

# Deadly Dates

## The Effect of Holy Days on Terrorism

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# Question

How do Islamic holy days affect the incidence of terror attacks?

# Evidence for an Increase

“Jihad fighters... [t]his month of Jihad (Ramadan) has come with all its blessings and with the double reward [granted to Jihad fighters] in its course. Come closer to Allah through the blood of infidels, do not relent in spilling [their blood]...!”

*-Saud Bin Hamoud al-Utaybi  
Senior Member of AQAP*

# Evidence for a Decrease

- Ashura commemoration in Karbala, Iraq (2012)
  - 2 million+ pilgrims gathered in Karbala for the holiday
  - No attacks occurred



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  - Civilian sensitivities to violence (Reese et al., 2017)
  - Religious respect (Hassner 2011)

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  - Decreased likelihood during short holidays (Eids)
  - Increased likelihood during long holidays (Ramadan)

# Theory

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  - Skyjackings and kidnappings (Landes, 1978)

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  - Challenges government legitimacy
  - → Imposes relatively more terror than other days

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  - Leads to heterogenous holiday effect

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- Muharram & Ashura in Pakistan

# Hypotheses

|     | Day Type              | Expectation |
|-----|-----------------------|-------------|
|     | Non-holiday           | Baseline    |
| H1: | Short Islamic Holiday | ↓           |
| H2: | Long Islamic Holiday  | ↑           |

# Data

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  - Population (km<sup>2</sup>)
  - Road density

# Dependent Variable

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  - Only 5% of province/RC days experience more than one attack

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  - Only 5% of province/RC days experience more than one attack
  - 15% of observations coded '1'

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  - Short Holidays: 18%
  - Long Holidays: 34%



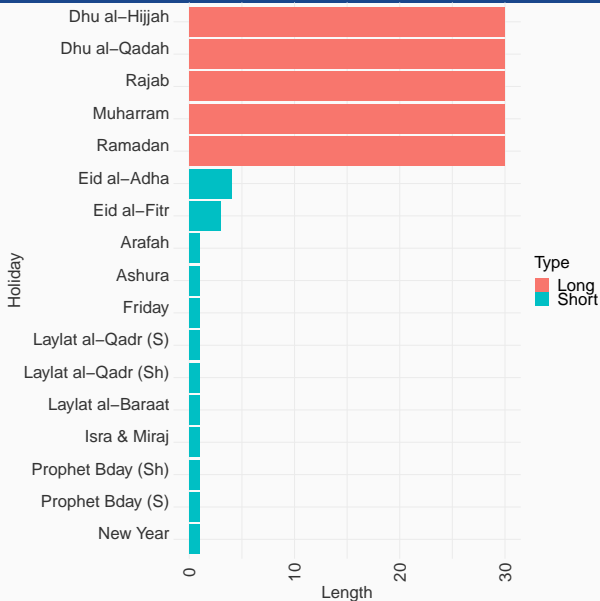
# Key Independent Variable

- Categorical variable with three levels
  - Non-holidays: 48% (baseline)
  - Short Holidays: 18%
  - Long Holidays: 34%
- Coding of individual holidays relies on data from Reese et al. (2017)

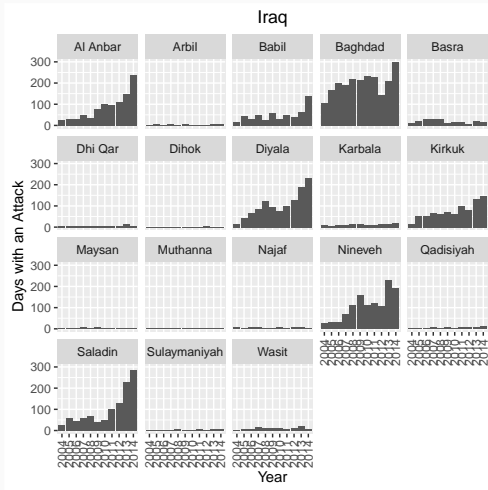
# Key Independent Variable

- Categorical variable with three levels
  - Non-holidays: 48% (baseline)
  - Short Holidays: 18%
  - Long Holidays: 34%
- Coding of individual holidays relies on data from Reese et al. (2017)
  - Different categorization scheme

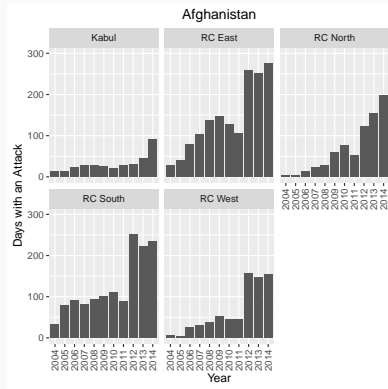
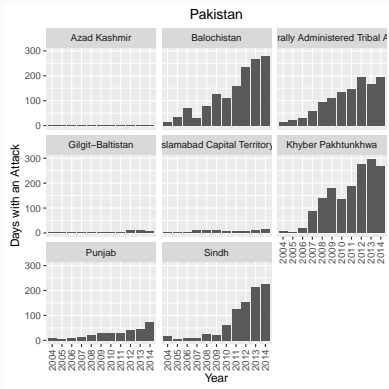
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# Model

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# Multilevel Model

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  - Predictors at different levels: population and temperature

$$p(y_{ijk} = 1) = \text{logit}^{-1}(\beta_0 + \beta_1 \cdot X_{1ijk} + \beta_2 \cdot X_{2jk} + \beta_3 \cdot X_{3k} + \text{provyear}_{jk} + \text{prov}_k)$$



# Results

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# Logistic Regression Results

| Expectation | Day Type      |
|-------------|---------------|
| H1: ↓       | Short Holiday |

\*p < .05

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| Expectation | Day Type      | Coef    |
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| Expectation | Day Type      | Coef    | SE    |
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| H1: ↓       | Short Holiday | -0.276* | 0.027 |

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| H2: ↑       | Long Holiday  |         |       |

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| Expectation | Day Type      | Coef    | SE    |
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| H1: ↓       | Short Holiday | -0.276* | 0.027 |
| H2: ↑       | Long Holiday  | 0.051*  |       |

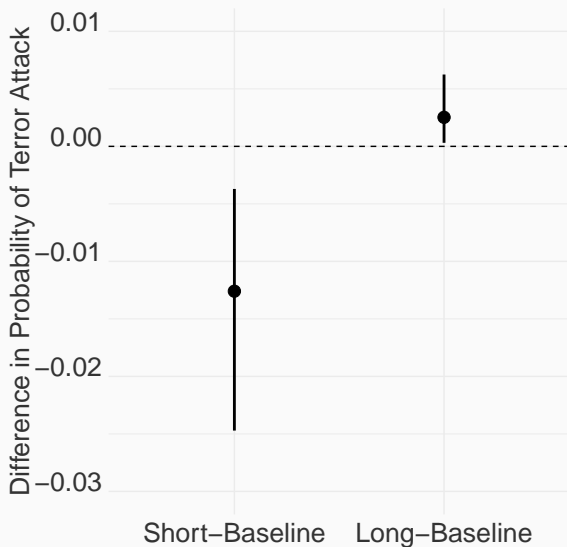
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| Expectation | Day Type      | Coef    | SE    |
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| H1: ↓       | Short Holiday | -0.276* | 0.027 |
| H2: ↑       | Long Holiday  | 0.051*  | 0.021 |

\* $p < .05$

# First Differences





## Conclusion + Next Steps

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- Model government/terrorist learning



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