India | 0.9007808 | 5.45 | 0.00 | Pakistan: Bangladesh | 7.71 | 0.00 |
| | Pakistan | 0.7744854 | 7.089 | 0.00 | India: Pakistan | 8.09 | 0.19 |
| Freedom from corruption | Bangladesh | 0.0175171 | 6.28 | 0.00 | Bangladesh: India | 12.65 | 0.00 |
| | India | 0.0681908 | 5.99 | 0.00 | Pakistan: Bangladesh | 1.56 | 0.123 |
| | Pakistan | 0.0087161 | 9.08 | 0.00 | India: Pakistan | 14.25 | 0.00 |
| Business cost of terrorism | Bangladesh | −0.7655221 | 10.36 | 0.00 | Bangladesh: India | 1.55 | 0.68 |
| | India | −0.5133019 | 12.55 | 0.00 | Pakistan: Bangladesh | 6.22 | 0.01 |
| | Pakistan | −1.18344 | 8.05 | 0.00 | India: Pakistan | 9.21 | 0.00 |
| Economic stability in the country | Bangladesh | 0.0150767 | 9.22 | 0.00 | Bangladesh: India | 11.28 | 0.00 |
| | India | 0.1353135 | 6.35 | 0.00 | Pakistan: Bangladesh | 9.56 | 0.00 |
| | Pakistan | 0.0053135 | 8.19 | 0.00 | India: Pakistan | 14.95 | 0.00 |
| Tax on doing business | Bangladesh | −0.0025588 | −3.25 | 0.00 | Bangladesh: India | 6.24 | 0.00 |
| | India | −0.0545854 | −4.02 | 0.00 | Pakistan: Bangladesh | 0.492 | 0.624 |
| | Pakistan | −0.002554 | −0.58 | 0.72 | India: Pakistan | 7.05 | 0.00 |

and has a higher positive effect on the Indian textile industry's export performance compared to the Bangladeshi and Pakistani textile industries. Therefore, we accept H6 (b).

Results in table 5 show that the mean coefficient value of the business cost of terrorism is worst for Pakistan and has a more negative effect on textile exports than the Bangladeshi and Indian textile exports. So, we accept H7 (b).

Results in table 5 show that the mean coefficient value of economic stability is higher for Indians and has a higher positive effect on the export performance of the Indian textile industry compared to the Pakistan textile industry. So, we accept H8 (b).

Results in table 5 show the insignificant effect of taxes on doing business on the export performance of the Pakistani textile industry. So, based on insignificant results, we reject H9 (b).

## CONCLUSION

This study is among the few contributing to the textile industry during the COVID-19 pandemic. Due to uncertain circumstances, it becomes hard for the government to identify essential factors which could help textile exporters to survive and grow during the COVID-19 pandemic. The study has identified important government policies and trade barriers affecting textile exports based on strong theoretical support and has also compared and elaborated on the importance of each factor across three South Asian countries. This study will help policymakers reconsider export-related factors to enhance their textile exports and revive their economy during the COVID-19 pandemic.

The study focused on determining essential government policies and trade barriers affecting the textile industry's export performance during the COVID-19 pandemic. To achieve the objective, a study has identified nine textile export-related factors based on Industrial Organization View. The significance of each textile export performance factor was seen using the panel regression model. Results of the study showed that currency exchange rates, the cost to export, time to export, political stability of the country, quality of

infrastructure in the country, freedom from corruption, business cost of terrorism and economic stability in the country have a significant effect on export performance of the industry. In contrast, taxes on doing business have an insignificant effect on export performance. Supporting the study's findings, Collins and Gagnon [59] has discussed that the currency of developing countries has depreciated during the COVID-19 pandemic and resulted in high export returns. They also pointed out that the cost of imports increases with currency depreciation, and import-dependent industries may get affected negatively. Moreover, the findings of Barbero et al. [60] align with the current study results, as during the COVID-19 pandemic, countries have imposed trade restrictions that have increased the cost and time of exports and are negatively affecting exports. Supporting the findings of the study, Verschuur [61] indicated the negative effect of government policies on the export performance of the industry; moreover, they argued that the government had ignored infrastructure during the COVID-19 pandemic and the lack of political stability in the country has also increased worries for the exporters.

To identify the difference in export performance of Pakistani, Indian and Bangladeshi textile industries due to differences in the level of government policies and trade barriers, the Seemingly Unrelated Estimation test was used to compare the difference in export performance due to government policies and trade barriers of Pakistani, Indian and Bangladeshi textile industry. The results showed that a higher level of time to export, cost to export and business cost of terrorism lead to low export performance. At the same time, a higher level of currency exchange rates, political stability of the country, quality of infrastructure, freedom from corruption and economic stability in-country lead to high export performance. Further, taxes on doing business have an insignificant effect on export performance.

Bas et al. [62] have compared the cross-country data, and their results are aligned with the current study. According to their results, low trade restrictions and friendly export policies can enhance the country's export performance. Delays in the export process and healthcare measures for the employee during the COVID-19 pandemic have increased the cost of export. Countries that are imposing strict lockdowns, working from home, and forcing industries to purchase health care equipment resulted in high costs of production.

For policymakers, this study has identified important factors to work on to increase the export performance of the textile industry. Policymakers should decrease the export barriers by decreasing taxes, improving infrastructure, minimising time to export and improving law and order in the country. The depreciated currency could also be beneficial to enhancing the textile industry's export performance. Finally, corruption is the most critical barrier to export performance. Corruption increases the cost of doing business and morally demotivates firms to export. All sort of corruption is harmful to export performance.

Research has also significant managerial implications for exporting firms as efficient exporting strategies at the firm level are required to manage exports during COVID-19 successfully. Managers of the textile exporting firm should continuously review the national and international trade policies during the COVID-19 pandemic, as the current pandemic has created political and economic instability in the countries. So, exporting firms should monitor local and foreign countries' dynamic international trade policies. Due to transportation and carriage problems during COVID-19, exporting firms should efficiently manage production time to avoid delays in delivering products. Exporting firms should also determine their production cost by anticipating exchange rates and the cost of doing business before quoting rates. Work from home and lockdown have negatively affected the production process of exporting firms. Exporting firms should follow all standard operating procedures (SOPs) for COVID-19 in the workplace to protect their employees from infection so that they can work in a safe environment.

Though research has presented a comprehensive model to explore the effect of export barriers across South Asian countries, still some areas are required to be addressed in future studies. First of all, some firm-level capabilities can be included to compare internal and external factors contributing to export performance during COVID-19. Secondly, as the current study has only considered developing countries, future studies are required to empirically test and compare the presented model in developed and developing countries. Finally, the current study has only considered the data for the period of the COVID-19 pandemic; further study can also pre COVID-19 data to make a more depth comparison of factors affecting export performance.

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