

## **Terrorism on Asean's economic growth, does it matter?**

Mertha Pessela<sup>1</sup>, Erika Haryulistiani Saksono<sup>2</sup>

Statistisi Ahli Pertama, Badan Pusat Statistik Lampung,  
Indonesia<sup>1,2</sup>

Received: 8-12-2021 | Revision: 11-01-2022 | Accepted: 10-02-2022

DOI: <https://doi.org/10.22219/jiko.v7i01.19034>

### **Abstract**

This study provides the impact of terrorism, investment, and government expenditure on economic growth in four ASEAN countries (Indonesia, Philippines, Thailand, and Myanmar). The fix effect model indicates that terrorism and investment have a negative and significant effect on economic growth, while government expenditure has a significant positive impact.

**Keywords:** Terrorism; investment; government expenditure

---

<sup>1</sup> erika.hs@bps.go.id

## **Introduction**

The security factor of an area or country has a significant impact on its economic sector. Terrorism is one type of behavior that might threaten economic activity. Terrorism is a complicated and emotional form of action that can produce anxiety, fear, and moral issues in those who are the objects of such acts of terror. Saleem et al. (2020) claims that terrorism is a type of political conspiracy aimed at influencing economic difficulties. Terrorist attacks can result in significant economic damage for a country. This decline is primarily due to the uncertainty created by a loss of investor confidence and increased government expenditure to counteract and alleviate the consequences of terrorist actions (Karagöz, 2016).

The threat of terrorism is the act of an individual or group of people that can cause unrest and division in various fields. The threat of terrorism in a region can be measured by the Global Terrorism Index (GTI), officially issued by The Institute for Economics & Peace (IEP). The GTI is a composite measure consisting of four indicators: incidents, deaths, injuries, and property damage. A five-year weighted average is used to measure the impact of terrorism (Vision of Humanity, 2021). GTI has an index size of 1-10, with the details described in Table 1.

Table 1 is an indicator score in determining the status of the impact of terrorism in a region or country. In the GTI report published by IEP, every year, there is a terrorism index map in all countries in the world using the help of specific colors to make it easier to see the status of the impact of terrorism. 163 countries are the objects of analysis and publication of the GTI from 2010 to 2020. There are three countries with very high impact, 17 countries with high impact, and 27 with medium implications based on the average GTI.

Based on an explanation from the Institute for Economics and Peace (2020), the perpetrators of terrorism are mainly from ASEAN, namely Indonesia, Thailand, the Philippines, and Malaysia. This study wants to find out whether the ASEAN region itself is affected by acts of terrorism or not. The average GTI from 2010 to 2020 shows that there are four countries of ASEAN (Association of Southeast Asian Nations) that have high and moderate GTIs, including; Philippines (high impact), Thailand (medium impact), Myanmar (medium impact), and Indonesia (moderate effect). Research conducted by Blomberg et al. (2004), Pratiwi et al. (2019), (Gaibulloev & Sandler, 2009), and (Barth et al., 2011) states that there is a negative effect between terrorism and economic growth. Terrorism can destroy and damage various kinds of physical capital and human capital. Areas with a high level of terrorism will decrease the confidence of foreign and local investors and will have implications for a decline in economic growth.

Çinar (2017) conducted a study in 115 countries and found that developing countries significantly impact acts of terrorism. These impacts are mainly on the economic sector, influencing investment decisions and productivity levels. Meanwhile, Blomberg (2004) state that the consequences of an act of terror will directly affect government expenditure because the government will provide a budget to fund the recovery of damage caused by an act of terror. It can be concluded that the variables or sectors directly affected by acts of terrorism are investment and government expenditure. Therefore, investment and government expenditure variables are considered appropriate as independent variables.

**Table 1. Score of Global terrorism index (GTI)**

Score	Impact of Terrorism
0	No impact
0-2	Very low impact
2-4	Low impact
4-6	Medium impact
6-8	High impact
8-10	Very high impact

Investment is activity-oriented towards several benefits obtained in the future (Saleem et al., 2020). The negative sentiment presented by acts of terrorism will affect investor confidence. Based on research conducted by Mohamed et al. (2013), investment positively affects economic growth; an increase in the number of realized investments can expand job opportunities. This will reduce the number of unemployed and increase productivity with an increase in per capita income so that, in the end, it will increase economic growth.

Terrorism can result in chaos, destruction, fear, and destruction. The damage occurred in particular to public goods financed by the government. The government will allocate several funds to mitigate and finance repairs to several parts of the impact of acts of terrorism. Zakaria et al. (2019) and Shahbaz et al. (2013) stated that acts of terrorism could increase government expenditure because the government is required to take preventive steps to maintain the security of its territory.

Some of the differences between this study and previous studies include: research by Gaibulloev & Sandler (2009) was conducted in 42 Asian countries in 1970-2004. All Asian countries with low, medium, and high GTI were sampled. In this study, only four countries with GTI have medium, high, and very high impacts because it indicates that more acts of terrorism will give good results to the study. Research conducted by Shahbaz et al. (2013) in Pakistan 1972-2010

measured acts of terrorism from the number of incidents of terrorism each year. In this study, acts of terrorism are more proxied than the GTI value, which is officially published.

Several variables affected by terrorism are channel variables that indirectly affect economic growth. In this study, we want to reveal whether the primary variable (terrorism), which is proxied from the value of GTI, and control variables (investment and government expenditure) has an influence on economic growth in four ASEAN countries (Indonesia, the Philippines, Thailand, and Myanmar).

## Method

This study aims to determine the effect of terrorism as measured by GTI, investment, and government expenditure on economic growth in four ASEAN countries (Indonesia, Philippines, Thailand, and Myanmar). This study uses the panel data regression method. After running regression, we provide Heteroscedasticity Test and Chow Test to choose the best model (Kuncoro, 2003). The research data using time series annual data from 2010-2020, collected from various official websites such as the World Bank and ASEAN. Panel data regression follows equation (1). EG is economic growth as the dependent variable, GTI is terrorism, I is investment, GE is government expenditure, and  $e$  is an error.

$$EG_t = \beta_0 + \beta_1 GTI_{it} + \beta_2 I_{it} + \beta_3 GE_{it} + e_{it} \quad (1)$$

## Empirical Result

We confirm that the model is free from multicollinearity and heteroscedasticity and the best model based on Chow-Test is Fix Effect Model. Based on Table 2, the F-statistic value is 7.667427 and probability is 0.00 or below 0.05, which means GTI, investment, and government expenditure variables together affect economic growth in the four ASEAN countries (Indonesia, Philippines, Thailand, and Myanmar). This result is the same as the research conducted by (Saleem et al., 2020); independent variables such as Trade, foreign aid, capital, and terrorism have a together effect on South Asian country's economic growth.

Based on the t-test, the terrorism variable proxied by GTI has a negative and significant effect on economic growth; this is indicated by the t-statistic value of the GTI variable is 2,234889, which is greater than the t-table value of 1,68385 with an alpha of 0.05. Research conducted by Pratiwi et al. (2019) and Zakaria et al. (2019) also found that terrorism has a negative and significant effect. Acts of terrorism will reduce investor confidence; it will reduce the productivity of goods and services produced to decline economic growth.

**Table 2. Regression result**

Variable	t-statistic	t-tabel	Sig.
GTI	-2.234889	1.68385	Significant
I	-2.536463	1.68385	Significant
GE	2.867073	1.68385	Significant
F-Count	Sig.		
7,667427	0.000		

The investment variable based on Table 2 has a negative and significant effect on economic growth; this is indicated by the t- statistic value of the investment variable of 2,536463, which is greater than the t-table value 1,68385 with an alpha of 0.05. This is similar to the research conducted by (Araz 2011), where investments made in countries with high levels of terrorism were mainly made to repair some public goods and capital goods destroyed by acts of terrorism. Some of it is used to purchase new capital goods, but the percentage is smaller. Therefore, its effect on economic growth tends to be small and negative.

The last variable is that government expenditure has a positive and significant impact on economic growth; this is indicated by the t-statistic value of the government expenditure variable of 2,867073, which is greater than the t-table value of 1,68385 with an alpha of 0,05. This result is the same as the research conducted by Blomberg et al. (2004) and Gaibulloev & Sandler (2009). The impact of terrorism can cause destruction and damage to public goods, private goods, and all infrastructure, which will make the government make more budget to repair it. The government will also spend more funds to carry out security measures to mitigate acts of terrorism. Government expenditure is increasing, accompanied by an increase in economic growth.

## Conclusions

Terrorism variable (GTI) has a negative and significant effect on economic growth; this proves the great influence of state security on the economic development of four ASEAN countries (Indonesia, Philippines, Thailand, and Myanmar) in 2010-2020. The investment variable (I) also has a negative and significant effect on economic growth. At the same time, the variable government expenditure (GE) has a positive and significant influence on economic growth.

## References

- Araz, T. (2011). *Munich Personal RePEc Archive The effects of terrorist activities on foreign direct investment : nonlinear Evidence*. 31015.
- Barth, J. R., Li, T., McCarthy, D., Phumiwasana, T., & Yago, G. (2011). Economic

- Impacts of Global Terrorism: From Munich to Bali. *SSRN Electronic Journal*.  
<https://doi.org/10.2139/ssrn.892033>
- Blomberg, S. B., Hess, G. D., & Orphanides, A. (2004). The Macroeconomic Consequences of Terrorism Claremont. *Claremont Colleges Working Papers*, No. 2004-02.
- Çinar, M. (2017). Utjecaj terorističkih napada na gospodarski rast: Panel regresijska analiza. *Zbornik Radova Ekonomskog Fakultet Au Rijeci*, 35(1), 97–121. <https://doi.org/10.18045/zbefri.2017.1.97>
- Gaibulloev, K., & Sandler, T. (2009). The impact of terrorism and conflicts on growth in Asia. In *Economics and Politics* (Vol. 21, Issue 3). <https://doi.org/10.1111/j.1468-0343.2009.00347.x>
- Institute for Economic and Peace. (2020). *Global Terrorism Index 2020*.
- Karagöz, H. (2016). Terörizmin Türkiye’de Turistler ve Turizm Gelirleri Üzerindeki Etkileri. *Dış Ticaret Enstitüsü Working Paper, Working Paper Series*, No: 19/2016-04.
- Kuncoro, M. (2003). *Metode Riset untuk Bisnis & Ekonomi*. Erlangga.
- Mohamed, M. R., Singh, K. S. J., & Liew, C. Y. (2013). Impact of foreign direct investment & domestic investment on economic growth of Malaysia. *Malaysian Journal of Economic Studies*, 50(1), 21–35.
- Pratiwi, E. T., Abdullah, L. O. D., Abdullah, R., Wardana, & Muhammad, R. (2019). Impact of criminal act of terrorism on economy. *IOP Conference Series: Earth and Environmental Science*, 235(1). <https://doi.org/10.1088/1755-1315/235/1/012066>
- Saleem, Q., Sidra, S., Rauf, A., & Siddique, H. M. A. (2020). Impact of Terrorism on Economic Growth in South Asian Country. *International Journal of Economics and Financial Issues*, 10(4), 185–191. <https://doi.org/10.32479/ijefi.9699>
- Shahbaz, M., Shabbir, M. S., Malik, M. N., & Wolters, M. E. (2013). An analysis of a causal relationship between economic growth and terrorism in Pakistan. *Economic Modelling*, 35, 21–29. <https://doi.org/10.1016/j.econmod.2013.06.031>
- Vision of Humanity. (2021). *Global Terrorism Index 2021*. <https://www.visionofhumanity.org/maps/global-terrorism-index/#/>
- Zakaria, M., Jun, W., & Ahmed, H. (2019). Effect of terrorism on economic growth in Pakistan: an empirical analysis. *Economic Research-Ekonomska Istrazivanja*, 32(1), 1794–1812. <https://doi.org/10.1080/1331677X.2019.1638290>