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**Research Report**

## Do Poor Economic Conditions Affect Terrorism?

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Claude Berrebi and Esteban F. Klor



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- **Do economic conditions affect the quality of terrorism?**
- **Are different types of terrorist organizations affected differently by changes in economic conditions?**
- **Do economic conditions affect the frequency of terror attacks?**

**Summary:** While the existing empirical literature shows that poverty and economic conditions are not correlated with the *quantity* of terror, theory predicts that poverty and poor economic conditions may affect the *quality* of terror. Poor economic conditions may lead more able individuals to participate in terror attacks, allowing terror organizations to send better-qualified terrorists to more complex, high-impact terror missions. Using data on Palestinian suicide-terrorists, we provide evidence of the correlation between economic conditions, the characteristics of suicide terrorists, and the targets they attack.

# POLICY BRIEFING

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## Do poor economic conditions affect terrorism?

### Introduction

Do poor economic conditions affect terrorism? A growing body of empirical literature shows that poverty and economic conditions are not directly correlated with the occurrence of terrorism (e.g. Abadie 2006). The lack of correlation between the frequency of terror attacks and economic conditions, combined with the privileged background of suicide terrorists found in earlier studies (e.g. Benmelech and Berrebi 2007; Berrebi 2007) suggests that economic conditions do not have a direct and straightforward effect on terrorism. Indeed, our findings establish unambiguously that economic conditions have no consistent and statistically significant impact on the frequency of suicide terrorism (Benmelech et al., 2012). However, economic conditions may affect terrorism through other, indirect, channels.

While economic conditions do not affect the level of terrorism, they may impact the nature and type of terror attacks. Studying the connection between the *quality* of terrorism and underlying economic conditions makes an important contribution to the related empirical literature, which has, so far, focused exclusively on the relationship between economic conditions and the *quantity* or amount of terror.

The notion that economic conditions may correlate with the *quality* of terrorism has been suggested by Bueno de Mesquita (2005). According to his theoretical analysis, if terror organizations select suicide terrorists from a large supply of volunteers,

they can choose better-qualified suicide terrorists under adverse economic conditions, even if the launching of a terror campaign and the *quantity* of terrorism are driven by strategic decisions that terror organizations make irrespective of economic conditions. In other words, we should observe that economic conditions affect the *quality* (rather than the *quantity*) of terrorism.

Our study (Benmelech et al., 2012) offers the first systematic analysis of the link between economic conditions, the quality of suicide terrorists, the characteristics of their targets, and the outcomes of their attacks.

## Data

Our data combines detailed information on the universe of Palestinian suicide terrorists during the Second Intifada with data on earnings and labor-force participation in the West Bank and Gaza Strip as well as data on Israeli counterterrorism measures.

The data set on Palestinian suicide terrorists contain detailed information on terrorists' characteristics, characteristics of the targets, and outcomes of the attacks for all Palestinian suicide terrorists who attacked (or attempted to attack) targets in Israel, the West Bank, and the Gaza Strip between September 2000 and December 2006.

## High unemployment allows organizations to recruit more educated and able terrorists

Our analysis differentiates between suicide terrorists of high and low quality. We determine suicide terrorist quality on the basis of information on education, past involvement in terror activity, and age. Suicide terrorists of high quality are associated with more complex terror attacks, more important targets, and better outcomes for the terror organizations (Benmelech and Berrebi 2007).



Figure 1. Number of suicide terrorists originating from different districts

The data on economic and demographic variables are culled from the Palestinian Labor Force Survey (PLFS) of the West Bank and Gaza Strip. We use these micro level data from all quarterly surveys between 2000 and 2006 to calculate economic and demographic variables at the district-quarter level. Finally, our analysis includes data on Israeli security measures and district levels of violence.

## Empirical framework

To test the relationship between economic conditions and quality of terrorism, we focus exclusively on district-quarter cells that originated at least one suicide attack. We assign to every suicide terrorist the prevailing economic, demographic,

and security conditions in his or her district in the quarter preceding the attack to further address the possibility of reverse causality. As proxies for the quality of suicide terrorism we use the characteristics of the suicide terrorists, their targets, and the outcome of each attack. We then test the effect of poor economic conditions on the quality of suicide terrorism.

Our detailed data set allows us to overcome the difficulties associated with the task of estimating the causal effects of economic conditions on the quality of suicide terrorism. First, our data set allows us to overcome serious concerns related to selection bias, whereby one reaches conclusions while only observing a specially selected subgroup of that pool.

Our study does not suffer from a selection problem because we use information on all suicide terrorists—those that died while committing an attack and those caught by the Israeli Security Forces. Second, by focusing on districts under the control of the Palestinian Authority, we do not have to worry about common factors (like geography, colonial history, ethnic composition, political institutions, and religion

affiliation) that may be correlated with terrorists' characteristics. Third, we are able to control for counterterrorist measures enacted by the Israeli government in the aftermath of an attack that may also affect economic conditions. In addition, the longitudinal dimension of the data provides a sequential order of the events of interest, allowing us to observe the effects of past economic and demographic conditions on subsequent characteristics of suicide terrorists and their attacks.

### The impact of economic conditions on the quality of suicide attacks

Our results support the hypothesis that poor economic conditions affect the quality of suicide terrorists. Higher unemployment rates (whether general or group specific), and higher income inequality are associated with more educated, more mature, and more experienced suicide terrorists. In particular, one standard deviation increase in the level of unemployment causes an increase of 34.3% on the probability that the suicide terrorist has some academic education relative to their mean education level. Similarly, a standard deviation increase in the level of unemployment is associated with a 5.57% increase in the probability that the terrorist is more than 20 years old, and a 33.5% increase in the probability that the terrorist was previously involved in terror activities.

Our results also confirm that economic conditions have a significant effect on the importance of the localities targeted in suicide attacks. Higher

## Hamas increases terrorist intensity during difficult economic times

unemployment rates and greater inequality significantly increase the likelihood a city with a large population is targeted. In particular, one standard deviation increase in unemployment or inequality induces a 17.6% or 25.7% respective increase in the probability that the targeted city has a large population relative to the mean number of large cities.

In summary, we show that there is a strong correlation between economic conditions, characteristics of suicide terrorists, and the targets they attack. High unemployment allows terror organizations to recruit more educated, mature, and experienced suicide terrorists who, in turn, attack more important targets.

### Economic conditions and suicide attacks across factions

Several Palestinian factions were involved in suicide terrorism during the Second Intifada. Each was closely associated with one of the three main Palestinian political organizations: Fatah, Hamas, and Palestinian Islamic Jihad (PIJ). Two important differences between these groups are in their level of religiosity and the extent to which they provide public goods and services.

When taking into consideration that the value of public services tend to increase in recessionary economies, a combination of the "club model" (Berman and Laitin 2008) and Bueno de Mesquita's (2005) theory of the quality of terrorism implies that religious clubs are more likely to commit suicide attacks when economic conditions are bad.

The results of our analysis confirm the hypothesis about the effect of economic conditions on religious factions that provide excludable public services. In particular, we find that Hamas is the most sensitive of the organizations to the unemployment rate, with an increase of more than 4 percentage points in the number of suicide terrorists attacks dispatched for every 1% increase in unemployment. The marginal effect of unemployment for Fatah is negative and

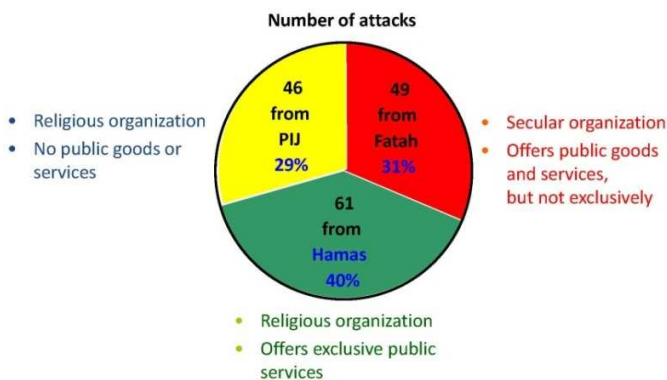


Figure 2. The division of attacks between the main Palestinian factions during the second intifada



statistically significant although of lesser magnitude than the decrease observed for PIJ.

Our results show that poor economic conditions do not enhance the quality of terror equally among different organizations. We find that groups that provide excludable public services (i.e., Hamas) are able to increase their ability to commit terror attacks during difficult economic times. The magnitude of the effect of economic conditions on the number of attacks by groups that provide non-excludable public goods (i.e., Fatah) is not as important, whereas the ability to commit suicide attacks of groups not associated with the provision of any public services (i.e., PIJ) decreases significantly during recessionary economies.

### Policy recommendations:

Our results have several implications for the design of efficient counterterrorism policies. The most common counterterrorism policies aim to incapacitate terror organizations by cracking down on their members and enacting security measures that diminish the probability of success of a planned attack. The connection between economic conditions and the quality of terrorism suggests that policies intended to improve economic development and stimulate economic growth may reduce the quality, and thus the threat, of suicide terrorism.

The suggested policy implications have, however, one important caveat. Institutions that provide economic aid geared to stimulate economic sustainability should pay particular attention to the ideology and political objectives of the local organizations that will be administering said aid. Even if these local organizations use the donors' aid to provide important public services (e.g., education and health), our analysis shows that this aid may allow terror organizations to coerce the local population into increasing violence and terrorism.

### Credits

This EUSECON Policy Briefing was authored by Claude Berrebi and Esteban F. Klor from The Hebrew University of Jerusalem. The views expressed in this briefing are the authors' alone.

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