THE IMPACT OF TERRORISM ON TOURISM DEMAND IN PAKISTAN

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ABSTRACT:

The terrorist attacks of September 11, 2001 in the United States (US) exposed the vulnerabilities of the tourism industry to changes in perception as to travel safety and security. Terrorism and threats to national security are documented to have impacts on tourism demand. Tourism activities are multi-pronged with mostly positive impact on any economy. This study attempts to investigate impacts of terrorist incidents in Pakistan. The proposed approach is a stated OLS and Autorgrasive distributed lag Modem (ARDL) model from 1985 to 2008 taken at different points in time in relation to terrorist attacks. Results show that the attacks caused a shock to tourists' utility, and a change in the image profile of destinations. Moreover, it was found that destination experienced a strongly negative impact on their image and attractiveness.

Key wards: Tourism, Exchange Rate, Economic Growth, terrorism (ARDL), ECM.

1. INTRODUCTION

Tourism in the developing world is often viewed as a potent source of employment and foreign currency (Scheyvens 2002). Through its exchange earnings and employment generation, it is expected to induce entrepreneurship, bringing hope to rural economies characterized by low agricultural productivity and industrial backwardness. Pakistan's prospect of urban-industrial development is limited. One of the principal paths Pakistan has pursued in its attempt to develop rural/remote areas basically amounts to tourism commoditization of the commercial potential embedded in its enchanting natural sceneries, mountainous terrain, relatively unadulterated rural-agrarian and artistic heritage.

Pakistan presently ranks very low in terms of world tourism income. Out of global tourism income of $ 514 billion, the share of South Asia is $ 5.4 billion including Pakistan's share of only $ 135 million i.e. 0.03 per cent of global and 2.5 per cent of South Asian share. Out of the total tourists arrivals in the world estimated at 694 million per year, Pakistan receives only 0.5 million tourists annually, a very low figure. Even among South Asian countries, the tourist arrival in Pakistan is very low.

The impact of terrorism on a state's economy may be enormous, leading to unemployment, homelessness, deflation, crime and other economic and social ills. According to Adam Blake and M. Thea Sinclair, two scholars who have studied the impact of the September 2001 al-Qaeda strikes on the U.S. tourism industry, "The contribution of tourism and travel to both industrialized and developing countries is now so great that any downturns in the level of activity in the industry are a cause of concern. The repercussions extend beyond activities directly associated with tourism, notably airlines, hotels and catering, to sectors that supply intermediate or final goods that are purchased by firms and employees in the industry, so that all sectors of the economy are affected to a greater or lesser extent." This seems particularly true for developing countries. "The international tourism industry has come to play an increasingly important role in many developing countries. In the late 1960s and 1970s, tourism was often promoted as a way to reduce persistent balance of payments deficits and as a major source of foreign exchange. In the late 1980s and throughout the 1990s, tourism was recognized for its direct and indirect positive impact on government revenue, national income and employment. In addition, tourism is recognized as a means to diversify the economy and reduce reliance on traditional agriculture and industry. In general, tourism is one of the fastest growing economic sectors in the underdeveloped world and can be characterized as having 'multidimensional' effects."

Tourism is an industry where both demand and supply can be sensitive to both extreme events such as terrorism or political violence (Ritcherand Waugh 1986; Ryan 1993). The absence of terror or violence is a pre-condition generally accepted for the development of destinations (Israeli and Reichel 2003; So¨nmez 1998). However, in the last decades, the world has been increasingly threatened by terrorism, and acts of violence have increased in many countries, some of them enjoying in parallel an increasing popularity as destinations (So¨nmez, Apostolopoulos and Tarlow 1999). These events can be considered a handicap at conflict and novel destinations, since tourists used to show

marked preferences for tranquility and peaceful social environments (Neumayer 2004; Reisenger and Mavondo 2005). The impact of terrorism on consumer choice and tourism decisions has been an area of research concern on demand. However, most of these studies have utilized a times series approach. For instance, Ender and Sandler (1991) and Enders, Sandler and Parise (1992) used monthly data and time series analysis to prove a significant negative impact of terrorism on tourism revenues in Spain and other European countries, and to support substitution effects between countries as a result of the tourists' goal of minimizing the risk of facing a terror attack. This result was also found by Drakos and Kutan (2003), while Pizam (1999) and Krakover (2005) show that both the severity and the frequency of the terror events are negatively correlated with tourism demand. In another study, Pizam and Fleischer (2002) confirmed for Israel the hypothesis that the frequency of terror acts caused a larger decline in demand than the severity of those visits. More recently, Coshall employs an ''intervention analysis'' to explore the dynamics of the impact of terrorism events on those visiting United Kingdom and UK tourists going abroad. He found that ''the expenditure was robust to such events in the 80s, rapidly returning to the norm after the crisis'' (2005:592). An interesting path of research in estimating the effect of terrorism events on the tourism industry has followed the work of Krakover (2005). This author proposed an index that collects the level of terrorist activity in a specific period of time. Thus, a zero represents a period with no terror event and a 9 a period with the maximum level of terror activity. A relevant application can be found in Fleischer and Buccola, who employ Krakover's index in order to estimate the effect of terrorism events on the demand and supply of the Israeli hotel sector. They find that ''the severer the war of terror climate, the lower the international visitor demand'' (2002:1339). More particularly, they found that ''tourists last an average of two months in reacting to increases in terrorist attacks, while over a longer period, an event's psychological effect appears to subside'' (2002:1339). Although Krakover's index has been successfully applied in previous research, its validity crucially depends on the existence of a relatively constant flow of terror events. Therefore, its utility is high for applications like those studied in Pizam and Fleischer (2002) or Fleischer and Buccola (2002). However, in the context of this research, the fact that the magnitude of the terror event was never seen before in modern history does not recommend its use. Nevertheless, previous research has focused on estimating the aggregate effects of terrorism events on the industry (by using time series analysis or structural equation models to forecast the reduction in the total number of trips, tourists' expenditure, and so

on), and have provided little evidence on the impact of terror events on micro-tourist preferences (using individual tourist data rather than aggregated or time series data). Since the ultimate goal of this line of research is to assist the industry and government agencies to learn form past experiences and to develop strategies for coping with similar events in the future, an extensive group of researchers have claimed the importance of introducing basic decision making approaches in order to fully understand international tourists' responses to traumatic events (Weimann and Winn 1994; Yechiam, Barron and Erev 2005).

The purpose of this paper is to determine whether terrorism has had an impact on tourism. The objective of this study is to statistically estimate the impact of terrorism and war against terrorism on the tourism receipts. To accomplish this task we estimate the autoregressive model to quantify its impact on terrorism of tourism.

2. TERRORISM AND TOURISM IN PAKISTAN

Pakistan has welcome the war against the terrorism after 9/11 terror incident in the United Stats. Terrorists employ the extra normal violence or its threatened use to gain the political objective through intimidation or fear. The political turmoil, judiciary problem, high inflation, food and energy crisis can create the uncertainty situation in the country. On the other hand Pakistan faces the terror and militants problems form 2001 in the border linked tribal areas. The militancy at present is growing by day it presents an acute threat to security and has already altered the very face our country and society. Harvey fighting in the area has also created damages to agriculture, to homes and to the environment. Worse still, the loss of tourism means source of livelihood have been badly hit. Throughout in the tourist areas special in Swat region, people can be found who have lost their jobs, incomes, and who curse the militant armies that have cursed havoc across their once tranquil valley. According to an official estimates that it may be years before tourism in Swat valley can be revived. Tourism has been completely destroyed by the terrorist attacks and military operation against the militants, because tourist is very sensitive to the law and order situation of the destination and can not take any risk about security measures.

Some high-profile terrorist incidents such as the assassination of Banazer Bhutto on December, 27, 2007, which have negative impact not only on tourism while on the whole economy of the country.

The escalation of terrorism over the last five years may have had a significant impact of terrorism on tourism trade in the country plagued with the terrorist incidents. There is much speculation on the economic cost of terrorism on tourist trade and other tourism industries, thereby imposing cost and pressure on the government through loss of foreign exchange earnings, employment and reduction of activities in the tourist areas.

3. MODEL AND DATA

The hypothesis that tourism demand is sensitive to the influence of political violence and terrorist attacks, since tourists—like everyone else—value tranquility and peace for the enjoyment of the pleasures and activities offered by destinations. The incidents of terrorism in Pakistan are considered in this study because of its previously unknown mode, dimension, and magnitude, thereby causing a major shock to the tourism industry. This paper uses a simple OLS and Autoregressive model approach to evaluate the impact of these terrorism incidents on the tourism revenue in Pakistan.

The study allows the testing of following hypothesis.

1. The revenue from tourist arrivals is inversely related to the severity of terrorists' attacks.
2. The impact of atrocious events on the reduction of tourism receipts inflow lasts for several years.

These hypotheses are tested by the application of two regression models. The initial model is a simple bi-variate regression model designed to test the first hypothesis by the following equation.

$$TOUR_t = \beta_1 + \beta_2 TER_t + \varepsilon_t \qquad (1)$$

where TOUR stands for tourism receipts in each year t and TER represents the annual number of terrorism incidents in the region. ε_t is white noise error term which represents omitted factors left out by the deterministic part of the model.

Model 2 is designed to capture the duration of the impact of terrorism attacks on the reduction in the inflow of tourism receipts (hypothesis 2). It will reflect the changes in the tourism revenue along the period.

$$TOUR_t = \beta_1 + \beta_2 TER_t + \sum_{i=1}^{n} \delta_i (TER)_{t-i} + \varepsilon_t \qquad (2)$$

This empirical analysis considers annual data for Pakistan for the period of 1985 to 2005. In this paper we have used Tourism Receipts (TOUR) data in local currency and data of number of terrorism incidents (TER) to analyze the dynamic relationship between these variables. Table 1 presents summery statistic of the data. Tourism receipts data has been taken from various issues of Tourism Year Book, Ministry of Tourism, Pakistan, while the data incidents of terrorism is obtained from "http://en.wikipedia.org/wiki/List_of_terrorist_incidents".

Table 1

Descriptive Statistics of Data

Variables	TER	TOUR
Mean	9.571	131.119
Median	2.000000	118.900
Maximum	76.000	260.100
Minimum	1.000	73.200
Std. Dev.	17.935	43.828
Skewness	2.832	1.173
Kurtosis	10.409	4.630
Observations	21	21

4. EMPIRICAL RESULTS

The results of the application of the first model are reported in table 2. These results confirm the first hypothesis and show that tourism receipts are highly significant and negatively related with the terrorism incidents. The coefficient of terrorism variable

shows that tourism revenue on average falls by 12.92% as terrorist incidents increase by one unit.

Table 2

Estimated coefficients using the first model

Dependent Variable: TOUR			
Variables	**Coefficient**	**t-values**	**Prob-values**
C	13.812*	5.698	[0.000]
TER_t	-12.926**	-2.305	[0.034]
Trend	0.628	0.991	[0.336]
R^2 = **0.306**		F-Statistics = **3.750 [0.045]**	
Adjusted-R^2= **0.285**		Durbin-Watson stat =**1.689**	

NOTE: * &**represents the level of significance at 1%, 5% respectively.

The results obtained from model 2 are reported in table 3. The number of lags included in the model was determined by their statistical significance. Lags of terrorism variable were significant up to second lag. Application of third lag and above is insignificant but still negative. The results of autoregressive model reaffirm our second hypothesis. It shows that effect of terrorist incidents lasts for two years and adversely affects the tourism receipts.

Table 3

Estimated coefficients using the Second model

Dependent Variable: TOUR		
Model with 1 Lag		
Variables	**Coefficient**	**t-values**
C	17.145	0. 2894
TER_t	-1.962**	-1. 9789
TER_{t-1}	-2.217**	-1. 9095
Trend	0.9024*	2.9192

R^2 = **0.508**	F-Statistics = **5.119 [0.012]**	
Adjusted-R^2= **0.497**	Durbin-W stat =**1.810**	
Model with 2 Lags		
C	14.831*	2.849
TER $_t$	-1.196**	-1.877
TER $_{t-1}$	-1.784*	-3.925
TER $_{t-2}$	3.732**	1.982
Trend	0.834*	3.237
R^2 = **0.606**	F-Statistics = **4.999** [**0.011**]	
Adjusted-R^2= **0.585**	Durbin-W stat =**1.975**	
Model with 3 Lags		
C	19.307**	1.972
TER $_t$	-0.997*	-2.480
TER $_{t-1}$	-1.684*	-2.77
TER $_{t-2}$	-3.772***	1.851
TER $_{t-3}$	-0.564	-0.082
Trend	0.801*	2.673
R^2 = **0.599**	**F-Statistics =** 3.287 **[**0.046**]**	
Adjusted-R^2= **0.574**	**Durbin-W stat =**1.859	

Note: * &**represents the level of significance at 1%, 5% respectively.

Examination of results in table 3 shows that all the three models pass the diagnostic tests of heteroscedasticity and autocorrelation. The models have a reasonable explanatory power (R^2) and F-statistics is highly significant in all the three models.

5. CONCLUSION AND POLICY IMPLICATIONS

Pakistan is one of those countries in the world in which tourism is a substantial share of overall economic activity but it is quite vulnerable to the adverse economic effects of terrorism on tourism, because tourism is such a significant part of their overall economic

activity. The study results have shown that the September event caused a significant decrease in tourism revenue. This decrease in revenue might be related to the lower benefits that the activity of tourism generated to the individual after the terror shock, and can be explained because of the state of anxiety surrounding the tourism industry. In earlier research, Pizam and Fleischer (2002) found that when terrorist events are not repeated, the industry can fully recover in a period of six to twelve months. However, these results obtained contradictory to the present study. It has been estimated the adverse impact of fall of tourism revenue lasts for two years after a terrorist attack.

No one is sure for how long this slump in the tourism industry will last. It all turns on how quickly confidence can be restored in the minds of potential travelers regarding airline safety and convenience. If the global coalition of countries combating terrorism is successful at rounding up terrorists, destroying their networks, and confiscating their finances, then perhaps confidence will be restored and international travel will return to some semblance of normalcy.

The results of this study could have relevant implications for managing security and image at destinations. In an increasingly insecure and threatened environment, destinations should anticipate and prevent major incidents, terror attacks, and their consequences.