



## **Does Terrorism Hinders Foreign Investments in Turkey? An Empirical Study with ARDL Bounds Test**

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### **Abstract**

*Terrorism has been maintained for the last five decades in fluctuating frequency in Turkey. In this process, thousands of people have been killed or wounded in over 4.000 terrorist attacks. However, the intangible economic costs and damages of them were ignored partially. Accordingly, this study investigates the intangible economic aspects of the terrorist attacks in terms of foreign direct investments over the 1988-2018 period towards Turkey as a developing country. The findings of the Autoregressive Distributed Lag (ARDL) Bounds Test, which is designed by the results of Zivot-Andres Unit Root Test allowing a break in time series, indicate that there is not a statistically significant relationship between terrorist attacks and foreign direct investments both in the short-run and long-run at the national level. The low share of terrorist attacks targeting business and investments as well as the low frequency, severity and geographically concentration degree of them could be potential reasons for these findings. However, potentially destructive impacts of terrorist attacks, which are frequently observed in the southeast of Turkey, should not be ignorable.*

**Keywords:** Terrorism, Foreign Direct Investments, ARDL Bounds Test, Turkey.

**JEL Codes:** C22, F21, F51.

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## Türkiye’de Terörizm Yabancı Yatırımları Baskılıyor mu? ARDL Sınır Testine Dayalı Ampirik Bir Uygulama

### Öz

*Türkiye’de terörizm yaklaşık elli yıldır inişli çıkışlı bir şekilde süregelmektedir. Bu süreçte, 4.000’in üzerinde terörist saldırı sebebiyle binlerce kişinin yaşamını yitirdiği ya da yaralandığı görülmektedir. Ancak, bu saldırıların görünür olmayan iktisadi maliyetleri ve zararları kısmen de olsa göz ardı edilmektedir. Bu doğrultuda yapılan çalışmada, 1998 - 2018 döneminde, terör saldırılarının, gelişmekte olan bir ülke olarak, Türkiye’ye yönelik doğrudan yabancı yatırımlar üzerindeki etkileri incelenmektedir. Zaman serilerinde tek yapısal kırılmaya izin veren Zivot-Andrews Birim Kök Testi sonuçlarına göre oluşturulan ve tahmin edilen ARDL Sınır Testinin bulguları, ulusal düzeyde, terör olaylarıyla doğrudan yabancı yatırımlar arasında ne kısa ne de uzun dönemde istatistiksel olarak anlamlı herhangi bir ilişki bulunmadığı yönündedir. Bu durumun muhtemel sebeplerinden biri, Türkiye’de gözlemlenen terör olaylarının sıklık, sertlik ve coğrafi yoğunluk derecesinin düşük olmasının yanı sıra iş dünyasını ve yatırımları hedef alma oranlarının da düşük olmasıdır. Ancak, terör olaylarının sıklıkla gözlemlendiği Türkiye’nin güneydoğusunda yer alan bölgeler üzerindeki muhtemel saptırıcı etkileri göz ardı edilmemelidir.*

**Anahtar Kelimeler:** Terörizm, Doğrudan Yabancı Yatırımlar, ARDL Sınır Testi, Türkiye.

**JEL Kodları:** C22, F21, F51.

### Introduction

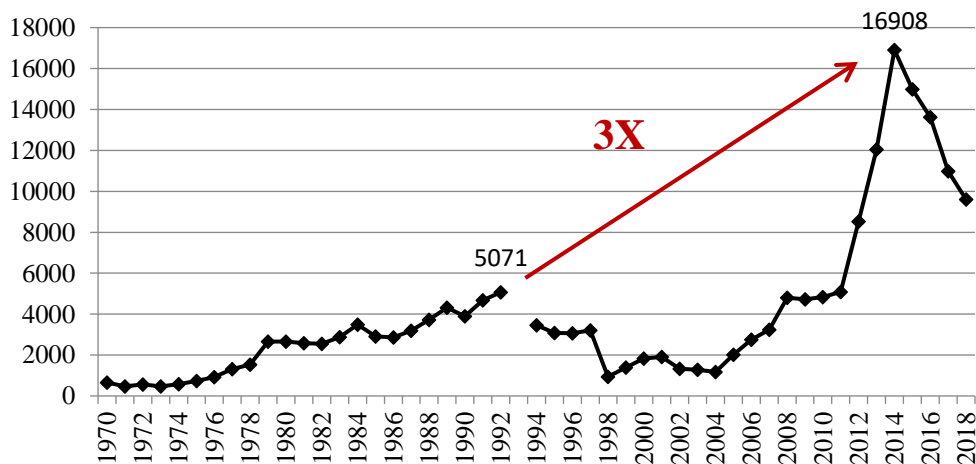
There is no consensus on the definition of terrorism (Laqueur, 1987; Reinares, 2003; Schmid, 2004) which is firstly used politically in French Revolution (Krueger and Maleckova, 2002:2) and expressed as “created fear on societies consciously via organized violence” (Cooper, 2001:883). When the definitions of the United Nation General Assembly, the United Nation Security Council, and the European Union are considered as a whole, terrorism could be defined as acts and attempts including violence which aim to cause political instability societies and it includes three main

dimensions that are systematic use of force; by creating fear on illegal use of force and political goals (Çelik, 2014: 7).

According to definition of the United Nation General Assembly in Declaration on Measures to Eliminate International Terrorism, terrorist attacks include “criminal acts intended or calculated to provoke a state of terror in the general public, a group of persons or particular persons for political purposes are in any circumstance unjustifiable, whatever the considerations of a political, philosophical, ideological, racial, ethnic, religious or any other nature that may be invoked to justify them.”

In addition, National Consortium for the Study of Terrorism and Responses to Terrorism (START) defines terror as a “the threatened or actual use of violence to achieve political, economic, religious or social goals by fear, coercion or intimidation” (START, 2019:10).

According to Figure 1, showing terrorist attacks observed over the world, without statistic of 1993 due to the lack of data for that year in GTD, terrorism has been dramatically increased especially since 2012, which is outbreak of the Syrian Conflict/War, and it reached its highest level in history in 2014 as 16.908 terrorist attacks. It is higher three times than terrorist attacks observed in 1992 which is the sub-peak point of them after the end of Cold War. This new situation indicates that terrorism is highly related to fragile and failed structure of international order.



**Figure 1.** Terrorist Attacks over the World  
(It is compiled from START Global Terrorism Database Statistics.)

These dramatic changes are also observed in Turkey where history of terrorism goes back to the 1960s. After right-left wing conflicts until the 1970s, 42 Turkish diplomats were killed in 21 foreign countries due to the 110 terrorist attacks by Armenian Secret Army for the Liberation of Armenia (ASALA) (Gökbunar and Ulusan, 2010:77). On the other hand, terrorist attacks of Kurdistan Workers' Party (PKK) have been maintained in a fluctuating way since 1984. In addition, Islamic State of Iraq and the Levant (ISIL) and People's Protection Units (YPG) terrorist groups could have been active in recent years because of the fragile structure of Syria. Although, 92 terrorist groups are still or once active in Turkey, according to Global Terrorism Database (GTD) statistics over 1970-2018 period, which is shown in Figure 2, PKK is the dominant terrorist group in terms of the number of terrorist attacks. It is responsible for the 50% of total attacks. In addition, according to GTD statistics, 6.984 people were killed; 10.104 persons were wounded and it had 110-Million-dollar damage due to 4.391 terrorist attacks by 92 terrorist groups between 1970-2018 period. For this reason, the indirect effects of terrorism appeared in the mid-term and long-term by the loss of confidence atmosphere rather than the direct effects of terrorism in the short-run such as humanitarian and tangible economic costs should be investigated in Turkey.

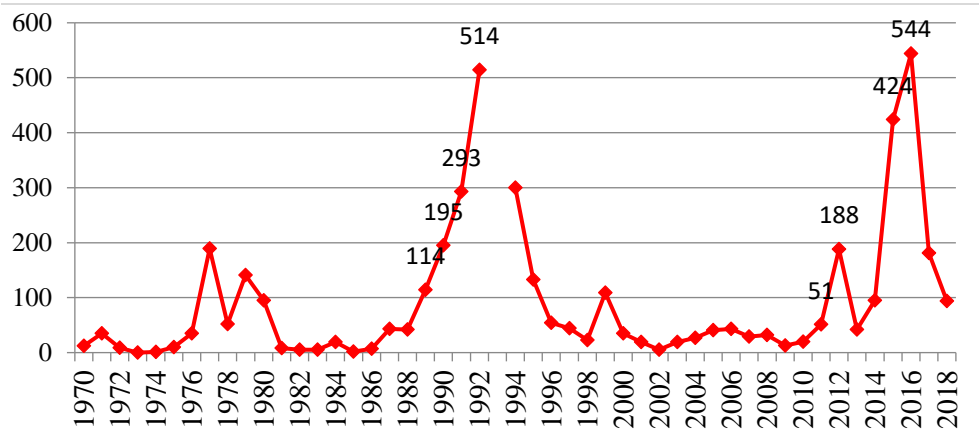


**Figure 2.** Terrorist Attacks by Terrorist Groups in Turkey (1970-2018)  
(It is compiled from START Global Terrorism Database Statistics.)

The effect of terrorism on Foreign Direct Investments (FDI), which is recognized as a source of economic growth (Papanek, 1973; De Mello, 1997;

Berthelemy and Demurger, 2000; Alguacil et al., 2011; Cuadros et al., 2004; Balasubramanyam et al., 1996; Choe, 2003; Iamsiraroj and Ulubaşoğlu, 2015), is one of the indirect effects of terrorism in mid-term and long-term. Indeed, Schneider and Frey (1985), Ender and Sandler (1996), Ramcharran (1999), Blomberg and Mody (2005), Enders et al. (2006), Kang and Lee (2007), Abadie and Gardeazabal (2008), Daniele and Marani (2011), Bandyopadhyay et al. (2011), Omay et al. (2011), Filer and Stanisis (2012), Rasheed and Tahir (2012), Kinyanjui (2014), Akıncı et al. (2015), Bezic et al. (2016), Saeed et al. (2018), Zakaria et al. (2019) indicate that terrorism hinders foreign direct investments.

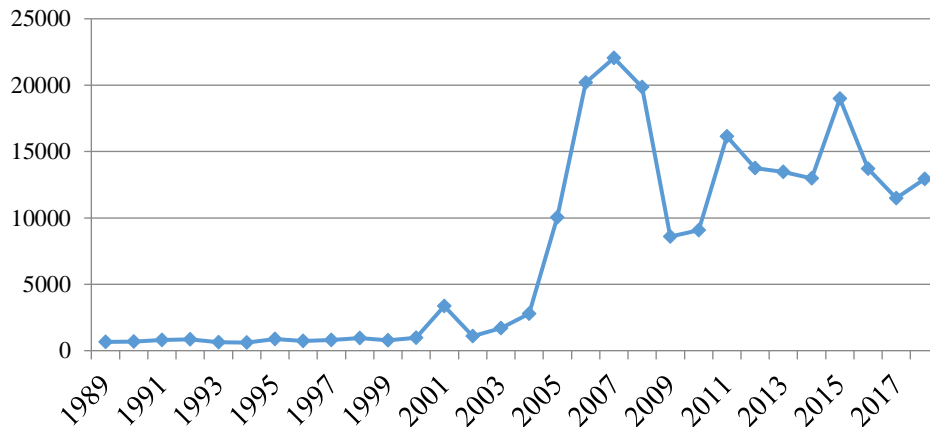
Therefore, in this study, the investigation of the indirect effects of terrorism, which are frequently observed in the southeast of Turkey especially since 1984, on foreign direct investment inflows were aimed. Although Turkey is the 23<sup>rd</sup> largest country that attracts foreign investments according to the United Nations Conference on Trade and Development (UNCTAD) statistics in 2018, the indirect effects of terrorism on foreign investments must be investigated to design national and international policies about counter-terrorism to raise foreign investments. Since, the share of foreign investments in Turkey is less than 1% of the world's investments and Figure 3 shows that the frequency degree of terrorist attacks has been increasing dramatically in Turkey recently. Accordingly, terrorist attacks have increased especially since Syrian Conflict as well as 1990's. It is parallel with trends of terrorist attacks over the world especially increased dramatically in 1990s and 2000s, which are, respectively, the end of Cold War and the beginning of multipolar international order periods. Therefore, terrorism could be recognized as an "external shock", which is caused and designed by international and interregional disorders, in Turkey.



**Figure 3. Terrorist Attacks in Turkey**

(It is compiled from START Global Terrorism Database Statistics.)

On the other hand, according to Figure 4, which is compiled from UNCTAD statistics, amount of FDI inflows to Turkey reached a peak in the early of 2000s which is the period of liquidity expansion over the world. However, this period is also stable in terms of terrorist attacks. Therefore, it shows a potential linkage between terrorist attacks and foreign direct investment in Turkey.



**Figure 4. FDI Inflows in Turkey (Million \$)**

(It is compiled from UNCTAD Global Terrorism Database Statistics.)

## Methodology

### Data and Variables

This study aims the effects of terrorism on FDI in Turkey in 1989-2018. The liberalization of foreign capital in Turkey dates back to 1989 and last statistics about terrorism are observed in 2018. The share of foreign direct investments in the Gross Domestic Product (GDP) is the dependent variable while the number of terrorist attacks is the independent variable. The variables were taken into consideration as logarithmic form and growth rate. Table 1 shows detailed information about them.

Terrorist attacks are expected to have distorting effects on foreign investments by the loss of confidence; in other words, terrorist attacks hinder foreign direct investment inflows. Therefore, **L**TERRORIST<sub>ATTACKS</sub> variable will have a negative sign. However, the size and statistically significance of **L**TERRORIST<sub>ATTACKS</sub> coefficient depend on the frequency and severity degrees and also target groups of them. As frequency and severity degree of terrorist attacks rise, the impact of them on foreign direct investment will increase due to further worsening political atmosphere. Accordingly, distorting effects of terrorist attacks could be negligible or zero due to their low frequency and hardness degree as periodically and geographically as well as the low share of business in targets of them in Turkey.

**Table 1.** Characteristics of Variables

Variables	Symbol	Definition	Sources
Foreign Direct Investments (FDI)	<b>L</b> FDIGDP	The logarithmic form of the growth rate of foreign direct investments in gross domestic product	UNCTAD*
Terrorism	<b>L</b> TERRORIST <sub>ATTACKS</sub>	The logarithmic form of the growth rate of terrorist attacks	GTD**

\* UNCTAD : United Nations Conference on Trade and Development

\*\*GTD : Global Terrorism Database

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### Econometric Model

The function of the econometric model covering 1989-2018 periods in case of Turkey could be shown as:

$$\mathbf{LFDIGDP}_t = \beta_1 - \beta_2 \mathbf{LTERRORIST}_{ATTACKS_t} + u_t \quad (1)$$

$t = 1988, 1989, \dots, 2018$

(Hypothesis: Terrorist attacks hinder foreign direct investments)

$R^2$  and t-statistics could be misleading even if the sample is large when the time series is not stationary; therefore, the relationship between variables could be a forgery (Gujarati and Porter, 2012). For this reason, in the first step, the unit root test with structural breaks as well as traditional tests were used because of the potential breaks in time series. Because, the observed dramatic changes in both foreign direct investments inflows and terrorist attacks in Turkey could cause structural breaks in series. Additionally, structural breaks in the series cause an increase in critical values by reducing the power performance of traditional unit root tests (Ben-David et al., 2003). Table 2 shows the results of the Zivot-Andrew Unit Root Test allowing one break-in, respectively, intercept; trend and regime as well as Augmented Dicky-Fuller (ADF) and Phillips-Perron (PP) as traditional tests.

Accordingly, Zivot-Andrews Test results which are parallel with ADF and PP Tests indicate that the LFDIGDP variable does not have a unit root or it is at a stationary level. However, LTERRORIST<sub>ATTACKS</sub> has a unit root and becomes stationary at its first difference according to with a break rather than results of traditional tests. In other words, the results of traditional and new tests with a break are not same. According to results of Zivot-Andrews Unit Root Test, the function of econometric model became as follows:

$$\mathbf{LFDIGDP}_t = \alpha_1 - \alpha_2 * \mathbf{D(LTERRORIST}_{ATTACKS_t}) + v_t \quad (2)$$

$t = 1989, \dots, 2018$  (period)



**Table 2.** Unit Root Tests (with and without a structural break)

Traditional Unit Root Tests			Variables		
			LFDIGDP	LTERRORIST <sub>ATTACKS</sub>	
ADF	C+T	Z (t)	- <b>5.673(0)***</b>		<b>-4.648(0)***</b>
<i>ADF Critical Values</i>			1%	5%	10%
			-2.628	-1.950	-1.611
PP	C+T	Z (rho)	- <b>32.13(0)***</b>		<b>-28.916(0)***</b>
		Z (t)	<b>-5.67(0)***</b>		<b>-4.648(0)***</b>
<i>PP Critical Values</i>			1%	5%	10%
			-17.540	-12.660	-10.300
			Z (rho)		
			Z (t)		
			-3.716	-2.986	-2.624
Unit Root Tests with a Structural Break			Variables		
			LFDIGDP	LTERRORIST <sub>ATTACKS</sub>	D.LTERRORIST <sub>ATTACKS</sub>
	MODEL A	Min.τ [Break]	- <b>6.671(0)***</b> [2001]	-2.865(1) [2010]	<b>-11.511(0)***</b> [2007]
Zivot- Andrews	MODEL B	Min.τ [Break]	- <b>5.910(0)***</b> [1996]	-2.326(1) [1995]	<b>-10.938(0)***</b> [2013]
	MODEL C	Min.τ [Break]	- <b>7.268(0)***</b> [1999]	-2.756(1) [2011]	<b>-11.739(0)***</b> [2007]
<i>Zivot-Andrews Critical Values 5%</i>			<i>MODEL A</i>	<i>MODEL B</i>	<i>MODEL C</i>
			-5.34	-4.80	-4.58

**Note:** Model A, Model B, and Model C allow onebreak, respectively, inintercept; trend and both intercept and trend. The size distortion for Model (B) is more moderate with an actual size of 14.2% (Zivot and Andrews, 1992: 258). The values in parenthesis ( ) show the number of lags determined by AIC.

In equation 2, D(LTERRORIST<sub>ATTACKS<sub>t</sub></sub>) refers to first difference of LTERRORIST<sub>ATTACKS</sub> variable. For this reason, the model covers 1989-2018 period. The long-term cointegration relation between variables becoming stationary at different levels should be estimated by Autoregressive Distributed Lag (ARDL) Bounds Test. Since, ARDL is more suitable even if regressors into purely I(0), purely (I) or mutually cointegrated (Pesaran et al., 2001) rather than Johansen Cointegration Test which investigated cointegrated vectors by Maximum Likelihood Methodology. In addition, the ARDL Test is relatively more efficient in the small samples and provides the unbiased long-run coefficients (Harris and Sollis, 2003). In other words, the using of ARDL Bounds Test, developed by Pesaran and Shin (1995); Pesaran and Pesaran (1997); Pesaran and Smith (1998) and Pesaran et al. (2001), which is useful when variables are stationary at either I(0) or I(1) and not

useful if variables are cointegrated at I(2) or higher level, has been increasing in the economic literature. In this direction, the new functional form of econometric models, considering stationary variables and ARDL format, is shown as:

$$\Delta LFDIGDP = \emptyset_0 + \sum_{i=1}^m \emptyset_{1i} \Delta LFDIGDP_{t-i} - \sum_{i=1}^m \emptyset_{2i} \Delta D(LTERRORISTATTACKS)_{t-i} + \emptyset_3 LFDIGDP_{t-1} - \emptyset_4 D(LTERRORISTATTACKS)_{t-1} + \varepsilon_t \quad (3)$$

### Findings

According to Table 3 showing the long-run ARDL results between terrorist attacks and foreign direct investment inflows over 1989-2018 period in Turkey, ARDL Model is valid in terms of diagnostic tests that are Jargue-Bera Normality Test, White's Heteroskedasticity Test and Breusch-Godfrey Autocorrelation LM Test. Accordingly, error terms are normally distributed and there is no heteroskedasticity and autocorrelation problems in standard errors of coefficients. Therefore, ARDL Bounds Test could be estimated over this model.

**Table 3.** Long-run ARDL Results

Dependent Variable: FDIGDP	Coefficients	Standard Errors	t-statistics
<b>LFDIGDP</b>			
L1	0.09	0.2041	0.46
L2	0.04	0.2032	0.21
L3	0.29	0.2027	1.45
<b>D.LTERRORISTATTACKS</b>			
LEVEL	-0.01	0.1626	-0.09
L1	-0.27	0.1961	-1.38
L2	0.11	0.2020	0.58
L3	0.14	0.1831	0.79
Constant	-0.26	0.2499	-1.08
<b>Diagnostic Tests Statistics</b>		<b><math>\chi^2</math> [p-value]</b>	
<i>Breusch-Godfrey LM Test (Autocorrelation)</i>		4.352[0.1135]	
<i>White's Test (Heteroskedasticity)</i>		41.25[0.1831]	
<i>Jargue-Bera Normality Test</i>		1.038[0.5952]	
<i>R<sup>2</sup></i>		0.2883	

In this direction, the results of the ARDL Bounds Test having a null hypothesis as no level relationship between variables and including lags which are determined by Akaike Information Criterion (AIC) in Table 4 indicate that there is no long-term relationship between terrorism and foreign direct investment inflows in Turkey. Because, F-statistic is lower than 1% and 5% critical bounds.

**Table 4.** ARDL Bounds Test (Pesaran,Shin,Smith (2001))

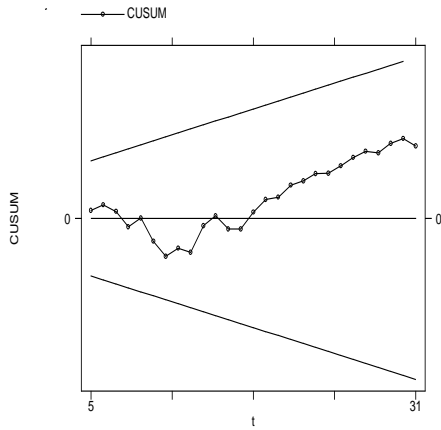
F-stat	1% Critical Bounds		5% Critical Bounds	
	I(0)	I(1)	I(0)	I(1)
1.469	6.84	7.84	4.94	5.73

H<sub>0</sub>: no level relationship

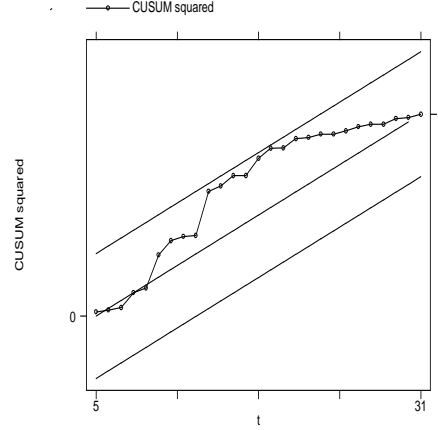
Finally, in Table 5, the ARDL Error Correction Model analyzing the short-run relationship between these variables indicates that there is also no statistically significant short-run relationship between terrorism and foreign direct investment in Turkey. Since the level and lagged coefficients of D.LTERRORIST<sub>ATTACKS</sub> variables are statistically insignificant as well as adjustment variable (ADJ). In addition, according to Figure 5 and Figure 6 showing respectively plots of CUSUM and CUSUM<sup>2</sup> statistics between D.LTERRORIST<sub>ATTACKS</sub> and LFDIGDP, coefficients are robust.

**Table 5.** Long-run and Short-run ARDL Coefficients

Dependent Variable: FDIGDP	Coefficients	Standard Error	t-statistics
<b>ADJ</b>			
LFDIGDP (-1)	-0.56	0.3366	-1.69
<b>LONG-RUN</b>			
D.LTERRORIST <sub>ATTACKS</sub>	-0.03	0.9021	-0.04
<b>SHORT-RUN</b>			
LFDIGDP			
LD.	-0.33	0.2307	-1.20
L2D.	-0.29	0.2027	-1.45
LTERRORIST <sub>ATTACKS</sub>			
D1	0.007	0.4414	0.02
LD	-0.26	0.3341	-0.79
L2D	-0.14	0.1831	-0.79
Constant	-0.26	0.2499	-1.08
R <sup>2</sup>	0.6417		
Root MSE	0.9336		



**Figure 5.** Plots of CUSUM Statistics, between D.LTERRORIST<sub>ATTACKS</sub> and LFDIGDP



**Figure 6.** Plots of CUSUM<sup>2</sup> Statistics, between D.LTERRORIST<sub>ATTACKS</sub> and LFDIGDP

### Conclusion and Recommendations

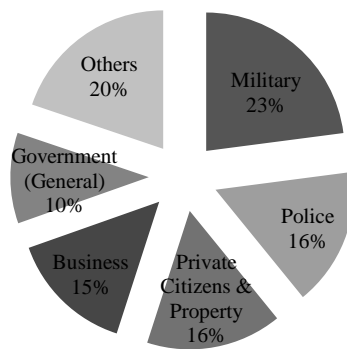
Terrorism, which could be defined as acts and attempts including violence, aiming cause political instability by creating fear on societies via systematic and illegal use of force, has been dramatically increased over the world due to fragile and failed structure of international order mainly. Similarly, terrorist attacks, which are observed in the last five decades, have been increased especially in recent years in Turkey. PKK is the major perpetrator of these attacks rather than many terrorist groups such as ISIL and YPG. The humanitarian and tangible economic costs of these attacks are discussed deeply while the indirect effects of them are ignored. Actually, these attacks could hinder the foreign investments in concerns with the political instability atmosphere as well as terrorist attacks' humanitarian and tangible economic costs. This study aims the investigation of these indirect effects of terrorism in Turkey over 1989-2018 periods.

In the first step of investigation, Zivot-Andres Unit Root Test allowing one break in time series was estimated as well as traditional unit root tests that are Augmented Dicky-Fuller (ADF) and Phillips-Perron (PP) due to the potential breaks. Indeed, break points are observed in both foreign direct investments inflows and terrorist attacks in Turkey because structural breaks could reduce the power performance of traditional unit root tests. Secondly, Autoregressive Distributed Lag (ARDL) Bounds Test and ARDL Error Correction Model were designed

according to results of Zivot-Andrews Unit Root Test. The findings of ARDL Bounds Test and Error Correction Model indicate that there are no statistically significant effects of terrorist attacks on foreign direct investments in both the short-run and long-run in the case of Turkey.

One of the potential reasons of these findings is that 15% of the total terrorist attacks target business while a significant share of them targets military and police according to statistics which are compiled from the START database. Figure 7 includes detail information about target groups of terrorist attacks over 1970-2018 periods in Turkey. In addition, the long-distance between locations which are frequently observed terrorist attacks and foreign investment clusters in Turkey could be the other potential reason.

The investigation of the impacts of terrorist attacks on the regional economies, which are especially in southeast Turkey, is not possible due to the lack of statistics related to foreign investment at the regional level in Turkey. However, the disturbing effects of terrorism are possible on the southeast of the country by the withdrawal of potential foreign investments. In other words, the direct and indirect effects of terrorism could be higher and statistically significant especially in the southeast of the country where terrorist attacks were frequently observed.



**Figure 7.** Terrorist Attacks by Targeting Groups in Turkey (1970-2018)  
(It is compiled with START Global Terrorism Database Statistics.)

Therefore, obstacles to political participation should be removed. In addition, the measurements, creating employment opportunities by increasing physical and human capital accumulation of those regions, should be taken. Indeed, as the employment opportunities increase and obstacles on participation and polarization

erode, the opportunity cost of violence will increase and the tendency to apply democratic solutions will also rise. On the other hand, the public support of terrorism will be weakened and then, the man force of terrorist groups will erode.

Therefore, the competitive advantages of those regions, depending on their industrial clustering patterns, should be supported for regional specialization. In addition, decreasing the 10% threshold on national political participation should be debated by political scientists in all aspects. Indeed, political polarization and democracy could decrease terrorism by creating higher opportunity costs on the use of violence.

### Genişletilmiş Özet

Genel kabul gören ve üzerinde uzlaşmış bir tanımlı olmamakla birlikte, genel olarak, siyasi hedeflere ulaşma noktasında geniş halk kitleleri üzerinde korku yaratarak istikrarsız bir atmosfer yaratan şiddete dayalı eylemler olarak ifade edilebilecek olan terör kavramı, ciddi bir politik ve toplumsal sorun olarak uluslararası sistemde varlığını korumakta ve şiddetlenerek artmaktadır. Dönemsel olarak incelendiğinde, terör olaylarında yaşanan dramatik artışların “Soğuk Savaş” döneminin sona erdiği 1990’lı yıllara ve uluslararası sistemin çok kutuplu bir yapıya doğru evrilmeye başladığı 2000’li yıllara denk geldiği görülmektedir.

Türkiye’de ise, Küresel Terörizm Veritabanı istatistiklerinden derlenen bilgilere göre, yaklaşık elli yıldır farklı zamanlarda şiddetlenerek süregelen ve ASALA, PKK, YPG ve ISIL gibi terör örgütlerinin ön planda olduğu irili-ufaklı 92 terörist grup tarafından gerçekleştirilen terör olayları sebebiyle, 6.984 kişinin yaşamını yitirdiği; 10.104 kişinin yaralandığı ve 110 Milyon Dolara yakın maddi hasarın oluştuğu görülmektedir. Bu açıdan bakıldığında, kırılmalı ve başarısız devletler olarak nitelendirilebilecek istikrarsız ülkelerin olduğu coğrafyada yer alan Türkiye’de, terörün olası iç ve dış etkenlere dayalı olarak süregelen ve atalet kazanan yapısal bir sorun olduğu görülmektedir. Nitekim, Türkiye’de gözlemlenen terör olaylarının periyodik sıklık düzeyi incelendiğinde, içinde bulunduğu coğrafyadaki ve dünyadaki politik gelişmelerle ilintili bir trend içerisinde olması, Türkiye’de terörün bir tür coğrafyadan kaynaklı “dışsal şok” vasfı taşıyabileceği görülmektedir.

Dünya’da ve Türkiye’de dramatik bir düzeye ulaşan terörün kısa dönemdeki insani ve maddi nitelikli maliyetleri tartışılır olsa da kaybolan güven ortamı nedeniyle daha ziyade orta ve uzun vadede ortaya çıkan dolaylı etkileri, sıklıkla, göz

ardı edilmektedir. Oysaki terör saldırılarının, özellikle gelişmekte olan ülkeler açısından önemli bir döviz, istihdam ve büyüme kaynağı olan yabancı yatırımcıların yatırım yeri kararlarında saptırıcı bir etki yaratarak ülkelerin büyüme potansiyellerini baskılaması oldukça muhtemeldir. Çünkü yabancı yatırımcıların yatırım yeri kararlarının ardında düşük işgücü maliyetleri, düşük girdi maliyetleri gibi iktisadi belirleyicilerin yanı sıra politik ve fiziki güven ortamı da ciddi bir belirleyici faktör olarak yer almaktadır. Başka bir ifadeyle, yabancı yatırımcıların özellikle büyük çaplı yatırımlarını daha sorunsuz ve istikrarlı bir ülkede ya da bölgede gerçekleştirme eğiliminde olmaları oldukça muhtemeldir.

Bu doğrultuda yapılan çalışmada, dünya genelindeki yabancı yatırımların yalnızca %1'ini kendisine çekeabilen Türkiye'de yaklaşık elli yıldır süregelen terör olaylarının yatırımlar üzerindeki olası saptırıcı etkilerinin incelenmesi; böylece, terörün somut maliyetlerinin yanı sıra orta ve uzun vadeli dolaylı-soyut maliyetlerinin de ortaya konulması amaçlanmıştır. Analiz öncesinde, 1988-2018 dönemine ilişkin Küresel Terörizm Veritabanından derlenen terör saldırıları ve UNCTAD Veritabanından alınan doğrudan yabancı yatırım tutarlarına ilişkin istatistiklerde olası kırılma ihtimaline karşın, ADF ve PP gibi geleneksel birim kök testlerinin yanı sıra tek kırılmaya izin veren Zivot-Andrews Birim Kök Testi uygulanmıştır. Birim kök sınamalarında, her iki değişkenin farklı derecelerden durağan olduğunun tespit edilmesi neticesinde, değişkenlerin ARDL Sınır Testi'ne dayalı olarak analiz edilmesine karar verilmiştir. Çünkü bu yaklaşım, geleneksel eşbütünleşme testlerinin aksine, değişkenlerin aynı derecede durağan olmalarının yanı sıra farklı dereceden durağan seriler arasında da olası koentegrasyon ilişkisinin analiz edilmesine imkân tanımaktadır (Pesaran vd., 2001). Ayrıca bu test; bu çalışmada olduğu gibi, küçük örneklerde dahi etkin sonuçlar vermekte ve sapmasız uzun dönemli katsayıların tahmin edilebilmesini sağlamaktadır (Harris ve Sollis, 2003).

ARDL Sınır Testi sonuçları, kısa ve uzun dönemde, terör saldırılarının doğrudan yabancı yatırımlar üzerindeki olası saptırıcı etkilerinin, Türkiye özelinde, istatistiksel olarak anlamsız olduğunu; başka bir ifadeyle, Türkiye'ye gelen doğrudan yabancı yatırımların yaşanan terör olaylarından etkilenmediğini ortaya koymaktadır. Bu durumun muhtemel sebeplerinden biri, Türkiye'de gözlemlenen terör olaylarının görülme sıklığının ve sebep olduğu ölüm ve yaralanmaları ifade eden şiddet düzeyinin düşük olması ve yabancı yatırımların yoğunlaştığı bölgelerden ziyade ülkenin güneydoğusunda atalet kazanmış olmasıdır. Bununla birlikte, terörist

saldırıların hedefinde daha ziyade asker, polis ve diğer devlet kurumlarının ağırlıklı olması; buna karşın, iş dünyasını ve yatırımlarını hedef alan saldırıların görece düşük oranda seyretmesi, böylesi bir saptırıcı etkinin Türkiye özelinde gözlemlenmemiş olmasının bir diğer muhtemel sebebi olarak değerlendirilebilir. Nitekim Küresel Terörizm Veritabanından derlenen istatistiklere göre, 1970-2018 döneminde kayıtlı 4.391 terörist saldırının %40'ının asker ve polisi hedef aldığı; iş dünyası ve yatırımları hedef alan saldırıların payının yalnızca %15 olduğu görülmektedir (Global Terrorism Database).

Öte yandan, terör olaylarının doğrudan yabancı yatırımlar üzerinde, ulusal düzeyde saptırıcı bir etki yaratmamış olsa da, benzer bir durum, terör saldırılarının sıklıkla gözlemlendiği ülkenin güneydoğusunda yer alan bölgeler açısından geçerli olmayabilir. Nitekim bu bölgelerde yerli ve yabancı yatırımların oldukça sık kaldığı, işsizlik ve yoksulluğun ön planda olduğu göz önüne alındığında, terör saldırılarının ulusal düzeyde olmasa da bölgesel düzeyde ciddi bir yıpratıcı etki yarattığı dikkate alınmalıdır. Ancak, doğrudan yabancı yatırımlara ilişkin parasal büyüklük istatistiklerinin bölge düzeyinde mevcut olmaması, bu çalışmada yapılan analizin bölgesel düzeyde genişletilmesine ve böylesi bir hipotezin sınanmasına engel oluşturmuştur.

Bu açıdan bakıldığında, bu bölgelerde, kamu kesiminin yanı sıra özel kesim sermaye birikiminin, beşerî sermaye birikiminin ve buna bağlı olarak istihdam imkânlarının artırılmasına yönelik tedbirlerin alınması; bununla birlikte, politik katılım ve politik temsiliyet önündeki engellerin kaldırılması terörizmle mücadelede etkili olabilecektir. Çünkü bölgelerin fiziki ve beşerî sermaye birikimine dayalı istihdam olanakları arttıkça ve politik temsiliyet önündeki engeller kaldırıldıkça, terör vb. şiddet kanallarına başvurma fırsat maliyeti artacağından mevcut sorunların demokratik platformlarda çözümüne yönelik girişimler artacak ve terör örgütlerinin ardındaki kitle desteği zayıflatılarak insan kaynağının önüne geçilebilecektir. Bu noktada, terörle mücadelenin yanı sıra terörizmle etkin mücadele edilebilmesi amacıyla, iktisadî temelli proaktif güvenlik önlemleri tartışılmalı ve devreye sokulmalıdır.



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