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Article

Impacts of Terrorism on Economic Growth and Foreign Direct Investment in Developing Asian Countries: Malaysia, Indonesia and Philippines

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Abstract: Terrorism is one of the most serious, damaging, and disturbing problems nowadays. Terrorism attacks are intended to apply sufficient pressure on a government so that it grants political and economic concessions. This study aims to investigate the impacts of terrorism on economic growth (GDP) and foreign direct investment (FDI) in Developing Asian Countries: Malaysia, Indonesia, and Philippines. The panel data was collected from World Bank Data Malaysia and the Department of Statistics Malaysia from 1999 to 2016 for each selected country. This study uses the panel data regressions to analyze the data by using the Pooled Ordinary Least Square (POLS), Fixed Effect (FE), and Random Effect (RE). This study showed that gross domestic product and foreign direct investment have a negative relationship with terrorism in Malaysia, Indonesia, and Philippines. The overall research or findings of this study can guide the government to identify the ways to prevent or manage to sustain terrorist attacks without displaying economic growth and foreign direct investment consequences.

Keywords: economic growth; foreign direct investment; terrorism; developing asian countries.

1. Introduction

Terrorism has become a major problem faced by a huge bulk of countries over the globe (Laqueur, 2017). Tragically, terrorism has moved toward becoming a part of the everyday textures of our lives (Miller, 2006). Economists Enders & Sandler (2011) define terrorism as the risk to utilize savagery by subnational gatherings or a person to get a political or social goal through the terrorizing of a huge group of spectators past that of the prompt exploited people. The broad feeling of helplessness that people or organizations in a nation where the viciousness happens will be the center definition of terrorism. Its episodes can be grouped into two huge classes, "local" and "transnational." In which the culprits, exploited people, and harmed properties have a place with the setting country are the ones in Domestic occurrences. The suicide bombings by the Liberation Tigers of Tamil Eelan are demonstrations of household fear-mongering. While transnational psychological oppression-based persecution incorporates different nationalities. The toppling of the World Trade Center towers on 9/11 was a transnational mental activist event. In light of the

unfortunate casualties hailed from numerous nations, the mission had been very much arranged by fear mongers and financed abroad, the fear mongers were outsiders, and the suggestions were worldwide. It is a transnational terrorist act in two nations as unfortunate casualties' event that a fear-based oppressor occurrence includes the residents from at least.

Terrorists try to provoke their attacks randomly to increase the audience's anxiety, but the attacks are well planned on the target's weaknesses. To further a political objective, a member of an organization in a terrorist group will employ all the terrorist attacks on a country. To compel a nation's administration to give up on the fear mongers' requests, current psychological oppressors are excited about making adequate mischief to the general public. The mischief may be as far as individuals and monetary misfortunes. For instance, the al-Qaeda reference booklet conjures adherents to assault "imperative monetary focuses" (WorldNetDaily, 2003). Fear-based oppression can conceivably influence monetary development in the short gone through various channels. Such assaults can expand vulnerability, breaking points ventures and occupy outside direct speculation (Abadie & Gardeazabal, 2003).

The capacity of a nation to withstand psychological oppressor assaults without appearing economic growth depends on the size and the decent variety of an economy. Very nearly 87 percent of worldwide psychological oppressor episodes are household; along these lines, most of the harms because of fear-mongering are borne exclusively by the residents of the scene nation itself. The anticipated ascent in security expenses and misfortune in the workforce's efficiency, the harm to work and capital will probably decrease the national salary. Transnational occurrences, albeit less in numbers, it has huge monetary ramifications, especially through misfortune in exchange and Foreign Direct Investment (FDI). Transnational occasions include remote natives and subsequently increase worldwide press consideration. Such exposure diminishes the ability of outside countries to work with a psychological oppression inclined country, which prompts less exchange and the FDI of the terrorism-prone country.

Fear-based oppression is characterized as 'the unlawful utilization of brutality and terrorizing, particularly against regular folks, in the quest for political points' (Gotham, 2017). However, the media, and unquestionably the Trump organization, referred to terrorism only when the individual involved originated from another nation to wreak devastation on the nation's citizens that they entered. We hear the word "Terrorism" a lot even though it is a term that is notoriously hard to explain." terrorism is the peacetime likeness an atrocity" (Schmid, 1992). There is no universal accord on the definition, legitimately or scholastically, for the expression "psychological oppressor". Indeed, the United States (U.S) government has more than 20 definitions. In 1996, the United Nation (UN) encircled its own Ad Hoc Committee to draft an official explanation of the term, and that took 10 years. As a result, more than a hundred meanings of psychological oppression exist (Laqueur, 2017). These days, fear-based oppression generally showed up after the Second World War with the ascent of patriot advancements in the old domains of the European power. These early enemy pilgrim developments perceived fear-mongering's capacity to produce exposure for a reason and impact a worldwide approach. "The capacity of these gatherings to prepare compassion and backing outside the limited bounds of their real "theatres of activity" (Hoffman, 2009).

The distribution of terrorist attacks shows the broad and large threat of terrorism incidents in the 21st Century. It is legitimate that creating nations are progressively defenceless against fear-based oppression since they are most likely not to have the assets to battle psychological warfare adequately. The Middle East and North Africa hold the highest prominence in the media reports of developed countries for terrorist attacks. This issue is frequently exacerbated by defilement, poor administration, and the absence of appropriate legal frameworks or law standards in these countries. Such institutional inadequacies breed discontent in the people, which can goad psychological oppression. In recent years, South Asian countries, especially India and Pakistan, have become victims of terrorist violence. South Asia countries have the second-highest number of terrorist attacks, 4320 in one year. However, the rest regions have fewer attacks in that particular year.

Psychological warfare can impact money related advancement in the short run. Remote direct endeavour is a noteworthy wellspring of saving to finance hypothesis for developing countries, particularly developing Asian countries. For creating Asian nations, intrastate and interstate wars have more prominent effects than fear-mongering does on the swarming of government spending (Gaibulloev & Sandler, 2008). A study has conducted by economist Brock Blomberg, Athanasios Orphanides and Gregory Hess, 2004, to evaluate the impact of fear-based oppression on development rates of total national output (GDP) by utilizing an example of 177 created and creating nations over the time of 1968 to 2000. They found that transnational psychological warfare has rather humble consequences for the economy by decreasing per capita GDP improvement by 0.048 percent in a given year. A 2009 research by Enders & Sandler (2011) highlighted the differences among made and making countries by isolating a case of 42 Asian countries into

seven made and 35 making countries. They didn't find any critical unfriendly impact on development for created nations. In any case, a transnational psychological militant episode (per million individuals) decreased an influence building up nation's development rate by around 1.4 rate focuses.

The effect of fear-mongering in Malaysia is expanding. The country is ascending from 91st spot in 2013 to 48th spot for the next years out of 162 nations in the Global Terrorism Index (GTI) and the Institute for Economics and Peace (IEP). Malaysia was set in a similar section as nations like Tunisia, Ireland, Peru and South Africa. The GTI, propelled in 2012, positions nations by the effect of fear-mongering just as dissecting the financial and social measurements identified with psychological oppression. The file covers 99.6% of the total populace from 2000 to 2013, utilizing pointers, for example, the number of psychological oppressor occurrences, wounds, fatalities and property harm. Its discoveries of the effect of fear-based oppression in 2013, just about 10,000 psychological oppressor assaults were recorded, speaking to a 44% expansion in 2012, bringing about almost 18,000 passing speaking to a 61% expansion from the earlier year. Fear-mongering Index in Indonesia expanded to 4.55 in 2016 from 4.43 in 2015. The psychological warfare Index in Indonesia is the middle value of 4.90 from 2002 to 2016, achieving an unsurpassed high of 6.55 in 2002 and a record low of 3.92 in 2008.

Fear-based oppression Index in Philippines expanded to 7.13 in 2016 from 7.10 in 2015. Fear-mongering Index in Philippines found the middle value of 6.65 from 2002 until 2016. The Philippines positioned twelfth universally as far as psychological oppression's effect because of an expansion in the quantity of fear-based oppressor action and fatalities. The Philippines, China and Thailand have represented 85 percent of the absolute passing in the Asia Pacific district since 2002 as per the Global Terrorism Index 2017. The Philippines, Thailand, and Myanmar have seen the greatest number of mental oppressor activities in the zone since 2002. "In 2016, these three countries spoke to 94 percent of strikes, which is a gigantic augmentation from 55 percent in 2002," said the Institute for Economics and Peace report and is reliant on data from the Global Terrorism Database. Between the 20th and 21st centuries, there was no specific research done on the impacts of terrorism on developing Asian countries. If any, it's quite small samples of Asian countries used and studied in the previous studies, which uncovers the details on the Foreign Direct Investment, (FDI), data on Gross Domestic Product, (GDP). Prior examinations on the monetary outcomes or effects of psychological warfare development have concentrated on the globe or the world (Blomberg & Hess, 2006) or Europe (Gaibulloev & Sandler, 2008). A prior examination of Asian examples and an alternate timeframe (Tavares, 2004) did not cover any huge impact of fear-based oppression on monetary development.

In this examination, a bigger example recognises the monetary development results of fear-mongering among creating and created nations. Creating Asian nations are significantly more influenced by political brutality, and as anyone might expect, political savagery unfavourably influences venture while it expands government spending. In this study, we can know how FDI and GDP are affected by a terrorist attack on developing Asian countries in the current years, from 2008 to 2017. The success of this study will help the government identify the ways to prevent or manage to sustain terrorist attacks without displaying economic growth consequences to know the importance of investment and economic growth for a country. It can be a way of doing everything possible to reduce the likelihood of a terrorist attack. Suppose a country has been fallen for terrorist attacks. In that case, the government knows how to overcome or tackle the economic consequences of a terrorist attack.

In this study, a sample of 50 Asian countries of panel estimation is presented to quantify the impact of terrorism on economic growth in developing Asian countries from 2008 to 2017. The second is to distinguish the influence of terrorism on economic growth from internal and external consequences on developing Asian countries. Third, to know how the FDI and the GDP are affected by a terrorist attack or a terrorism event in Asian countries. Fourth, the impact-focused in this study is the economic impact and not politically or socially. The economic impact is a broad and wide compound related to political issues and social impacts. Lastly, this study is limited to developing Asian countries because there are no earlier studies on more sample size of Asian countries and their impact on the GDP and FDI. Thus, this study investigates the impact of terrorism on developing Asian countries: Malaysia, Indonesia and Philippines.

2. Literature Review

This section reviews the economic impacts of terrorism in Developing Asian countries. The first subsection focused on the terrorism theory in Developing Asian countries. The second subsection focused on the impacts of terrorism on Developing Asian countries. The third subsection focused on how the economic growth-Gross Domestic Product (GDP) and Foreign Direct Investment (FDI) impacts are affected

by terrorism in Developing Asian countries. Finally, the fourth subsection consists of the literature review on the method.

2.1. Terrorism in Developing Asian Countries

Throughout Asia, there are insurgencies, terrorist organizations and revolutionaries of all kinds. However, what sets terrorist groups operating in Asia? Well, using the risk of power against non-soldier regular citizen military targets. Fear-based oppression can be characterized as a type of mental welfare utilized to make outrageous dread terrorism is about mental harm. By assaulting a carrier, a nation's international haven, or a noteworthy business focus, the psychological militants gain or give them the publicizing they pine. According to Adekoya (2011), publicizing shows the presence of a gathering as well as fills in as a notice of its political plan. So as of late, Asia is becoming the dominant focal point in the realm of universal fear-mongering.

Numerous Asian nations are religiously pluralistic. Regardless of the ethnic clash in cessation by tyrant administration, such pressures like monetary flourishing and an inserted custom of social resilience erupt during the seasons of financial emergency or social strain. A consequence of the 1997 monetary emergency was uncovered by the numerous Southeast Asia's inert ethnic clashes. In Indonesia, for example, an abrupt rush of financial weakness chains a gigantic influx of ethnic disunity that coordinated against Chinese natives ethnic. At that point, it is later transmuted into a battle against Christians and outsiders. Other than ethnic, religious and political issues, the spread of transnational wrongdoing and different types of disorder are likewise the causes of psychological oppression (Murphy & Malik, 2009). Numerous gatherings find that they should make do by taking part in opiate dealing or other crimes in a period of non-state financed fear-based oppression. Asia gives an extraordinary region to such exercises. Thailand is a virtual spot of phoney travel papers and other character issues, just as a noteworthy get-together spot for almost all worldwide criminal associations. Opiate dealing gives the fear monger bunches a wellspring of financing since it is only overflowing all through Asia. Especially in nations like the Philippines or in some South Pacific states, for example, Nauru, the district's reckless financial segments give the basic money related base to fear monger associations.

2.2. The Impacts of Terrorism on Developing Asian countries.

Psychological militants are enthused about doing adequate damage to a general public that focused governments surrender or pursue their requests. Damages might be regarding human and financial misfortunes. The al-Qaida instructional booklet summons supporters to assault the fundamental monetary focuses (WorldNetDaily, 2003). Mental oppressor strikes are sufficiently deadly, extreme, and persevering terrorism can impact money related advancement in the short run. Those attacks can extend weakness which cutoff focuses adventures and involves outside direct theory (FDI) of making countries (Abadie & Gardeazabal, 2003). Fear-based oppressor assaults can wreck foundations and some key ventures, for example, the travel industry, carriers, and fare segment, which can diminish total national output (GDP) (Enders & Sandler, 2011).

Fear-based oppression has caused enormous financial expenses for a large portion of the South Asian countries. The immediate effect of psychological warfare is the decimation of industrial facilities, framework, standing harvests and stoppage of financial exercises. Thus, the economy is unfit to pull in remote ventures and faces challenges from numerous angles, such as improved military use, high exchange costs, and other monetary contortions (Kumar, 2012). Although, with a reasonable vision, the main effect of psychological warfare on South Asia nations is the direct money related demolition, the fastest and quantifiable impact of dread-based persecution is physical decimation. On humbler scales, exhibits of dread-based mistreatment may detonate nightclubs, places of love or boulevards.

For the most part, Colossal scale ambushes detonate structures and can demolish billions of dollars of property and counter-intuitively murder many society and gainful authorities. Dread based oppressors decimate plants, workers, machines, transportation systems and other money-related resources. Additionally, extended helplessness in the Markets. Despite whether you don't live wherever near fear-based oppressor assaults, you may, in any case, be contrarily affected by implication. It is because a wide range of business sectors despise vulnerability, and psychological oppression makes a ton of it. Protection, Trade, Tourism and FDI are the fourth effect of psychological oppression. Two evident enterprises are particularly powerless against the impacts of fear-based oppression, protection, and the travel industry.

At last, extended enthusiasm and outside doubt. The last danger to the economy is political peril. This is currently on display where there has been a rising in wariness of remote social orders, associations, outsider authorities and dislodged individuals in the United States and Europe in 2016.

2.3. The Economic Growth and Foreign Direct Investment are Affected by Terrorism in Developing Asian Countries

A study by Blomberg et al. (2004), used a sample of 177 nations (developing Asian countries) over the time of 1968 to 2000 to assess the impact of fear-based oppression on development rates of total national output (GDP) in the year 2004. They found that transnational psychological oppression has unassuming impacts on the economy, lessening per capita GDP development by 0.05 percent each year. A recent report by Enders & Sandler (2011) found the contrasts among created and creating countries by isolating an example of 42 Asian countries into seven created and 35 creating countries. They didn't locate an unfriendly impact on development for created countries. Intrastate and interstate wars have a lot more prominent effect than fear-based oppression does on the jamming in of government spending for creating Asian nations.

Outside Direct Investment, more noteworthy fear-based oppression in creating Asian nations builds the hazard for remote financial specialists of not having the option to get the profits to their interests later. For example, Abadie & Gardeazabal (2003) examined this issue in 2008 and found significant redirection of FDI from a scene country of fear-mongering to substitute dread free countries. An investigation in 2014 by Bandyopadhyay et al. (2014) concentrated on an example of 78 created Asian nations from 1984 to 2008. They found that a one standard deviation increments in residential fear-based oppressor episodes per 100,000 individuals diminishes net FDI by between $323.6 million and $512.9 million for the normal example nation. While the practically identical decrease on account of transnational psychological militant occurrences is between $296.5 million and $735.7 million. They likewise discovered that outside guide can significantly alleviate fear-based oppression related FDI harms because of more prominent guide streams in Asia.

3. Materials and Methods

This section consists of methods that are used to calculate the results. It also includes the sources of data where it is finds from and the appropriate method that has been used later. This segment will also establish abbreviations of a model that has been used. This examination aims to give a contemporary review of itemized fear-based oppression contemplates, broad in its inclusion, and ready to graph advancements after some time. Information was gathered on most articles distributed between 2006 and 2017 of every eleven diaries on fear-mongering. This time span does not just give bits of knowledge into how the field has fared in the decades since it was of late inspected yet corresponds with the production of seven new diaries. While past audits could concentrate on the field's two center diaries, TPV (1989-present) and SCT (1977-present), an appraisal of the ebb and flow situation requires expanding the scientific degree to these seven newcomers: The Combating Terrorism Center Sentinel (SNT, 2007-present), Perspectives on Terrorism (POT, 2007-present), Dynamics of Asymmetric Conflict: Pathways Toward Terrorism and Genocide (DAC, 2008-present), Critical Studies on Terrorism (CST, 2008-present), Behavioral Sciences of Terrorism and Political Aggression (BSTPA, 2009-present), Journal of Terrorism Research (JTR, 2011-present) and Journal for Deradicalization (JDR, 2014-present).

3.1 Sources of Data

This study uses World Development Indicator (WDI) from the World Bank from 2008 to 2017 for each country extracted from various sources. The variables were chosen initial: per capita GDP, crime or fatal rates, and the Gross Domestic Product per capita (GDP) in selected Asian countries. The data on per capita GDP, and FDI for selected Asian countries are collected from the Department of Statistics (DOS). In contrast, data on crime statistics were collected from the Royal Police of Malaysia (Polis Diraja Malaysia).

Table 1: Definition of Operational Variable

Variable	Dimension/ Proxied by	Definition of Variable
Foreign Direct Investment Confidence Index	Foreign Direct Investment Index (FDI Index)	Foreign direct investment (FDI) is an investment made by an individual or firm in one country into business interests located in another country. Generally, FDI occurs when an investor establishes foreign business acquires and foreign

		business assets, including establishing ownership or controlling interest in a foreign company. FDI scores higher when the GDP per capita is higher and the crime rate is lower.
Economic Growth	Gross Domestic Product (GDP)	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident procedures in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without deductions for depreciation of fabricated assets or depletion and degradation of natural resources.
Terrorism	Fatality Rate	Fatality is death by an accident, in a war or by having a disease.

Source: World Development Indicators and the Nations Development Program (2018)

3.2. Econometric Model

This study embraces a quantitative approach by utilizing secondary data. The data were collected from the United Nations Development Program and the World Bank. For empirical analysis, this study uses the panel data of three countries in Asia, namely Malaysia, Indonesia and Philippines, from 2008 to 2017 for each country using STATA 13. This study focuses on economic growth and FDI. To measure both variables, we use several reliable and prominent proxies. Terrorism is measured by fatality rate and economic growth is measured by annual Gross Domestic Product per capita (GDP). All variables are transformed into the natural log for expressing the real terms. Furthermore, this study uses a panel data regression to analyze the data. It is a statistical method used widely to analyze two-dimensional (typically cross-sectional and longitudinal) panel data (mandala, 2001). In addition, the data are usually collected over time and the same individual. Therefore, panel data regression is appropriate for running over these two dimensions (Davies & Lahiri, 1995). The common mathematical model for panel data regression is as follows:

$$y_{it} = \beta' x_{it} + \alpha_i + \lambda_i + u_{it} \quad (1)$$

In panel data (Equation 1), the model assumes that the effects of observed explanatory variables, x, are identical across cross-sectional units, $i = 1,\ldots,N$ and over time, $t = 1,\ldots,T$. Further, the effect of omitted variables can be decomposed into the individual-specific effects α_i, time-specific effects, λ_t, and individual time-varying effects, u_{it} or δ_{it}.

Through the panel analysis, the model can be estimated using three-panel regression methods, i.e. Pooled Ordinary Least Square (POLS), Fixed Effect (FE), and Random Effect (RE). The mathematical model for a method of Pooled Ordinary Least Square (POLS) can be rewritten as follows:

$$y_{it} = \beta' x_{it} + u_{it} \quad (2)$$

Equation 2 shows that the effects of observed explanatory variables, x, are identical across cross-sectional units, $I = 1,\ldots N$ and over time, $t = 1,\ldots,T$. Furthermore, the dependent variable is denoted as y, the coefficient regression is β and the disturbance term (residual error) is u_{it}. So, one condition of the pooled regression is that it assumes homogeneity for all countries, which does not permit control of the individual-specific effects, α_i. Thus, the mathematical model for the fixed effect model is as follows:

$$y_{it} = \beta' x_{it} + \alpha_i + u_{it} \quad (3)$$

In equation 3, the model assumes that the effects of observed explanatory variables, x, are identical across cross-sectional units, $i = 1,\ldots,N$ and over time, , $t = 1,\ldots,T$. Therefore, the dependent variable is denoted as y, the coefficient regression is β and the disturbance term (residual error) is u_{it}. Further, the effects of omitted variables can be decomposed into the individual-specific effects denoted as α_i. Finally, the general mathematical model of the random effect method can be written as follows:

$$y_{it} = \beta' x_{it} + \alpha + u_{it} + \delta_{it} \quad (4)$$

Equation 4 shows that the formula considers the individual-specific effects, denoted as α_i and two disturbance terms (residual error) such as u_{it}, representing entity error and δ_{it} describes within entity error.

Further, the model assumes that the effects of observed explanatory variables, *x*, are identical across cross-sectional units, $i = 1,\ldots,N$ and over time, , $t = 1,\ldots,T$. the dependent variable is denoted as *y*, the coefficient regression is β and the effects of omitted variables can be decomposed into the individual-specific effects denoted as α_i. We use a specific variable to represent the econometric model under panel data regression from the general equation. Using equation 2, the econometric model for Pooled Least Square method can be written as below:

$$GDP_{it} = \beta_0 + \beta_1 TRR_{it} + u_{it} \quad (5a)$$

$$FDI_{it} = \beta_0 + \beta_1 TRR_{it} + u_{it}, \quad (5b)$$

Equation 5a and 5b show the effects of observed explanatory variables, GDP, FDI, FATAL are identical across cross-sectional units, $i = 1,\ldots,N$ and over time, , $t = 1,\ldots,T$. Further, the dependent variable is denoted as TRR. The coefficient regression is β_i, $i = 1,\ldots,x$ and the disturbance term (residual error) is u_{it}. Further, using equation 3, the specific econometric model for the fixed effect method is as follows:

$$GDP_{it} = \beta_0 + \beta_3 TRR_{it} + \alpha_i + u_{it} \quad (6a)$$

$$FDI_{it} = \beta_0 + \beta_3 TRR_{it} + \alpha_i + u_{it} \quad (6b)$$

Equation 6a and 6b show the effects of omitted variables, which can be decomposed into the individual-specific effects denoted as α_i. The dependent variable is denoted as *TRR*, the coefficient regression is β_i, $i = 1,\ldots,x$ and disturbance term (residual error) is u_{it} and the effects of observed explanatory variables, *GDP, FDI, FATAL* are identical across cross-sectional units, $i = 1,\ldots,N$ and over time, , $t = 1,\ldots,T$. Further, utilizing equation 4, the specific econometric model for random effect method can be written as follows:

$$GDP_{it} = \beta_0 + \beta_1 TRR_{it} + \alpha_i + \quad u_{it} \quad + \delta_{it} \quad (7a)$$

$$FDI_{it} = \beta_0 + \beta_1 TRR_{it} + \alpha_i + \quad u_{it} + \delta_{it} \quad (7b)$$

Equations 7a and 7b consider the individual-specific effects denoted as α, and two disturbance terms (residual error) such as u_{it}, which represents entity error and δ_{it} describes entity error. Then, the effects of omitted variables, which can be decomposed into the individual-specific effects, are denoted as α_i. The dependent variable is denoted as *TRR*, the coefficient the coefficient regression is β_i, $i = 1,\ldots,x$ and disturbance term (residual error) is u_{it}, and the effects of observed explanatory variables, *GDP, FDI, FATAL* are identical across cross-sectional units, $i = 1,\ldots,N$ and over time, , $t = 1,\ldots,T$. The random effect method presents a bias in the estimator due to a correlation between the explanatory variables and unobservable effects (Cheng & Wall, 2005). In contrast, the FE method introduces the country-specific effect by estimating different intercepts for each pool member country and provides consistent estimates regarding the correlation between the specific effects and the explanatory variables. Besides that, the RE method is based on the Generalized Least Squares (GLS), which considers time-series as well as the cross-sectional dimension of the data and treats intercepts as random variables across the pooled member countries. The RE method provides efficient estimation, especially when there is little time-series variant. However, biased and inconsistent estimates occur when the specific effect is correlated to some explanatory variables. Hence, it is necessary to test the presence of this bias by using the Hausman test, which has x^2 distribution under the null hypothesis of no correlation between the individual effects and the explanatory variables. If the calculated test statistic rejects the null hypothesis, the FE method is more efficient than the RE method.

4. Results and Discussion

This study presents the result according to the descriptive statistic, correlation and panel data regression analyses. In addition, it uses several proxies for measuring the foreign direct investment index (FDI Index). Further, economic growth is measured by gross domestic product (GDP). Besides that, terrorism is proxied by the fatality rate in the chosen countries.

Table 1. Results of Descriptive Statistics (Mean and Standard Deviation)

Variable	Mean	Std. Dev.
TERR	79.996	133.485
GDP	2,369	2,699
FDI	3,640	5,580

Table 1 displays the result of descriptive statistics using mean and standard deviation. The result showed the mean value of TERR is 79.996, with a standard deviation is 133.485. Also, the mean GDP is 2,369 (in billion), with a standard deviation is 2,699 (in billion). Lastly, the FDI mean value is 3,640 (in billion) with a standard deviation of 5,580 (in billion).

Table 2. Results of Hypothesis Testing

Variable	Coefficient	Std. Error	t-stat	Sig.
LFDI	0.636	0.228	2.780**	0.016
LGDP	0.309	0.069	4.440***	0.001
LFAT	0.581	0.235	2.480**	0.028
Malaysia	-0.147	0.047	-3.130***	0.008
Indonesia	0.062	0.032	1.960*	0.071
Philippines	0.164	0.028	5.750***	0.000
Constant	-2.610	0.795	-3.290***	0.006
prob>F	0.000		Adjusted-R^2	0.305
R-squared	0.916			

Note: *, **, *** denote significance at 1 percent, 5 percent and 10 percent

This research aimed to identify the relationship between economic variables and terrorism and to discuss its implications. This relationship was expressed mathematically to measure panel linear regression analysis with the study of regression of each of the variables found in Table 2. From the table, we can conclude that all the variables are related to terrorism. FDI and GDP are negatively related, while the fatality rate positively relates to terrorism. Foreign direct investment (FDI) has a negative relationship as theoretically expected. When terrorism or terrorist attack increases by 1 percent, the FDI will decrease by 0.636 percent and be statistically significant at 5 percent. It meant that lower FDI rates were found in places with many terrorist incidents; therefore, as the terrorist attacks rose in these selected countries, one would expect to find lower FDI rates. A higher terrorist attack will lead the people to not directly invest as they would not have any guarantee for their investment. So, people from outstations will be afraid of investing in the affected countries and this will cause the FDI rate to decrease.

Next, gross domestic product (GDP) also negatively relates to terrorism. When terrorism or terrorist attacks increase by 1 percent, the gross domestic product will decrease by 0.509 percent and statistically significantly 5 percent. As terrorism increases, it will cause a big impact on the country's losses, such as corruption of buildings, people and the public. So, for that period, the particular countries will face a crisis, affecting or decreasing the country's GDP rate. Then, when the fatality rate increases, have a positive relationship with terrorism, which shows that when terrorism increases 1 percent, it will increase the fatality rate around 0.581 percent and is statistically significant at 5 percent. As terrorism increases, it may cause an effect not only on buildings, GDP, or FDI and public, which is people. During the 11 September attacks of 2001, 2996 people were killed, including hijackers and more than 6000 people were injured. So, it is proven that, when terrorism attack increases, the fatality rate also increases, which is directly proportional. The results indicated that the FDI and GDP in Malaysia, Indonesia, and the Philippines negatively correlate with terrorism. On the other hand, the fatality rate has a positive relationship with terrorism, which shows that 1 percent increase in terrorism, the FDI rate and the GDP rate in Malaysia, Indonesia and Philippines will decrease by 0.147 percent and its statistically significant at 1 percent. As Malaysia have the lowest terrorism incidents, the FDI and GDP rate will remain high. In contrast, the fatality rate will remain low as there is no attack, and the same goes for Indonesia and Philippines.

5. Conclusions

In this study, the linear panel regression was used to investigate the relationship between Foreign Direct Investment (FDI), Gross Domestic Product (GDP) and the Fatality rate of terrorism in Malaysia, Indonesia and Philippines. The sample period was from 1999 to 2016, and the data was annual. The results showed that foreign direct investment and gross domestic product (GDP) had been positively influenced by terrorism in Malaysia, Indonesia, and the Philippines. They are significantly at 1 and 5 percent. The government of the day should seriously consider the results of this study in all terrorism policies that are formulated. The policymaker could reduce the terrorist attack in these selected countries, Malaysia, Indonesia and Philippines, by controlling the macroeconomic variables such as FDI, GDP and the fatality rate caused by terrorism. In addition, the supply-side economy may be a good policy to reduce terrorism worldwide. The government must actively involve multiple agencies across the criminal justice system and other parts of national and local government as well as the private sector. These resolutions would give the government the right approach to the end of terrorism. The disaggregated analysis of terrorism, such as property and violent crimes, may be more comprehensive and interesting. Nevertheless, this is beyond the scope of this study. Thus, the future study can be extended by analyzing the effect of other economic or non-economic variables on different categories of terrorism.

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