



### Article Title

Localized Revenue Implications of Severe Tornado Outbreaks on the Lodging Industry

### Citation

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### Abstract

In 2011, significant tornado outbreaks occurred throughout the United States. The property damage from these tornadoes was record breaking at over \$28 billion. The impact of these tornadic events on the lodging industry, however, was not as extreme and in some instances was financially beneficial. This study evaluated the revenue implications of severe tornado events on the lodging industry. Using data provided by the National Oceanic and Atmospheric Administration (NOAA) and Smith Travel Research (STR), the lodging industries of 17 counties impacted by either EF4 or EF5 (enhanced Fujita scale) tornadoes were analyzed.

### Methods

Descriptive statistical analyses were used to examine the lodging performance data of the 17 counties of interest. The two-standard deviation band method was then performed for the counties' occupancy percentage, ADR, and RevPAR to detect any statistically significant differences in the operating ratios after the tornado events.

### Results

Results indicated that the lodging operations in all 17 counties experienced an occupancy percentage increase for multiple days after tornado events. Only five counties experienced significant increases in average daily rate (ADR) for seven days following tornado events. All but one county experienced increases in revenue per available room (RevPAR) following tornado events. This suggests that gains in RevPAR were influenced more by increased occupancy opposed to inflated room rates.

### Conclusion

The findings may also be useful to both investors and insurance underwriters as they consider the risks involved with hotel properties in tornado-prone areas. A severe tornado event may not have the negative risk implications one might think. The counties examined in this study experienced minimal hotel room inventory losses after extreme tornado events occurred.