

# Book Review

## Alan B. Krueger: *What Makes a Terrorist: Economics and the Roots of Terrorism*.

Princeton: Princeton University Press, 2007  
(paperback): 194 pp.

Letting loose economists on non-economic social phenomena has, by and large, been a boon for the social sciences. They have brought with them a keen eye for data, new analytical tools, genuine curiosity, and a rigorous focus on the micro-foundations of social behaviour.

Yet there are cases when the economist's gaze on large social phenomena can obscure as much as clarify. This is the case with many existing economic analyses of political violence—*vulgo* 'terrorism'. The discipline's relentless drive to generalize stands in tension with the complex and context-dependent nature of the phenomenon.

Alan Krueger's effort to tell us 'What Makes a Terrorist' positions itself squarely in the deductive and quantitative tradition of economics. That much is welcome in a field which has produced much woolly and sensationalist babble on the basis of little data and cogent theorizing. Drawing on standard econometric tools, the book aims to tell us which micro- and macro-factors are correlated, and which ones are not correlated, with political violence. Yet ironically, it seems to fall into the same trap that many self-appointed 'security experts' have stumbled into: it does not do the boring, but necessary, empirical legwork that would be required to delimit the phenomenon and classify its sub-categories before any extrapolation is attempted.

This is why the generalizations that Krueger constructs on the basis of a limited number of quantitative case studies—apparently based on 'convenience sampling'—stand on rather earthen feet. Political violence is a phenomenon whose general dynamics are not easily captured through either synecdochic case studies or through randomly assembled cross-sectional studies. Instead, a descriptive discussion would have been required as to which kinds of terrorism exist, what their broad socio-economic and cultural correlates are, whether we can generalize across them, and

if yes, which case studies are likely to be the most representative.

That this was not really attempted is regrettable, because the book is chock full of good conceptual insights and innovative ways of measuring micro- and macro-phenomena related to political violence. Some of the data are convincing and smartly analysed, but a cogent overall picture does not emerge. The internal validity of many results is questionable and their external validity is assumed rather than discussed.

The book is an edited version of a series of lectures Krueger gave at the London School of Economics in 2005 and that in turn were to a significant extent based on previous research papers of his. This might explain some of the patchwork nature of the overall opus.

Krueger starts with some observations on how economic theories of occupational choice could be useful for understanding who decides to become a terrorist. He argues throughout the book that terrorists are, on average, better educated and better off than the peers in their society of origin. But of course, he concedes, the opportunity cost of time for poor people should be lower, so they instead of their better situated compatriots should become radicalized. Out goes the theory of occupational choice, and in comes Krueger's analogy with voting behaviour, which he argues is based on a taste for ideology and voicing opinions that is more strongly developed among the better educated and privileged. The comparison makes sense, but rather leaves the reader wondering what economics has contributed to it.

In any case, the main ambition of the book is not to formally model the behaviour of militants, but to measure its political, geographic, socio-economic, and cultural correlates through econometric methods.

## First Lecture

The first chapter is largely dedicated to micro-level factors that are, and are not, correlated with individuals' violent activity as well as radical political attitudes, the main aim being to demolish the myth that poverty breeds terrorism.

Krueger starts with a regression analysis of hate crimes in Germany in the 1990s, demonstrating that if East and West are looked at separately, the economic conditions in the counties involved had no impact on

incidence of violence. His argument that hate crimes demonstrate the 'supply function' of terrorism in a purer way, as most perpetrators are not selected through an organization, is perceptive. At the same time, it is not clear whether right-wing hate crimes in post-unification Germany have much to do with the transnational Islamist violence that has been captivating our attention since 9/11.

The book subsequently shows poll results indicating that higher levels of education in a variety of Islamic countries are linked to more, rather than less, willingness to approve of suicide bombings in Iraq. In the case of the Palestine conflict, the unemployed in Gaza are the local group least supportive of attacks on Israel. Students appear the most supportive, although this might to some extent be explained by their age, which Krueger does not control for. Even so, professionals and merchants are the group with the second highest approval rates. This will come as a striking finding to many non-specialists—and makes sense to regional specialists who have documented the dominant role the professional middle class plays in Muslim Brotherhood-inspired movements such as Hamas.

Krueger then combines Lebanese census data and biographical information on 129 deceased Hizballah militants in a logistic regression that measures the factors that are correlated with participation in the organization. He finds that secondary or higher education and not being poor (both measured as dummies) make participation somewhat more likely. His comparison group, however, are districts with a strong Shiite presence, which on average tend to be worse off in Lebanon. Even if Hizballah militants in his sample might be slightly better off than their Shiite peers, the sect in general constitutes a group that is perceived as economically marginalized—but as environmental factors of radicalization are discussed in chapter 2, Krueger does not engage with this issue.

After pointing to a few other heterogeneous examples of well-educated radical groups, Krueger briefly addresses the puzzle of Northern Ireland's IRA, whose rungs have been predominantly working class. He points to political science findings that civil war—as opposed to terrorism—tends to break out in deprived areas, and that the IRA should rather be seen as an insurgent movement. This is plausible, not least as the Basque ETA group, which Krueger does not mention, has also been shown to have a very low share of educated members. But what does this tell us about Islamist insurgencies in Palestine, Iraq, the Philippines, Kashmir, Southern Thailand, and South Lebanon? A few pages before, Krueger (implicitly) used South

Lebanese Hizballah as an example of a conventional terror group, although historically it has probably been closer to the 'insurgent' ideal type than the IRA. The categories at use remain unclear and so do, therefore, the conclusions.

A more fundamental problem of the chapter is that one of his flagship tests of the micro-conditions of political violence actually does not involve any micro-variables: the regression on German hate crimes contains only meso-data on counties, no data on the perpetrators themselves. This would not be that problematic if (i) the test had been placed in chapter 2, which addresses environmental rather than individual correlates of terrorism and (ii) if individual-level data on hate crime perpetrators were not available. Unfortunately neither is the case.

There is a solid German literature showing that individuals committing hate crimes are disproportionately disadvantaged. The study by Willems *et al.* (1994) is based on a larger data set than Krueger's regression and has detailed socio-economic information on German hate crime perpetrators from the early 1990s. Their average educational attainment was abysmal: only 1.9 per cent had 'Abitur', the German A-level equivalent, and 1 per cent had university education; 60 per cent had attended the low-ranking 'Hauptschule'; and 6.5 per cent schools for pupils with learning disabilities. Around 20 per cent were unemployed, and among the suspects aged 25 and older, the unemployment rate rose to 40 per cent. Those in employment were mostly workers. Parents' social background was not necessarily marginal, but clearly below the German average.

The pattern of socio-economic deprivation appears both stronger and better evidenced than in any of Krueger's tests. Perhaps Krueger should not be expected to be aware of German language publications on the issue, but then his 1997 paper from which the hate crime regression is taken had a German co-author. Another German study (Decker and Brähler, 2006) shows correlations, although weak, between subjective economic deprivation and job worries on the one hand and extreme right-wing attitudes on the other.

Similar, though less comprehensive data exist on right-wing terrorists in US—arguably actors that are more representative of the organized political violence that we usually call 'terrorism'. Smith and Morgan (1994) present a sample of American militants in which only 12 per cent are degree holders and 33 per cent hold only a GED qualification or less. Many are impoverished and unemployed. Similar results are compiled in Handler (1990).

In contrast, left-wing terrorists are usually much better educated and come from middle and upper middle class backgrounds (see the classical survey by Russell and Miller (1977), as well the case study literature on various European leftist movements). Krueger's finding that 'the well-off and better educated are drawn to extreme positions' (p. 47) hence appears to paper over large categorical differences in the socio-economic backgrounds of left- and right-wing terrorists.

Although he never draws a clear line, one might argue that it is Islamist terrorists who are implicitly the main focus of Krueger's book. In this case, there are indeed many groups whose members are better off. This statement however conceals more than it reveals, as there are large differences between groups: transnational terrorists attacking Western targets tend to be from privileged backgrounds not least as this allows them to enter and operate in Western countries (cf. Sageman, 2004). In the Arab world, early socio-revolutionary Islamist militant groups operating in a domestic political context were often started in student and professional circles, such as Takfir wal-Hijra and Islamic Jihad in Egypt, the Fighting Vanguard group in Syria, or Hamas in Palestine (cf. Ibrahim, 1980).

These are however only two brands of Islamist militancy. Other forms have a different and usually quite distinct socio-economic profile: the numerous foot soldiers of insurgencies and separatist movements for example are often lower class. The followers of the most significant millenarian Islamist terror group of the 20th century—the Juhayman band occupying the Grand Mosque in Mecca in 1979—were mostly lower class (Hegghammer and Lacroix, 2007). Anecdotally, the same seems to be true about other millenarian groups as well as 'vigilantist' militant groups, whose aim is not so much international or local politic change as it is to violently punish perceived transgressors of Islamic moral codes.

Muslim radicals who have grown up in Western countries and engage in local violence there are at best of average socio-economic background and are often members of the lower class (Nesser, 2004; Gambetta and Hertog, 2007). Krueger in the annex to his book points out that radical Muslims in the US—where socio-economic integration of Muslims is more successful than in Europe—are not more educated than their non-radical Muslim peers (p. 169ff.).

There is another recent trend discussed among specialists of militant Islam that the book does not pick up: the increasing proletarianization of local

terrorism in the Islamic world. The cells that conducted the recent large attacks in Egypt and Morocco were formed among marginal Bedouin and slum-dwelling populations. Recent attacks in Syria were conducted by socially marginal radicalized youth. The Lebanese Fatah Al-Islam group that was involved in a bloody standoff with the Lebanese army in 2007 recruited among socio-economically marginalized Sunnis in Tripoli (Gade, 2007; see also Rougier, 2007).

This new phenomenon further undermines the utility of any generalization about Islamist militants' socio-economic background. Whatever averages we reach are almost meaningless because we are likely to lump together socio-economically, organizationally, and ideologically discrete phenomena that look quite different individually. This makes the convenience sampling strategy that the book has followed all the more problematic—not least as different types of groups are likely to be reported to very different extents.

## Second Lecture

The book's second chapter deals with environmental factors correlated with political violence. It is prefaced by an amusing discussion of data fiddling by the Bush administration's State Department in their 'Patterns of Global Terrorism' report.

Krueger then uses corrected State Department data to look for country-level causes of terrorism through a negative binomial count model, including characteristics of both the country of origin of terrorists and of the target country. He finds that the per capita GDP of the country of origin is irrelevant, but that richer countries are more frequently targeted. The one variable operating at both ends is civil liberties: lower civil liberties in a country of origin increase the likelihood of a terrorist emerging from there, while higher civil liberties increase the likelihood of a country being targeted.

Although Krueger himself is skeptical about the quality of data, a discussion of potential reporting biases—which might privilege events involving Western targets—is notably absent. Probably more important, the reporting is about incidents of *international* terrorism, i.e. events involving perpetrators and targets of different nationality. That such terrorism is often anti-Western and hence directed against richer countries is not surprising. However, as argued above, transnational terror groups tend to have a higher socio-economic profile than most other groups, so again extrapolating from this sample to terrorism in

general is problematic. Locally oriented terrorism and insurgencies that happen more frequently in poorer countries, and more often involve lower class actors, are not included in the data.

Neither this nor the other tests in the book control for one of the principal socio-economic explanations of political violence: the relative deprivation hypothesis. Even if absolute poverty levels might not make individuals more radical, a reversal in economic fortunes or the experience of socio-economic mobility closure could have a radicalizing impact across different strata of society. On the face of it, the hypothesis works well in explaining the emergence of militant groups all over the Middle East region since the 1970s and is often referred to by area experts. It is in fact what could explain the disproportionate presence of members of the frustrated professional class in certain types of movements. It incidentally also appears a plausible candidate to explain hate crimes in 1990s East Germany. Krueger includes GDP growth between 1990 and 1996 as a control variable in his above country-level regression, but a proper test of relative deprivation would imply controlling for changes of growth in GDP per capita, not just for levels of aggregate national growth.

The book proceeds to analyse data about foreign insurgents in Iraq that were released by a US military officer, Rick Lynch, in 2005. Krueger uses a negative binomial regression to examine how characteristics of countries of origin are correlated with the number of insurgents coming from there. He finds that although GDP per capita does not have a strong impact, lower infant mortality—a proxy for socio-economic development—strongly increases the number of fighters from a given country. Political and civil freedoms have the same negative impact as in the previous regression.

As higher GDP per capita presumably means more mobility and money for travel, we could in fact read Krueger's results to indicate that all other things being equal, individuals from richer countries are *less* likely to be attracted by jihad in Iraq. But this is speculative—as is indeed the whole model: Krueger discusses the residuals of a number of outlier cases in his regression, pointing out that Saudi Arabia, in particular, has many fewer fighters in Iraq than the model would predict. In the afterword to the book, Krueger presents some select data from the 'Sinjar records', a collection of foreign jihadi biographies in Iraq found and published by the US government after the hardcover version of the book had gone to print. As *ad hoc* corroboration for his model, Krueger points out that the share of

**Table 1** Composition of selected nationalities in samples of foreign insurgents in Iraq

	Krueger/Lynch	Sinjar	Paz
Egyptians	25.0%	0.5%	0%
Syrians	21.2%	8.2%	10.4%
Saudis	10.3%	41.0%	61.0%
Tunisian	3.2%	5.0%	1.3%
Algerians	2.6%	7.2%	1.3%
Libyans	2.2%	18.8%	1.3%
Yemenis	0.3%	8.1%	1.3%
Moroccan	0.3%	6.1%	1.3%
Total cases	312 <sup>a</sup>	595	154

Note: <sup>a</sup>Author's count. According to Krueger's count 311 cases.

Saudis in Sinjar is considerably higher than in his previous sample.

What he does not mention is that the breakdown of other nationalities is quite different too, calling into question the reliability of the original sample he had based his model on. In fact, the original sample's credibility was already doubtful when it was produced, because another list of foreign insurgents, compiled by Reuven Paz in 2005, whom Krueger in fact cites in passing, already provided a very different composition of nationalities.<sup>1</sup>

Krueger neither runs his old model to calculate the residuals for the new Sinjar sample, nor does he estimate a new model with the new sample to see whether and how his coefficients change. The distributions in the Table 1 look so different that we can expect rather different results from sample to sample. At least two of them must be unreliable, and very likely they all are. 'Sinjar' is not a proof of the model, but demonstrates that the data are in all likelihood worthless for use in multivariate regression. To be sure, even if the different samples were more consistent, further robustness tests would be required, such as taking out influential country cases, as ideographic, country-level ideological, and historical factors are likely to influence links to the Iraqi insurgency—they certainly do so in the Saudi case, which has a unique history of transnational Islamic militancy.

## Third Lecture

The third chapter, which addresses the economic and psychological impact of terrorism, presents relatively less original data, and constitutes more of a literature review. Krueger gives a concise overview of different causal channels through which terrorism might impact a nation's economy, and presents interesting data on

the psychological well-being of a number of experimental subjects in the US whose self-perceptions happened to be recorded on the days immediately before and after 9/11.

His broad conclusion is that the long-term economic and psychological impact of terrorism is probably limited. He is more concerned about its indirect political consequences and argues that the heaviest damage from terrorism might be self-inflicted by its victims—through an irrational over-reaction which, among other things, can result in the curtailment of civil rights.

Krueger proves his knack for exploiting unconventional data by demonstrating that more terrorist attacks tend to happen during morning and evening news hours, from which he deduces that terrorists deliberately maximize the media impact of their actions. He chides the media for their sensationalism and rolls out some numbers that put the (minute) risk of dying from a terror attack in comparative perspective.

## Conclusion

In passages, the book is very good at what it does—but it does not do what it purports to do: providing a balanced survey of ‘What Makes a Terrorist’. Instead, it presents a large number of usually quantitative case studies, the overall selection criteria for which remain obscure, and from which cautiously worded but rather large inferences are drawn.

The world of terrorism is pretty ‘lumpy’, however, with very distinct types and clusters of groups. The external validity of findings based on individual case studies would have required a much more elaborate discussion. Sweeping conclusions like ‘poor economic conditions do not seem to motivate people to participate in terrorist activities’ (p. 12) probably are true for some types of groups—classical socio-revolutionary Islamism, transnational jihadism, left-wing extremism—but appear misplaced or simply wrong in other cases, such as right-wing extremism, right-wing hate crimes, local Islamic insurgencies, millenarian Islamic terrorism, and ‘home-bred’ Islamic radicalism in the West.

This does not mean that we should throw up our hands in the face of the world’s complexity. Instead, we should take existing case literature seriously, familiarize ourselves at least broadly with context, and be a bit more careful before we throw everything into the statistical meat grinder—at a minimum by including a few dummies for different types of

groups and ideologies. It is true that we have not yet assembled enough descriptive information that would allow the construction of a generally agreed lexicon of different types of extremist groups. But there is enough information in the literature to tell us that throwing too many inherently different groups together without further ado does not make much sense.

If the external validity of Krueger’s evidence is doubtful, what about the value of his case studies qua case studies? He conducts four major statistical tests in the book. Two of these are quite problematic, at least in terms of the conclusions he draws from them: the data on hate crimes in Germany do not support his micro-level argument, and the data on foreign insurgents in Iraq seem near useless. The potential biases of the State Department data put a question mark over some of his main conclusions. The Hizballah micro-level data, though by far the smallest data set, might in fact be the most robust. These statistical findings are not strong, however, and Hizballah’s broader social context seems to speak against Krueger’s macro-level arguments. Perhaps unwittingly, Krueger uses micro- and macro-evidence selectively depending on the point that he wants to make.

The question ‘What Makes a Terrorist’ is still waiting for a comprehensive answer—or at least a thorough compilation of existing research results. Krueger develops many inspiring ideas showing us how we might explain and measure political violence. But to move beyond statistically informed guesswork, the macro-view of the quantitative social scientist, it seems, will have to be combined with the legwork of the area specialist. It is still too rare that one finds the two talking to each other.

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## Note

1. There is in fact a fourth set of data provided by the Saudi government which again has a widely different composition of nationalities.

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