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The Impact of Technical Non-Tariff Measures on Pakistan's Export Performance

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A B S T R A C T

Technical non-tariff barriers, such as sanitary and phytosanitary regulations and technical trade barriers (TBTs), must be scrupulously adhered to by WTO members (SPSs). The protection of food, people, animals, plants, and the environment is the goal of these NTBs. The only way for nations to compete on the global market is by adhering to WTO standards for products and quality. International commerce has been both helped and hampered by non-tariff obstacles. Any country's exports depend on the successful implementation of both microeconomic and macroeconomic policies because of the interaction between product supply and demand. In a developing global and local economy, this article analyses economic methods that promote commerce and rethink routes to riches. The United States, China, and the United Arab Emirates top Pakistan's export partners all enacted and upheld TBT and SPS standards between 2003 and 2016. This study looked at the effects of these policies at the HS-2 product code level. TBT and SPS measurements are computed using, respectively, a ratio of coverage and an index of frequency. This Research is based on Secondary data, data has been taken from different sources like research articles, Websites like World Bank, SBP, UNCTD etc. Through Secondary qualitative analysis, all data and their results have been analysed deeply and provide conclusions. The study findings showed Pakistan's export performance, which has been boosted by the importer's TBT on Pakistani goods, has been badly hurt by SPS. The paper also looks at how these NTBs affect the business and agricultural sectors separately. TBT and SPS use the frequency index and the export coverage ratio to measure rising agricultural and industrial exports. The data set contains information from WDI, WTO, and UN Comtrade.

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INTRODUCTION

Non-tariff policies, also referred to as non-tariff barriers (NTBs), restrict commerce (NTBs). NTBs can limit the amount of international trade without being protective of domestic industries at the expense of foreign exporters. The World Trade Organization's technical non-tariff trade barrier measures include the TBT and SPS accords, which are currently in force (WTO). The impact of these restrictions on regional and international trade has been negative. Their objective is to make food safe for customers and stop the spread of pests and diseases among living things by enforcing trade quality standards. It is useless to defend domestic producers or keep a competitive edge by using health and safety regulations. The country has started and is currently implementing bilateral and preferential trade liberalisation measures as a result of its WTO membership.

This study examines bilateral commerce in goods under the HS 21 Section between Pakistan and the US, China, and the UAE from 2003 to 2016. The report also evaluates how these governments execute TBT and SPS regulations on exportable Pakistani commodities. The World Trade Organization (WTO) defines a tariff as a customs charge placed on imported goods that gives domestically produced items a price advantage. These controls include internal taxes or fees imposed on imports as well as domestic subsidies, as well as health, product, labour, and environmental standards. However, non-tariff barriers are not backed by money and are erected by importing countries. The Sanitary and Phytosanitary Measures Agreement of the World Trade Organization establishes fundamental standards and quality requirements. Living creatures must always be protected, and laws must be upheld in this regard. Commodity commerce is governed by sanitary (health of people and animals) and phytosanitary (health of plants) norms. Any actions taken to safeguard certain areas against disease-causing organisms, such as food, human life, fish, and animals, as well as forests and flora, are considered protective measures under the SPS Agreement (UNCTAD, 2012). Technical regulations are defined to incorporate product qualities and the associated processes. TBT can be used for labels, packages, and other packaging and labelling requirements. The government acknowledges a formal body that is in charge of endorsing standards. Government officials go through a series of steps to decide if the TBT and SPS should be applied to items, starting with sampling, testing, and inspection procedures, followed by reviews of verification and assurance of conformance, and ending with registration (UNCTAD, 2012). Consumers benefit from high health and hygiene standards because they reduce the risk of food-borne illness and monetary losses.

Agreements

Technical laws, standards, or conformity assessment processes may not impose trade obstacles if they are discriminatory or unnecessary, according to WTO Article 10 of the Agreement on Technical Barriers to Trade. Members of the WTO also adopt legal policy objectives, such as safeguarding environmental sustainability or ensuring public health and safety. The Sanitary and Phytosanitary Agreement's Article 20b states, "The SPS Agreement permits countries to create their own standards." Legislation must be founded on

scientific knowledge to preserve human life, animal life, and plant life. It should also not unfairly discriminate across countries with similar conditions (WTO, 2016). The Pakistan Standards and Quality Control Authority (PSQCA), Pakistan National Accreditation Council, and the Ministry of Science and Technology of Pakistan collaborated with the Pakistan Ministry of Commerce to develop technical standards and testing assessments for the implementation of TBT and SPS agreements. In order to boost industrial and agricultural production, the bodies provide technical standardisation policies and projects advice to government agencies, businesses, labour unions, and other stakeholders. Additionally, these associations provide TBT and SPS information to organisations like ISO and Codex Alimentarius.

While other nations have their own investigating and issuing authorities, China's General Administration of Quality Supervision, Inspection, and Quarantine serves as the country's investigating and issuing authority for quality standards in importing nations. International Organization for Standardization (ISO), American National Standards Institute (ANSI), and Association for Testing and Materials (ASTM) (2017). To comply with the TBT and SPS notifications, traders must register with these organisations.

Importance and Objectives of the Study

From a Pakistani viewpoint, this article explores TBT and SPS rules and their effects on exports from that country. The effect of the TBT and SPS limits on Pakistan's overall exports to its major trading partners has not yet been examined. The influence of trade barriers other than tariffs on Pakistan's exports will also be looked into in this study. Scholars from Pakistan and elsewhere studied NTBs' effects on exports as well as other factors in Pakistan and the exporting countries. Create a plan to raise the standards and quality of Pakistan's export goods. So, the main objectives of this study are to analyse the effects of sanitary and phytosanitary regulations and technological trade barriers on Pakistani exports. The second objective is to find out which non-tariff barriers have a greater impact on the exports of Pakistan. The last and third objective of this study is to evaluate how the TBT and SPS (non-tariff and tariff barriers) affect Pakistani exports.

LITERATURE REVIEW

In order to assess the impact/cost on Pakistan exports imposed by importers due to technical trade barriers and quarantine, and phytosanitary measures, this chapter reviews data from national and international surveys. It has been established that the TBT and SPS regulations imposed on the exports of trading partners by importing nations harm the economies of exporting nations. Some academics contend that the TBT SPS has the power to both encourage and restrain trade. These non-tariff obstacles hurt developing nations while helping the industrialised world. In the final half of this chapter, we look at the theory that underlies all of these discoveries.

Exports are hampered by non-tariff barriers, also referred to as non-tariff hurdles (NTBs). In terms of their effect on trade, non-tariff barriers (NTBs) may outweigh tariffs. (Ardakani, et al., 2009) And his colleagues, the non-tariff restrictions that importer countries place on Iranian exports were calculated

using a gravity model. Their findings suggest that non-tariff barriers (NTBs) have a stronger impact on exports than do tariffs. The significance of quality, packaging, labelling, and product standards grows as agricultural exports and global demand rise. Imports from Iran by EU members have decreased as a result of SPS and TBT regulations. Non-tariff barriers (NTBs) are a threat to developing nations due to TBT and SPS policies in the agricultural, textile, apparel, and iron and steel industries (Bora et al., 2002). The trade of emerging countries is significantly impacted by the high export value of these goods.

Less developed countries will likely bear the higher costs of adhering to such strict requirements, which could lead to market failures (Beghin & Bureau, 2001; Ferrantino, 2006; Korinek et al., 2008; Maskus et al., 2000). They all offer thorough analyses of the most important economic concerns connected to the modelling and assessment of TBT and SPS. Nontariff barriers (NTBs) to imports and exports have been modelled and assessed using known methodologies (Johnston & DiNardo, 2001). It was identified how to measure the impacts of sanitary and phytosanitary (SPS) and technical trade barriers (TBT) on trade flows, market equilibrium, economic efficiency, and welfare. Their research concentrated on estimating the impact of these actions on a particular product.

(Bao & Qiu, 2010) The impact of China's TBT on its 43 trading partners' agriculture and manufactured goods will also be examined through experiments. Through the use of the frequency index and coverage ratio, technical trade barriers (TBT). The frequency index shows that the value of China's imports has decreased by 0.8 percent, proving that TBT is trade-restrictive. Before entering the WTO, China's TBT had trade promotion effects, increasing import value by roughly 0.2% to make up for exporters' decreased access to the market. Their research indicates that China's TBT inhibits agricultural commerce while fostering manufacturing. Research by Sithamaparam & Devadason (2011) backed up this conclusion.

Figure 1. TBT Impacts Trade Flows

One such barrier that has a substantial effect on Pakistan's economy is technical trade barriers (TBT). Empirical research has been done on Pakistan's textile export performance in relation to TBT (Shah et al., 2014). In their investigation the idea holds that trade liberalisation has increased competition, forcing companies to boost productivity to remain competitive. Technical trade barriers (TBT) have an impact on Pakistan's textile industry's export

performance. In their research, which used first-hand information, this relationship was empirically examined. Multiple regression analysis shows that Pakistan's textile sector has improved since technical trade barriers were removed (TBT). According to estimates, Pakistan and India have agricultural tariffs of 218 percent and 17 percent, respectively. Trade limitations between the two nations are a result of economic, political, and military factors. Other non-tariff barriers to Pakistani exports include sanitary and phytosanitary regulations, import restrictions, and safety and regulatory standards. India restricts potential buyers of its textile exports with several non-tariff restrictions, including sanitary and phytosanitary (SPS) rules and technical trade barriers (TBTs). Statistics show that one of Pakistan's top 10 largest trading partners is the United States (Altaf et al., 2020). Pakistani exports to the US face major non-tariff obstacles as well. Due to the large distance, the strained government-to-government ties, and the US government's strict technical and sanitary regulations, trade between Pakistan and the US is incredibly expensive.

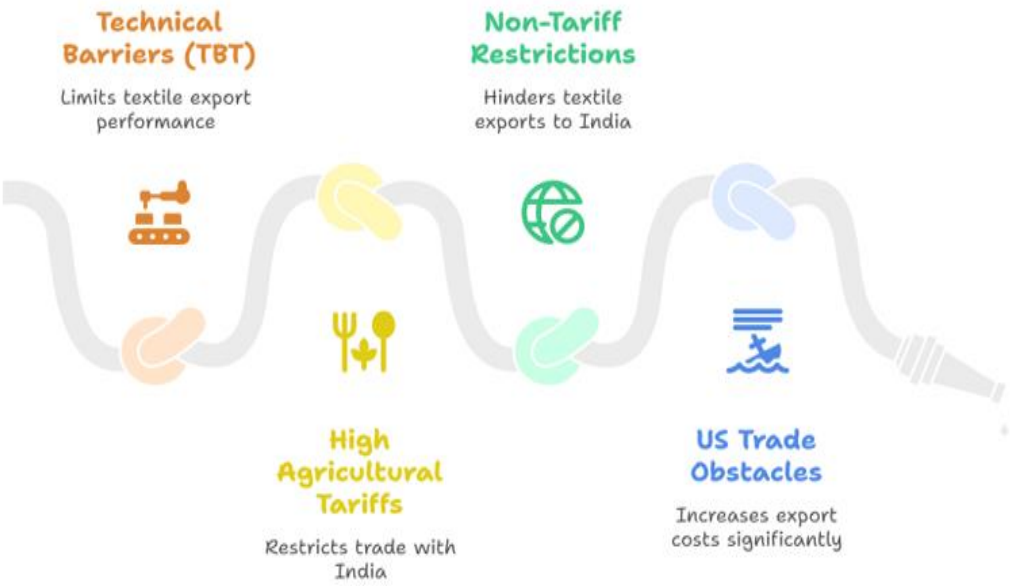

Figure 2. Navigating Trade Barriers for Pakistan Exports

(Ministry of Commerce Pakistan, 2016) These problems are described in the strategic trade plan framework for 2015–18, which also shows how the government is working to improve exports and standards. Pakistan's exports in a number of industries, including fans, home appliances, rice, cutlery, and sporting goods, are not rising as a result of the use of inefficient technologies. Investment and mark-up assistance programmes have been established to aid investors in modernising their technology. The government decided to provide a grant to assist brand certification and branding in order to hasten the expansion of Pakistan's SME sector and export industry. The standardisation and harmonisation of Pakistan's quality standards would fall under the purview of the recently founded Ministries of Science and Technology, Commerce, and National Food Security and Research. Through short-term strategic interventions in technical trade barriers and sanitary and phytosanitary procedures, China has the capacity to significantly increase

exports of basmati rice, horticulture, cattle, meat, and meat products, as well as jewellery.

Traditional theories also connected non-tariff restrictions, including TBT and SPS, imposed by importing countries on exporting countries' products. The influence of measures, standards, and technology specific to a nation's products on its export success is discussed in many theoretical works. Traditional trade theories, like the Ricardo model of international trade, assume that countries will specialise in the products where they have a competitive edge due to technology or productivity. According to a trade model based on monopolistic competition, comparable countries should trade differentiated commodities to satisfy customer need for choice (Krugman, 1980). In monopolistic markets, exporting is only possible for the most productive companies. More goods will be exported and sent to foreign markets in countries where businesses are more productive. In 1971, Walter investigated the effects of non-tariff measures (Walter, 1971). Non-tariff trade barriers have a wide range of impacts.

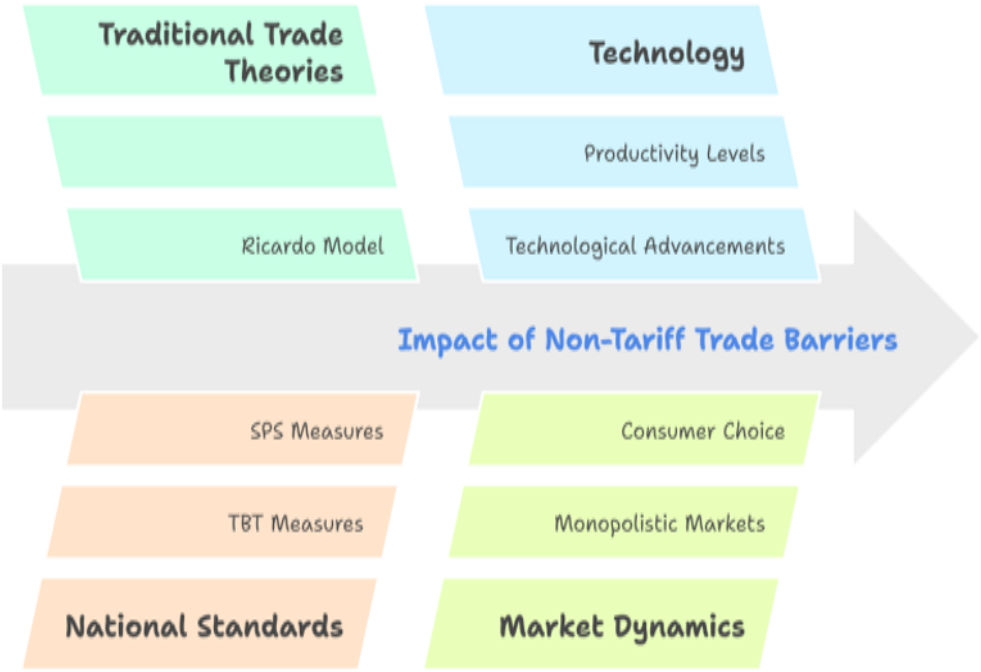

Figure 3. Analysing Non-Tariff Trade Barriers

The gravity model is the approach to analysing global trade patterns that is most commonly discussed in the literature. By analogy with Newtonian theory, the "gravity equation" is a law that may be used to estimate the volume of bilateral trade between any two countries (Tinbergen, 1966). Gravity models can be influenced by a wide variety of business ideas. We can create a gravity-type equation using the Ricardian model of international trade in differentiated commodities developed by Eaton and Kortum in 2002 and the theoretical model of international trade in differentiated goods with company heterogeneity developed by Helpman et al. (2008; Chaney, 2008). In addition to export performance, our analysis will examine tariffs and TBTs, the SPS, and GDP of Pakistan and other nations that buy our products. When evaluating a country's

supply and demand capability, we use its real GDP as a stand-in for each country's actual GDP. The size of a country's GDP and rate of economic growth can have an impact on its export dynamics (Besedina, 2015).

METHODOLOGY

Secondary data refers to information that has already been collected from primary sources and made available to other researchers for their own purposes. In other words, this is old, existing information. It's possible that the information was gathered by one researcher for a particular study and then made accessible to another researcher. For instance, data from the national census may have been gathered without a clear study purpose for broad use. In one study, data that is viewed as secondary may be viewed as primary in another. When data is used again, it serves as both primary and secondary data for the initial study. There are a variety of secondary data sources available, such as other people's published works and government-maintained archives (Formplus, 2021). Qualitative researchers use data analysis, which is the methodical search and organisation of interview transcripts, observation notes, and other non-textual materials, to get a deeper knowledge of a phenomenon.

Research Design

This study draws data from various secondary sources, including research articles, government websites, and UNCTAD. The primary objective is to gather as much relevant research information as possible to address the stated research objectives. Additionally, the authors have employed a qualitative research approach, utilizing an inductive method to analyse the data. The study is based on panel data from 2003 to 2016, and incorporates the following variables, which have been used by researchers in previous studies: export, gross domestic product, distance, exchange rate, tariff, TBT (Technical Barriers to Trade), and SPS (Sanitary and Phytosanitary measures). The quantification techniques for TBT and SPS, as well as the results of this research, will be explained in the next chapter.

RESULT AND DISCUSSION

The UN Comtrade database's HS-2 export information for Pakistan was compiled between 2003 and 2016. Using a gravity indicator distance from the CEPII database, it is possible to derive TBT SPS data from the World Trade Organization (WTO) and exchange rate, GDP, and tariff data from the World Bank's World Development Indicators. TBT SPS is measured using the Frequency Index (FI) and Export Coverage Ratio (ECR) (CR). According to the Economic Survey of Pakistan 2015–16, the United States, China, and the United Arab Emirates are Pakistan's top export markets (Ministry of Finance, 2007). All of these countries-imposed trade restrictions and sanitary and phytosanitary controls on Pakistan. Although every country belongs to the World Trade Organization (WTO), its participation dates differ. Pakistan became a member of the WTO in 1995, and since 2003, it has been compiling TBT and SPS data (WTO, 2017). Pakistan exports all agricultural and industrial goods at level HS-2 of the Harmonized System (HS), while the other sample nations import all of these goods. The United States, China, and the United Arab Emirates have used

a range of technical trade barriers (TBTs) and sanitary and phytosanitary (SPS) measures against Pakistani exports in compliance with WTO regulations. Information on these metrics can be found in Table 1.

The following model was developed and specified after taking into account the link between exports and independent variables (technical trade barriers, sanitary and phytosanitary, exchange rate, and real GDP): It is possible to obtain the NTBs using the gravity equation. According to an economic model, bilateral trade flows are inversely correlated with the size of the economies of the two countries. The gravity model is best explained using this way because it is the simplest (Tinbergen, 1962). The gravity model's development for use in analysing global trade started with. Both gravity tariffs and non-tariff barriers are taken into consideration in the gravity equation (World Trade Report, 2012). Pakistan's unstable currency has a significant negative impact on exports. Numerous factors, such as the exporting nation I and the importer, are incorporated into the model (j).

(Bora, et al., 2002) We looked at a range of methods for calculating TBT and SPS. The two methods that are most frequently used are the frequency index and coverage ratio. This approach is employed to evaluate NTBs (Bao & Qiu, 2010). Regarding the assessment of the export frequency index and the ECR (Bora et al., 2002). Therefore, researchers used these methods to determine how TBT and SPS will affect Pakistani exports. The percentage of exports subject to TBT and SPS requirements is known as the export coverage ratio. The percentage of Pakistan's exports in product category j that were impacted by TBT and SPS in a given year is known as the TBT and SPS ratio. The frequency index for TBT and SPS is computed without taking export value into consideration. The percentage of export transactions in Pakistan that are influenced by TBT and SPS is disclosed by FI. The percentage of Pakistani exports affected by TBT and SPS in the importing country is the frequency index of TBT and SPS in Pakistan for product category j. Calculate the export value of products subject to TBT by taking into account the frequency index, the quantity of SPS and TBT items, and the coverage ratio.

Table 1. The Following Table Lists the TBT and SPS Restrictions that Importers Placed from 2003 to 2016 on Pakistani Exports

HS Section	HS Product Description	SPS	TBT
TOTAL		3319	2732
S01	Live animals and products	334	196
S02	Vegetable products	283	280
S03	Animal and vegetable fats, oils, and waxes	30	108
S04	Prepared foodstuff; beverages, spirits, vinegar; tobacco	201	423
S05	Mineral products	4	233
S06	Products of the chemical and allied industries	139	614

S07	Resins, plastics, and articles; rubber and articles	43	425
S08	Hides, skins, and articles; saddlery and travel goods	2	11
S09	Wood, cork, and articles; basketware	7	65
S10	Paper, paperboard, and articles	6	44
S11	Textiles and articles	1	99
S12	Footwear, headgear, feathers, artificial flowers, fans		41
S13	Articles of stone, plaster, ceramic products, and glass	2	212
S14	Pearls, precious stones, metals, coins		12
S15	Base metals and articles	6	210
S16	Machinery and electrical equipment	6	889
S17	Vehicles, aircraft, and vessels		401
S18	Instruments, clocks, recorders, and reproducers	2	350
S19	Arms and ammunition		15
S20	Miscellaneous manufactured articles		392
S21	Works of art and antiques		14

These products are further categorised as HS-2 level code products by HS section number 21. (I.e., 1-97). Aggregating HS 2-digit coded product data into HS sections is necessary to quantify non-tariff trade restrictions on Pakistani exports. As the gravity model has time-invariant characteristics that can only be observed by combining data from different nations, they are estimated by combining data from the US, China, and the UAE. Table 2 displays the pooled estimate of EGLS data for non-agricultural items. An estimated pooled least squares model's findings show that explanatory factors significantly influence Pakistan's export sales to the selected trading partner. The dependent variable is the log of all HS section merchandise shipped on a bilateral basis.

It is promising for Pakistani exports to see the export coverage ratio for sanitary and phytosanitary measures (CRSPS) implemented by the United States, China, and the United Arab Emirates on Pakistani exports from 2003 to 2016. If importers enact a 1 percent SPS policy, Pakistan's exports rise by 0.008 percent. T-statistics and p-values indicate significance. At the 5% level of significance, the SPS coverage ratio is quite significant. From 2003 to 2016, exports from Pakistan to the United States, China, and the United Arab Emirates were hampered by the application of FISPS. The results show that Pakistani exports will increase by 0.001 percent if importers implement an SPS measure of 1 percent.

However, the effect of this variable on the results is not statistically significant. The CRTBT (export coverage ratio for technical trade barriers) imposed on Pakistani exports by the US, China, and UAE increased Pakistani exports between 2003 and 2016. The results show that when importers apply a

1% TBT policy, Pakistani exports increase by 0.014 percent. The results are statistically significant at the 5% significance level, according to the t-statistics and p-values. Pakistan's exports were boosted by the frequency index for technical trade barrier measures (FITBT) that it faced from 2003 to 2016. Pakistan's exports will grow by 0.015 percent if importers raise the TBT by 1%. There is a statistically significant difference.

Table 2. Total Exports from the Pooled EGLs of All HS Section Products

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	98.42763	4.086275	24.08737	0.0000*
CRSPS	0.008675	0.001326	6.542395	0.0000*
CRTBT	0.014881	0.000928	16.03816	0.0000*
FISPS	–0.001586	0.001482	–1.070189	0.2845
FITBT	0.015948	0.001019	15.65619	0.0000*
Tariff	–0.025350	0.003699	–6.853958	0.0000*
ER	0.007458	0.002557	2.916897	0.0035*
GDP	1.662587	0.076175	21.82576	0.0000*
GDPP	–0.885426	0.143065	–6.188998	0.0000*
Dist	–13.63136	0.373952	–36.45217	0.0000*
R-squared	0.130363	Mean dependent var		14.87961
Adjusted R-squared	0.130207	S.D. dependent var		4.248135
S.E. of regression	3.961926	Sum squared resid		872038.9
F-statistic	832.7983	Durbin-Watson stat		0.433223
Prob(F-statistic)	0.000000			

* Significant at 5 percent.

Exports suffer as a result of tariffs since they make global trade more difficult. Increased intra-national trade brought on by higher tariffs on products reduces exports for the simple reason that exports already exist. The average tariff charged by importing nations to Pakistan has a statistically significant negative sign. Data indicates that for every 1% increase in tariffs, exports will decline by 0.025. The results of this investigation are consistent with those in (Novy-Marx, 2013; Anderson & Wincoop, 2004). According to the statistics, ER has a positive sign and is statistically significant at the level of 5%. As a result, it can be said that the decline in the nominal exchange rate is closely tied to Pakistan's exports.

The findings show that Pakistan's GDP has a detrimental effect on exports to China, the United States, and the United Arab Emirates (GDP). For every one percent growth in GDP, Pakistan's exports decline by 0.88 percent. Similar results were found by Irshad et al. (2017). In contrast, the GDP of Pakistan has a negligible impact on exports. A 1 percent increase in the GDP of the United States, China, or the United Arab Emirates (GCC) has a 1.66 percent influence on Pakistani exports, according to the GDP coefficient. Pakistan presently reaps greater gains from bilateral trade than its trading partners as a result of their quicker GDP growth than Pakistan's own.

The main factors influencing trade barriers are distance (Dist) and common language (Comlang). The associated transportation costs in a business transaction depend on how far apart the parties are. Bilateral trade is hampered by the considerable distance between trading states. According to the determined data, Pakistan's exports and its distance from its trading partners are negatively correlated. Exports fell by 13.63 percent for every percentage point of increased distance. Pakistan's exports have surged as a result of an increase in demand from a neighbouring country. It is somewhat significant at a

5% level of significance. According to R2, independent reasons account for 13% of the export volume. The results of Duan and Jason support their own findings (2012).

In the HS, agricultural products are categorised in sections 1 through 4. Agricultural products have between 1 and 23 HS-coded components at the 2-digit HS level. Aggregating HS 2-digit coded goods data into HS sections was necessary to calculate non-tariff barriers to Pakistani exports. As the gravity model has time-invariant characteristics that can only be observed by combining data from different nations, they are estimated by combining data from the US, China, and the UAE. The EGLS outcomes in this case were merged. If importers adopt a 1 percent SPS policy, Pakistan's exports rise by 0.001%. The coverage ratio indicates that the SPS metric has a statistically insignificant impact on Pakistan's exports.

According to the frequency index for SPS, exports from Pakistan increase by 0.026 percent for every 1 percent increase in SPS measures implemented by importers (FISPS). This variable is statistically significant at the 5% level of significance. % of exports subject to trade technical constraints. Pakistan's exports will increase by 0.016 percent if importers apply a TBT measure of 1 percent. The fact that the T-statistic and p-value are both 0.000 demonstrates that this finding is statistically extremely significant at a significance level of 5%. The frequency of technical trade barriers is measured (FITBT). According to the data, Pakistani exports increase by 0.02 percent for every 1 percent rise in the TBT measures of importers. There is a statistically significant difference.

Five to twenty-one code sections are specified in HS sections for a product's manufacture. The HS 2-digit manufacturing level includes goods with HS codes between 24 and 97. Merging HS 2-digit coded product data with HS sections allows for the assessment of non-tariff barriers to Pakistani exports. Because the gravity model incorporates time-invariant components that alter what they may detect, scientists estimate them by combining data from multiple countries (including the United States, China, and the United Arab Emirates). Pakistan has increased its exports as a result of the United States, China, and the United Arab Emirates (UAE) insisting that Pakistani exports adhere to strict sanitary and phytosanitary standards since 2003.

Pakistani exports rise by 0.009 percent when importers enact a 1 percent SPS policy. T-statistics and p-values indicate significance. At the 5% level of significance, the SPS coverage ratio is quite significant. A list of safety and health precautions. The statistics show that importer SPS measures increase Pakistani exports by 0.002%. However, the effect of this variable on the results is not statistically significant. The percentage of exports facing technical trade challenges. The data show that Pakistani exports will grow by 0.013 percent if importers implement a 1 percent TBT measure. An extremely significant level of significance is one with a 5 percent T-statistic and p-value. Restrictions on the frequency index of trade measurements due to technical issues, Pakistan's exports will grow by 0.019 percent if importers raise the TBT by 1%. There is a statistically significant difference.

CONCLUSIONS AND RECOMMENDATIONS

TBT and SPS measures encourage Pakistan exports to its major trading partners i.e., USA, UAE and China. TBT has a more significant and favourable impact on Pakistan's exports than tariffs do. Pakistan's exports are hampered by hefty tariffs. The government must act quickly and decisively if it is to keep its competitive edge in the export of concentrated commodities. The Trade Policy Framework 2015-2018 stipulates particular project guidelines that the government must follow. The Ministry of Science and Technology, Pakistan National Accreditation Council, and Pakistan Standards and Quality Control Authority (PSQCA) all need to be updated in order to boost exports. Reshaping the size and dimensions of the GDPs of China and USA, as well as UAE may help Pakistan to avail market share with the assistance of China. Protectionist macroeconomic policies in wake of CPEC and emergence of Chinese economy at global level reinforce Pakistan to increase its competitiveness to boost exports.

FURTHER STUDY

This research still has limitations, so further research on this topic is still needed.

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