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Terrorism and Growth: Evidence from India and Egypt

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ABSTRACT

The impact of terrorism is different in developed and developing countries, according to many economists. But what leads to variation in the consequences of terrorism between two developing countries? This paper takes into account two developing countries from two different continents and quantifies the impact of terrorism on GDP per capita. The data is extracted and arranged from the Global Terrorism Index (Humanity, n.d.) for India and Egypt from the years 1975-2018 and 1977-2018, respectively. A set of statistical analyses using the OLS and Newey-West method is used to examine the relationship between the variables. For India, an act of terrorism has no significant impact, whereas, for Egypt, terrorism does have growth restricting character. The main reason is the type of regime each country demonstrates. India is a democratic country with a polity score of 9, and on the other hand, Egypt has an authoritarian regime with a polity score of -3.

I. Introduction

It is widely acknowledged that terrorism and violence have a grave consequence on social, political, and economic arena. Terrorist attacks not only lead to adverse economic outcomes, but they mostly threaten the social and political fabric of any country leading to a further potential negative economic outcome. UNDP (2019) states that the Institute for Economics & Peace (IEP) research finds the global economic impact of terrorism reached US\$52 billion in 2017, rising about two thirds in the ten years from 2008. Although both developed and developing countries have been victims to terrorism and violence, scholars believe that the negative consequences and the speed of recovery may be quite different. They deem that the level of social, political, and economic development is a key factor in the country's ability to cope with the repercussions of terrorism.

India and Egypt are no different from many countries which have been victims to violent extremism. Both countries suffered from terrorism during the last and the current century. According to the 2019 Global Terrorism Index, India ranks 7th and Egypt ranks 11th out of 163 countries in the world with a score of 7.52 and 6.25, respectively. However, the consequences on both economies might have been different, arguably because they have clear differences in their political environment and economic development. After the incident of 9/11, terrorism has become a hot topic for many articles, journals, research, and, most important, media. Now everybody has an idea about the grave consequences of terrorism. It impedes the social, political and economic development of a country. But the level of social, political and economic development also implies their ability to cope with the repercussions of terrorism. I selected India and Egypt based on the differences in their political environment and economic development. According to the Global Terrorism Index, India ranks 7th and Egypt ranks 11th out of 163 countries in the world with a score of 7.52 and 6.25, respectively, in 2019. They concluded that as the fatalities from terror attacks halved in the last four years, the number of countries affected is now growing.

II. Different Definitions of Terrorism

For a layperson, terrorism might mean the use of violence to spread fear amongst the citizens of a country. Generally, it is described as the use of violence or the threat of violence in the pursuit of political, religious, ideological, or social objectives committed by non-state actors that reaches the immediate targets as well as the targets that consist of a larger spectrum of society. But there hasn't been any common consensus on the definition of terrorism among different societies and organizations. According to the United Nations, it is important to first define terrorism and then apply it to the crimes of terrorism because the lack of it might lead to politicization and misuse of the term "terrorism" to control non-terrorist activities. UN (us code n.d.) defines terrorism in General Assembly resolution 49/60 as:

"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 circumstances unjustifiable, whatever the considerations of a political, philosophical, ideological, racial, ethnic, religious or any other nature that may be invoked to justify them." (Althnayan 2012)

But still, there is a need to define terrorism comprehensively in international criminal law. For example, the United States defined terrorism as "premeditated, politically motivated violence perpetrated against noncombatant targets by subnational groups or clandestine agents" in Title 22 Chapter 38 U.S. Code 2656f (US code). The Indian government (Terrorism Act, 2002 n.d.), on the other hand, follows the definition proposed by Schmid and Jongman in 1988.

“Terrorism is an anxiety-inspiring method of repeated violent action, employed by (semi-) clandestine individual, group or state actors, for idiosyncratic, criminal or political reasons, whereby the direct targets of violence are not the main targets. The immediate human victims of violence are generally chosen randomly (targets of opportunity) or selectively (representative or symbolic targets) from a target population and serve as message generators. Threat and violence-based communication processes between the terrorist organization, victims, and main targets are used to manipulate the main target of attention, depending on whether intimidation, coercion, or propaganda is primarily sought.”¹

Indian government divides terrorism into four groups Ethno-national terrorism², Religious terrorism, Left-wing terrorism³, and Narcoterrorism⁴. In Egypt’s Penal Code (Legislating Terror in Egypt n.d.), article 86 defines terrorism as: “*Any use of force or violence or any threat or intimidation to which the perpetrator resorts in order to disturb the peace or jeopardize the safety and security of society and of such nature as to harm or create fear in persons or imperil the lives, freedoms or security; harm the environment; damage or take possession of communications; prevent or impede the public authorities in the performance of their work; or thwart the application of the constitution or of laws or regulations.*” (Counter-Extremism Report 2019).

Many scholars like Enders, Sandler, and Gaibullov (Enders, Sandler, and Gaibullov 2011) distinguish terrorism based on the nationality of the perpetrators, location and target group. If terrorism is homegrown, in which the venue, victims and perpetrators are all from the same country, then it is domestic terrorism. Transnational terrorism affects multiple countries, and the nationality of the perpetrators is different from the nationality of the victims. This, hence, sheds light that both India and Egypt are the victims of both domestic as well as transnational terrorism. Some of the domestic terrorist group commonly known as separatist groups in India are Khalistan Zindabad Force (KZF), Tani land National Liberation Tigers (TLNLT), Communist Party of India (CPI-Maoist), United Liberation Front of Asom-Independent (ULFA-I) and Liberation Tigers of Tamil Eelam (LTTE). Jaish-E-Mohammed, IS, Hizb-UI-Mujahideen, Laand shkar-E-Taiba are some of the transnational terror organizations that attacked India in the past years (India - Terrorist Groups n.d.). In Egypt, Wilayat Sinai, Muslim Brotherhood, Hasm, and Hamas are the domestic terror group, and ISIS and Al-Qaeda are the transnational groups that mainly operate through these homegrown terror groups (Egypt 2016).

III. Types of Terrorism

¹This form of terror focuses on religious imperatives, a presumed duty or in solidarity for a specific religious group, against one or more religious groups.

²This form of terror focuses on either creating a separate state within India or independent of India or in a neighboring country or emphasizing the view of one ethnic group against another.

³This form of terror focuses on economic ideology, where all the existing socio-political structures are seen to be economically exploitative in character and a revolutionary change through violent means is essential.

⁴This form of terror focuses on creating illegal narcotics traffic zones.

Throughout this paper, the authors present various forms and types of terrorism. These are presented in this section through the following:

i. The New Terrorism

The modern terrorist environment arose during the end of the 20th century, culminating in the September 11, 2001, terrorist attacks in New York City. New Terrorism is characterized by the threat of mass casualty attacks from dissident terrorist organizations, new and creative organizational configurations, transnational religious solidarity, and redefined moral justifications for political violence⁵.

ii. Religious Terrorism

It is fabricated terrorism based on motives and goals that are predominantly religious in nature or influence.

iii. Ideological Terrorism

It is terrorism stemming from established worldly norms and theories. Communist ideology is considered one of the most violent ideologies that produce ideological violence due to its revolutionary thought based on the idea of unilateral hegemony over all other ideas and systems (Gary A. Ackerman & Michael Burnham 2021).

iv. Dissident Terrorism

Terrorism is “committed by nonstate movements and groups against governments, ethnonational groups, religious groups, and other perceived enemies” (ibid.).

v. State Terrorism

State terrorism has been defined as acts of terrorism conducted by governments or terrorism carried out directly by, or encouraged and funded by, an established government of a state (country) or terrorism practiced by a government against its own people or in support of international terrorism⁶.

vi. Criminal Dissident Terrorism

This type of terrorism is solely profit-driven and can be some combination of profit and politics. For instance, traditional organized criminals accrue profits to fund their criminal activity and for personal interests, while criminal-political enterprises acquire profits to sustain their movement.

IV. Literature Review

Meierrieks and Gries (2013) argue in their publication in the Journal of Peace Research found that the causal relationship between terrorism and growth is heterogeneous over time and across space. By studying a panel of 160 countries over 37 years, they concluded that there are many factors like politico-economic development, cultural affiliation, intensity and persistence of terrorist activities, and the political instability that govern the government’s resilience to terrorism. Terrorism has a stronger impact on economically and politically weak developing countries, mostly African and Islamic countries. Also, growth influenced terrorism, mostly in Latin American countries like Argentina, Guatemala, and El Salvador, because of political instability.

⁵Terrorism. FBI.gov. <https://www.fbi.gov/investigate/terrorism>.

⁶Various Definitions of Terrorism. <https://dema.az.gov/sites/default/files/Publications/AR-Terrorism%20Definitions-BORUNDA.pdf>.

These results were consistent for developing Asian countries (Gaibullov & Sandler, 2009). Developed Asian economies can cope with terrorist incidents. However, each additional transnational terrorist incident per million people would affect the growth of smaller Asian countries by 1.5 percentage points. Rich countries can divert their resources from terror-prone areas to safer regions. A good transport system, good governance, and institutions absorb the impact of terrorism in rich countries.

Most scholars discuss the role of political stability and governance on growth and terrorism. The level of democracy or autocracy is now considered one of the significant factors that influence the magnitude of terrorism. The "double democracy advantage" that Amichai Magen (Magen n.d.) talks about are enjoyed by only higher quality democracies and polyarchies. They are less prone to terrorist attacks, and the rate of increase in the number of attacks is quite lower than in any other form of regime. The reason is that political openness, protection of civil liberties, and the rule of law are very strong in these types of regimes.

Findley and Young (2011) gave empirical evidence for less terrorism in high democracies and high autocracies. Countries like Saudi Arabia, Jordan, and Oman have a polity score of -1,0, but they rarely experience terror events. However, autocracies are now facing many terrorist attacks due to changing technology factors (Magen, n.d.). Now authoritarian regimes can no longer hide the incidents of terrorism from people due to better communication, virtual currencies, 3D printing, smartphones, and social media. Only North Korea is an exception. But there is also a third democratic advantage enjoyed by only the high-quality democracy, es that is a few numbers of fatalities.

Investment in intelligence, infrastructure protection, first responders, social resilience, and specialized medical care averts the effect of terrorism in advanced democracies. An increase in terrorism also affects investments in the short run (Bandyopadhyay, Sandler, and Youna,s n.d.). Investors would shift their investments to other safer countries or destinations due to the high risk and high transaction costs associated with it. Hence, trade decreases terrorism-inflicted countries. A year later Egger and Gassebner (2015) found no short-term effect on trade or investments; the effects were only moderate for the long term. In most of developing countries, public and private investments also bear the brunt of terrorism because of increased government spending on the security of the country. Transnational as well as domestic terrorism hampers growth due to crowding in government spending and crowding out of investments (Gaibullov & Sandler 2009).

i. The Relationship between Terrorism and Growth

Terrorism is the biggest threat for the human civilization and economic growth. Terrorism causes not only the consumption pattern but also the future finance and investment strategy of the economy (Shaikh Imlak 2019). Terrorism has both direct and indirect effects on economic growth. Terrorism impedes economic growth directly by damaging infrastructure, incurring a loss of human capital, reducing school enrolment, reducing short-run commerce, causing internally displaced persons (IDPs), and reallocating resources, among others (Muhammad Zakaria, Wen Jun & Haseeb Ahmed 2019).

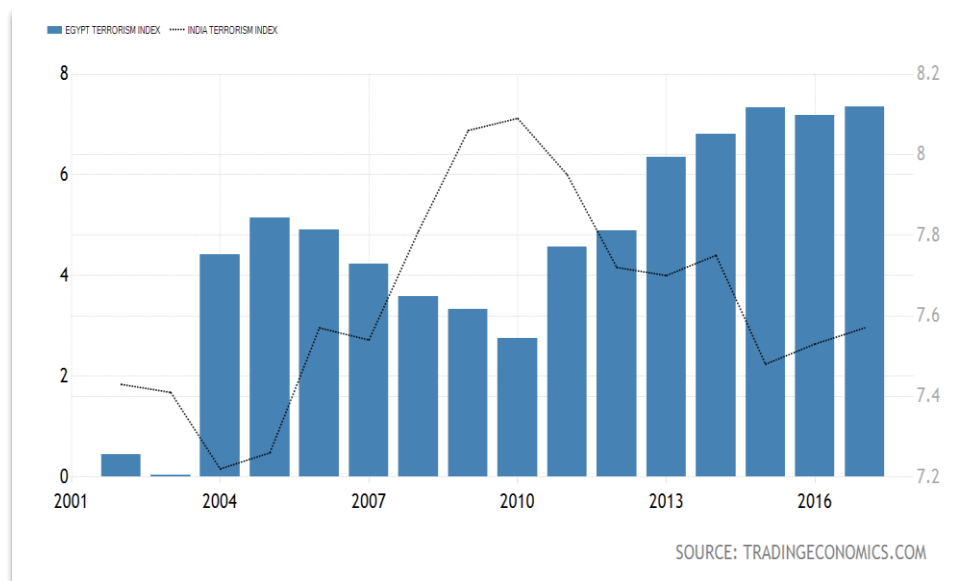
In terms of the link between economic growth and terrorism, the existing evidence is inconclusive: Some authors claim there is a positive link; others suggest there is an inverse association; and some have found no statistically significant relationship. Some researchers have linked the impact of terrorist activity and some economic growth activities such as agricultural growth, industrial growth and the tourism sector. Terrorism also thwarts economic growth indirectly by affecting macroeconomic variables, e.g., by reducing FDI, lessening domestic investment, increasing inflation, increasing non-development government

expenditures (law and order), damaging stock markets, and increasing unemployment, through which it is possible to explain the variation in the impact of terrorism on the rates of economic growth in both India and Egypt (Martin Maximino and Denise-Marie Ordway 2015).

V. Terrorism Index of India and Egypt

Terrorism Index (Humanity n.d.) measures the direct and indirect impact of terrorism, including its effects on lives lost, injuries, property damage and the psychological impacts with a score that ranges from 0 (no impact) to 10 (high impact).

Figure 1



Source: *Egypt Terrorism Index | 2019 | Data | Chart | Calendar | Forecast | News n.d.*

Egypt scored 7.17 and ranked 11th out of 163 countries whereas India scored 7.51 and ranked 8th in 2017. But the score for Egypt declined with 6.79 and India's score increased to 7.52 in 2019 (Global Terrorism Index, 2019).

During the year 2002-03, there were five bombings in Mumbai alone which is reflected in the index shown above. After 2007, the terror attacks have spiked till 2011 which includes the famous 26/11 of India. On 26th November 2008 terrorists targeted various locations in Mumbai which included a terminal, café, Taj Mahal Palace Hotel and Oberoi Trident, and Nariman House. 171 people lost their lives on that day (Mumbai terrorist attacks of 2008 | Events, Death Toll, & Facts n.d.).

In 2004-05, Egypt was dealing with terrorism. The Sinai-bombing and Sharm el-Sheikh attacks during this period led to the loss of many lives. The level of terrorism declined until 2010 in Egypt, but it started skyrocketing after 2010. The downing of Russian flight that killed all 224 passengers in 2015 and many church bombings were experienced by Egypt (Special Feature n.d.).

To determine the extent to which economic growth in India and Egypt is affected, we will monitor the impact of terrorism on three main sectors as the basis of economic activity: the industrial and investment sector, the tourism sector, and the agricultural sector in both India and Egypt. The effects extend outside activities directly associated with tourism, particularly hotels, catering, airlines, and other sectors. In the modern world, when no place is a safe haven, issue of terrorism influencing tourism industry is of a huge importance. Tourist arrivals to India

were down by more than 17 percent in January, 2009 due to the global economic crisis. In December 2008, about 521,990 tourists came to India—a 12.5 percent decline compared to December 2007. In January this year, 487,262 travelers came to India, which was 17.6 percent decline compared to the same month of 2008. “Though the growth rate in Foreign Tourist Arrivals (FTAs) in 2008 over 2007 was lower (5.6 percent) as compared to that of 14.3 percent in 2007 over 2006, the total number of FTAs in 2008 was 5.37 million which is higher than the FTAs of 5.08 million in 2007,” The lower growth rate in 2008, particularly in November and December, may be due to various reasons⁷.

In India, The industrial sector has become based mainly on foreign investments, but the Indian government is adopting many industries within it since the local development plan that it adopted. Therefore, despite the impact of the industrial sector with terrorist attacks, it affects the investment side only, and it also affects the stock and stock market as a result of the speed of Dissemination of news and information through social networking sites. The impact of a terrorist attack is worldwide and not confined to India in the global market scenario. The terrorist attack, even on a foreign person, will infinitely impact India's investment environment and economic market. While we find the impact of the agricultural sector in terrorist operations is less, India depends mainly on the agricultural sector (R. Muneeswaran & M. Babu 2017).

In Egypt nearly all terrorist attacks in Egypt took place in the Sinai Peninsula and largely targeted security forces, but terrorist attacks targeting civilians, tourists, and security personnel in mainland Egypt remained a concern. Overall terrorist attack methods throughout Egypt included small arms attacks, IEDs, VBIEDs, kidnappings, executions, complex assaults, ambushes, and targeted assassinations (Country Reports on Terrorism 2019). Terrorism has affected the investment and industrial sector in Egypt, despite its many advantages. Industrial activity in Egypt and investment in it is characterized by many advantages such as dense, cheap, and trained manpower in many fields and the state's ability to provide infrastructure in industrial areas such as water, electricity, ports, and roads, in addition to the availability of many raw materials used in industry at low prices. In Egypt, especially after 2011, it affected the industrial and investment sector because of the terrorist attacks. Terrorism has come to be considered one of the defining crises facing the tourism industry. Terrorism inflicted losses of \$65 billion on the tourism sector in 2011-2015, while \$25 billion more never reached other tourism-related sectors in those four years. Although Egypt relies on the agricultural sector, tourism and the industrial sector represent the most important proportion of the provision of hard currency. Therefore, the impact of terrorist attacks in Egypt had serious repercussions on economic growth rates.

VI. Stylized Facts about India and Egypt

India is the seventh-largest country in the world, with 1.3 billion people. It is also the largest democracy in the world. According to the International Monetary Fund (IMF), The Indian economy is worth \$11.326 trillion in 2019, the third-largest by purchasing power parity (PPP) but 119th by GDP per capita.

Egypt, also known as the Arab Republic of Egypt, is a country in Africa with 99 million people. IMF has ranked Egypt in 19th place with 1.391 trillion by purchasing power parity and 94th by GDP per capita. However, certain factors counter these trends, such as unemployment, inflation, growing population, and pollution. Both countries have been dealing with terrorism and conflicts for a long time, that has growth-restricting attributes. India's main source of economic growth is the service sector in recent years. The development is service, agriculture,

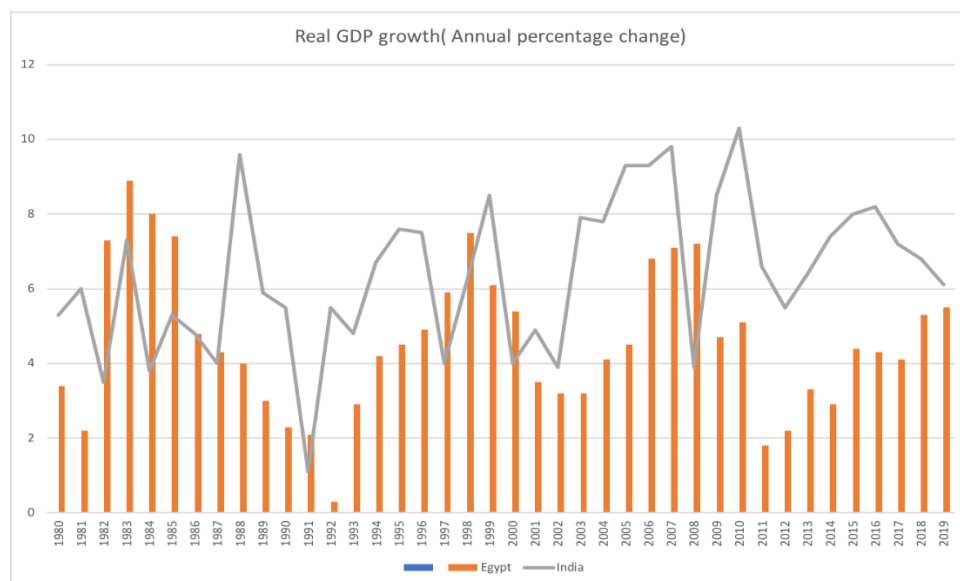
⁷The effects of Terrorism and Crime in Indian Tourism. The effects of Terrorism and Crime in Indian Tourism. <https://madhavuniversity.edu.in/effects-of-terrorism.html>.

infrastructure, and institutions made ways for India to establish itself among the world's top economies. But India lost its place as the world's fastest-growing economy in 2019 after the Modi government laid more stress on national security than the economy (Slater, 2019). In 2019, the attack on CRPF personnel in Kashmir's Pulwama led to the death of 44 personnel, and in 2016, 19 personnel lost their lives in Kashmir's Uri (Rashid,2019,) which escalated the tension between India and Pakistan as the former blames the latter for protecting militants in their ground. This led to increased security and fewer investments in India in recent years.

For Egypt, tourism and energy have been the most important sectors of the economy. It is famous for historical sites like Giza Necropolis, Luxor temple, Abu Simbel, and many more. Tourism comprised 11.9 percent of the GDP in 2018 (Welle n.d.). But there are many highs and lows in the industry due to terrorism; it was only 3.8 percent, a sharp decline from 7.4 in 2015(Trading Economics). There have been several attacks on tourists, like the Russian airplane blast in 2015 that led to the death of all 224 Russian passengers (Regev,2017) and the most infamous 1997 Luxor massacre, where 70 tourists were killed (Jehl 1997). Russia has banned its flights entirely after that, and many European and Japanese tourism companies canceled their tours to Egypt.

Figure 2 is the growth chart of India and Egypt. In 2019, the real GDP growth rate of India is 6.1, and for Egypt, it was 5.5. We can see the fluctuations in both countries, and one of the reasons could be terrorism.

Figure 2



Source: Data are extracted from the IMF for both countries from the year 1980-2019 and are graphed using Excel to give a comparative perspective.

There are some implications of terrorism in both countries. This paper investigates the extent to which terrorism can limit economic growth in these two countries. The paper is divided into the following section: an explanation of terrorism, its definitions, and types are explained in section two of this paper. In section three, a brief review of past literature is presented. In section four, the terrorism Index for India and Egypt is given. An explanation of data and methodology is presented the paper's results section. The final section is the concluding remarks, followed by the bibliography at the end.

VII. Methodology

The paper utilizes 44 observations for India and 42 observations for Egypt from WDI, GTI, and Semantic peace organization (Polity Project, n.d.). There are several variables in the model with GDP per capita growth of India and Egypt as the dependent variable and number of terrorist incidents, the number of casualties, Gross capital formation, Foreign direct investments, Government expenditure and polity IV score as the explanatory variables. I ran an identical model for both countries with different specifications to check the robustness of the model using Stata.

The model specified for both countries is: $Growth_i = \beta_0 + \beta_1 GCF_i + \beta_2 FDI_i + \beta_3 TERC_i + \beta_4 TERI_i + \beta_5 PSCORE_i + \beta_6 GE_i + \varepsilon_i$

The macroeconomic variables- GDP per capita growth is in annual percentage (growth), Gross capital formation (GCF) as a percentage of GDP, foreign direct investments (FDI) as a percentage of GDP and Government expenditure also as a percentage of GDP.

Two variables are defined to measure terrorism. First is the number of casualties (term) and second is the number of incidents (teri) from the year 1975-2017. The data is extracted from the Global terrorism database (GTD). The data was crude as it was reported according to the date, month, and year of the incidents. I added all the incidents and fatalities that occurred in a particular year to make the data more meaningful for estimation. Both variables include internal as well as transnational incidents and casualties.

Polity IV (Center of Systemic Peace, CSP) score captures the regime authority spectrum on a scale of -10 (hereditary monarchy) to +10 (consolidated democracy). It can be converted into regime categories of “autocracies” (-10 to -6), “anocracies” (-5 to +5), and “democracies” (+6 to +10). It gives information on the level of democracy with a population greater than 500,000. The evaluation is based on the elections' competitiveness and openness, the nature of political participation and the nature of checks on executive authority.

OLS and the Newey-West method are used to estimate the results of the models. Due to the presence of stationarity in India's growth model, the first difference has been used. For Egypt's model, the results are estimated using both OLS and Newey-West method to get small standard errors.

The results for Variance Inflation Factor (VIF) and correlation matrix, in order to detect multicollinearity, are reported in the appendix. The VIF table and correlation matrix show that the explanatory variables for Egypt as well as India are not correlated. The values of VIF for all explanatory variables are less than 10 and are less than 0.9 in the correlation matrix.

The statistics summary table of Egypt and India are given side by side below for the sake of comparison. Due to an imbalance in the period selected for the two countries, there might be some discrepancies.

Table 1
Summary Statistics for Egypt and India

Egypt: N=42					India: N=44				
Variables	mean	sd	min	max	Variables	mean	sd	min	max
year	1998	12.27	1977	2018	year	1996	12.85	1975	2018
gdp	5.148	2.157	1.125	10.01	gdp	5.893	2.613	-5.238	9.628
gcf	7.481	11.26	-20.32	40.87	gcf	7.805	9.445	-16.52	29.77
fdi	2.445	2.114	-0.205	9.344	fdi	0.798	0.890	-0.0297	3.621
terc	94.45	206.3	0	878	terc	460.9	317.2	0	1,152
teri	60.26	133.7	0	647	teri	293.0	302.9	0	1,025
pscore	-5.095	1.358	-6	-2	pscore	8.500	0.591	7	9
ge	12.70	2.573	8.352	20.67	ge	6.387	3.781	-0.185	14.97

Source: *Egypt Terrorism Index | 2019 | Data | Chart | Calendar | Forecast | News n.d.*

The maximum number of incidents and casualties are in India, but there is a significant difference in the level of population in both countries. In comparison to 1.3 billion people in India, the ratio of fatalities to population is quite small than Egypt.

VIII. Results and Discussions

The results below indicated no impact of terrorism on the GDP growth of India in models (1), (2), (4), and (5). Model (3) indicated a significant impact at 10 percent significance, but the sign is unexpected. The polity indicator also turned out to be insignificant. Government expenditure is significant at 10 percent and adds to the economic growth of India.

Table 2
OLS Estimation for India

Variables	(1)	(2)	(3)	(4)	(5)
Gross capital formation(gcf)	1.25e-09*** (1.22e-10)	1.25e-09*** (1.25e-10)	1.26e-09*** (1.20e-10)	1.01e-09*** (1.91e-10)	1.01e-09*** (1.93e-10)
Foreign direct investments(fdi)	-3.70e-10 (7.16e-10)	-3.70e-10 (7.25e-10)	-8.04e-10 (7.15e-10)	-7.36e-10 (7.64e-10)	-7.44e-10 (7.67e-10)
Terrorism Casualties(terc)	0.0135 (0.0145)	0.0134 (0.0146)			-0.00399 (0.0184)
Polity IV(pscore)		-1.392 (3.439)	-2.933 (4.285)	-0.693 (4.260)	-0.939 (4.580)
Terrorist Incidents(teri)			0.0712* (0.0358)	0.0546 (0.0354)	0.0597 (0.0464)
Government expenditure(ge)				1.09e-09* (6.05e-10)	1.08e-09* (5.89e-10)
Constant	13.42*** (3.677)	13.51*** (3.914)	12.38*** (3.801)	10.71*** (3.787)	10.76*** (3.762)
Observations	43	43	43	43	43
R-squared	0.670	0.670	0.695	0.719	0.719

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: OECD (2020), OECD Review of Foreign Direct Investment Statistics: India. www.oecd.org/investment/OECD-Review-of-Foreign-Direct-Investment-Statistics-India.pdf.

In Egypt, the number of casualties representing terrorism is significant at 1 percent level in model (1) and 5 percent level in model (2) whereas the number of incidents is only significant at 10 percent in model (3). Egypt's polity variable is also showing a significant impact at 10 percent in model (2) and (3). The GDP per capita growth of Egypt would reduce by only 0.2 or 0.1 percent owing to a unit increase in casualties and incidents, other things being constant. The authoritative regime also culminates in a negative relationship with growth.

Table 3
OLS Estimation for Egypt

Variables	(1)	(2)	(3)	(4)	(5)
Gross capital formation(gcf)	0.114*** (0.0248)	0.106*** (0.0260)	0.103*** (0.0258)	0.0812*** (0.0271)	0.0813*** (0.0287)
Foreign direct investments(fdi)	0.0486 (0.119)	0.168 (0.159)	0.162 (0.160)	0.148 (0.165)	0.148 (0.168)
Terrorism Casualties(terc)	-0.00236*** (0.000735)	-0.00163** (0.000678)			-4.96e-05 (0.000848)
Polity IV(pscore)		-0.394* (0.213)	-0.393* (0.217)	-0.213 (0.223)	-0.213 (0.227)
Terrorist Incidents(teri)			-0.00241* (0.00132)	-0.00175 (0.00115)	-0.00169 (0.00173)
Government expenditure(ge)				0.268** (0.108)	0.268** (0.112)
Constant	4.396*** (0.432)	2.092 (1.300)	2.122 (1.340)	-0.209 (1.936)	-0.204 (1.971)
Observations	42	42	42	42	42
R-squared	0.425	0.471	0.468	0.540	0.540

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: OECD (2020), OECD Review of Foreign Direct Investment Statistics: Egypt. www.oecd.org/investment/OECD-Review-of-Foreign-Direct-Investment-Statistics-Egypt.pdf.

Table 4
Newey-West Method for Egypt

Variables	(1)	(2)	(3)	(4)	(5)
Gross capital formation(gcf)	0.114*** (0.0254)	0.106*** (0.0264)	0.103*** (0.0262)	0.0812** (0.0304)	0.0813** (0.0327)
Foreign direct investments(fdi)	0.0486 (0.113)	0.168 (0.135)	0.162 (0.138)	0.148 (0.144)	0.148 (0.147)
Terrorism Casualties(terc)	-0.00236*** (0.000709)	-0.00163** (0.000726)			-4.96e-05 (0.00109)
Polity IV(pscore)		-0.394* (0.198)	-0.393* (0.198)	-0.213 (0.239)	-0.213 (0.242)
Terrorist Incidents(teri)			-0.00241* (0.00132)	-0.00175* (0.00104)	-0.00169 (0.00177)
Government expenditure(ge)				0.268*** (0.0856)	0.268*** (0.0906)
Constant	4.396*** (0.547)	2.092 (1.288)	2.122 (1.305)	-0.209 (1.569)	-0.204 (1.611)
Observations	42	42	42	42	42

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: OECD (2020), OECD Review of Foreign Direct Investment Statistics: Egypt. www.oecd.org/investment/OECD-Review-of-Foreign-Direct-Investment-Statistics-Egypt.pdf.

Both Newey-West and OLS estimates suggest that the impact of terrorist attacks in India is quite limited relative to Egypt. Neither terrorism casualties nor the number of terrorist incidents have any impact on economic growth in India, whereas in Egypt, both have adverse impact on growth. There could be various reasons for the contrasting impact of terrorism on economic growth in Egypt and India, which can be attributed to factors that differ between the two countries. First and foremost, the way terrorist attacks are covered in the media and social media in the two countries. Media coverage is an important tool in shaping the perceptions of the general public. With regards to reporting on terrorist attacks, it is even more important because the duration and intensity of journalists' coverage of these incidents can create a domino effect that could hinder economic growth in the short and long run.

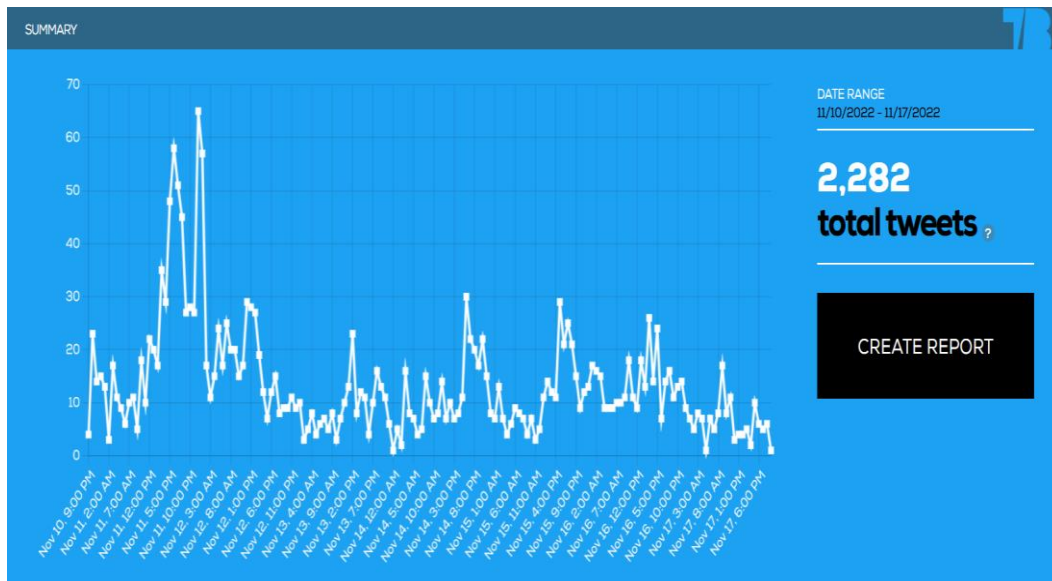
India and Egypt both have different ways of covering domestic terrorist attacks and this has impacted their economic performance. Egypt has a more state-controlled way of reporting which limits information to the public and projects a state-devised narrative which involves showing that Egypt is under a persistent threat. The government may use the media coverage of terrorism to maintain control and justify their actions, such as imposing restrictions on civil liberties or increasing security measures. Meanwhile, India aims at distancing itself from the perpetrators and does not have a state-controlled narrative, like Egypt does. This makes it more likely for investors to head to India instead.

In India, media coverage related to terrorist attacks is often extensive in the immediate aftermath, with 24-hour news channels providing constant updates and analysis. However, this coverage tends to peter out quickly, shifting the focus to other news stories. Part of the reason for this could be that terrorist attacks have unfortunately become relatively common in India, and people may have become desensitized to them. Additionally, the Indian government may have policies in place to limit the amount of coverage given to terrorist attacks in order to prevent panic and maintain law and order. For example, after the Mumbai terrorist attacks in 2008, a study was conducted on the nature of the media coverage by the Hindustan Times (HT), at which it criticized the government and corruption as a reason for the lack of response to the attacks (Roy & Ross, 2011). HT also aimed at othering the perpetrators of terrorist attacks (Roy & Ross, 2011.). Secondly, the HT also tried to create a sense of patriotism in their articles (Roy & Ross, 2011). Therefore, I believe in the case of India, there is an emphasis on making sure that they distance themselves from the terrorists. For investors, this may be more encouraging as they see a positive reaction from the media and the public compared to Egypt where there is barely any accountability.

Regarding social media outlet, the case in Egypt vs. India is not so much different than the classic media outlets and T.V. shows. For instance, when comparing Twitter analytics, over the period from November 10th to November 17th, 2022, one can find that there have been 2,282 tweets which mention The Muslim Brotherhood (see graph 3), the biggest enemy of the state since July 2013. On the other front, there was only one tweet that contained Khalistan Zindabad Force (see graph 4).

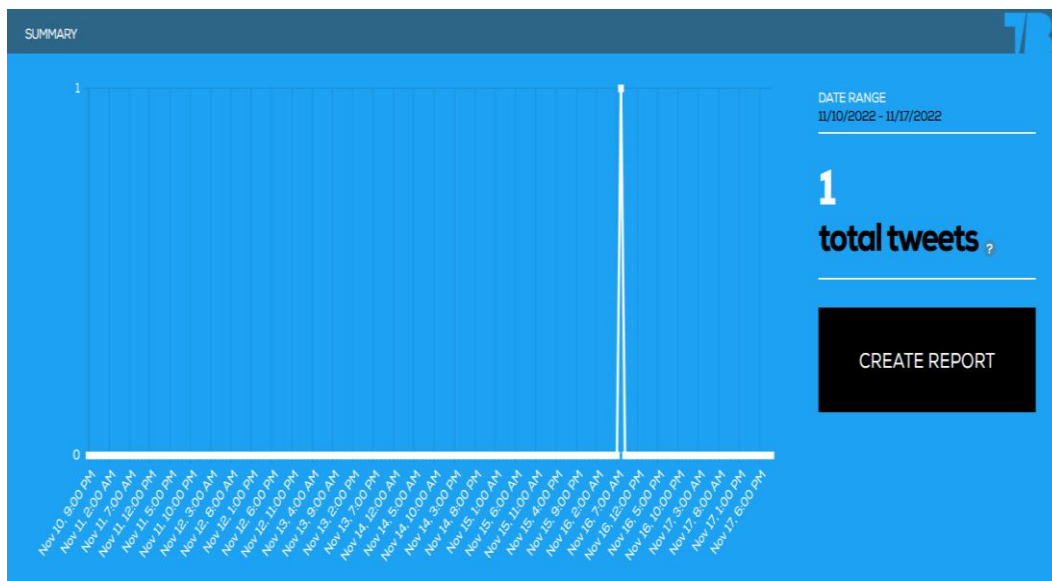
In conclusion, there are slight differences between media coverage of terrorism in India and Egypt. In India, a sense of patriotism and togetherness is created while othering the terrorists and searching for solutions. In Egypt, terrorism is dwelled on, and coverage of it, whether by news outlets or the entertainment industry, lasts much longer, creating a sense of a lack of security in Egypt compared to India. Overall, the media coverage of terrorism in India tends to be more subdued compared to Egypt, with less emphasis given to the emotional impact of such attacks.

Figure 3
Number of Tweets Containing “The Muslim Brotherhood”



Source: *Tweet Binder*.

Figure 4
Number of Tweets Containing “Khalistan Zindabad Force”



Source: *Tweet Binder*.

Moreover, the impact of terrorism on the economy is not the same across sectors. The vulnerability of certain sectors to terrorism can exacerbate the impact of terrorist attacks on the economy. In Egypt, the tourism industry is a key sector that has been greatly affected by terrorist attacks. Tourism accounts for a significant portion of Egypt's GDP and is a major source of employment. In 2018, the tourism sector generated 174.1 billion pounds that constituted 15% of GDP; It is also responsible for the employment of 9.5% of the total labor force (OECD 2020). Egypt's tourism industry is not only promoted globally for its rich historical landmarks, scenic attractions, and cultural heritage but also for the safety and security it offers to tourists. The safety of tourists is a critical factor for their travel decisions, and as

such, it is imperative for Egypt to continue to maintain a reputation as a safe and secure destination for visitors. While political instability and turmoil can be an inevitable occurrence in any country, it is important for Egypt to implement a dependable strategy that ensures a speedy and effective recovery from such occurrences. The 2011 political upheaval in Egypt, for instance, led to a significant 90% drop in tourist revenues.

Therefore, building a strong and resilient tourism industry that can withstand external shocks is crucial for Egypt's long-term economic growth and development. This can be achieved by prioritizing safety measures, investing in infrastructure and services, and diversifying the country's tourism offerings to attract a broader range of tourists (Kingsley, 2014). Overall, the terrorist attacks targeting tourists have led to a decline in tourism activity, resulting in a significant loss of revenue and jobs.

On the other hand, in India, the service sector is a major contributor to the country's GDP and employment and is less vulnerable to the impact of terrorism. The service sector includes a wide range of activities such as banking, IT, finance, and retail, and is not dependent on physical infrastructure that can be easily targeted by terrorists. tourism sector in India constituted 5.8% of its GDP in 2021 (Statista, 2022), and FDI makes up 2.4% of GDP in 2020 (WDI, 2020). While they account for a reasonable portion of Indian GDP, they are not the leading sectors in the economy. Meanwhile, the services sector is the largest sector of India. Gross Value Added (GVA) at current prices for the services sector is estimated at 96.54 lakh crore INR in 2020-21 (statistics times, 2021). Terrorist attacks may not directly impact the service sector, except in cases where firms are targeted and suffer damage or destruction. However, in the event of a terrorist attack in India, individuals would typically continue to attend work and experience no direct consequences such as layoffs. The 2019 Pulwama terrorist attack, which resulted in over 40 fatalities, could potentially have a direct impact on foreign direct investment (FDI) in India. However, the service sector, which accounted for 53% of total gross value added (GVA) in both 2018 and 2019, experienced minimal effects. Notably, the sector expanded further to 55% of total GVA in 2020 (IBEF, 2020). To sum up, India's diversified economy and the resilience of its services sector have helped to mitigate the impact of terrorist attacks on its overall economic growth.

The recovery of an economy following a traumatic event, such as a terrorist attack, is heavily reliant on the quality of the governance of the country. Strong and effective governance can expedite the recovery process and provide more opportunities for development. The quality of decisions made during such a critical time greatly impacts the economy and its people; hence, well-planned and efficient actions are preferable over impulsive and temporary solutions. Governance also has a significant impact on various economic activities, notably domestic and foreign direct investment. The better the governance, the more conducive the environment for investors. According to the Worldwide Governance Indicators (WGI), India fares better than Egypt in terms of six key indicators of governance, including voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption, with its best scores in government effectiveness and control of corruption. On the other hand, Egypt's scores are particularly low in terms of regulatory quality and rule of law.

Additionally, Blomberg et al. (2004) argue that the level of democracy significantly contributes to overpowering terrorism. Democracy can be seen as one of the main drivers of MENA terrorism alongside civil conflicts. Low levels of democracy can be considered one of the major motives for different types of terrorism, as it suppresses social inclusion. Democracy Index (2020) indicates that India's overall score is 8.67 on the 53rd rank versus Egypt with an overall score of 2.93 on the 138th rank. This indicates that Egypt is considered a closed

anocracy country and most domestic terrorism occurs in anocracies (Kim, Sandler, 2020). Democracy and political inclusion give the citizens a feeling of social inclusion in their country. The thing that might limit any type of harm or disruption to their society. In other words, when citizens feel more socially connected, they feel that they will not face injustice from their society and hence reduce terrorism that might harm this society (Kim, Sandler, 2020). Davis (2018) contends that Egypt has struggled to effectively implement democracy due to a lack of proper understanding and experience among its citizens. The Egyptian education system in schools has resulted in this challenge, as it has taught the youth to comply with the regime instead of enabling them to freely express their thoughts and opinions. On the other hand, India has a deliberation culture that deepens democracy experience. This happens through the “Gram Sabha” established in 1992 as part of the 73rd amendment of the Indian constitution, and it now influences 840 million people and one million villages in rural India (Parthasarathy, Rao, 2017). Gram Sabha allows meetings where different people meet and opinions are presented. During early meetings, public debates included intellectuals, religious elites, politicians, peasants, and men who opposed each other and opposed the state (Parthasarathy, Rao, 2017). The enriched culture of a democratic environment has been practiced since the fifth century BCE back to Buddhist, Jain, and Hindu traditions (Parthasarathy, Rao, 2017). This atmosphere of practicing democracy has led to the awareness of the young generation of their society, state, and federal government situation. that is far away from terrorism. In summary, India's successful practice of democracy has led to a less polarized society in comparison to Egypt.

Overall, democracy, institutional quality, and political stability are major determinants of a peaceful environment (Bayar, Gavriletea, 2018). The cost of terrorism is less in the countries that have developed institutions (Tavares, 2004), an independent judiciary that keeps the government in check (Findley and Young, 2011). By providing stability and a secure environment, democracy and good governance can help mitigate the negative impacts of terrorism on the economy, notably vulnerable sectors such as tourism and FDI.

IX. Conclusion

The paper investigates the impact of terrorist attacks on the economic growth of Egypt and India, at which it utilized the standard growth model and added terrorism to ascertain its influence on the economies of India and Egypt. The results recommend that the impact of terrorism is contrasting for the two countries. They indicate that terrorism has an adverse impact on economic growth in Egypt, but not in India.

The paper suggests that the variation of the impact of terrorism on both countries is mainly due to the difference in their economic, political, and social structures in them. Namely, the major sectors that contribute to Egypt's GDP, such as tourism and FDI, are very vulnerable to terrorist attacks. In contrast, the service sector, which is the foremost economic sector in India, is more resilient to these attacks.

Democracy and governance quality are other major factors contributing to such differences of terrorism impact in Egypt and India. India's democratic system with relatively higher governance indicators significantly helps to cope with and recover from the repercussions of terrorism faster. For instance, most of the terror organizations in Egypt are operating internally, which is one of the reasons, given by many scholars, terrorism is most likely to occur in low democracies and autocracies. The difference in infrastructure, transportation and, most importantly, geography enhances the impact. On the other hand, the region of Kashmir is under constant attack from outside and inside forces. However, the repercussions stay out of other Indian States because of better mobility of resources and institutions.

Terrorism can have a detrimental and far-reaching impact on both society and the economy, which can create a vicious cycle of more attacks if not addressed effectively by the government. Thus, it is crucial to combat terrorism by addressing its root causes and minimizing its harmful effects on society. While alleviating poverty is a major factor in reducing terrorism, democracy practice, quality institutions and governance, and free agenda media outlets will contribute significantly to fighting this phenomenon.

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Appendix

VIF Table for Egypt

Variable	VIF	1/VIF
terc	4.43	0.225812
teri	4.40	0.227185
pscore	1.55	0.644627
fdi	1.49	0.669630
ge	1.49	0.670440
gcf	1.45	0.687913
Mean VIF	2.47	

Correlation Matrix for Egypt

	gdp	gcf	fdi	terc	teri	pscore	ge
gdp	1.0000						
gcf	0.6093	1.0000					
fdi	0.2772	0.3730	1.0000				
terc	-0.2116	0.0263	-0.0297	1.0000			
teri	-0.2711	-0.0745	-0.1000	0.8695	1.0000		
pscore	-0.2237	0.0010	0.3949	0.2641	0.2644	1.0000	
ge	0.5679	0.3853	0.0504	-0.2731	-0.2523	-0.3705	1.0000

VIF Table for India

Variable	VIF	1/VIF
terc	1.26	0.795852
teri	2.01	0.498384
pscore	2.33	0.429035
fdi	3.18	0.314476
ge	1.18	0.849418
gcf	1.09	0.919439
Mean VIF	1.84	

Correlation Matrix for Egypt

	gdp	fdi	terc	teri	pscore	gcf	ge
gdp	1.0000						
fdi	0.2245	1.0000					
terc	0.0883	0.3376	1.0000				
teri	0.2540	0.6907	0.3534	1.0000			
pscore	0.3000	0.7277	0.3622	0.5353	1.0000		
gcf	0.4502	0.0120	0.0454	-0.0673	0.1307	1.0000	
ge	0.1194	0.2322	-0.1321	0.1096	0.0606	0.1492	1.0000