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Theme 2- Economic and Decision Models of Terrorist Enterprises

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National Center for Risk and Economic Analysis of Terrorism Events
University of Southern California
Los Angeles, California

Theme 2 – Economic and Decision Models of Terrorist Enterprises
October 2010 to September 2011

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Other Contributing Investigators: Lindsay Heger, University of Denver

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Department of Homeland Security

December 31, 2011
ABOUT CREATE
The National Center for Risk and Economic Analysis of Terrorism Events (CREATE) was the first university-based Center of Excellence (COE) funded by University Programs of the Science and Technology (S&T) Directorate of the Department of Homeland Security (DHS). CREATE started operations in March of 2004. This annual report covers the seventh year of CREATE funding from October 2010 to September 2011, the first year under Cooperative Agreement 2010-ST-061-RE0001 from DHS. While the text of this report focuses on the seventh year, all data tables, publications, lists of participants, students, and presentations and events are cumulative from the inception of CREATE.

CREATE’s research mission is to develop advanced models and tools for risk assessment, economic assessment, and risk management to counter terrorism. CREATE accomplishes this mission through an integrated program of research, education, and outreach, spanning the disciplines of economics, psychology, political science, industrial and systems engineering and information science. CREATE develops models, analytical tools, methodologies and software, and tests these tools in case analyses, representing critical homeland security investment and policy decisions.

Due to the cross-cutting nature of research in risk, economics, and risk management, CREATE serves the need of many client agencies at the DHS, including the Transportation Security Agency, Customs and Border Protection, Immigration and Customs Enforcement, FEMA and the US Coast Guard. In addition, CREATE has developed relationships with clients in the Offices of National Protection and Programs, Intelligence and Analysis, General Council, Health Affairs, and Domestic Nuclear Detection. Using a mix of fundamental and applied research, CREATE faculty and students take both the long-term view of how to reduce terrorism risk through fundamental research and the medium-term view of how to improve the cost-effectiveness of counter-terrorism policies and investments through applied research.

Please visit www.create.usc.edu for more information.
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1. Executive Summary

Berman’s team, in collaboration with Dr. Lindsay Heger, have been investigating complementary models describing the behavior of terrorist enterprises.

Ultimately, we hope that policy makers and researchers will find the results of our projects enlightening and useful in developing effective counterterrorism. Below we provide a brief description of each project.

Project 1: Clubs or Hearts and Minds

Goals:
Two types of terrorist enterprises have been identified: the conventional “Hearts and Minds” insurgent organization, which sometimes targets civilians and carries out terrorist attacks, and the more recent “club”, which is capable of high value terrorist attacks. Unfortunately, in current conflicts in Afghanistan, Iraq, Pakistan and other areas the distinction between clubs and conventional insurgents is unclear. For that reason a first order research priority is discovering the nature of the terrorist enterprises. Our aim is to do that in two ways: by studying how tactic choice (suicide attacks vs. IEDs) vary with the support of noncombatants for insurgents and the hardness of targets; and by evaluating the success of different types of constructive counterinsurgency policies against these enterprises. Building on our success in Iraq, recently established data declassification and sharing arrangements with NATO forces in Afghanistan will allow a much more extensive set of tests of these underlying theories. Those tests include evaluation of both training and reconstruction programs in Afghanistan.

Background:
While we have known since the Marine barracks attack of October 1983 in Beirut that a more lethal form of terrorist enterprise had evolved, it is only recently that the reasons for its potency have become well understood. We conjecture that the modern form is an economic “club” that derives its capacity to execute high-value attacks from an ability to select defection-resistant recruits (Berman and Laitin, 2008). That ability, in turn, is based on a service provision base rooted in traditional mutual aid. The “Hearts and Minds” insurgency, in contrast, is less defection-resistant and thus attempts only low value attacks, creating little or no threat of international terrorism (Berman et al., 2009). It can be undermined by convincing noncombatants to share information with counterinsurgents about the location and identity of attackers –often by winning their support through provision of basic services, and a combination of political and economic development. This is possible because that conventional insurgency leaks information. Clubs, on the other hand, cannot be defeated through leaks from noncombatants –leaks from
the inside are required. Undermining them should be achievable by a different mix of coercive and benign measures, including direct competition with the services provided by the club’s organizational base.

Project 2: Terrorist Target Choice

Goals:
Terrorist groups choose targets that maximize their ability to extract political concessions. The goal of this project is to develop a better understanding of how political institutions affect a group’s targeting decision. Groups attack those things that pressure politicians and those things that pressure politicians are largely determined by the political institutions set in place. The goals of this project are to understand a) how political institutions incentivize groups to attack certain targets and b) how groups respond to those incentives. For instance, in democracies political institutions empower civilians, but by doing so they also make them attractive targets for terrorist groups. In non-democracies, this is not necessarily the case. This is a simple example. In some instances the political ties and connections states develop with other states (their allies) can make them attractive targets for groups hoping to gain concessions from the partnering country. One of the primary tasks of this project is to understand how US political connections in Iraq, Afghanistan, and Pakistan affect the likelihood of groups attacking US targets, including US civilians within the US.

Background:
This project is based on the theory that groups choose targets strategically to maximize their political influence. As such, political institutions play a key role in determining who or what is valuable to political officials and, thereby, an attractive target for terrorists. The theory is based on Heger (2010) who finds strong connections between democratic institutions and the probability that a group will target civilians. If terrorist enterprises maximize their ability to extract policy concessions, they will therefore make target choices based on political institutions that make governments sensitive to their demands (e.g., by attacking civilians, violent groups terrorize that segment of a democratic society that is most able to pressure a politician into granting concessions via the electoral mechanism). Similarly, if a government is largely dependent on economic or political relations with foreign allies, it will be more sensitive to attacks by local terrorists on foreign targets, providing an incentive for international terrorism. Understanding the drivers of international, as opposed to localized, terrorism is timely, as policies implemented now in Iraq, Afghanistan and Pakistan are likely to empower some violent enterprises at the expense of others.

Project 1: Clubs or Hearts and Minds

Keyword 1: Club Model
Keyword 2: “Hearts and Minds”
Keyword 3: Service Provision
Project 2: Terrorist Target Choice

Keyword 1: Terrorism
Keyword 2: Terrorist Targets

2. Research Accomplishments

Project 1: Clubs or Hearts and Minds (Eli Berman)

The aim of this project is to discover the nature of the terrorist enterprises (i.e., which model best applies to understanding these organizations). First, by studying how an organization’s tactic choice (suicide attacks vs. IEDs and direct fire, for instance) varies with the support of noncombatants for insurgents and with the hardness of targets. Second, by investigating to what extent reconstruction
spending by the U.S. Military under the Commander’s Emergency Response Program (CERP) and other related funding mechanisms reduces violence of different types.

To meet those two goals we have been geographically and temporally matching two data sets, the Worldwide Incidents Tracking System (WITS) data (Wigle, 2010) to a district level dataset already constructed on Iraq by the Empirical Studies of Conflict (ESOC) project. The former contains information about fatalities, perpetrators, targets and types of attacks. The second provides extensive data on local demographic characteristics and voting patterns by district, while also including levels of CERP spending and administrative data on attacks by type, so-called SIGACTs (which provides cross-validation for WITS).

To date we have identified the WITS data and have made considerable progress in coding the Iraq district data. While the latter exist now in usable form, matching them to WITS and cleaning the WITS into usable form are time-consuming activities which will continue.

Our work in Afghanistan has attempted to pursue the analogous question with Afghan data. Unfortunately, our ongoing efforts have failed to secure ongoing release of SIGACTs data for Afghanistan in a form that will provide replicable data for researchers. Travel to Afghanistan to confer with the relevant authorities at the ISAF Joint Command (IJC) has failed to secure those data so far. We have continued to pursue research with previously released data, utilizing the insights of practitioners from U.S. Forces Afghanistan (USFOR-A) with whom we met on research trips.

Project 2: Terrorist Target Choice (Lindsay Heger)

The aim of this project is to develop a theory about and test how political institutions impact a terrorist group’s targeting decisions. The project is premised on the idea that groups will react to the incentives generated by political institutions, therefore, I anticipate groups will select targets that are empowered vis-à-vis the political process.

In developing this idea, I have made two significant steps forward. First, I have begun work on a theory about how groups attacking domestically respond to democratic institutions. The theory is premised on earlier work by scholars in comparative politics about the influence of a regime’s minimum winning coalition and selectorate. The ideas generated at this stage are particularly useful in understanding how and why terrorist organizations may be reacting to incentives from US-based democratic institutions. To extend the theory I have also begun work on how institutions in various forms of non-democracy predict targeting patterns, a theoretical aspect of the project I hope to complete very soon and one that I anticipate will generate significant hypotheses about the conditions under which terrorist groups from abroad (largely from those states we are allied with or have a presence in) will attack US targets.

Second, I have acquired data to test my preliminary theoretical predictions. Initial analysis from this data indicates strong support for my early hypothesis. More specifically, I find a strong link between civilian targeting and democratic institutions. Groups that attack in democracies are more likely to target civilians compared with their counterparts operating in countries with non-democratic forms of government. This finding is robust to the inclusion of a variety of controls and different modeling specifications. The next step in this process, and one that corresponds with subsequent stages of theoretical development, is to establish how different forms of non-democracy and political institutions in flux (transition) affect patterns of targeting.

3. Applied Relevance

Project 1: Clubs or Hearts and Minds (Eli Berman)

Discovering the nature of organizations helps us understand their capabilities and vulnerabilities. A realistic understanding of capabilities can inform homeland security policy, informing DHS officials, for

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1 See The Logic of Political Survival (2003) by Bruce Bueno de Mesquita, Alastair Smith, Randolph M. Siverson, and James D. Morrow for more on these concepts.
instance, on what type of organization presents a credible threat of terrorism in the U.S., as opposed to a violent threat to government and civilians in their country of origin. Understanding whether organizations are vulnerable to leaks from noncombatants—which conventional insurgents are, informs homeland security officials as to where one can seek operational intelligence on these organizations.

Project 2: Terrorist Target Choice (Lindsay Heger)

The work and results generated in project two on targeting decisions has several significant applications for DHS and other government agencies. First, the theoretical model will generate specific predictions about how US foreign policy and involvement in other areas of the world may incentivize terrorist groups to attack US targets (abroad or domestically). Second, the models used to test these theories will generate evidence that may be useful for various government agencies charged with protecting US targets and borders. Finally, latter stages of this project will shed light on how specific US involvement in the development process (e.g. establishing policing procedures) affects the likelihood of attack on US targets.

4. Collaborative Projects

The resources of the Minerva “Terrorism, Governance, and Development” grant are being leveraged along with this CREATE agreement to conduct the research. We continue to collaborate with USAID and the World Bank on investigating the role of economic development in conflict areas. In addition, we have leveraged the expertise of scholars who we gathered to conduct a training workshop on political violence in June 2011, which was sponsored by the National Science Foundation.

5. Research Products

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5.1. Publications and Reports

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<td><strong>Berman, Eli – University of California, San Diego</strong></td>
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<td>1. Eli Berman, Jacob N. Shapiro and Joseph H. Felter,</td>
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## CREATE PUBLICATIONS

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## 5.2. Presentations

### PRESENTATIONS - CONFERENCES

**Berman, Eli - University of California-San Diego**


### PRESENTATIONS - OUTREACH EVENTS

**Berman, Eli - University of California-San Diego**


## 5.3 Education and Outreach Products

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1 Completed postdoc position. Currently employed at University of Denver.
2 Graduated from UCSD. Currently postdoc at IGCC under Eli Berman.
3 Graduated from UCSD. Currently employed at US Department of Treasury.

MEETINGS WITH EXTERNAL ORGANIZATIONS

- Office of Secretary of Defense
- ISAF Counterinsurgency Advisory and Assistance Team
- ISAF Joint Command
- U.S. Forces - Afghanistan
- American University of Afghanistan, Kabul
- World Bank
- U.S. Agency for International Development, Development Innovation Ventures
- Former Foreign Secretary of Bangladesh
- Parliamentary delegation from Pakistan

Other Outreach

Radical, Religious and Violent Book Review


Interviews and Op-eds on the Death of Osama Bin Laden


Other Citations


http://www.guardian.co.uk/commentisfree/2011/may/03/are-islamist-terrorists-basically-altruistic

http://foreign.senate.gov/reports/

http://www.newstrackindia.com/newsdetails/244260

Conference co-sponsored: IGCC Fellows’ Day

IGCC awards fellowships for graduate research on topics of international conflict and cooperation, using funding from a competitive systemwide UC grant. Graduate students across UC campuses have recently taken an increased interest in insurgency and terrorism in particular, and in political violence in general. About half of this years’ grantees conducted research on terrorism and insurgency.

IGCC held its first thematic Fellows’ Day on these topics on March 2, 2011 at UC San Diego, bringing together faculty and students from UC San Diego, UC Berkeley, and UC Irvine for a one-day workshop. Additional funding for the workshop was provided by the National Center for Risk and Economic Analysis of Terrorism (CREATE).

IGCC Dissertation Fellowship recipients presented and discussed each other’s papers, with additional discussion coming from UC San Diego faculty and from postdoctoral scholars in our Development and Conflict research program. Papers reported empirical results from four continents, covering a broad range of topics: post-election ethnic violence in Kenya; policing in counterinsurgency in Iraq and Afghanistan; state-sponsored terrorism in the Middle East and Asia; optimal management structure of criminal gangs in Mexico, Colombia, and the United States; and lethal attacks against aid workers in several countries.