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# Terrorism and Tourism Demand in Terror Affected Island

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### ABSTRACT

Sri Lanka is an island and is becoming an attractive tourist destination in South Asia. It has famous beaches, mountainous regions, many colonise features, UNESCO world heritage sites, wild life, traditional festivals, and unparalleled climate generate extra topographies to attract more and more international tourists. However, Sri Lanka is badly affected by terrorism. Henceforth, this study examines the impact terrorism on inbound tourism along with other important factors, for instance, FDI and World GDP. Long run estimates are obtained through DOLS after confirmation of cointegration. World GDP and FDI have positive effect on tourism. Terrorism has negative impact on inbound tourism in Sri Lanka. The tourism in Sri Lanka remained stagnant between 1978 and 2009 because of terrorism. Since 2009, there is sharp increase in tourism arrivals as a result of remarkable decrease in terrorism activities. Results of VECM confirmed causality from terrorism to tourism. This finding revealed that terrorism is badly affecting tourism in Sri Lanka. Similarly, terrorism is affecting FDI inflows to Sri Lanka. Moreover, these results confirmed that tourism and FDI are engaged in complementary effect with each other. If Sri Lanka enabled itself well to maintain peace in country its effect will be multiple. Elimination of terrorism will improve tourism development which in turn will bring economic development as travel and tourism industry contributes 11.1 % to GDP, and 10 % to country employment. Similarly, better security situation will also help in attracting more FDI. Besides this, FDI and private investment has to be encouraged to build new hotel rooms to accommodate influx of tourists.

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## 1. INTRODUCTION

Sri Lanka is an island and is becoming an attractive tourist destination in South Asia. It has famous beaches, mountainous regions, many colonise features, UNESCO

world heritage sites, wild life, traditional festivals, and unparalleled climate generate extra topographies to attract more and more international tourists (Li et al. 2017). However, country's tourist arrival had remained stagnant around half million for three decades during 1978-2009. Average tourism receipt was US\$102 million, US\$205 million, US\$330 million in 1980s, 1990s and 2000s respectively. Since 2010 tourism is on the rise and average tourism receipt remains US\$1320 million between 2010 and 2014. Terrorism has badly affected Sri Lankan economy. A great reduction has been witnessed in terrorism between 2010 and 2014 as its average remained below two digits which were 134 in 1980s. Terrorism may cause political instability of the country and consequently affecting tourist arrivals (Seddighi et al., 2001). Terrorism have adverse effect

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on tourism demand as tourists' value tranquility and peace (Arana & Leon, 2008) whereas absence of terrorism is a precondition for tourism development (Sonmez, 1998). There are time series studies who find deteriorated effect of terrorism on tourism development. Such as, Enders and Sandler (1991), Enders et al. (1992), Faridun (2011), and Raza and Jawaid (2013) among others. We also used income and foreign direct investment (FDI) as control variables. Because, Jayathilake (2013) finds positive impact of income on tourism in the host country whereas Tang et al. (2007) opine that causality runs from FDI to tourism and not vice versa while Selvanathan et al. (2012) discover tourism and FDI causes each other.

In the context of tourism development, various studies tried to find the determinant of tourism demand and factors affecting tourism development. Accordingly the study conducted by (Li et al. 2017) examined "tourism development in Sri Lanka in the context of social capital and resident attitude towards tourism development" and found positive relationship of education in both rural and urban community with tourism. Similarly another study conducted Gamage et al. (2017) to find the impact of tourism development and energy on environmental degradation in Sri Lanka. They study results indicates that tourism development is significant factor in reducing the environment deterioration, while energy has positive link with environmental degradation. This study examines the impact terrorism on inbound tourism along with other important factors, for instance, FDI and World GDP and determines the causal nexus between terrorism and inbound tourism in Sri Lanka.

**2. RESEARCH METHODOLOGY**

In the light of above discussion, the empirical model is developed and is written in log-linear form in Eq. 1 as follows:

$$\log TR_t = \alpha_0 + \beta_1 \log GDPW_t + \beta_2 \log FDI_t + \beta_3 \log TER_t + \mu_t \quad (1)$$

where TR, GDPW, and TER denotes tourism receipt, world gross domestic product and terrorism incidents respectively. This study covered period from 1978 to 2014. Tourist's income is proxy by world gross domestic product following Ranasinghe and Deysappriya (2012). Data on World GDP and FDI is collected from World Bank (2022). Terrorism incidences are collected from Global terrorism database (2022) while tourism receipt is gathered from Sri Lanka tourism development authority (2022).

Augmented Dickey-Fuller test (Dickey & Fuller, 1979) assured that variables of the study are stationary at first difference and integrated of order one. The Johansen and Juselius (1990) cointegration test determined long run relationship among variables. One can use dynamic ordinary least squares to obtain estimates if variables are cointegrated and share same level of integration (Stock & Watson, 1993).

**3. RESULTS AND ANALYSIS**

Results of DOLS are given in Table 1. World GDP and FDI have positive impact on tourism whereas terrorism has negative effect on tourism in Sri Lanka. A 10 percent increase in World GDP and FDI will increase tourism by 3.1 and 5.3 percent respectively while a 10 percent increase in

terrorism incidents will decrease tourism by 1 percent in Sri Lanka.

**Table 1**  
Long Run Results

Dependent var.: logTR		
Variable	Coefficient	t-Statistic
logGDPW	0.31***	7.439676
logFDI	0.53***	7.054771
logTER	-0.10*	-1.909328
R <sup>2</sup>	0.903611	
Adjusted R <sup>2</sup>	0.865056	

\*\*\* and \* significant at 1 and 10 percent level respectively.

Table 2 displays results of short run and long run causality obtained through vector error correction model. Results confirmed that tourism and World GDP Granger causes each other whereas causality is running from FDI and terrorism to tourism in the long run. Unidirectional causality is running from terrorism to tourism in short run. Results also revealed bidirectional causality between World GDP and terrorism, and one-way causation causality from World GDP to FDI, and from terrorism to FDI in short run. Thus, it is concluded that terrorism is affecting tourism and inflows of FDI to Sri Lanka.

**Table 2**  
Causality Results

variable	Short Run Causality				Long Run Causality
	$\Delta \log T_R$	$\Delta \log GDP_W$	$\Delta \log FDI$	$\Delta \log TE_R$	ECT
$\Delta \log TR$	---	2.20	1.88	2.91**	-2.24**
$\Delta \log GDP_W$	3.99** *	---	2.24	4.19**	-3.18***
$\Delta \log FDI$	2.34*	3.47**	---	2.69 <sup>c</sup>	0.74
$\Delta \log TER$	0.84	7.24 <sup>a</sup>	0.76	---	-0.48

\*\*\*, \*\* and \* significant at 1, 5 and 10 percent level respectively.

**4. Conclusion and Recommendations**

This study examines the impact terrorism on inbound tourism along with other important factors like FDI and World GDP. For this objectives, this study are tested through time series data and different time series techniques are used such as unit root, cointegration and DOLS. Cointegration test confirmed that there is long run relationship among study variables. Long run estimates were obtained through DOLS. World GDP and FDI have positive effect on tourism. Terrorism has negative impact on inbound tourism in Sri Lanka. The tourism in Sri Lanka remained stagnant between 1978 and 2009 because of terrorism. Since 2009, there is sharp increase in tourism arrivals as a result of remarkable decrease in terrorism activities. Results of VECM confirmed one-way causality from terrorism to tourism in both short run and long run. This finding revealed that terrorism is badly affecting

tourism in Sri Lanka. Similarly, terrorism is affecting FDI inflows to Sri Lanka in Short run. Furthermore, causality is running from FDI to tourism while opposite is true in short run as one-way causation is found from tourism to FDI. These results confirmed that tourism and FDI are engaged in complementary effect with each other. If Sri Lanka enabled itself well to maintain peace in country its effect will be multiple. Elimination of terrorism will improve tourism development which in turn will bring economic development as travel and tourism industry contributes 11.1 % to GDP, and 10 % to country employment. Similarly, better security situation will also help in attracting more FDI which can put the country on right track of sustainable development. Besides this, FDI and private investment has to be encouraged to build new hotel rooms to accommodate influx of tourists.

### Competing Interests

The authors have declared that no competing interests exist.

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