

EXPLORING THE INFLUENCING FACTORS: PROPOSING A FRAMEWORK FOR EXPORT PROCESSING ZONES ACROSS SOUTH ASIA

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Abstract

This research aims to assess the performance and success factors of established EPZs in SAARC countries. The study period ranges between 2012 and 2022 based on an annual frequency balanced panel data of Bangladesh, India, Pakistan, and Sri Lanka, and the panel fixed-effect OLS analysis was used for hypothesis testing using EViews. The results showed that the natural logarithm of external debt has a positively significant effect on export performance. Ease of doing business has a positively significant effect on export performance. Law and Order and security have a positively significant effect on export performance. The natural logarithm of economic growth has a negatively insignificant effect on export performance. Trade openness has a negatively significant effect on export performance. The simplification of business regulations and the reduction in bureaucratic procedures of all kinds help in encouraging domestic and foreign investments to flow easily to countries that have export-oriented industries. Furthermore, great emphasis should be placed on incorporating elaborate systems of security for the physical setting to carry out activities as well as to protect investors' confidence.

Keywords: Export Performance, External Debt, Cost Of Doing Business, Import Dependency, Terrorism Effect.

Introduction

According to the research, the role of international trade, export-led growth, and economic development has been one of the most hotly debated subjects among scholars and policymakers in the globalized world over the decades (Ohwofasa & Ekaruwe, 2023). Since the 1970s, there has been more emphasis on controlling for the balance of payments, inflation, or otherwise fashioning policies that stabilize the economies. Over the last decade, there has been a process of promoting an increase in the trade capacities of countries due to changes in global production and value-added chains. It has been a relatively recent global policy development. These changes have called for a closer partnership in the development and expansion of the economic zones that are important to sustain the competitiveness of countries and nations in international trade (Nhung et al., 2023). Export Processing Zones (EPZs) have become widely recognized organizational structures and intervention instruments



worldwide, which assist in revitalizing the economy by creating employment opportunities, attracting foreign investment, and technology transfer (Wu & Hong, 2023). Globalization and increasing competition have encouraged developing countries to develop sustainable economic growth that incorporates trade and industrial clusters, which are attributed to improving a particular region's development and promoting exports and employment (Situmorang et al., 2024).

However, the EPZs pose specific issues and benefits in the South Asia region, specifically among the South Asian Association for Regional Cooperation (SAARC) countries. In a similar regard, even though a few countries have established several planned and operational zones for export, the value is still considerably low when compared to other regional counterparts such as India and Bangladesh (Tang, 2023). South Asian textile exporters observed a marked-up trend in export figures during the same period, while Pakistan saw its export figures reach a plateau. Likewise, the all-around overall trade of SAARC countries has not been as encouraging as in other areas. For instance, East Asia has tremendously expanded accounts based on trade within the same period. Hence, it becomes crucial to closely examine the current provisions of laws and policies covering EPZ operations in South Asian nations (Xin et al., 2023). It is, therefore, relevant to understand the factors that determine the success of these zones to make strategies that will effectively improve their performance regarding the exportation of goods, employment opportunities, and inflow of foreign investors (Alam et al., 2024).

Additionally, there is challenging evidence of these South Asian EPZs, namely the continued low performances of EPZs in SAARC as compared to EPZs in other regions, which have discouraged growth and development (Assabane, 2023). As a result of their function in stimulating exports and generating employment and foreign investment magnets, the EPZs in South Asian countries have only partly benefitted from their intended objectives. Therefore, the overall problem under consideration is to identify the causes of the present underperformance and to develop ways and means to increase the efficiency of EPZs in the region (Bettani & Ahmed, 2023). However, a comprehensive and detailed review of the performance of EPZs and the regulatory systems that expressly control these zones in South Asia is lacking in the existing literature. Despite various attempts made in the context of EPZs in different parts of the world, it seems there is definable lack of research and analysis along with a severe lack of in-depth empirical work that looks at the issues confronting the SAARC countries. However, the prejudice described above is further exacerbated by a lack of appreciation of the various socio-economic, political, and institutional conditions where the definition of the operation of EPZs in the mentioned area occurs (Ahmad et al., 2024).

This study aims to evaluate and identify success factors in the developed EPZs of the SAARC; the literature explored in this paper points to some of the major gaps in what may influence the performance of EPZs. It aims to help comprehend and identify trade barriers and regulation concerns in EPZs for policy making to attain long-term, efficient functioning of EPZs for economic and sustainable development for the South Asian region. Therefore, the intention of this work is to provide precious hints to the worried policymakers and stakeholders concerning the nearby EPZ outcomes and to increase a very good recipe for the enhancement of local EPZ effects (Aggarwal, 2023).

Rationale

This study investigated the necessity of recognizing and enhancing the performance of export processing zones (EPZs) in SAARC countries. EPZs are pivotal in riding the monetary boom, enhancing exports, growing employment, and attracting foreign investment. However, the present-day overall performance of EPZs inside the SAARC vicinity has been lackluster compared to that of their counterparts in other areas, including East Asia. This paper intends doing this in order to try and fit the gaps within the present literature by providing a systematic and extensive assessment of the factors explaining EPZ performance in SAARC nations. As a result, this study on the demanding situations and success elements of cleaning soap making will offer a realistic route map to the policymakers, stakeholders, and buyers. The ultimate aim is beautify the operation performance as well as efficiency of EPZs that in return supports the location's sustainable economic growth. This examination is synchronised and required, because of the rising global rivalry and the requirement of SAARC nations to enhance their monetary steadiness and competitiveness.

Research Problem

The Appendix about trends of EPZs in SAARC international locations depicts that the performance of EPZs has not been satisfactory as compared to other region like East Asia. Although these have the potential to influence exports positively, employment opportunities, and foreign investment attraction, the EPZs in countries such as Pakistan have not been effective as planned. This under performance is worsened by a number of challenges, such as high outside debt, the regulation issue, import dependence as well as protection issues. Still, he is absolutely right as there is an unbelievable absence of exhaustive monographs and reviews contemplating on these troubles in the perspective of the sociolect-monetary, political, and institutional conditions specific to the SAARC area. Thus, effectively, it is necessary and crucial for getting aware of and analyzing the factors that are making stylized EPZs under performing, and ways and means of embellishing their performance and capacities to sell the message of financial boom and development in SAARC land.

Research Questions

1. How does external debt influence the overall performance of Export Processing Zones (EPZs) in SAARC nations?
2. What is the relationship between the ease of doing enterprise and the performance of EPZs in SAARC nations?
3. What effect does import dependency have on the performance of EPZs in SAARC international locations?
4. How do order and safety degrees affect the overall performance of EPZs in SAARC nations

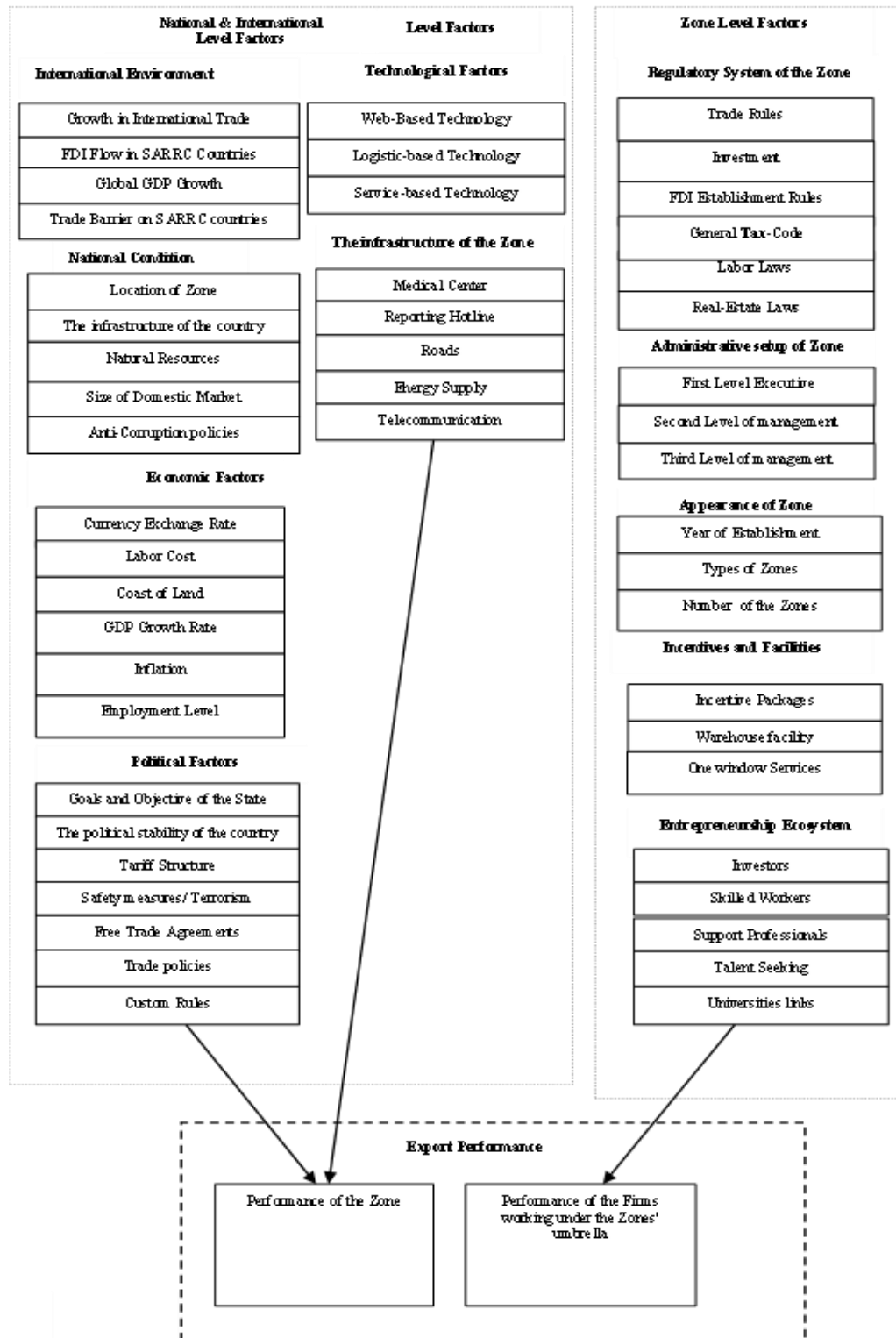
Research Questions

- To investigate the effect of external debt on the overall performance of Export Processing Zones (EPZs) in SAARC international locations.
- To have a look at the relationship between the ease of doing enterprise and the performance of EPZs in SAARC international locations.
- To evaluate the effect of import dependency on the performance of EPZs in SAARC nations.
- To examine how order and safety ranges impact the performance of EPZs in SAARC international locations.

Theoretical Framework

Several key factors influence the overall performance of Export Processing Zones (EPZs) in SAARC international locations. Firstly, the extent of external debt in those international locations plays a vital position, doubtlessly straining the government budget and restricting the capacity to spend money on infrastructure and incentives essential for EPZ operations. Secondly, the benefit of doing business within these zones significantly affects their performance, with streamlined administrative methods and obvious guidelines attracting extra funding and enhancing operational performance. Thirdly, the quantity of import dependency affects EPZ performance, as reliance on imported inputs can increase manufacturing costs and expose companies to worldwide marketplace fluctuations. Furthermore, the level of order and security in and around EPZs is important, with strong socio-political environments and powerful security measures bolstering investor self-belief and ensuring uninterrupted operations. Economic increase costs in the broader financial system impact EPZ's overall performance undoubtedly, creating a call for and improving infrastructure that helps EPZ sports. Lastly, the openness of change regulations complements EPZ's performance by providing a broader market entry, lowering alternate barriers, and attracting foreign investment critical for export-oriented increase. This theoretical framework presents a complete assessment of the interconnected factors shaping the performance of EPZs inside the SAARC vicinity, providing a dependent approach for empirical studies and policy pointers aimed at improving their effectiveness and contribution to sustainable financial improvement.

Proposed Model for Performance of South Asian Countries Economic Zones



Proposed Framework: Author's personal Completion

The model was used in research to determine how economic zones (EZS) work in South Asian countries, and it supplied an in-intensity framework of evaluation, indicating the weightage of a few vital factors that might affect export overall performance. A dynamic model combining macroeconomic and microeconomic factors is used to research a complete picture of the forces that establish themselves inside the zones. The model gives ramifications of actionable strategic insights to policy makers and stakeholders by identifying the most important areas desiring interest and intervention for improving export performance. The study incorporates a well-rounded view of coverage structures by addressing liberalization at the side of both macroeconomic international—and microeconomic Zone-level elements. The implementation of the suggestions given by using this model can honestly raise the global competitiveness of South Asian EPZs. The emphasis on handling external debts and pushing GDP growth to even an extent of securing economic stability by hook or crook is rightly central to sustainable economic development and for earning good export performance. This model illustrates that what is and remains is the resource to reduce the business cost within EPZs by eliminating regulations, upgrading infrastructure, and cutting down bureaucracy. On this front, the lower cost will make these zones more appealing to investors and make them more commutative globally. In this case, it is also a more attractive and secure model that addresses the issues related to security and the importance of import dependency, resulting in investor confidence being raised.

Significance of the Study

Export Processing Zones (EPZs) in SAARC countries have not yet fully realized their potential compared to counterparts in other regions like East Asia. EPZs are significant tools for economic development, export domination, creating employment opportunities, as well as the attraction of FDI; hence, the fine-tuning of EPZs is critical for the realization of regional advancement. By identifying and analyzing the factors influencing EPZ performance within the SAARC context, this study aims to fill critical gaps in existing literature. This will help the policymakers, stakeholders, and investors in understanding the factors that can either act as a barrier or motive for EPZs in SAARC countries. The findings are expected to offer practical recommendations to enhance the operational efficiency and effectiveness of EPZs, thereby contributing to sustainable economic development in the region. Given the increasing global competition and the imperative for SAARC countries to strengthen their economic resilience and competitiveness, this study's findings are timely and have the potential to inform strategic decisions that can positively impact the region's economic trajectory.

Limitations

However, it is important to acknowledge that the study is constrained by the focus on four SAARC member countries; the findings may not be generalizable to other regions with significantly different economic, political, and social contexts. Furthermore, the sources of data of the study are within the SAARC countries only, and this limits the accuracy and reliability of analysis as data might be inconsistent or of varying quality in different countries. What is more, since this study focuses on the

end-year 2012 to the end-year 2023, some deeper examinations on the key performance of the EPZ may be restricted due to low capability to capture proliferative changes or infringement of a longer broken structure. Also, due to the short time horizon used in the analysis, certain effects might be omitted when determining export contributions with policy introduction, which requires a careful correlation of the results to the long-term policy impacts.

Literature Review

Export Processing Zones (EPZs)

EPZs are any given area in a country that is established and functions with an independent legal framework and political measures with the aim of fostering development, investment, and export. These zones offer a number of rights and privileges to the firms operating in those areas; thus, it is intended to further industrialization and export-oriented industrialization, increasing the role of FDI in export-led growth (Wu & Hong, 2023). They are designed primarily to advance export-oriented industrialization for export industries in the country by offering several incentives to companies involved and engaging in manufacturing and export business (Abdijabar, 2023). These incentives include tax holidays, duties, waivers, liberalized measures on imported or exported inputs, simplified customs formalities, and freed-up regulations. In this way, EPZs give those manufacturers a host of incentives for setting up plants in the zone and for exporting purely locally produced goods to foreign nations (Aggarwal, 2023).

This is because EPZs offer employment and contribute greatly to creating other employment options and general economic growth. Since EPZs encourage investment and industrial development to increase exports, they offer employment to locally available labor, decreasing both unemployment and poverty. Similarly, the existence of EPZs can bring about other complementary facilities and complexes together with the related formation of infrastructure, hence enhancing economic progress and advancement of the region (Braga et al., 2023). In addition, it offers incentives for technology transfer and skill development; this is because most firms operating within the EPZs embrace advanced technologies and production methods. Since EPZs bring together domestic firms and firms from the outside world, crucial resources, including knowledge, expertise, and technology, are imported, thus spurring the economy. Adopting and implementing these technologies and skills also helps develop the competency levels of the domestic industries as well as improve the overall technology and growth of the sector (Abeyasinghe & Arangala, 2023). Another advantage of EPZs is that they enhance export trade and investment because they encourage international business. As those involved in the easy processing of imports, simplified bureaucratic requirements, and structural Infrastructure for export production-oriented industries, EPZs foster increased participation in international commerce (Ale et al., 2023). This can lead to the growth of foreign exchange earnings, the improvement of the balance of pay and receive, and the advancement of the integration into the global economy. However, it is worth noting that EPZs are effective depending on the following: regulatory, supportive infrastructure, and improved government policies in trade and investment (Ahmad et al., 2024).

Relationship between External Debts and Performance of EPZs

External debt can also inhibit the performance of EPZs because it places pressure on the economy. At the micro level, internationally induced competitiveness lowers a country's ability to service external liabilities while resulting in macroeconomic instability, depreciation of the domestic currency, and costly borrowings (Muhammad & Afroz, 2023). This is likely to have a cumulative effect of reducing investors' confidence and reducing investment from foreign investors in EPZ ventures. Furthermore, the high external debts some governments incur lead to debt servicing, which constrains infrastructure development and the granting of incentives to EPZs (Ale et al., 2023). However, reduction in government spending and complexities in the regulatory framework because of the austerity measures taken to address the debt challenges are also disadvantageous for EPZs. Hence, there is a need to manage external debt risks in order to provide a favorable environment in which the EPZs can operate effectively and support sustainable economic development (Mazengia et al., 2023). Thus, the hypothesis has formed:

H₁: External debts have a negative impact on EPZ's performance.

Relationship between Ease of Doing Business and Performance of EPZs

The ease of doing business refers to the conditions of business regulation and administration that affect the ease and speed at which people can conduct commerce within a particular country. It found that, in EPZs, a competitive perception of ease of doing business positively predicts performance (John et al., 2023b). Flexible administrative measures for business formation, operating permits, and customs formalities help cut costs, ease constraints, and promote investment and business opportunities within EPZs. Furthermore, efficiency and effectiveness have benefitted investor confidence, Foreign Direct Investment, employment generation, and export-promoting activities within the zones through a favorable business environment (Oladejo et al., 2024). Increasing the efficiency of doing business with the country hosting EPZs can make well-propagated EPZs, propelling the economic, industrial, and competitive status of the country (Khan et al., 2024). Thus, the hypothesis is formed:

H₂: Ease of doing business has a positive effect on EPZ's performance.

Relationship between Import Dependency and Performance of EPZs

Import dependency, therefore, refers to a situation whereby a country relies on imports to meet its demand for manufactured goods and services since it lacks adequate production and manufacturing capacity within the country (Wu & Hong, 2023). In EPZs, thus, high import dependency can again prove to be costly. Using imported inputs in production, such as raw materials and components, exposes EPZs to various trends, including changes in international markets and policies on exportation. This results in high production costs, low competitiveness, and decreased profitability of businesses in the EPZs (Situmorang et al., 2024). Moreover, it limits the possibility of upgrading the value and fortifying local businesses inside the EPZs. Therefore, fostering import dependency reduction through diversification of the supply base and utilization of domestic resources is crucial to improving EPZ

operations and fortune and effectively managing risks and volatilities of the global environment(John et al., 2023a). Thus, the hypothesis has formed:

H₃: Import dependency has a negative effect on EPZ performance.

Relationship between Terrorism and Performance of EPZs

Terrorism remains a major threat to a country, and when it comes to EPZs, there is no denying that it hampers the working of these zones to a great extent. Terrorism exposes individuals to uncertainty and fear of undertaking investment, trade, and carrying out other business in EPZs(Jibril, 2023). The potential of terrorism elevates operational risks; this, in turn, improves protection levels and costs relating to establishing security measures for important and vulnerable sites and people. In addition, the disruption of supply channels due to terrorist attacks can have negative ramifications on the EPZ by leading to economic losses and low production efficiency (Mumbua & Nekesa, 2023). Moreover, terrorism can come with many drawbacks, such as negatively impacting the image of a country and reducing the number of foreign investors, hence worsening the circumstances for developing EPZs. Thus, combating terrorism and guaranteeing security inside and in the vicinity of EPZs is vital for maintaining investor trust and subsequent efficiency and a positive impact on economic production (Jibril, 2023). Thus, the hypothesis is formed:

H₄: Terrorism has a negative effect on the EPZ performance.

Relationship between Order and Security Level and Performance of EPZs

The concept of order within EPZs can be viewed as a structured methodology of performing businesses and following all requirements necessary for efficient functioning. Basically, security is about safeguarding an organization's resources and individuals from dangers(Akama, 2023). On this account, both of the factors mentioned above positively impact EPZ performance. More specifically, a better law and order situation contributes to well-coordinated processes along with the confidence of investors and high production rates. Strong security decreases hazards while protecting resources and providing security to the workplace, attracting investors (Ferdous, 2023). Cumulatively, these aspects help to make EPZs more appealing business locations and foster economic activity for growth and development initiatives. Thus, order and security should always be kept high to ensure functional performance and continued functioning as growth stimulants in the economy of each country that hosts the EPZs(Situmorang et al., 2024). Thus, the hypothesis has formed:

H₅: Order and security levels have a positive effect on EPZ performance.

Relationship between Economic Growth and Performance of EPZs

Economic growth and the performance of EPZs are, therefore, mutualistic in that one is dependent on the other to perform optimally. EPZs help in the growth of a country's economy through the provision of employment opportunities and attraction of foreign investors, as well as encouragement for export processing zone

industrialization (Wu & Hong, 2023). Consequently, higher economic development contributes to the factors necessary for developing EPZs, such as consumer purchasing power growth and infrastructure and market improvements. These aspects reveal that as the EPZs grow in size and produce more goods, their impact on economic development is also greatly realized through the creation and advancement in innovation and technology, besides imparting skills to human resources (Situmorang et al., 2024). It will thus be seen that EPZs remain crucial enactors of economic growth and development since their performance map corresponds contemporaneously with that of the general performance of the host economy (Ferdous, 2023). Thus, the hypothesis has formed:

H₆: Economic growth has a positive effect on EPZ's performance.

Relationship between Trade Openness and Performance of EPZs

According to prior research, trade openness positively impacts the performance of EPZs. This is because liberalization of trade policies is an essential aspect that helps nations create a favorable international trade climate, that is, the international trade of goods and services (Ohwofasa&Ekaruwe, 2023). Such environments prove advantageous to EPZs in terms of unfettered and preferential market access and the option of enjoying the least trade barriers, tariffs, and draconian customs hurdles. Accessibility of international markets is an advantage in that firms within the EPZs can sell their products to the external markets cheaper, hence increasing their clientele base and exporting their goods in larger quantities (Ackah et al., 2023). Furthermore, when there is trade openness, there is an increase in foreign investment in EPZ since firms want to utilize the advantages of competitive export destinations. A positive effect of FDI is the provision of capital investment resulting in the improvement of the physical infrastructures, transfer of technology, and skill development in EPZs to increase productivity and improve competitiveness (Akorsu& Okyere, 2023). In conclusion, trade openness is the most remarkable factor influencing the optimization of the full potentials of EPZs, economic liberalization, job creation, and export-led growth in comprehensively liberalizing trade nations (Ohwofasa&Ekaruwe, 2023). Thus, the hypothesis has formed:

H₇: Trade openness has a positive effect on EPZ performance.

Methodology

Sample and Population

The sample population for this study includes four member countries of the SAARC: Pakistan, Bangladesh, India, and Sri Lanka. These countries have been selected for their relevance to the regional economy and for being relatively new in manufacturing and services sectors, which are keen on foreign investment (Voumik et al., 2023). The study period ranges between the years 2012 and 2022, thus making it easier to examine short-run analysis and the long-run impacts of EPZs on the given nations' export contributions. This time frame allows for examination of the trends, risks, potentials, and policies impacting EPZ performance with the South Asian lens (Saha, 2023).

Model Specifications

The function equation and econometric model have been expressed as follows.

$$\text{LnIM} = f(\text{LnED}, \text{BUSN}, \text{TER}, \text{OS}, \text{LnGDP}, \text{TO})$$

$$\text{LnIM}_{it} = \alpha_{it} + \beta_1 (\text{LnED})_{it} + \beta_2 (\text{BUSN})_{it} + \beta_3 (\text{TER})_{it} + \beta_4 (\text{OS})_{it} + \beta_5 (\text{LnGDP})_{it} + \beta_6 (\text{TO})_{it} + \varepsilon_{it}$$

In the above model equation, LnIM represents the natural logarithm of import of i^{th} country at a specific time t , LnED represents the natural logarithm of external debt of i^{th} country at a specific time t , BUSN represents ease of doing business index of i^{th} country at a specific time t , TER represents terrorism effect on an i^{th} country at a specific time t , OS represents order and security index of an i^{th} country at a specific time t , LnGDP represents the natural logarithm of economic growth of an i^{th} country at a specific time t , and TO represents trade openness of an i^{th} country at a specific time t . α represents the intercept or constant term, β represents the slope or regression coefficient, and ε represents the error or residual term of an i^{th} country at a specific time t .

Results and Findings

Descriptive Statistics

Table 1 provides the descriptive statistics for the 44 observations.				
Table 1: Descriptive Statistics (N = 44)				
Variable/Series	Mean	S. D.	Min.	Max.
Log (Import)	25.563	1.384	23.627	29.110
Log (External Debt)	11.011	0.432	10.465	11.787
Ease of Doing Business	117.773	32.143	60.000	177.000
Terrorism	6.127	2.346	0.460	9.881
Order and Security	0.538	0.143	0.293	0.721
Log (Economic Growth)	11.720	0.484	11.125	12.642
Trade Openness	38.604	9.056	24.702	55.794
<i>Author's Estimation</i>				

The descriptive statistics for the 44 observations in the dataset provide an overview of the central tendencies and variability for several key economic and social variables. The mean value for Log (Import) is 25.563 with a standard deviation of 1.384, indicating that import values are moderately dispersed around the mean, ranging from a minimum of 23.627 to a maximum of 29.110. Log (external debt) shows a mean of 11.011 and a standard deviation of 0.432, suggesting relatively low variability, with values spanning from 10.465 to 11.787. The Ease of Doing Business

index has a mean of 117.773 and a higher standard deviation of 32.143, reflecting a wider dispersion, and the values range from 60.000 to 177.000. Terrorism is measured with a mean of 6.127 and a standard deviation of 2.346, with the minimum and maximum values being 0.460 and 9.881, respectively, indicating significant variability in terrorism levels across the observations. The order and security index has a mean of 0.538 with a standard deviation of 0.143, and the values range from 0.293 to 0.721, suggesting moderate dispersion. Log (economic growth) shows a mean of 11.720 with a standard deviation of 0.484, with values ranging from 11.125 to 12.642, indicating relatively low variability. Finally, trade openness has a mean of 38.604 and a standard deviation of 9.056, with values ranging from 24.702 to 55.794, suggesting moderate variability in trade openness across the dataset.

Panel Unit Root Analysis

Table 2 provides the result of panel unit root analysis for stationarity assessment of the panel series using Levin et al. (2002) and Im et al. (2003) statistics. The null hypothesis of the panel unit root analysis states that there is no unit root in the panel series or that the panel series is non-stationary. The assessment of the panel unit root analysis is based on 5% statistical significance to test the null hypothesis.

Variables	Level		1st Difference	
	LLC	IPS	LLC	IPS
Log (Import)	-1.151	0.412	-8.472*	-3.518*
Log (External Debt)	0.201	2.298	-4.944*	-3.452*
Ease of Doing Business	-3.115*	-1.110	0.255	-0.105
Terrorism	-3.775*	-1.265	-1.231	-0.451
Order and Security	-1.458	-0.379	-4.481*	-2.294*
Log (Economic Growth)	0.826	3.075	1.700	-0.002
Trade Openness	-2.845*	-4.193*	-3.845*	-5.048*

Author's Estimation
*Note: LLC = Levin et al. (2002); IPS = Im et al. (2003); * Significant at 5%*

The above table shows that panel series have mixed results of stationarity at the level and first Difference, providing that the null hypothesis has been accepted at the level for all the series except trade openness. In contrast, the null hypothesis has been rejected for the majority of the variables at first Difference.

Hypothesis Testing

Table 3 presents the results of hypothesis testing using fixed-effect panel OLS analysis.

Table 3: Hypothesis Testing using Fixed-Effect Panel OLS Analysis				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-13.335	3.923	-3.399	0.002
Log (External Debt)	3.312	0.723	4.582	0.000
Ease of Doing Business	0.019	0.005	4.117	0.000
Terrorism	0.083	0.111	0.744	0.463
Order and Security	9.007	1.986	4.534	0.000
Log (Economic Growth)	-0.094	0.695	-0.135	0.894
Trade Openness	-0.105	0.027	-3.866	0.001
<i>Author's Estimation; Dependent Variable: Export Performance (Log-Import)</i>				
<i>Kao-Residual (t-Statistics, Prob.) = -1.692 (0.045)</i>				
<i>Hausman Test (Chi-Square, Prob.) = 27.317 (0.001)</i>				
<i>Model Summary: R² = 0.835; Adj. R² = 0.737; F-Stats (Prob.) = 8.513 (0.000)</i>				

The above table shows that the Kao (1999) test showed that there is a long-run relationship between the cointegrated panel series. In contrast, the Hausman (1978) test showed that the null hypothesis has been rejected and, therefore, fixed-effect panel OLS analysis is valid. Hence, the study has used fixed-effect panel OLS analysis for hypothesis testing.

For hypothesis testing, the results showed that the natural logarithm of external debt ($\beta = 3.312$; $p < 0.05$) has a positively significant effect on export performance. Ease of doing business ($\beta = 0.019$; $p < 0.05$) has a positively significant effect on export performance. Terrorism ($\beta = 0.083$; $p > 0.05$) has a positively insignificant effect on export performance. Order and security ($\beta = 9.007$; $p < 0.05$) positively affect export performance. The natural logarithm of economic growth ($\beta = -0.094$; $p > 0.05$) has a negatively insignificant effect on export performance. Trade openness ($\beta = -0.105$; $p < 0.05$) has a negatively significant effect on export performance.

Discussions

The study results have shown that Log (External Debt) has a positively significant effect on export performance because external debt can provide the necessary capital for countries to invest in improving their infrastructure, technology,

and production capabilities. The results are similar to the study of Zuhroh and Pristiva (2022). Such investments might increase the efficiency of the national producer and make domestic industries more competitive in the global marketplace. More so, borrowing can assist in bringing stability to an economy and the exchange rate, as well as financing export-oriented projects. The relationship between export volume or export value, on the one hand, and external debt, on the other hand, can be seen as interdependent because by increasing productive capacity as well as efficiency of utilization of resources, the growth of external debt enables the corresponding increase of export performance. Thus, the established relationship shows that proper management of debt is crucial for economic growth as well as for trade relations (Kissa, 2022).

Also, the study ascertains that ease of doing business positively impacts export performance because it creates a favorable environment for businesses to operate efficiently and competitively. The results are similar to the study of Ayob et al. (2023). Due to minimized burdens, bureaucracy, and formalities, which are commonly referred to as export barriers, the costs and time required to export goods are minimized: better infrastructure, easier credit accessibility, and enhanced legal regime guarantee enhanced investment in export-oriented sectors. Through friendly legal and regulatory frameworks and supportive policies for the establishment, carrying out, and growth of ventures, nations encourage domestic as well as international investments, increase production capacities, and create competitive demands in the global market. Therefore, a higher ease of doing business rank, commonly linked with improvements in trading across borders, boosts export performance and economic growth (Njinyah et al., 2023).

Terrorism has a positively insignificant effect on export performance because its impact might be overshadowed by other more influential factors, such as economic policies, infrastructure, and market conditions. The results are in line with the study of Naveed et al. (2022). Even though terrorism can cause a decline in economic activities and lead to instabilities, it is often possible that most nations possess strategies that can allow countering of such impacts, including the existence of measures that have to do with personal security and more colorful economies. Furthermore, terrorism may not tangibly impact export sectors when they are located distant from the terrorists or function independently of them. Thus, when statistics do not support this hypothesis, it means that other factors have a stronger influence on export performance and reduce terrorism's observable effects (Adedoyin et al., 2022).

The study results also show that order and security positively impact export performance by creating a stable and predictable environment for business operations. A secure and orderly society reduces risks associated with crime, political instability, and social unrest, fostering confidence among investors and exporters. The results are in line with the study of Amirah (2022). This stability makes supply chain operations consistent, the transportation of goods and services becomes efficient, and the safety of goods and personnel is guaranteed. At the same time, stringent order and security ensure that the country remains a hub for trade parties to engage in trade, hence improving the economy. Therefore, high order and security outcomes can improve the export performance in nations since the business environment has low risks that lead to efficiency (Aseeva & Shishkova, 2021).

Log (Economic Growth) has a negatively insignificant effect on export performance because economic growth does not directly translate into increased exports. The results are similar to the study of Arifah and Kim (2022). Hence, export activities are not necessary for attaining high economic growth as this may be complemented by domestic consumption and investment. Moreover, as growing economies mature, they are faced with other factors like increased production costs due to increases in wages and prices of domestically produced products, leading to a reduction of export earnings. Furthermore, some industries that can contribute to economic growth may not be those focused on exports. Consequently, although economic growth in general is received well at the macroeconomic level, the extent to which it enhances export outcomes is likely to be inconsequential and statistically non-significant (Gebremariam & Ying, 2022).

Lastly, trade openness has a negatively significant effect on export performance due to several potential factors. The results are similar to the study of Ohwofasa and Ekaruwe (2023). One of the reasons that could be attributed to it may be because, normally, when there is an opening up of trade, it results in competition from other foreign firms, which in turn may limit the market share of domestic exporters both domestically and internationally. Secondly, suppose the national trade policies of a country are structured in such a way that the country is more open to imports. In that case, the domestic industries can be out-competed, and hence export capacity may decline. However, opening for trade might also lead to vulnerability to external shocks and fluctuating market forces, which might inhibit the stabilization of exports. Finally, over-dependence on imported feeds can affect or undermine the export market for feeds and thus pull down export performance (Akorsu & Okyere, 2023).

Conclusion

The study aimed to develop a framework for optimizing EPZs in South Asian nations by leveraging key factors to enhance export performance and regional economic growth. The sample population for this study includes four member countries of the SAARC: Pakistan, Bangladesh, India, and Sri Lanka. The study period ranges between the years 2012 and 2023, thus making it easier to examine short-run analysis and the long-run impacts of EPZs on the given nations' export contributions. This time frame allows for the examination of the trends, risks, potentials, and policies impacting EPZ's performance with the South Asian lens.

The study results show that Log (External Debt) has a positively significant effect on export performance. The ease of doing business also has a positive and significant effect on export performance. Terrorism has a positively insignificant effect on export performance. Order and security have a positively significant effect on export performance. Log (economic growth) has a negative and insignificant effect on export performance, while trade openness has a negative and significant effect on export performance.

The importance of this study is derived from the fact that it unveils pertinent information that may help policymakers, business managers, and economic strategists in South Asian countries to develop and manage EPZs better. By recognizing key drivers, including external debt, ease of doing business, terrorism, order and security,

economic growth, and trade openness, it will be easier for stakeholders to recommend changes and policies that will foster higher export performance, increased economic growth, better regional integration in trade, and a generally healthier economy. Together with data analysis, it will be possible to introduce more suitable and specific legislation and funding priorities that meet the region's opportunities and threats.

Theoretical Implications

The theoretical implications of this study, grounded in the previous literature and the variables examined, offer significant insights into the functioning of EPZs. The research reinforces the theoretical understanding that financial capital, represented by external debt, is crucial for enhancing export capacities. This aligns with literature that suggests strategic borrowing can fund critical infrastructure and technological advancements, fostering increased global competitiveness. Regarding the variable of ease of doing commercial enterprise resonates with the existing theories highlighting the significance of a favorable regulatory climate. Simplified procedures and fewer impediments to formalities help the running of the commercial enterprises, which corresponds with previous research suggesting that such conditions are necessary for selling financial activities and export.

However, they look at demanding situations by way of orthodox models regarding the effect of terrorism and financial increase on exports. This implies that it is possible that EPZs may perhaps operate relatively isolated from numerous other monetary and security problems. What this implies that their specialised environments are capable of reducing some of the undesirable impacts attributed to those variables. This divergence from conventional perceptions has necessitated a re-examination of how the EPZs framework can be used to maintain the balance as well as export expansion perpetually. Organization and safeguard are underlined and this cherishes theoretical stances that popularize order as a key to financial progress. This concurs with literature supporting comfy environments for the exchange of activities.

The results linked to trade openness require not only the revision of the real factors behind liberalization, but also the reconsideration of the other theories on liberalization. Despite the fact that the examine tends to suppose that excesses in openness are beneficial, the author identifies extra dynamics that might additionally pose troubles to home-primarily based industries inside EPZs, especially the need to strike a stability that will assist the local industries and need for exchange at the identical time. Such a progressive view is valuable in further discussion on enhancing of the framework of the exchange guidelines for emergent economies.

Policy Implications

This research offers a number of coverage implications for the member international locations of the South Asian area, which are involved in increasing the efficiency of the EPZs. This social policy should be accompanied by using efficient management of the outside debt with an emphasis on directing investment into infrastructure and era adoption in EPZs for the conclusion of export objectives.. The

simplification of business regulations and the reduction in bureaucratic procedures of all kinds help in encouraging domestic and foreign investments to flow easily to countries that have export-oriented industries. Furthermore, great emphasis should be placed on incorporating elaborate systems of security for the physical setting to carry out activities as well as to protect investors' confidence. Banking and Finance Stakeholders should embrace an open-door policy for imports while applying various trade barriers to protect the domestic industry when exporting their goods globally.

Also, there is a need to address external constraints that may hinder the continued success of EPZs through the development of contingency plans and risk management instruments to protect EPZs from terrorism and economic downturns. Finally, there should be a policy focus on improving EPZs' access to the domestic economy through backward linkages, technology transfer, and skills development, as well as forward linkages to other industries and sectors. Given the policy recommendations highlighted above, performance within the EPZs can be improved, promoting exports and enhancing economic development within the region.

Recommendations

Future research may also extend the sample of nations such that it only includes countries from the SAARC, which may help compare results and improve the conclusions made for nations across the globe. Future research with greater longitudinal scope could further assist in comprehending the changing nature and durability of EPZs' impact on export development. Quantitative research strategies like surveys may be complemented by methods such as case studies and interviews to gain a better understanding of the environment within which EPZs operate or of the impact of certain policies on their performance. Besides, a comprehensive assessment of the socio-economic and environmental outcomes of EPZ operations would help offer better information on their implications for the development of the location's economy.

The proposed framework for boosting the export performance of Export Processing Zones/ Economic Zones (EPZs/EZs) in South Asian countries consists of a comprehensive evaluation of both global and zone-degree factors. This framework identifies and addresses key elements that impact consequences. By integrating these elements into a cohesive framework, the version affords actionable insights and strategic hints for policymakers and stakeholders. This approach guarantees that both monetary stability and macroeconomic efficiencies are addressed. Thereby optimizing the export overall performance of EPZs across the South Asian Nations.

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