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Impact of Terrorism on Foreign Direct Investment in South Asian Countries: Evidence from Heterogeneous Panel Analysis

Fahim Qazi [*] Khalid M. Iraqi [†]

Abstract: *This research investigates the impact of terrorism and peace on foreign direct investment (FDI) in South Asian countries comprising eight economies. The study initially examines the effects of terrorism, GDP, inflation, and trade openness on the FDI of South Asian countries. Subsequently, it explores the influence of peace, GDP, inflation, and trade openness on the FDI of the same economies. The sample data covers a time frame from 2011 to 2021. The panel-regression framework is employed as the primary technique for data analysis. Moreover, to examine the integration among the variables under consideration, Pedroni co-integration and FMOLS regression methods are applied. The outcomes of the articles support the initial aim of the study by noting down a considerable nexus of both peace and terrorism as well as relative economic proxies in driving FDI of South Asian economies. The result strongly suggests that terrorism in these countries is one of the pioneering factors for predicting FDI. The study concludes that an increase in terrorism declines the flow of FDI, while an improvement in peace enhances FDI. Likewise, other indicators such as inflation, trade openness, and GDP also contribute to changes in FDI.*

Keywords: Terrorism, Peace Index, Foreign Direct Investment, South Asian countries, Panel regression, Co-integration, FMOLS regression.

Introduction

South Asia has been combating the enormous problem of terrorism operations, which is considered a disease that impacts the government and the nation. It has become deeply rooted both internally and externally in the South Asian region, and the uncertain situation has made this region the most vulnerable, leading to an unstable political situation, increased inequality, religious extremism, nationalization, and a fragile governance structure, as well as outside terrorism attacks (Babar, Sattar, Shah, & Laeque, 2017). Plenty of natural resources and inexpensive production, such as raw materials, inflation, and overseas countries' interest in trade are some of the major reasons for terrorism. According to the estimates of the World Bank in 2021, the ratio of individuals living with less than $1.90/day in the South Asian region has increased by 58 million, accounting for more than half of the worldwide elevation in poverty. The backbone of South Asian economies is private consumption, which depends on informal employment, particularly in the tourism

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and travel industry, trade, and transport industries for revenue generation, and it is part of the integrated global value chains. However, terrorism negatively impacts it along with different industries. Societies in this area are a proactive amalgamation of resilient ethnic characteristics and different religious beliefs, the majority of which are rigorous in restricted neighborhoods, labeling the area a prospective nurturing ground of terrorism and extremism. Religious support, state approval, and protective societal infrastructure against terrorism and spiteful philosophies have turned the countries into a target, being blamed for the violence. The main motives for terrorism are backing from the state, protective social structure, and control of terrorist groups. Research has indicated that terrorism significantly impacted the inflows of foreign direct investment in South Asia. In 2021, the FDI inflow received by South Asia was less than in 2020, with a reduction of $19.48 billion USD. Private consumption being a part of the integrated global value chains, is adversely influenced by terrorism along with other industries.

Moreover, societies in this area are a proactive amalgamation of resilient ethnic characteristics and different religious beliefs, the majority of which are rigorous in restricted neighborhoods, labeling the area a prospective nurturing ground of terrorism and extremism (Mbulawa, 2017). Religious support, state approval, protective societal infrastructure against terrorism, and spiteful philosophies have turned the countries into a target, being blamed for the violence. The main motives for terrorism are backed by the state, protective social structure, and control of terrorist groups. Research also indicated that terrorism significantly impacts the inflows of foreign direct investment in world economies, including South Asia. In 2021, the FDI inflow received by South Asia was less compared to 2020, with a reduction of $19.48 billion. Hence, the statistics indicate a decreasing trend of FDI in South Asia, which will have significant consequences for the countries within this region.

Most nations within South Asia are thriving and reliant on FDI for economic progress. Foreign direct investments are significant as FDI helps them to bridge saving and investment gaps, produce employment opportunities, earn returns from technology transfer, and accelerate prosperity of host regions' economies. FDI does not just assist developing and underdeveloped economies with imperative capital for investment. It also enhances and creates more jobs, managerial knowledge, skills, and technology transfer and advancement. All these elements contribute to economic prosperity. Thus, attracting and gaining FDI is important for developing countries. FDI facilitates South Asia to invest in development projects, strengthens industries, creates job, provide advanced technology, backs local managerial knowledge, aids in productivity and output, elevates Balance of Payments (BOP), forex reserves, infrastructure, and human capital, while ultimately leading to economic development. In the case of export-oriented policy implementation, FDI also enhances host country's BOP by promoting exports. Further, it grants local exchequer in terms of taxes and creating job opportunities to enhance living level in the host economy (United Nations Conference on Trade and Development, 2021; World Bank Group, 2021).

Various factors pitch in to keep a nation appealing for FDI, such as inflation appears to induce positivity along with adverse effects on FDI depending upon various circumstances. On the one hand, high inflation can be a deterrent for FDI because it raises ex-

pense of conducting business in host nation. This can lead to higher production costs and reduced profit margins, which could discourage foreign investors. On the other hand, moderate inflation can be attractive to foreign investors because it can accelerate the competitiveness of a country's exports. The inflation rate can slacken worth of a nation's currency relative to rest of the currencies, making its exports more affordable and attractive to foreign buyers. This can make a country's products more competitive in global markets and can increase demand for its exports (IMF, 2019). Inflation in South Asia varies in different countries and can be influenced by various factors, including global commodity prices, local supply and demand dynamics, and economic and political conditions.

The contribution of GDP in attracting South Asian FDI inflows varies depending on the specific country and its economic situation. Generally, a higher GDP indicates a larger market and a more stable economic environment, which can make a country more attractive to foreign investors. Subject to South Asian nations like India and Pakistan, with larger GDPs and relatively stable economic conditions, tend to attract more FDI inflows compared to smaller and less developed countries in the region. For instance, World Investment Report (2021) claims that India was the largest recipient of FDI inflows in South Asia in 2020, accounting for over 70% of the total FDI inflows to the region.

Additionally, Trade openness indicates the level of integration and liberalization of an economy with the global trade system. It is observed as a substantial FDI inflows facet (Chakrabarti, 2001). Globally, massive progress is observed in the liberalization of trade regimes, reduction in tariff barriers, and engagement in trade agreements which created favorable settings to attract FDI. However, countries in the South Asian region have different economic conditions; therefore, the link of trade openness with FDI inflows varies across countries. For instance, countries like India, Bangladesh, Maldives, and Bhutan induce trade liberalization and open the economy for international trade, which tends to attract more inflows of FDI in comparison to the rest of the regions. On the contrary, trade openness of Pakistan has been fluctuating over the years with the lowest trade openness value in this region.

Various studies explored the economic growth's nexus with FDI in numerous countries (Islam et al., 2021; Murshed et al., 2022). Also, some researchers have emphasized identifying linkage among militarization, carbon emission, energy use, and forex markets. In addition, Chishti et al. (2021) scrutinized connection amongst terrorism, FDI, and environmental quality in South Asia. However, the literature examines the connection between trade openness, terrorism, inflation-INF, GDP, and FDI inflow is less. Thus, a notable literary deficit subsists, which the present research intends to address by exploring the impact of terrorism, peace, GDP, INF, and trade openness on FDI inflows of the South Asian economies.

Moreover, this research aims to add to the persisting literary body in the following manner. Initially, this study analyzes impression of less focused variables on FDI to provide valuable insight to policymakers and researchers. Further, this work emphasizes estimating outcomes by utilizing data at the country level as this would provide robust analysis, making a reasonable contribution to the literature.

FDI inflows are crucial to meet countries' capital requirements and technological shortages. If the FDI inflows rate diminishes due to escalated terrorism risk, it slows down

economic growth. This study pays more attention to a new paradigm of research that examines whether terrorism impedes the FDI inflows or not, which has not often been researched in the academic literature. Additionally, the study turns out to be more noteworthy by unfolding terrorism's impacts on FDI inflows. It urges the host country to develop governance structures and strategies for reducing terrorist activities and stimulating foreign investors' investment interests toward countries. Moreover, the findings will help policymakers to understand the impact of terrorism, GDP, inflation, trade openness, and peace on foreign direct investment inflow. Policymakers can formulate price control policies, tax and tariff regulations, and measures to grow the economy to attract more FDI. Besides, this study has also recommended some policies or strategies for the government about combating terrorism and attracting FDI inflows.

Literature Review

Theoretical Framework

Eclectic Theory

There are many theories related to the critical function of FDI inflows. The internalisation theory of J.H. Dunning serves as the foundation of the eclectic paradigm (Dunning, 1980) that elucidates three key considerations namely ownership benefit, locational benefit, and internalization benefit to analyze the attractiveness of FDI inflows (Dunning, 2001). Domestic companies become transnational through FDI, driven by ownership, location, and internationalization benefits. Other names for paradigm include "Ownership, Location, Internalization (OLI) model". The ownership benefit includes unique resources, while the location benefit involves factors like raw materials, market size, labor, and regulations (Abille, Mpuure, Wuni, & Dadzie, 2020). Internalization benefit drives TNCs to pursue FDIs for profitability, with the host country's business environment being crucial. Hymer (1960) introduced internalization from different perspectives. TNCs form due to market imperfections. In terror-affected economies, foreign investors are cautious, analyzing returns and hedging risks (Li, 2006).

Rational Choice Theory

This theory by Smith (1776) elaborate that individuals use a rational calculation to determine the right option that is allied with their own goals. Currently, the rational choice theory is employed to elucidate the impact of terrorism on FDI inflows (Anderton & Carter, 2005; Polyxeni & Theodore, 2019). The influence of risk over FDI is based upon investors' rational and uncertain expectations. Firms must adapt decisions to unforeseen risks, including terrorism. If expected returns don't increase despite terrorism, foreign investors may shift resources to safer economies.

Decision Theory

Decision theory is proposed by Von Neumann and Morgenstern (2007). The theory supports our arguments in a way that investors have a choice of alternative investments and the optimum decision is based upon receiving the full benefit of the projected utility value (i.e., satisfaction) from the selected investments. Theoretically, foreign investors behave as risk-averse and expect the greatest return on their investment (Onanuga, Odusanya, & Adekunle, 2021). Terrorist activities decrease FDI inflows due to increased costs and reduced returns. While Pre-9/11 period shows a stronger adverse effect over FDI (Arif, Rawat, & Khan, 2021). According to Bandyopadhyay, Sandler, and Younas (2014), transnational as compared to domestic terrorism influences FDI adversely. Effective counter-terrorism strategies are crucial for attracting FDI.

Repressive Terrorism

Repressive terrorism is considered an obstacle to FDI as it creates an atmosphere of fear and insecurity, which can discourage investment decisions of foreign investors in affected economies. These violent activities of terrorist groups under repressive terrorism lead to a decline in economic activities, loss of jobs, and reduction in the standard of living, which can ultimately discourage foreign investors. In addition, repressive terrorism can result in political instability, social unrest, and weak governance, which can be a significant deterrent for foreign investors. The presence of specialized agents or agencies that use terroristic instruments against opposition groups can also contribute to the negative image of a nation in view of investors and reduce their willingness to invest in the country.

Sub-revolutionary Terrorism

Another primary violence purpose is sub-revolutionary terrorism. This concept refers to the utilization of violence for political motives, change and control of government (Shultz, 1978). This type of terrorism is more engrossed in practicing control over government to change political structures, policies and amend rules in order to ascertain their reactive power for the rules that are not accepted by terrorists (Wilkinson & Wilkinson, 1974). Krueger and Malečková (2002) argued that there may be a causal connection between education, poverty, and political violence, shedding light on potential factors influencing the formation and actions of terrorist-producing organizations within this context. Therefore, terrorism groups under sub revolutionary terrorism are labelled as terrorist producing organizations.

Capital market theory

Capital market theory suggests that terrorism can reduce the availability of capital in a country, making it more difficult for foreign investors to finance their investments. Terrorist attacks can increase uncertainty in financial markets, leading to a reduction in capital flows and a decrease in investment. Terrorist attacks can disrupt financial markets, causing uncertainty and reducing investor confidence. This can limit the availability of

capital and make it challenging for foreign investors to finance their investments, impacting capital market theory. Terrorist attacks increase perceived investment risk, leading to decreased investment and capital flow. This impacts economic growth and diverts resources from productive sectors. Capital market theory explains how terrorism reduces capital availability and investment due to market disruptions and increased uncertainty.

Reputation theory

Reputation theory suggests that terrorism can harm a country's reputation, making it less attractive to foreign investors. It proposes that an economy's reputation is essential to attracting foreign investment. Terrorist incidents can damage a country's reputation, deter foreign investors, and hinder economic growth, as the negative impact of terrorism can decrease foreign investment and reduce the country's economic development Blomberg, Hess, and Orphanides (2004) establish that terrorist incidents are associated with low FDI inflows. Gassebner, Keck, and Teh (2010) found terrorist incidents as negatively associated with foreign direct investment inflows in developing countries. Furthermore, research has also shown that a country's reputation plays a crucial role in attracting foreign investment. Similarly, another research found that a country's reputation influences businesses' investment decisions in that specific economy. While the relationship between terrorism and FDI is complex and multi-faceted, these theories help to explain some of the factors that can impact foreign investment decisions in the context of terrorism.

Empirical Evidences

Ali and Xialing (2017) examines the long-term association of terrorism with FDI in Pakistan. The finding revealed that occurrence of death and injuries caused by terrorism negatively affects foreign investment flow to Pakistan. Similarly, Haider and Anwar (2014) conclude that constant violence significantly increases investment and security risks while terrorist violence increases, reducing FDI. Additionally, Rawat and Khan (2020) conclude terrorism having long-term fatalistic impression over FDI in top terror-affected economies. Findings reflect long-term insignificant influence. Subsequently, Bano, Zhao, Ahmad, Wang, and Liu (2019) observed terrorism as a significant determinant for FDI in Pakistan during global financial crises. Mansoor (2022) determined that terrorism negatively affects SAARC countries, and Pakistan, Bangladesh, and Afghanistan prioritize technology-driven FDI and physical transformations. Powers and Choi (2012) find that terrorism targeting multinational corporations negatively affects FDI, while terrorism affecting non-business has minimal impact. Shah (2015) show that increase in overall terrorism rate of Pakistan decreases the inflow of foreign investments owing to exports, but its imports related contribution increases. Shah (2015) finds a significant negative correlation among terrorism and FDI in SAARC countries, posing a threat to economic expansion. Lee (2017) suggests that foreign investors consider a host country's ability to handle terrorism, with counterterrorism assistance mitigating the negative impact on FDI inflows.

In addition, Peace Index, developed by Institute for Economics- IEP and Peace, is considered as the peacefulness measure covering 99.7% of the overall population. The said

index measures peace in three distinct domains including: Social Security, Ongoing International and Domestic Conflicts, and Militarization. According to a recent report of Global Peace Index (2022), the peace index has deteriorated by 0.03% on average with 71 nations abating, 90 nations improving while two nations are in a stable position of maintaining peacefulness. The index reveals that nations continuously deteriorate faster compared to improving peacefulness. Overall, militarization has enhanced since 2008 in 113 nations despite recent agreements. The degree of terrorism has also improved since 2008, as no attacks were recorded in 2021. However, food prices and insecurity have significantly increased globally, particularly in South Asia, Africa, and Middle Eastern regions. Moreover, the report also indicates the worse conditions of political terror scale such that IDPs, political insecurity and conflicts among neighboring countries reached their worst state owing to peace index. To record the recent impacts of conflict, deaths noted severe deterioration due to Russia-Ukraine conflict. These statistics reflect the considerable role of peace among nations in enabling economic growth or depression.

Therefore, various scholars studied the relationship of peace with a number of economic indicators to predict their extravagance in overall economic growth. For instance, Santhirasegaram (2008) investigated peace with economic well-being. The research recommends that nations with highest peaceful environment attracts highest growth rate with positive physical and human capital while less peaceful countries with conflicts are far away from economic development. Hence, calm and peaceful environment of any country has the potential to attract investments. Moreover, Ojo (2021) examined the social instability with FDI and economic growth of sub-Saharan African nations utilizing 30-year data (1988-2019). The research concluded that instable socio-political environment (one of the GPI domain) is negatively associated with FDI, meaning that higher instable socio-political environment will result in significant decrease in overall FDI. Another study by Mukoka, Tshuma, and Chibhoyi (2019) predicted the peace ranking and economic indicators such as FDI, Inflation and Interest Rates using OLS technique from a period of 2010 till 2018. The findings recommend that higher percentage in peace ranking of the country indicate low and rate of FDI. Hence, for economic growth, it is perceived that a country must make measures to promote peace both at national and international level in order to improve their ranking in peace and ultimately attract foreign investments.

Accordingly, Saleem, Shabbir, and Khan (2020) examine dynamic causal link amo-ng trade openness, GDP, and FDI of 5 south Asian countries. Similarly, Khan, Nawaz, and Saeed (2021) established that FDI inflows and trade openness impact income inequality in South Asian countries. While, Sahoo and Sethi (2023) show that trade openness and financial integration positively influence economic enrichment in South Asian nations i.e., "Bangladesh, Bhutan, India, Pakistan, and Sri Lanka", from 1990–2017. Azam, Khan, and Iqbal (2012) examine how political risk and uncertain macroeconomic policies is related with South Asian countries; FDI. Result suggest that trade openness positively affects short-term FDI inflows, while it has a negative impact due to inconsistent policy and high trade costs in long term. Similarly, Liargovas and Skandalis (2012) revealed that open trade favorably influences developing nations' FDI over the long term and Alam, Raza, Shahbaz, and Abbas (2016) show FDI along with open trade systems contribute to long run improved living expectancy. Bhavan, Xu, and Zhong (2011) discover favourable

correlation of FDI with South Asian countries' prosperity.

Intisar et al. (2020) indicates that human capital as well as trade openness show a desirable correlation with economic expansion in South and Western Asia. Rao, Sethi, Dash, and Bhujabal (2023) find unfavorable nexus among foreign aid and FDI and favorable nexus among FDI and development in South-East Asia and South Asia. Nguyen (2022) concludes that FDI has a directional association with GDP rate and unemployment in South Asian countries. Considering Inflation as one of the key economic indicators, many authors have attempted to investigate the prominence of inflation in predicting its association with FDI. For instance, Adhikary (2017) explored the determinants of FDI among South Asian countries. The studies disclose that among various other factors, inflation is less likely to predict the FDI inflows or might have very minimal impact on FDI in South Asian regions. However, other scholars analyzed the crucial role of inflation. Similarly, Mason and Vracheva (2017) exhibit that inflation targeting attracts FDI with positive impact. This result is more prominent in developed nations who utilize inflation targeting monetary policy as compared to developing nations with alternative monetary policies. Apart from direct association between inflation and FDI, literature is also enriched with studies which considered both FDI and inflation as determinants of economic development. These research articles indicate the considerable role of economic determinants i.e., inflation, FDI, GDP, economic infrastructure, human capital, capital formation, trade openness, and government expenditure. Mixed results are achieved in terms of positive and negative association, however, the impact is considerably significant between the determinants and economic growth. Hence, economic growth is heavily influenced and predicted by these factors.

Azam et al. (2012) reveal that both corruption as well as terrorism induce a considerable pessimistic influence upon FDI inflows to Pakistan, whereas market size has a significant positive impact by utilizing Autoregressive Distributed Lag (ARDL). Saleem et al. (2020) used "ARDL and an error-correction model (ECM)" with data of 1980-2016, conclude Long-term, institutional quality, GDP, and trade openness, preferably affect FDI in Pakistan; in the short term, unstable politics, inflation, and the real exchange rate hinder FDI. Saleem et al. (2020) examine South Asian nations from 1975 to 2016 by using "bootstrap auto regressive distributed lags (ARDL) integration test". Findings conclude that Bangladeshi, Indian and Sri Lankan economic expansion is strongly tied to open trade systems, and its expansion. It also indicates that all countries (except Bangladesh) discovered long-run cointegration between GDP, trade openness and FDI. Rahman (2021) revealed that GDP and trade openness positively impact Afghanistan's FDI inflows. Exchange rate and terrorism have a moderate relationship, while inflation has a weak relationship with FDI by employing linear regression and correlation matrix from 2000 to 2020. Mugableh (2021) ascertained education, gross domestic product, open trade, technological and infrastructure capabilities are the key drivers of inbound FDI inflows (long and short term). Additionally, Syarifuddin and Setiawan (2022) used local projection estimation and panel vector auto regression model and discovers a significant COVID-19 role upon GDP and FDI nexus. Nur Mozahid, Akter, and Hafiz Iqbal (2022) five South Asian nations from 1980 to 2016 by utilizing "Panel unit root tests, panel co-integration, autoregressive distributed lag model, and Granger causality tests". Outcomes revealed

that CO2 emission is positively impacted by EC. The test of Granger causality indicates one-way causation from EC to CO2 emissions and bidirectional causality between FDI and CO2 emissions in the long term. It suggests that the said countries can promote sustainable energy technology via FDI while maintaining GDP and environmental quality.

Research Model

The relationship between the variables is examined using the subsequent regression model.

$$FDI_{i,t} = \alpha_e + \beta_1 TI_{i,t} + \beta_2 GDP_{i,t} + \beta_3 INF_{i,t} + \beta_4 TOP_{i,t} + \epsilon_{i,t}$$

$$FDI_{i,t} = \alpha_e + \beta_1 PI_{i,t} + \beta_2 GDP_{i,t} + \beta_3 INF_{i,t} + \beta_4 TOP_{i,t} + \epsilon_{i,t}$$

Whereas, FDI is a foreign direct investment, TI is a terrorism index, PI is peace index, INF is inflation rate, TOP is trade openness.

Methodology

This study emphasizes to explore the long-term connection among the variables via the Panel Co-integration approach. This study caters to the long-term impact of terrorism, GDP, Inflation, and trade openness on FDI, and then impact of peace, GDP, inflation, and trade openness on peace through applying FMOLS (i.e., fully modified ordinary least square) technique. Further, the heterogeneous panel non-causality test is applied to examine the causal connection among the variables.

Research Techniques

CD and Unit Root Test

The first step of this analysis is to evaluate whether the data possess properties of cross-sectional dependence or independence. The cross-sectional dependence assessment of Pesaran (2021) is used for this purpose. It is the prime concern which should be considered and solved earlier before moving on to the panel unit root test. The basic unit root assessment has less power and is not efficient enough when applied on panel data series which already has a cross-sectional dependence problem (Dogan & Seker, 2016). Therefore, for the analysis unit root test is carried out as this assessment is based on cross-sectional dependence hypothesis. Secondly, this test is necessary for models of panel-co-integration. Secondly, this particular advance unit root test helps to sort the order of variables that are incorporated. In case, if all variables are equal-level integrated such as I (1), then this underscores that entire sample at level has a unit root issue and at 1st difference are stationary. Hence, it can be summarized that all variables in the sample can have a connection in long-term equilibrium.

Panel Co-integration Approach

In the next step, we employed bootstrap panel co-integration to identify the connection among the variables in entire sample of 8 countries. This assessment is significant because the time-series variables of each cross-section are lower. To determine these facts, researchers use bootstrapping technique for panel co-integration to identify the long-term connection among the considered variables. In earlier approaches no co-integration H0 were accepted even where the presence of co-integration was strong and backed by theories. Apart from earlier methods or approaches, this advance approach by Westerlund (2007) has recently proposed a panel co-integration test emphasizing structural rather than dynamics of residual. The results verify that these assessments and evaluation checks have limited normal distributions and these provide more precise and accurate outcomes due to reliable consistency. According to Westerlund (2007), the results of this modified assessment provides satisfactory accuracy about size and are more strong comparative to Pedroni (2001) residual-based test. As per the evidence, present analysis will examine the impact of the variables on one another.

In this present research, we have applied the "Panel Co-integration" test of Westerlund (2007). For co-integration hypothesis evaluation, two different assessments are performed named: group-mean and panel-test. Established on the Error-Correction framework, different statistical tests were proposed like Ga, Gt, Pa, and Pt and all these statistical tests are distributed normally. Among these four different statistical test Gt and Pt are computed in a standard manner via standard-error parameters of the Error-Correction framework. While the other two remaining tests i.e. Ga and Pa are standard-error based which can be adjusted through heteroscedasticity and auto-correlation.

To perform these assessments, each variable at 1st difference is considered to be stationary. Also, through this test we can assess the co-integration absence via assuming in case error-correction exists for the entire group and additionally in panel members, individually. In case if the co-integration exists, the parameters in long-term are computed. For cross-sectional analysis, the error-variance changes throughout the group, impacting the measures consistency. Therefore, to resolve this issue, the GLS (generalized least square) approach can be applied. Hence, the variance deviation still occurs, for instance the squared residuals correlation along with every group regressors. In the group, there are more than one reason which leads to problem of heteroscedasticity, it can be due to variance difference of the residual terms conditioned on the regressors or via unconditional variance difference of the residual terms. Thus, to limit both sources leading to heteroscedasticity, FMOLS is applied.

Long-run Elasticities

In panel data, OLS application is determined to bias and its distribution emphasizes annoyance constraint. According to Pedroni (2001), annoyance constraints can lead to occurrence of endogeneity and serial correlation detection among regressors, in case of regression outcomes. Therefore, to eliminate this issue, FMOLS is applied as this approach is non-parametric based, effectively eliminating issues like endogeneity and serial correlation. Hence, this study employs FMOLS approach to explore the long-term equilibrium

connection.

Heterogeneous Panel Causality Test

This analysis identifies the short-term bi-variate causal connection among the determinants via finalizing a model which backs the heterogeneity of the framework during cross-sections. The technique named panel-causality is appropriate when data is stationary via applying the fixed-coefficient in the VAR framework. The technique implications are that it selects varied log-structure and likewise heterogenetiy measurement across cross-sections in both notions. Initially, the no-causal connection H0 is tested and later causal connection H1 for at least some cross-sections. Lastly, the Wald-statistics are calculated to individual of the cross-sections, respectively for assessing Granger-noncausality. The cause behind the panel-causality assessment satisfies to a normal-distribution in homogeneous non-causality hypothesis when T represent to infinity-fist and after N denotes to infinity.

Data

This research explores the impact of terrorism and peace on FDI in South Asian countries (8 economies). At first, this research examines the impact of terrorism, GDP, inflation, and trade openness on FDI for South Asian countries. Then the impact of peace, GDP, inflation, and trade openness on FDI for South Asian economies have been determined in the research. The data of all variables include the time frame from 2011 to 2021. Terrorism data was obtained from GTI (Global terrorism index), peace index data was acquired from GPI (Global peace index), and other variables named FDI, GDP, inflation, and trade openness were retrieved from the world bank (WB).

Data Analysis and Results

This study determines the association between TI, PI, FDI, GDP, INF AND TOP in South Asian countries, and the list of the countries is displayed in Table 1.

Table 1
List of South Asian Countries

S. No.	Name
1	Afghanistan
2	Bangladesh
3	Bhutan
4	India
5	Pakistan
6	Maldives
7	Nepal
8	Sri Lanka

Descriptive Statistics

The table 2 explains the summary of Descriptive Statistics based on the 99 observations. It can be seen from the table that in South Asian Countries, terrorism has a maximum value 9.212 and a minimum value 0. Moreover, the mean calculated for terrorism is 5.113 and the median is 5.230 with a standard deviation of 2.940. On the other hand, peace has a maximum value 3.6 and a minimum value 1.473. Moreover, the mean calculated for peace is 2.370 and the median is 2.218 with a standard deviation of 0.536. Similarly, FDI has a maximum value 17.132 and a minimum value -0.675. Moreover, the mean calculated for FDI is 1.903 and the median is 0.715 with a standard deviation of 3.338. Likewise, GDP has a maximum value 10753.14 and a minimum value 426.030. Moreover, the mean calculated for GDP is 3030.34 and the median is 1701.184 with a standard deviation of 2729.449 making it the most volatile and uncertain economic factor. On the other hand, INF has a maximum value 43.389 and a minimum value -1.369. Moreover, the mean calculated for INF is 7.809 and the median is 6.194 with a standard deviation of 7.659. Finally, TOP has a maximum value 165.979 and a minimum value 23.701. Moreover, the mean calculated for TOP is 56.026 and the median is 43.810 with a standard deviation of 36.276. Moreover, the results of kurtosis and skewness confirm the non-normal distribution of the data.

Table 2
Results of descriptive statistics

Variables	Mean	Median	Max	Min	Std. Dev.	Skewness	Kurtosis	J-B	Prob	Obsv
TI	5.113	5.230	9.212	0.000	2.940	-0.289	1.955	30.87	0.000	99
PI	2.370	2.218	3.600	1.473	0.536	0.536	2.500	35.77	0.000	99
FDI	1.903	0.715	17.132	-0.675	3.338	2.808	10.25	347.5	0.000	99
GDP	3030	1701	1075	426.03	2729.4	1.397	4.021	36.51	0.000	99
INF	7.809	6.194	43.38	-1.369	7.659	2.816	11.79	450.09	0.000	99
TOP	56.02	43.81	165.97	23.70	36.27	1.638	4.562	54.34	0.000	99

Note: Note: J-B = Jarque-Bera test of Normality.
Source: Authors' Estimations

CD Test

The CD test is used following the descriptive statistics. Pesaran introduced this test in 2004 to explain the presence of cross-sectional dependence in variable series. When doing a panel study, Dogan and Seker (2016) propose that the presence of cross-sectional dependence should be investigated.

Table 3
Results of Pesaran (2004) CD test

Variables	Test statistics	p value
South Asian Countries		
TI	11.999	0.001
PI	12.737	0.000
FDI	11.001	0.000
GDP	6.001	0.000
INF	7.333	0.000
TOP	8.961	0.000

Note: All variables are significant at 1% level.
Source: Authors' Estimation

In the CD test, the absence of cross-sectional dependence is the null hypothesis. The CD test results in Table 3 provide sufficient evidence to reject the null hypothesis because the p value is less than 1%, indicating acceptance of the alternative hypothesis and proving the existence of cross-sectional dependence among variables.

Unit Root Test

After descriptive, the unit root test is employed to evaluate the variables' stationary characteristics. The results of the Im, Pesaran, and Shin unit root tests are shown in Table 4. According to the findings, all variables are nonstationary at the level but become stationary at the first difference.

Table 4
Results of Im, Pesaran, Shin Panel Unit Root Test

South Asian Countries				
	I (0)		I (I)	
Variables	**Statistics**	**p-value**	**Statistics**	**p-value**
TI	-0.611	0.390	-10.987	0.000
PI	-0.603	0.402	-9.563	0.000
FDI	-0.332	0.290	-8.982	0.000
GDP	-1.228	0.730	-6.741	0.000
INF	-1.144	0.780	-8.779	0.000
TOP	-0.326	0.510	-6.667	0.000

The Lag selection (automatic) is based on SIC.
Source: Authors' estimation.

Panel Co-Integration Test

Panel co-integration technique as developed by Westerlund (2007); Persyn and Westerlund (2008) evaluated two tests: Group mean tests and Panel test. Table: 5 presents the outcomes of Pedroni (Engle-Granger based) Panel Cointegration indicating the rejection of null hypothesis (no co-integration) at critical value of 1% significance in both TI and PI model.

The results are primarily based upon the two tests (Panel PP statistics and Panel ADF statistics in both models) from the measurement and two tests (group PP statistics and group ADF statistics) from dimensions. These four out of seven tests support the non-acceptance of the hypothesis. Hence, these four tests indicate the movement of variables in the said models.

By employing Westerlund (2007) Bootstrap Panel Co-integration test, study also analyzes co-integration among variables. The findings of the test can be viewed in table: 6 where results with dimension and within dimension are illustrated. The analysis reveals the non-acceptance of null hypothesis by accepting alternative hypothesis. Hence, the co-integration of the variables in terrorism and peace models is confirmed via the second-generation test.

Table 5
Results of Pedroni Panel Cointegration

Estimates	Stats.	Prob.
TI Model		
Panel v-statistic	-2.114	0.532
Panel rho-statistic	-6.006	0.924
Panel PP statistic	-3.508	0.000
Panel ADF statistic	-5.505	0.000
Alternative Hypothesis: Individual AR Coefficient		
Group rho-statistic	-3.911	0.348
Group PP statistic	-4.703	0.000
Group ADF statistic	-5.070	0.000
PI Model		
Panel v-statistic	-6.041	0.325
Panel rho-statistic	-4.247	0.344
Panel PP statistic	-3.536	0.000
Panel ADF statistic	-2.070	0.000
Alternative Hypothesis: Individual AR Coefficient		
Group rho-statistic	-7.364	0.528
Group PP statistic	-5.856	0.000
Group ADF statistic	-4.679	0.000

The null hypothesis of Pedroni's (1997) panel cointegration procedure is no cointegration
Source: Authors' estimation.

Table 6
Results of Westerlund (2007) Bootstrap Panel Cointegration

Statistic	Value	Z value	p value	Robust p value
TI Model				
Gt	-21.342	-19.223	0.000	0.000
Ga	-25.223	-18.112	0.000	0.000
Pt	-29.999	-17.224	0.000	0.000
Pa	-19.335	-14.224	0.000	0.000
PI Model				
Gt	-20.534	-19.268	0.000	0.000
Ga	-24.469	-18.658	0.000	0.000
Pt	-30.876	-17.054	0.000	0.000
Pa	-18.656	-14.567	0.000	0.000

Note: The null hypothesis of Westerlund (2007) panel cointegration procedure is no cointegration.
Using the boot strap approach of Westerlund (2007) to account for cross-sectional dependence, the number of replications is 400.
The p-values are for a one sided test based on normal distribution. The robust p-value are for a one sided test based on 400 bootstrap replications.
Source: Authors' estimation.

Results of Fully Modified Ordinary Least Square (FMOLS)

FMOLS approach specified by Phillips and Hansen (1990), later revised by Pedroni (2001) allows assessing the long run nexus among variables. The prime objective of utilizing FMOLS is that it generates robust findings while accounting for endogeneity along with

autocorrelation issues. Table: 7 represents the test outcome so the technique. The findings explicit that the overall long run impact of terrorism index with FDI in Asian countries is negatively associated; meaning that 1% increase in TI will reduce FDI by -0.115. Furthermore, 1% improvement in GDP, INF, and TOP will result in enhancing FDI by 0.804, 0.113, 0.591 respectively. Hence, if GDP, inflation and trade openness of Asian countries increase, economy will be observing higher FDI. Further analysis of PI model reveals that if 1% rise is noted in peace index of the country, FDI is more likely to be increased by 0.843. Subsequently, 1% improvement in GDP, INF and TOP contribute to increase FDI by 0.773, 0.111, and 0.732 respectively. Therefore, based upon these results, it can be concluded that the changes in FDI are significantly influenced by said factors and behave differently in both situations (TI and PI). Therefore, based upon these results, it can be concluded that the changes in FDI are significantly influenced by said factors except inflation that behave differently in both situations (Terrorism and Peace). Therefore, South Asian nations who aim to increase their FDI in long run must work continuously and initiate strategies that enhance peace while reducing their exposure and ranking in terrorism. As a result, South Asian countries will be able to develop economically based on higher FDI owing to higher peace and lower terrorism along with the roles of GDP, INF, and TOP.

Table 7
Results of Long Run Analysis through FMOLS

Variable	Coeff.	t-stats.	Prob.
		TI Model	
TI	-0.115	3.204	0.001
GDP	0.804	34.553	0.000
INF	0.113	1.620	0.106
TOP	0.591	7.085	0.000
		PI Model	
PI	0.843	34.59	0.000
GDP	0.773	25.89	0.000
INF	0.111	1.103	0.271
TOP	0.732	19.40	0.000

Source: Authors' Estimations

Heterogeneous Panel Causality Test

The Heterogeneous Panel Causality Test is utilized in the present study to analyze the causal association among FDI, terrorism, peace, GDP, INF, and TOP of South Asian countries. Table: 08A and Table 08B signify the results of the heterogeneous panel causality test. It can be observed from the table that bidirectional causal nexus exists between economic factors and FDI. It is also evident that the causality from economic factors runs to FDI under both TI and PI models. Hence, the results suggest each one of the economic factor causes changes in FDI.

terrorism and foreign direct investment exists while the causality runs from both terrorism and foreign direct investments toward each other. The results suggest that for investors, terrorism creates a sense of danger and increases security concerns. This risk perception lowers investor confidence and discourages FDI (Blomberg et al., 2004).

Moving forward, the causal association between GDP and FDI also prevails in the

findings. The results suggest bi-directional linkage between the variables. A higher GDP denotes a bigger market, more powerful consumers, and potential commercial opportunities. These elements increase a nation's allure to foreign investors looking to break into the local market and gain from its potential for economic growth. According to literary evidence, GDP and FDI inflows have a positive connection.

Next, the causal link between FDI and inflation appears to be insignificant which drives the research to accept null hypotheses. Hence, the null hypotheses do not entail any bi directional nexus among said variables. In South Asian countries context, the results imply that these factors are not directly affecting one another. In other words, FDI inflows do not significantly affect changes in inflation rates, while inflation levels do not significantly affect FDI inflows. Other elements may be more important in luring FDI inflows, such as market size, political stability, infrastructure, and investment climate. In a similar vein, the absence of a causal relationship between FDI and inflation shows that FDI inflows have little to no influence on inflation rates in the host nation. Concerning the trade openness, the null hypothesis is rejected due to evident bi-directional causality among trade openness and foreign direct investment. It suggests that these factors are in a mutually reinforcing connection.

In the second model of peace, the result in the table suggests that bi-directional association among peace and FDI positively exist in South Asian economies. Hence, higher amounts of FDI may be attracted by a higher peace, which denotes a more tranquil and stable environment. Studies have demonstrated that FDI inflows are positively influenced by political stability and peace (Busse & Hefeker, 2007). Greater FDI is projected to flow into South Asian nations with greater peace as investors look for safe and stable places to place their money.

Keeping in view the association of inflation and FDI, the outcomes reveal unidirectional linkage running from FDI to INF while the null hypothesis of causal link from INF to FDI is accepted. South Asian countries may experience higher inflation as a result of foreign direct investment. Increased FDI inflows can spur economic expansion, increase consumer demand, and put pressure on prices to rise. On the contrary, the level of inflation does not seem to have a substantial effect on FDI inflows to South Asian nations. Strong evidence to establish a causal relationship between inflation and FDI inflows has not been discovered in studies studying this relationship (Rajan & Subramanian, 2005).

Table 8a
Results of Heterogeneous Panel Causality Test (TI)

Null Hypothesis	Stats.	Prob.
TI does not homogenously cause FDI	0.756	0.000
FDI does not homogenously cause TI	0.614	0.000
GDP does not homogenously cause FDI	0.551	0.000
FDI does not homogenously cause GDP	0.459	0.000
INF does not homogenously cause FDI	0.115	0.172
FDI does not homogenously cause INF	0.132	0.072
TOP does not homogenously cause FDI	0.561	0.000
FDI does not homogenously cause TOP	0.559	0.000

Source: Authors' Estimations

Table 8b
Results of Heterogeneous Panel Causality Test (PI)

Null Hypothesis	Stats.	Prob.
PI does not homogenously cause FDI	0.770	0.000
FDI does not homogenously cause PI	0.681	0.000
GDP does not homogenously cause FDI	0.357	0.000
FDI does not homogenously cause GDP	0.428	0.000
INF does not homogenously cause FDI	0.132	0.129
FDI does not homogenously cause INF	0.273	0.003
TOP does not homogenously cause FDI	0.462	0.000
FDI does not homogenously cause TOP	0.438	0.000

Source: Authors' Estimations

Conclusion, Implications and Limitations

Conclusion

This novel article is aimed to signify the role of various economic determinants including GDP, Inflation, and Trade Openness in the dynamic impact of peace and terrorism index on FDI. To serve the purpose, the research utilizes case of South Asian countries (8 economies). Subsequently, the study employed data from 2011 to 2021. The results have been deduced by employing panel-regression framework, Pedroni co-integration and FMOLS regression. The articles' outcomes support the study's initial aim by noting a considerable nexus of both peace and terrorism as well as relative economic proxies in driving FDI of South Asian economies. The result strongly suggests that terrorism is one of the pioneering factors for predicting FDI. The study concludes that increase in terrorism in the countries leads to minimum flow of FDI while improvement in the peace enhances FDI. Likewise, other indicators such as inflation, trade openness, and GDP also increase FDI.

Implications

To account for the insights of the study, various beneficiaries can utilize these insights in number of ways. For instance, governments and policymakers can devise multiple strategies and policies to attract FDI by reducing terrorism and spreading peace. By comprehending the association, these bodies are more likely asses their current ranking in terrorism and peace indexes and the risks associated with these factors. Study's insight can help them in their decision making for effective use of resources and course of action for attracting and retaining FDI. Likewise, investors and businesses can also benefit from the research to assess the risk of foreign investment along with international trade of particular countries i.e., South Asian countries. This study aids them to identify effective decision making by establishing operations and allocation of resources. Moreover, international bodies like World, Bank, regional banks, United Nations and International Monetary Fund-IMF can gain insights from the study to regularly formulate and inform strategies, policies and programs to boost peace, economic expansion and stability in Asian Countries.

Limitations

Apart from its valuable contributions and considerable outcomes, the research also meets some inabilities that limit its exposure. For instance, the study lacks the ability to review how different regions i.e., European region and Asian region react in the given situation. Therefore, future researchers are suggested to expand the study by conducting comparative research of different regions. Moreover, only limited economic factors have been analyzed which limit the study to only employed variables. As a result, authors recommend scholars to incorporate other indicators such as unemployment, interest rate and population growth. Additionally, other scholars can also expand the outcomes of this study by utilizing other contemporary research methodologies namely, panel data approach, ARDL model, panel vector autoregressive and generalized method of moments models.

References

Abille, A. B., Mpuure, D. M.-N., Wuni, I. Y., & Dadzie, P. (2020). Modelling the synergy between fiscal incentives and foreign direct investment in Ghana. *Journal of Economics and Development*, *22*(2), 325–334.

Adhikary, B. K. (2017). Factors influencing foreign direct investment in South Asian economies: A comparative analysis. *South Asian Journal of Business Studies*, *6*(1), 8–37.

Alam, M. S., Raza, S. A., Shahbaz, M., & Abbas, Q. (2016). Accounting for contribution of trade openness and foreign direct investment in life expectancy: The long-run and short-run analysis in Pakistan. *Social Indicators Research*, *129*, 1155–1170.

Ali, N., & Xialing, L. (2017). Foreign direct investment, international trade and economic growth in Pakistan's economic perspective. *American Journal of Economics*, *7*(5), 211–215.

Anderton, C. H., & Carter, J. R. (2005). On rational choice theory and the study of terrorism. *Defence and Peace Economics*, *16*(4), 275–282.

Arif, I., Rawat, A. S., & Khan, L. (2021). Does terrorism hamper FDI inflows? a pre and post 9/11 analysis. *Journal of Economic Studies*, *48*(5), 968–980.

Azam, M., Khan, M. A., & Iqbal, N. (2012). Impact of political risk and uncertainty on FDI in South Asia. *Transition Studies Review*, *19*, 59–77.

Babar, S. F., Sattar, A., Shah, N., & Laeque, H. (2017). Terrorism in Pakistan and its impact on foreign investment. *Journal of Research Society of Pakistan*, *1*(1), 61–83.

Bandyopadhyay, S., Sandler, T., & Younas, J. (2014). Foreign direct investment, aid, and terrorism. *Oxford Economic Papers*, *66*(1), 25–50.

Bano, S., Zhao, Y., Ahmad, A., Wang, S., & Liu, Y. (2019). Why did FDI inflows of Pakistan decline? from the perspective of terrorism, energy shortage, financial instability, and political instability. *Emerging Markets Finance and Trade*, *55*(1), 90–104.

Bhavan, T., Xu, C., & Zhong, C. (2011). Determinants and growth effect of FDI in South Asian economies: Evidence from a panel data analysis. *International Business Research*, *4*(1), 43–50.

Blomberg, S. B., Hess, G. D., & Orphanides, A. (2004). The macroeconomic consequences of terrorism. *Journal of monetary economics*, *51*(5), 1007–1032.

Busse, M., & Hefeker, C. (2007). Political risk, institutions and foreign direct investment. *European Journal of Political Economy*, *23*(2), 397–415.

Chakrabarti, A. (2001). The determinants of foreign direct investments: Sensitivity analyses of cross-country regressions. *kyklos*, *54*(1), 89–114.

Chishti, M. Z., Ahmed, Z., Murshed, M., Namkambe, H. H., Ulucak, R., et al. (2021). The asymmetric associations between foreign direct investment inflows, terrorism, CO2 emissions, and economic growth: a tale of two shocks. *Environmental Science and Pollution Research*, *28*, 69253–69271.

Dogan, E., & Seker, F. (2016). An investigation on the determinants of carbon emissions for OECD countries: empirical evidence from panel models robust to heterogeneity and cross-sectional dependence. *Environmental Science and Pollution Research*, *23*, 14646–14655.

Dunning, J. H. (1980). Toward an eclectic theory of international production: Some empirical tests. *Journal of International Business Studies*, *11*, 9–31.

Dunning, J. H. (2001). The eclectic (OLI) paradigm of international production: past, present and future. *International Journal of the Economics of Business*, *8*(2), 173–190.

Gassebner, M., Keck, A., & Teh, R. (2010). Shaken, not stirred: the impact of disasters on international trade. *Review of international Economics*, *18*(2), 351–368.

Haider, M., & Anwar, A. (2014). Impact of terrorism on FDI flows to pakistan. *Available at SSRN 2463543*.

Hymer, S. H. (1960). *The international operations of national firms, a study of direct foreign investment* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.

IMF. (2019). *World Economic Outlook Database, October 2019.* Retrieved from `https://www.imf.org/en/Publications/WEO/weo-database/2019/October`

Intisar, R., Yaseen, M. R., Kousar, R., Usman, M., Makhdum, M. S. A., et al. (2020). Impact of trade openness and human capital on economic growth: a comparative investigation of Asian countries. *Sustainability*, *12*(7), 1-19.

Islam, M. M., Khan, M. K., Tareque, M., Jehan, N., Dagar, V., et al. (2021). Impact of globalization, foreign direct investment, and energy consumption on CO2 emissions in Bangladesh: Does institutional quality matter? *Environmental Science and Pollution Research*, *28*(35), 48851–48871.

Khan, I., Nawaz, Z., & Saeed, B. B. (2021). Does trade openness and FDI reduce inequality? Evidence from South Asia. *International Journal of Finance & Economics*, *26*(4), 6459–6470.

Krueger, A. B., & Malečková, J. (2002). Education, poverty and terrorism: Is there a causal connection? *Journal of Economic Perspectives*, *17*(4), 119–144.

Lee, C.-Y. (2017). Terrorism, counterterrorism aid, and foreign direct investment. *Foreign Policy Analysis*, *13*(1), 168–187.

Li, C. (2006). Location choice in a mixed oligopoly. *Economic Modelling*, *23*(1), 131–141.

Liargovas, P. G., & Skandalis, K. S. (2012). Foreign direct investment and trade openness: The case of developing economies. *Social indicators research*, *106*, 323–331.

Mansoor, A. (2022). Bearing the brunt: The effect of terrorism on the foreign direct investment in South Asian Association for Regional Cooperation (SAARC) Nations. *Journal of Social Sciences*, *5*(1), 167-186.

Mason, R. L., & Vracheva, V. (2017). The impact of inflation targeting on attracting foreign direct investment. *Journal of Applied Business and Economics*, *19*(4), 79–94.

Mbulawa, S. (2017). Remittances, foreign direct investment and growth in SADC: A panel co-integration approach. *Journal of Finance & Economics Research*, *2*(1), 43–58.

Mugableh, M. (2021). An examination into the causal links among inward fdi determinants: empirical evidence from Jordan. *International Journal of Financial Research*, *12*(2), 195–201.

Mukoka, S., Tshuma, E., & Chibhoyi, D. (2019). Zimbabwe economic indicators and the global peace index ranking. *International Journal of Humanities and Social Science Research*, *5*(3), 9-13.

Murshed, M., Nurmakhanova, M., Al-Tal, R., Mahmood, H., Elheddad, M., & Ahmed, R. (2022). Can intra-regional trade, renewable energy use, foreign direct investments, and economic growth mitigate ecological footprints in South Asia? *Energy Sources, Part B: Economics, Planning, and Policy*, *17*(1), 2038730.

Nguyen, A. T. (2022). The relationship between economic growth, foreign direct investment, trade openness, and unemployment in South Asia. *Asian Academy of Management Journal*, *27*(2), 21–40.

Nur Mozahid, M., Akter, S., & Hafiz Iqbal, M. (2022). Causality analysis of CO2 emissions, foreign direct investment, gross domestic product, and energy consumption: empirical evidence from South Asian Association for Regional Cooperation (SAARC) countries. *Environmental Science and Pollution Research*, *29*(43), 65684–65698.

Ojo, E. (2021). Social instability and foreign direct investment: Implication for economic growth and development in Sub-Sahara Africa. *IOSR Journal of Humanities And Social Science*, *26*(5), 48-60.

Onanuga, A. T., Odusanya, I. A., & Adekunle, I. A. (2021). Terrorism and financial flows in Africa. *Behavioral Sciences of Terrorism and Political Aggression*, *13*(3), 197–214.

Pedroni, P. (2001). Fully modified OLS for heterogeneous cointegrated panels. In *Nonstationary panels, panel cointegration, and dynamic panels* (Vol. 15, pp. 93–130). Emerald Group Publishing Limited.

Persyn, D., & Westerlund, J. (2008). Error-correction–based cointegration tests for panel data. *The STATA journal*, *8*(2), 232–241.

Phillips, P. C., & Hansen, B. E. (1990). Statistical inference in instrumental variables regression with i (1) processes. *The Review of Economic Studies*, *57*(1), 99–125.

Polyxeni, K., & Theodore, M. (2019). An empirical investigation of FDI inflows in developing economies: Terrorism as a determinant factor. *The Journal of Economic Asymmetries*, *20*, e00125.

Powers, M., & Choi, S.-W. (2012). Does transnational terrorism reduce foreign direct investment? business-related versus non-business-related terrorism. *Journal of Peace Research*, *49*(3), 407–422.

Rahman, N. Q. I. A. (2021). Foreign direct investment in afghanistan and the factors which affect it. *Academic Research in Educational Sciences*, *2*(5), 31–36.

Rajan, R., & Subramanian, A. (2005). *What undermines aid's impact on growth?* National Bureau of Economic Research Cambridge, Mass., USA.

Rao, D. T., Sethi, N., Dash, D. P., & Bhujabal, P. (2023). Foreign aid, FDI and economic growth in South-East Asia and South Asia. *Global Business Review*, *24*(1), 31–47.

Rawat, A. S., & Khan, L. (2020). Exploring the link between public investment and long run economic growth: A case of a developing country. *Pénzügyi Szemle/Public Finance Quarterly*, *65*(2), 151–167.

Sahoo, M., & Sethi, N. (2023). An empirical insight into the financial globalization–growth nexus via trade openness: Evidence from select South Asian countries. *Global Business Review*, *24*(2), 317–334.

Saleem, H., Shabbir, M. S., & Khan, M. B. (2020). The short-run and long-run dynamics among fdi, trade openness and economic growth: using a bootstrap ARDL test for co-integration in selected South Asian countries. *South Asian Journal of Business Studies*, *9*(2), 279–295.

Santhirasegaram, S. (2008). Peace and economic growth in developing countries: pooled data cross–country empirical study. In *International conference on applied economics–icoae* (p. 807).

Shah, M. H. (2015). Terrorism and foreign direct investment: An empirical analysis of SAARC countries. *City University Research Journal*, *5*(2).

Shultz, R. (1978). Conceptualizing political terrorism: A typology. *Journal of International Affairs*, 7–15.

Smith, A. (1776). *An inquiry into the nature and causes of the wealth of nations: Volume one*. London: printed for W. Strahan; and T. Cadell, 1776.

Syarifuddin, F., & Setiawan, M. (2022). The relationship between COVID-19 Pandemic, Foreign Direct Investment, and Gross Domestic Product in Indonesia. *Sustainability*, *14*(5), 2786.

Von Neumann, J., & Morgenstern, O. (2007). Theory of games and economic behavior. In *Theory of games and economic behavior.* Princeton university press.

Westerlund, J. (2007). Testing for error correction in panel data. *Oxford Bulletin of Economics and statistics*, *69*(6), 709–748.

Wilkinson, P., & Wilkinson, P. (1974). Revolutionary and sub-revolutionary terrorism. *Political Terrorism*, 45–135.