EXPLORING TERRORISM, OIL AND ETHNICITY IN IRAQ

Introduction

Since 2003, Iraq has been mired by conflict. One of the greatest security challenges facing the country over the last decade in particular has been terrorism. In fact, according to the Global Terrorism Index, Iraq has the highest “Terrorism Index” in the world as of 2011, this index considers incidents, fatalities, injuries, and property damage due to acts of terrorism in the country.

What factors contribute to this continuing trend of violence in a country that is no longer officially “at war”? A common explanation for the high degree of conflict circulating in foreign policy circles relates to Iraq’s ethno-sectarian composition. Specifically, Iraq is divided into three major groups: Sunnis, Shiites, and (predominantly Sunni) Kurds, with other significant minorities interspersed throughout the territory. The nation’s political landscape increasingly reflects this composition, as Iraq’s 18 governorates (provinces) have become more homogeneous since the US invaded a decade ago, suggesting decreasing cooperation and trust between these groups over this time period. This said, a range of ethnic and religious groups have inhabited the land that is Iraq for centuries; while violence has ebbed and flowed over time, it alone cannot explain the country’s current state of violence.

Over the last decade, Iraq’s oil production has rapidly increased, as has the nation’s revenue stream from exporting the lucrative natural resource. Iraq is now the world’s third largest oil exporter, behind only Saudi Arabia and Russia, according to the BBC, and as the nation’s extraction and refinery technology is still maturing, these exports will continue to grow. Moreover, oil revenue comprises a huge sum of the nation’s income: in 2011, oil exports accounted for 95% of government revenues and over 70% of GDP, according to the International Energy Agency.

Capital is not the only thing that oil has generated in Iraq over the last several years. Conflict in the country is surely also a product of the nation’s reliance on this single resource. Competition for access to the fact that refinery and exportation require international private companies to base themselves inside the country, and its use as a political tool are all potential explanations for why oil has had the impact that it has. As determining the precise reasons for why oil sparks conflict is beyond the scope of this poster however, the analysis instead aims to illuminate the relationship between locations of incidents of terrorism and oil in Iraq, while considering certain population’s characteristics that may be related as well.

Visualizing Poverty, Oil and Conflict

Limitations

Unfortunately, limitations regarding the accuracy and detail of the data used in this presentation are numerous. The first issue stems from the Global Terrorism Database; it is littered with important omissions regarding location and date, and even where locations were given I often had to estimate the closest point on the file with which I was joining. As a result, the hot-spots are but rough estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations. Another distinct issue regarding conflict is that the only data readily available on terrorism, which is not a safe proxy for conflict overall. More generally, alternative estimations.

Conclusions

It is clear from the graphics shown here that there is a correlation between the location of oil and terrorist attacks in Iraq. Interestingly, it seems as though these two factors are also closely correlated with intersecting/overlapping ethnic boundaries. Conversely, the relationship to poverty is not as evident from the images provided, though this may be due to the fact issues discussed in the limitations section (rapid changes, lack of specific data).

This analysis provides no firm answers, but is a good jumping off point for further exploration of the relationship between oil and conflict in Iraq. It would be interesting to map out shifts in ethno-sectarian composition over time, to see if the demographic changes correlate with new oil discoveries or infrastructure in the country. Similarly, mapping shifts in the most lucrative or busiest/largest oil-related sites from 2003-2011 to see if they align with the shifts in “hot-spots”, on the right, would provide more substantial proof that the relationship between oil and terrorism in Iraq is a causal one.

Geospatial Techniques Employed

I then created four separate raster files of the terrorist incidents: one for years 2003-2006; one for the years of the US Troop Surge, 2007-2008; one for 2009-2011, and one for 2003-2011. I used the “kernels density” tool to create hotspots of this data; examples of the result of this process are available on the right side of this poster. For the 2003-2011 raster data set, I reclassified the raster categories as “high violence”, “medium violence”, “low violence”, and “no violence”, and used the “conversion” tool to convert this raster file into a polygon file with the four categories just mentioned.

Ethnicity, Oil and Terrorism: 2003-2011

Another population characteristic often associated with conflict is poverty. I depicted poverty by governorate for lack of more precise data, in the two images immediately to the left on this poster. I imported this data into ArcGIS by joining it to a shapefile of governorate polygons. Also depicted in this corner is my attempt to drive home the correlation between oil and conflict. To show this, I made one shapefile from all manifestations of oil in Iraq by using the “union” tool, and then created a 20Km dissolved buffer around the file. I used 20Km because I estimated that an average community living within 20Km of oil would likely be impacted by its presence in some way.