

Economics of Terrorism

David Gold

Professor of Economics

Graduate Program in International Affairs

New School University

Introduction

Terrorism has multiple roots and multiple effects. Economic considerations come into play at both ends, but it has been difficult for scholars and policy makers to reach a consensus on what role economics plays in causing terrorism, and how economic considerations might be useful in understanding terrorism and in devising strategies and specific policies to counter terrorism. Much of the discussion about the links between economics and terrorism has revolved around how poverty, inequality, and limits on opportunity shape terrorist responses, and on how the alleviation of these conditions might reduce the incidence of terror. In addition, policy responses have increasingly emphasized such tools as economic sanctions on states that are supporters of terrorism and efforts to disrupt the financing channels of terrorist organizations.

The direct role of economic factors, such as poverty and inequality, and of policy measures, such as sanctions, is one way to examine the economics of terrorism. But these measures are incomplete. It is also important to look at how terrorism affects behavior, how economic concepts can help us understand the behavior of individuals and organizations that employ the tools of violent terrorism, and how economic concepts can help fashion measures to combat terrorism. Thus, a second way to look at the connections between economics and terrorism is to employ economic concepts to analyze the behavioral aspects of terrorism, paying particular attention to how the responses of

individuals and organizations to the incentives and constraints they face can lead to terrorist behavior.

Costs of Terrorism

Terrorist incidents impose large direct costs upon individuals and societies. The immediate costs can be measured in terms of the economic value of the lives lost and property destroyed in terrorist incidents. These measures are usually derived by estimating the present market value of the projected future production of the lost human and physical assets. This does not mean that all losses can be reduced to purely market calculations. The emotional toll imposed on victims, relatives, friends, other survivors and a broad range of community members is quite real, and while the legal system does try to measure these losses – pain and suffering, for example – there is an important sense in which the usual methods of quantifying costs are insufficient.

For example, individuals appear to place a much higher priority on countering terrorism, in terms of their willingness to commit public resources and political capital, than they do on offsetting the risk of death, injury, or property damage from automobile accidents, even though the latter regularly produce far more casualties and impose far greater direct costs than the former.¹ There are, of course, many differences between the two events. Driving is an activity subject to private decision-making that brings benefits along with risks, and both individuals and societies take actions to reduce those risks and minimize the costs, such as wearing seat belts, supporting publicly funded driver education and laws mandating insurance coverage, buying cars with air bags, etc. Another difference is that the potential upside risk from terrorism is huge, even if the probability of experiencing a catastrophic event is extremely low. Perhaps the most important difference, however, is that the possibility of being subject to terrorist attack invokes a considerable amount of fear and anger, which leads to a willingness to accept costs and policies that appear to be out of proportion to the potential benefits that they might produce.

The costs imposed by a single incident of terrorism are generally not large in relation to the size of the economy in question. In the case of the 9/11 attacks in the United States, while the personal costs borne by those directly involved are immense and

can linger for substantial periods of time, and while the magnitude of loss measured in dollars appears huge—\$33 to \$36 billion in New York City alone, according to one authoritative estimate—the destruction of physical and human capital and related loss of output was quite small in relation to the size of the economy. Although business activity, and especially air travel, suffered setbacks, and some activities remain weakened after two-and-one-half years, the aggregate regional and national economies recovered quickly, and within a year were again dominated by the trends and cyclical patterns in place prior to 9/11.² In New York City, among the activities that suffered considerable losses after 9/11 were finance, air transportation as the decline in air traffic affected employment and income associated with the two major airports, Kennedy and LaGuardia, and businesses related to tourism, including hotels, restaurants and the theater.³

When terrorism persists for long periods of time, the costs can continue to mount. Countries or regions that depend heavily on tourism have been found to suffer significant economic losses from the persistence of terrorism, losses that have been documented for the Basque region in Spain, as well as for Austria, Egypt, Greece, India, Israel, Italy, Kenya, and Turkey.⁴ Terrorism also appears to reduce inflows of foreign direct investment.⁵ With the threat of terrorism, normal business dealings and consumption activities require more time, extra security and—because they entail greater risk—often higher compensation as well. The Bank of Israel estimated that the country's 2002 GDP was down by between 3 and 3.8 per cent as a result of the second *Intifada*, which began toward the end of 2000. The initial negative impacts on tourism, exports to the Palestinian territories, and construction were magnified as individuals began to translate the persistence of terrorist incidents into perceptions of a long-term decline in their income, and reduced their level of consumption.⁶ Such a response can in turn have multiplier effects, as reduced demand leads to less production, less demand for labor, less investment, and a general slowdown in economic activity. The Israeli example shows how terrorism can adversely affect forward-looking behavior that in turn influences a wider range of economic activities. The relatively quick recovery in economic activity in the U. S. may reflect a widespread perception that 9/11 was a single event and not part of a pattern likely to be repeated.

Economic Aspects of Fighting Terrorism

Fighting terrorism requires resources, so it does impose a direct economic cost. When terrorism is perceived as a threat, businesses, individuals, and governments spend more on security (including, for example, public sector outlays for homeland security). Government and private spending on security is expected to grow by between 100 and 200 per cent by the end of the decade and the private security industry in the U. S. is booming.⁷ There will also be extra outlays for insurance, since terrorism has parallels to the type of insurance risks associated with natural disasters such as fires and floods, or large weather-related incidents such as hurricanes or tornados. These costs reduce the resources available for other purposes, and shift resources toward providing security and insurance services. Those who supply the services in demand experience an upturn in their businesses, but this is at the expense of other activities that are likely to be more productive. In addition, higher business costs, such as insurance premiums, are passed on to other consumers. To the extent that these added security-related outlays reduce or even eliminate the threat of terrorist incidents, they can at best restore a *status quo ante*, but they do not provide the type of economic stimulation that is cumulative over time.

There are also costs resulting from anti-terrorist activities that are harder to quantify. Tighter security at airports and seaports increases the costs of travel for both tourists and business travelers and the costs associated with shipping goods, especially when time is factored in as a cost. Indeed, firms that have adopted just-in-time inventory systems and rely on cross-border shipments feel these added costs during periods of heightened terrorist alerts.⁸ Transport costs can be a significant trade barrier, and if tighter security raises the costs of shipping, it can potentially penalize a country's trading partners, even if they have no links to terrorism.⁹ Tighter immigration restrictions represent another cost, making it harder for skilled workers to move across borders. Business travelers to the U. S. report increased difficulties in gaining entry, and "(m)any say they are inclined to do business elsewhere if they have the choice."¹⁰ In another example, a 32 per cent drop in foreign applications to U. S. universities has been attributed to a more difficult visa application process instituted in the aftermath of 9/11.¹¹ And in a related example, restrictions on the transport of pathogens in the U. S. has impeded biomedical research in a number of areas, including research that might

contribute to bio-defense related activities.¹² The myriad of such costs can be described as a tax on economic activity, which “do[es] nothing to increase the quantity or quality of the supply of goods and services” and “may adversely impact both the economy’s productivity growth and long-term potential growth rate.”¹³

The most visible forms of anti-terrorist expenditures are those undertaken by governments. The United States created a Department of Homeland Security after 9/11. While most of the activities contained within the new department had been assigned to existing departments and agencies prior to the terrorist attacks, new activities have been added, and the older ones have been given new urgency. Budgetary outlays for homeland security jumped from \$15 billion in Fiscal Year (FY) 2001, prior to 9/11, to \$32 billion in FY2003. Of course, spending by the Defense Department, the Justice Department, the Treasury Department, and other government agencies, probably also including the Central Intelligence Agency (whose budget is never made public) has jumped as a result of activities undertaken in the war against terrorism.

One issue to consider is whether there is an appropriate balance between private and public sector actions taken to combat terrorism. Security is a classic public good, supplied, in the first instance, by governments.¹⁴ But individuals and private organizations can purchase their own security, especially if they perceive public sector activities as being inadequate and they can afford the expenditures. An example is the construction of gated communities, the employment of private security services, the purchase of alarm systems and surveillance equipment, and the hiring of personal bodyguards in communities that have been subject to rising crime (such as kidnapping) or terrorism. It is unclear, however, whether such expenditures reduce the incidence of violence or primarily transfer it to those who lack the resources to purchase added protection.

Government spending, of course, has a demand-stimulating impact, especially when financed by deficits. In the U.S., security spending tends to have a smaller effect on aggregate demand than most alternatives, in part because security-related outlays tend to have substantial external leakages, as illustrated by the continuing spending for the occupations in Afghanistan and Iraq. All outlays entail opportunity costs, in that spending in one area implies less spending in another. To take the U.S. as an example,

increased spending on national defense and homeland security has been accompanied by smaller than anticipated increases in spending in areas that are potential contributors to economic growth. For example, a number of federal government civilian programs in health care and education, which are important components of human capital formation, have already had their funding growth curtailed and are slated for funding cuts in the future.¹⁵

The question of how security is financed is one of long standing, with numerous economic implications. Governments rarely finance wars through taxation, and the war against terror is no exception.¹⁶ The Bush Administration had adopted a tax-cutting agenda prior to 9/11, and has expanded rather than cut back on this policy despite the rapid growth of security-related spending since the terrorist attacks. The combination of spending growth and tax cuts has led to high federal budget deficits, which have increased the likelihood of significant upward movements in interest rates. In the view of some knowledgeable observers, these developments could impose costs on the economy in the future, in terms of foregone growth opportunities, especially in the context of the need to allocate greater resources to an aging population.¹⁷ Moreover, there has been a trickle-down effect from the federal tax cuts. State governments use essentially the same base for income and wealth tax purposes as the federal government, leading to revenue shortfalls at the state level as the federal government cuts tax rates. With states unable to run deficits, they are forced to cut spending. Heavy losers have been health care, education, and public safety, including police, fire and emergency medical service—the much-praised “first responders” who performed so well on 9/11.¹⁸

These considerations suggest that, even when economies recover from specific terrorist incidents, they might still bear substantial costs in the long term. These costs emanate from the implicit taxation imposed by the measures taken to fight terrorism, the opportunity costs of anti-terrorist actions that influence economic growth, and the methods adopted to finance anti-terrorist activities. These costs will tend to reduce an economy’s growth potential over time.

Economic Sources of Terrorism

Following 9/11, one response, by some observers in the West and East alike, was to attribute the wave of violent terrorism to deficiencies in the development process, particularly the continual existence of poverty in many developing countries. In addition, the contrast between the wealth of the few and the poverty of the many and the absence of effective education, widely seen as both a source of economic development and an overall “civilizing” element, were pointed to as being root causes of terrorism. It is clear, however, that such explanations are incomplete at best. Not all terrorists are poor, or even come from societies that are poor, and not all poor people or people from poor societies become terrorists. To the extent that poverty, inequality, and other elements of underdevelopment are determinants of terrorism, the links are subtle and difficult to bring to light.

Recent research on the relationship between indices of underdevelopment and terrorist activity underscores the difficulty in making such links. Alan Krueger and Jitka Maleckova examined available evidence on the links between poverty and education, on the one hand, and the incidence of terrorist activities on the other, and found “little direct connection between poverty or education and participation in terrorism.”¹⁹ They explored data on the education and income levels of those engaged in terrorist activities, opinion polls on attitudes toward terrorism, and data on income and poverty levels in the West Bank and Gaza Strip as well as among members of Hezbollah and the Jewish Underground—that is, in populations where terrorism has grown and where organizations have practiced terrorism. Their findings indicate that terrorism seems unrelated to economic deprivation. Indeed, Krueger and Maleckova cite evidence that participants in terrorist organizations and terrorist activities seem to possess higher education and income status than the bulk of the populations from which they are drawn. This, of course, was true for the terrorists who carried out the 9/11 attacks on the U. S. Indeed, Muhammad Atta, widely thought to be the leader of the 9/11 attackers, was the son of a lawyer and attended graduate school in Germany.²⁰ Based on the evidence they evaluate, Krueger and Maleckova conclude that the absence of civil liberties, rather than economic deprivation, and the quality and content of education, rather than one’s level of educational achievement, appear more important as determinants of terrorist activity.²¹

At the same time, it needs to be recognized that those who are accepted into terrorist organizations and are selected for operational activities are drawn from a large pool of volunteers who tend to be from the poorest segments of their societies, a point Krueger and Maleckova recognize but apparently feel is outweighed by additional evidence. Those selected for missions are likely to be those thought to be not only the most committed, but also the most capable of handling the complexities and difficulties that might arise on an operation, and therefore have higher education and technical skills than most members.²²

It should not be surprising that quantitative measures of economic causation would be weak predictors of terrorist membership and activity since it is clear, as mentioned above, that economic deprivation does not always lead to terrorism. The broader point is that economics is not just about discovering whether specific economic variables can be identified as the sources of studied outcomes. It is primarily about how the inter-relation between incentives and constraints shapes behavior and objectives. Research on groups that use violence suggest a number of avenues where economic considerations of this type may be important.

One example is the behavior of criminal gangs. Steven Levitt and Sudhir Venkatesh describe the organization of a drug dealing gang in an inner-city neighborhood.²³ Most such gangs originated as social organizations to give primarily younger people a sense of community and identity in an environment experienced as increasingly impersonal and hostile. With the introduction of crack cocaine in the 1980s—a product characterized by its low cost, high markup, and ease of use—many gangs turned to dealing drugs. The gang studied by Levitt and Venkatesh kept a detailed set of book, as a management tool. Studying this material revealed this gang to be organized much along the lines of a franchise in a national or international retail organization. Whatever their motives for originally joining the gang, members became predominantly concerned with their prospects for economic advancement. Unlike (most) franchises in the legal world, the gang expended substantial resources related to violence, such as hiring contractors (“muscle”), purchasing weapons, and paying for funerals. Competition for markets in this world often involved violence, and paying for

violence—both on the front and the back end—was simply one of the costs of doing business.

Research on rebel groups engaged in civil wars has led to similar findings. One gray area in the analysis of terrorism is that terrorism can overlap with civil war. Some groups that practice terrorism—such as the IRA in Ireland and England, Hamas in Israel, and others—see themselves as being in revolt against an occupying power, while in civil wars, while the primary targets are opposing armies, terror against civilians has often been utilized as a tactic. Groups join or instigate rebellions for a variety of reasons, but an important body of research suggests that many rebel groups continue (and sometimes increase) their violent activities in the pursuit of economic gain. Paul Collier and his colleagues at the World Bank conclude that rebellions, whatever their origins, tend to persist when accompanied by low levels of economic development, a natural resource that is an easy target for predation, and a government that is not capable of protecting that resource, perhaps exacerbated by an unfavorable geography.²⁴ Thus, state failure and the prospects for economic gain become key elements in the persistence of rebellions. David Keen describes civil war as the continuation of economics by other means, emphasizing a country's failure to create and sustain the institutional framework for normal economic activity as one of the root causes of civil war.²⁵ In this analysis, poor development plays a key role in that it creates masses of people with few alternatives—people with essentially zero opportunity costs—who become natural recruits for a rebel group. An example of these transitions is the career of Angola's Jonas Savimbi, who started out as the charismatic leader of a rebel movement seeking to overthrow Portuguese colonial rule, moved to the right while gaining support from the U.S. for his struggle against a Soviet-backed government and then, after the end of the Cold War, led military attacks on the new government in order to steal diamonds. At the time of his death in 2002, Savimbi was an extremely wealthy man.

Research on terrorist groups suggests some similarities to the behavior observed in gangs and rebellions. Jessica Stern describes, for example, individuals who have become disaffected with their terrorist organizations.²⁶ One such individual

is making a good salary—better than he could get in the civilian sector.... But he sees his bosses getting rich off jihad and has come to feel disgusted. They have

dirty offices and serve you bad food just to prove they have no money. But they live in mansions.... Jihadi organizations receive a lot of donations, and a lot of the money ends up going to the leaders.

Stern quotes a second disillusioned jihadi member:

‘At first I thought [the bosses] are serving a religious cause, but now I feel they are running a business. They are ... suppliers of human beings. They use poor and illiterate boys for their own private cause and call it jihad.... The ... real methods for raising funds is smuggling of goods through Afghanistan, Iran and India. This includes drug trafficking, in some cases to India.... The mujahideen bring with them many smuggled items such as cosmetics and ... electronic goods from Afghanistan and Pakistan to raise funds.’

And a third:

‘Initially I was of the view that they were doing jihad, but now I believe that it is a business and people are earning wealth through it.... I thought [the leaders] were true Muslims, but now I believe that they are fraud, they are selling Islam as a product.... First I was there for jihad, now I am there for my financial reasons.’

And, as Stern points out, as with any profession, there are non-pecuniary benefits:

Not only money is important: emotional satisfaction and status are critical. Operatives describe the emotional satisfaction of their work, and the status they earn in their community. ‘One becomes important due to his work. Successful operations make a militant famous and glamorous among his fellow men....’

Some terrorist groups are successful because they provide services to the population within which they reside. Hamas, for example, has become a successful social service agency, and the Taliban first achieved prominence by offering effective security on trade routes between Afghanistan and Pakistan after the withdrawal of the Soviet Union, while Pakistan-based Jihadi groups have organized entire communities. These terrorist groups become providers of local public goods, in effect filling in gaps left by the failure of governments and international organizations. Private groups that supply public goods, known as “club” goods, create mechanisms that allow them to control access to the goods and services being supplied. The need to control access explains the elaborate selection processes and the resort to violence on the part of terrorist groups who provide such goods, even when this behavior does not appear to bring them close to their stated objectives. They are, instead, devices that serve to bind members to the group and make it difficult for members to leave, thereby providing a solution to the “free rider” problem inherent in all public goods production. When governments supply public goods, their activities are financed via taxation. Private suppliers of public goods raise funds externally via charities; appeals to diaspora populations in Europe, North

America, and other countries; or from various governments, using their political work as a justification. Saudi Arabia, for example, is thought to be a significant source of funds for Jihadi groups, while the IRA conducts considerable fund raising in the United States.

Terrorist groups, criminal organizations, and participants in civil wars—whatever their original motives—become increasingly concerned with the business of making money and with the provision of social and economic services that governments are either incapable or unwilling to provide. Researchers have identified a phenomenon of “agenda shifting.” Organizations that may originally have a political objective shift their activities towards wealth accumulation in the illegal economy, such as smuggling; obtaining and selling drugs and guns; fund raising through sympathetic governments, charities, wealthy individuals, etc.; and the ownership of legitimate businesses.²⁷ In doing so, they become entrenched, essentially moving into gaps created by political, economic, and social weaknesses. The initial rationale for moving into illegal activities is usually to raise funds for the continuation of a group’s political work. Both the Taliban and Al Qaeda, for example, despite strong prohibitions against the drug trade in Islam, have used the growing and trading of opium as an important revenue source.²⁸ The examples cited of criminal gangs, rebel groups, and terrorist organizations fit under the broad rubric of agenda shifting—that is, starting out with one set of objectives that defines an organization and is used to solicit membership, but then shifting over time to take on another set of objectives as members, and the group as a whole, follow incentives. Some researchers argue that wealth accumulation becomes the dominant goal, and that political activity becomes a justification, not an objective. Others see wealth accumulation and the attendant set of economic incentives as simply one among a number of objectives, with their relative importance varying in different situations.²⁹

Economic Aspects of Policies to Combat Terrorism

Terrorism is a complex phenomenon, and a wide range of tools are required to address it: security (military and policing), politics and diplomacy, economic and social policy, etc. Yet frequently, it is the security aspect that is emphasized above all others. When an act of terrorism occurs, the response of governments is usually to first retaliate

in kind, and then formulate a series of additional measures designed to punish and weaken the perpetrators. This punishment/deterrence formula has a number of advantages. It provides a sense of immediate gratification, as the shock of experiencing an attack is quickly followed by the satisfaction of inflicting punishment on those responsible. For a government, this conveys a sense of legitimacy, since it has done “something” to satisfy the citizenry’s desire for a visible response.

Responding to a terrorist event after it occurs may also be justified on comparative cost grounds. The main alternative to the punishment/deterrence model is a preventive model, where the root causes of terrorism are addressed in order to limit—or possibly even prevent—its growth. But since the number of actual terrorist incidents is far less than the number of potential terrorist incidents, decisions regarding resource allocation are easier when security agencies concentrate on responses. A similar problem occurs in local policing, where police agencies do not have the resources to deploy personnel at all possible places where crimes might take place. Instead, they seek to patrol those locations deemed most likely to experience crime, or locations where the consequences of crime might be greatest in terms of the value of property or the possible loss of life, and then devote substantial resources to detection and apprehension once crimes are committed. In local policing efforts, prevention focuses on enhancing security through such mechanisms as alarm systems, street lighting, effective emergency call-in services, etc.

There is, however, another side to the issue of comparing strategies: the relative benefits to be gained. Responding in kind to terrorist incidents may be psychologically and politically satisfying, but it is not clear if it is effective. It may, of course, be hard to evaluate effectiveness, since it is difficult to measure the number and size of terrorist operations that are *not* undertaken because of effective deterrence. In one example where retaliation may have had a minimal impact, after the bombing of a Berlin discothèque in 1986, the U.S. launched an attack against targets in Libya. In the following months, the incidence of terrorist attacks against U.S. and U.K. targets first increased, then tapered off, and then resumed its previous level. It appears that the U.S. retaliation induced terrorists to move planned operations forward in time, as a response to the U.S. action, but did not reduce the total number of incidents.³⁰ As this example illustrates, terrorists

have shown themselves willing and able to shift tactics, or to change the time or location of operations. Terrorist groups behave as if they are cost constrained, and therefore choose tactics they believe to be cost-effective. If the relative costs of one avenue of action are raised, or the perceived benefits change, timing and tactics can also change in response.³¹

This propensity for substitution behavior has implications for policy. For example, in the present security context, the U.S. has expended substantial resources to improve airline safety since 9/11 but has been much slower, and has devoted far less resources, to improving shipping security. As of early 2003, only four per cent of containers arriving at U.S. ports were subject to inspection, and there have been identifiable lags in the development and application of inspection technology.³² This failure is particularly conspicuous in light of the fact that terrorism experts have identified incoming shipping as the most likely means for a terrorist group to import weapons of mass destruction into a country, a possibility that would appear even more likely with the intensification of airport security.³³

It should not be assumed that increases in spending equate to, or even approximate, increases in effectiveness with respect to security-related problems. Specific defense expenditures have been challenged in terms of whether their existence reduces a nation's ability to engage in other, more effective, activities. The U.S. defense budget includes several large "legacy" weapons systems, including, for example, the F-22 high-performance fighter aircraft, which was originally designed to counter expected next-generation Soviet systems. With the breakup of the Soviet Union, this threat has not materialized and is not expected to, yet the system remains and accounts for \$72 billion in future spending commitments, not counting likely future cost growth. Indeed, the overall defense program will require extensive further spending increases if all programs currently in place are carried out. With tax cuts, high deficits, and demands for spending growth in other areas, this is a classic recipe for a budgetary "train wreck."³⁴

At the same time, a number of programs that are more directly involved with counter-terrorist activities have had trouble securing adequate funding. One is the Cooperative Threat Reduction Program—popularly called Nunn-Lugar, after its sponsors in the Senate—designed to fund the securing of fissile materials within the former Soviet

Union. While this effort to address the so-called “loose nukes” problem has run into a number of difficulties involving officials and institutions in the former Soviet Union, it has also been consistently funded at sub-optimal levels, and has received less than adequate support within the various U.S. government bureaucracies.³⁵ In another example, the U.S. has still not created a single database of suspected terrorists, relying instead on lists from eight different agencies. This situation has persisted for more than a decade, since the first World Trade Center bombing in 1993, when the problem first received national attention, and for more than two years after 9/11, despite the fact that President Bush on several occasions committed the government to creating a single, effective list. On December 1, 2003, an inter-agency body, the Terrorist Screening Center (TSC), was opened within the FBI to consolidate data, weed out obsolete information, and develop new technology to better identify suspected terrorists. However, the TSC suffers “from the lack of a dedicated budget” and “ongoing failures to obtain the cooperation of several agencies to share their information....” In the view of one critic, the TSC “is a hollow box.”³⁶

These examples of under-funding counter-terrorism activities suggest the importance of relative cost-benefit analyses in evaluating a given program’s effectiveness. While governments often treat their resources as infinitely expandable, the reality is that large increases in one set of programs often necessitate cutbacks in other programs. In the area of security, the massive increases in offensive military operations and programs since October of 2001 have not been accompanied by an equivalent growth in programs that are primarily defensive in orientation, as well as those that could be classified as preventive. In some cases, administration budget officials have acted to restrict the growth of defensive programs, on the grounds that budgetary resources are too limited. Programs are usually approved without comparative evaluations, and those with the strongest political, institutional, and regional support have the upper hand. The result can be a weakening, not a strengthening, of the U.S. security posture.

Economic Counter-Terrorism Measures

Another tool that governments deploy to combat terrorism is economic sanctions, including efforts to disrupt the financial arrangements of terrorist groups. Most sanctions are aimed at a nation's visible economic activities, such as restrictions on trade and investment, limitations on travel, freezing or even seizing assets held in foreign countries, etc. It is difficult to apply sanctions to terrorists, since they operate less visibly, they do not have "official" economies and, as is the case with criminal organizations, the economic activities being targeted must be specifically linked to the individuals or organizations identified as terrorist. This is required both on practical grounds, in order for the sanctions to be effective, and on legal grounds, in order to ensure that the actions do not interfere unjustly with legitimate activities. One of the problems with economic sanctions is that they often impose costs on people who have no ties to terrorism, such as those who seek to travel to or trade with a country that has been placed under restrictive sanctions. Moreover, the rulers of a country that is subject to sanctions can often deflect the costs of sanctions onto a broader population.

There have been instances where sanctions and other economic measures have exerted pressure on countries that have supported terrorism. In 1996, the government of Sudan evicted Osama bin Laden, who had been using that country as a base for terrorist activity. Among the reasons for Sudan's action was the fear of losing foreign investment that was needed to develop the country's oil reserves.³⁷ Another example is Libya, which has withdrawn its support for international terrorism over a number of years and agreed to dismantle its nuclear weapons program, in large part in order to escape from economic sanctions and begin rebuilding its severely weakened economy.³⁸ Despite these successes, the overall record of using sanctions against governments to achieve foreign policy objectives, including the reduction of terrorism, has been mixed.³⁹

With respect to terrorism, using sanctions against states is based on the premise that terrorists depend on governments for financial support and protection. This was the

primary rationale for deposing the Taliban regime in Afghanistan in 2001, and one of the rationales for deposing the Saddam Hussein regime in Iraq in 2003. However, evidence suggests that terrorist organizations thrive where states are weak and, while there have been some successes in targeting state supporters of terrorism, such as Sudan and Libya, the imposition of economic sanctions against state sponsors of terrorism is clearly insufficient in itself. Indeed, despite successful regime changes in Afghanistan and Iraq, terrorist organizations remain strong. George Tenet, the Director of the Central Intelligence Agency, testified before Congress in March 2004, a year after the beginning of the Iraq War, that, as compared with a year earlier, “The world ... today is equally, if not more, complicated and fraught with dangers for United States interests....”.⁴⁰ Al Qaeda has reorganized itself into a loose confederation and, along with other groups, remains a serious threat⁴¹.

More targeted financial efforts, as opposed to broad state economic sanctions, can be aimed at specific organizations, and disrupting the financing networks of terrorist organizations has been an explicit objective of the war against terrorism. There has been some success in closing charities that are largely front organizations for terrorist fundraising, and in seizing financial assets held by terrorist organizations. Here, as with economic sanctions, one side effect is that innocent people are also hurt. Some charities, for example, do provide financial support and social services for poor citizens, even as they simultaneously aid terrorist groups. One example is the Benevolence International Foundation (BIF), whose assets were frozen by the U. S. Treasury Department a year after 9/11 and whose head, an Al Qaeda operative, was convicted of money laundering. The BIF collected funds from donors, many of them Moslems performing their religious obligations. The funds would be allocated to specific projects, with approximately 10% skimmed off and handed directly, in cash, to Al Qaeda representatives.⁴² Freezing assets and effectively closing the foundation cut off both the 10% that went to Al Qaeda and the 90% that funded charitable activities. More important, attacking financial networks is expensive and time consuming, requiring a substantial commitment of investigative and administrative resources. Much of the global financial system has taken its current form out of the desire of both legitimate and illegitimate financial actors to avoid or minimize regulation, and governments and private sector participants have resisted attacking that

structure. The continued inability of law enforcement officials worldwide to eliminate the money-laundering networks associated with the international drug and armaments trade suggests the difficulties inherent in this endeavor.⁴³

Another policy area with a substantial economic dimension that has an impact on counter-terrorism efforts is foreign aid. The Bush Administration has included the problem of development failures and “failed states” as a source of political instability and terrorism in formulating its public statements on U.S. national security objectives. In announcing new initiatives regarding foreign aid, the president explicitly referred to terrorism:

Poverty doesn't cause terrorism.... Yet persistent poverty and oppression can lead to hopelessness and despair. And when governments fail to meet the most basic needs of their people, these failed states can become havens for terror.... Development provides the resources to build hope and prosperity, and security.⁴⁴

There is, of course, a long history of countries utilizing foreign aid to affect economic, political, and security relations. Aid was utilized as a political and security instrument during the Cold War, and has been similarly utilized since in regions of high tension, including South Asia and the Middle East. Indeed, granting or withholding aid is a form of economic sanctions. Past controversies over the effectiveness of aid, and the increasing recognition that development is a multi-faceted process that involves far more than resource and technology transfers, have led aid policy in the direction of emphasizing effective governance, widespread political participation, environmental sustainability, improved education and health care, and more democratic social representation, in addition to the traditional, and more narrowly focused, economic objectives.⁴⁵ Part of the realization of the need for a multi-faceted approach to foreign aid, for example, has stemmed from the effects on development and governance of widespread epidemics, including HIV/AIDS, malaria, and tuberculosis.

There is some evidence of limited success on the part of aid projects in reducing the incentives for people to join terrorist organizations. However, when aid projects are inadequately funded or administered, or are abruptly terminated, they can generate a backlash, inflating expectations without delivering results and reinforcing nascent support for terrorist activities.⁴⁶

The Bush Administration's aid initiatives, labeled the Millennium Challenge Account, establish a wide-ranging set of criteria to determine country eligibility. One problem with these eligibility criteria is that the countries most in need of support, due to poor development experience and weak governance, are those least likely to meet the eligibility criteria, a classic "catch-22." A second problem is that U.S. aid initiatives are spread across a number of bureaucratic centers, which tends to raise administrative costs and weakens initiative.⁴⁷

Improving Security

Lastly, there are economic aspects to the improvement of security. Effective security is essential, and one of the keys to making security effective is for it to be more economically efficient. The discussion above revolved around trade-offs and the comparative evaluation of policy effectiveness relative to budgetary outlays in a society such as the United States, which is a primary target for terrorist activity. Similar considerations apply in countries that are trying to create an effective security framework in the context of severe development and governance deficiencies. In addition, some simple economic considerations are important. Thus, adequate pay and training can reduce corruption among security forces and help impart a sense of fairness in dealings with the public. Adequate supplies of transportation and communications equipment can act as a "force multiplier," giving security forces greater scope for their operations. The general point is that security and development initiatives can work together in generating small but noticeable and positive changes in many societies.⁴⁸

Conclusion

Terrorism imposes substantial economic costs, but there are also significant costs associated with policies to combat terrorism. A society is better off if the threat of terrorism can be reduced, or even eliminated, just as it is better off if the threat of crime can be reduced or eliminated. There are some economic roots of terrorism, but these have more to do with the incentives and constraints that individuals and organizations face than with any specific set of easily quantifiable factors that push people toward

involvement in terrorist organizations. This suggests that policy responses to terrorism need to be multi-faceted and flexible. Security policies, for example, need to be more cost effective, in order to both achieve results and to limit the negative economic consequences of devoting excessive resources to security purposes. Similarly, aid policies need to concentrate on achievable objectives, both to obtain positive results and to provide a more representative and optimistic outlook on the future. Policies need to be targeted at filling in the voids left by weak states and shifting incentive structures within societies away from the use of violence. But such policies can never be complete, just as policies to fight crime can never reduce crime to zero. There are too many potential sources of violence to expect policy to deal with them all, and incentive-based policies can never force everyone to disregard the ideological or psychological tendencies that lead them to resort to violence.

Notes

¹ There were over 42,000 deaths from automobile accidents in the United States in 2001, with a total estimated cost of \$230 billion, which means that more people were killed every twenty-five days in auto accidents than died in the 9/11 terrorist attacks. Of these deaths, 41%, or 17,400, were alcohol related, and the estimated cost of these was greater than \$100 billion, or three times the estimated costs of all damages from the 9/11 terrorist attacks in New York. See U.S. Department of Transportation, Office of Public Affairs, "USDOT Releases 2002 Highway Fatality Statistics," July 17, 2003, at www.nhtsa.dot.gov/nhtsa/announce/press/index.cfm, and "Impaired Driving in the United States," at www.nhtsa.dot.gov/people/injury/alcohol/impaired_driving_pg2/US.htm.

² Jason Bram, James Orr, and Carol Rapaport, "Measuring the Effects of the September 11 Attack on New York City," and Jason Bram, Andrew Haughwout, and James Orr, "Has September 11 Affected New York City's Growth Potential?" Federal Reserve Bank of New York *Economic Policy Review* 8:2 (November 2002), at www.nyfed.org/research/epr/2002.html. For additional estimates of the costs of 9/11, see Robert Kelleher, "The Economic Costs of Terrorism," Joint Economic Committee, United States Congress, May 2002, at www.house.gov/jec/terrorism/costs.pdf

³ Michael L. Dolfman and Solidelle F. Wasser, "9/11 and the New York City Economy: A Borough-by-borough Analysis," *Monthly Labor Review* 127:6 (June 2004): pp. 3-33, at www.bls.gov/opub/mlr/mlrhome.htm

⁴ Alberto Abadie and Javier Gardeazabal, "The Economic Costs of Conflict: A Case-Control Study for the Basque Country," National Bureau of Economic Research Working Paper No. W8478, September 2001, at www.nber.org/papers/W8478; Todd Sandler and Walter Enders, "An Economic Perspective on Transnational Terrorism," *European Journal of Political Economy* (forthcoming), at www-ref.usc.edu/~tsandler/complete-terror02.pdf; Arthur Andersen, Inc., "Tourism and Terrorism – The Road to Recovery in Egypt," December 2000, at www.hotel-online.com/Trends/Andersen/2001_Egypt.html; William Wallis, "Terror Takes Toll on Kenya's Tourism Industry," *Financial Times*, December 8, 2003; Reecha Dhariwal, "Tourist Arrivals in India: How Important are Domestic Disorders," Indira Gandhi Institute of Development Research, 2003, at www.ssrn.com/abstract=390666.

⁵ Walter Enders and Todd Sandler, "Terrorism and Foreign Direct Investment in Spain and Greece," *Kyklos* 49:3 (1996): 331-52.

⁶ Bank of Israel, “The Economy: Development and Policies,” *Bank of Israel Annual Report – 2002*, July 2003, at www.bankisrael.gov.il/deptdata/mehkar/doch02/eng/dochoze.htm#topart1

⁷ Joshua Chaffin, “American’s See Profit in Terror Protection,” *Financial Times*, April 3, 2004; Paul Magnussen et al, “Welcome to Security Nation,” *Business Week*, June 14, 2004; Mark Huband, “Fight Against Terror Spawns a New Industry,” *Financial Times*, December 3, 2003.

⁸ Daniel Altman, “Uncertain Economy Hinders Highly Precise Supply System,” *New York Times*, March 15, 2003.

⁹ See, e.g., Ximena Clark, David Dollar, and Alejandro Micco, “Port Efficiency, Maritime Transport Costs and Bilateral Trade,” National Bureau of Economic Research Working Paper W10353, March 2004 at www.nber.org/papers/w10353.

¹⁰ Edward Alden, “No Entry: Tougher Visa Controls are Creating Barriers to American Business,” *Financial Times*, July 2, 2004.

¹¹ Christopher Grimes, “Universities in US Hit by Tighter Visa Demands,” *Financial Times*, April 29, 2004.

¹² Dana Wilkie, “Select-Agent Security Clearance Stymies Research,” *The Scientist*: 18, 10 (May 24, 2004) at www.the-scientist.com.

¹³ Robert Kelleher, “The Economic Costs of Terrorism,” 3.

¹⁴ A public good has two basic properties. First, if it is supplied to one member of a community, it must be supplied to all, so there is no effective means of charging a price or rationing its use; second, the marginal cost of supplying additional amounts is zero, which means that the efficient price is also zero. But there are fixed costs in supplying a public good, so some means of financing, producing, and distributing the good must be found, a task that usually falls to governments.

¹⁵ Richard Kogan and David Kamin, “President’s Budget Contains Larger Cuts in Domestic Discretionary Programs than has Been Reported,” Center on Budget and Policy Priorities, February 5, 2004, at www.cbpp.org/2-5-04bud.htm.; Joseph A. Barbera, Anthony G. Macintyre, and Craig A. DeAtley, “Ambulances to Nowhere: America’s Critical Shortfall in Medical Preparedness for Catastrophic Terrorism,” in *Countering Terrorism: Dimensions of Preparedness*, eds. Arnold M. Howitt and Robyn L. Pangi (Cambridge, MA: MIT Press, 2003).

¹⁶ Only one war in United States history, the Korean War, was wholly financed by taxation. The 1991 Gulf War was largely funded by contributions from members of the coalition that fought with the United States. Every other war since the American Revolution was financed largely by some combination of debt issuance and new money creation. See, e.g., Lee E. Olhanian, “The Macroeconomic Effects of War Finance in the United States: World War II and the Korean War,” *American Economic Review* 87:1 (March 1997): 25.

¹⁷ See, e.g., Martin Muhleisen and Christopher M. Towe, eds., *U.S. Fiscal Policies and Priorities for Long-Run Sustainability*, Occasional Paper No. 227 (Washington, D.C.: International Monetary Fund, January 7, 2004).

¹⁸ Nicholas Johnson and Rose Ribeiro, “Severe State Fiscal Crisis May be Worsening,” Center on Budget and Policy Priorities,” May 9, 2003, at www.cbpp.org/5-9-03sfp2.htm. Cuts in funding for first responders have also been noted at the federal level; see, e.g., Robert Block, “Police, Firefighters to Get Less,” *Wall Street Journal*, February 3, 2004.

¹⁹ Alan B. Krueger and Jitka Maleckova, “Education, Poverty and Terrorism: Is There a Causal Connection?” *Journal of Economic Perspectives* 17:4 (Fall 2003): 141. See also Alan B. Krueger and Jitka Maleckova, “Does Poverty Cause Terrorism?” *The New Republic*, June 24, 2002; and Claude Berrebi, “Evidence About the Link Between Education, Poverty and Terrorism Among Palestinians,” Princeton University Industrial Relations Section Working Paper #477, September 2003, at www.princeton.edu/~cberebi/edu-pov-terror.pdf

²⁰ Rohan Gunaratna, *Inside Al Qaeda: Global Network of Terror* (New York, Columbia University Press, 2002), p. 105.

²¹ An empirical study utilizing a large, cross-national data set concluded that enhanced civil liberties and stronger economic growth were both effective in reducing support for political violence, with the effect resulting from enhanced civil liberties being quantitatively more important. Robert MacCulloch and Silvia Pezzini, “The Role of Freedom, Growth and Religion in the Taste for Revolution,” The Suntory Centre, London School of Economics and Political Science, September 2002, at <http://sticerd.lse.ac.uk/dps/di/dedps36.pdf>.

²² As Eli Berman points out, “One would hardly expect Al Qaeda to send some of its thousands of semi-literate mercenaries in Afghanistan to flight school in Florida if disaffected students in Europe were available.” Eli Berman, “ Hamas, Taliban and the Jewish Underground: An Economist’s View of Radical Religious Militias,” National Bureau of Economic Research Working Paper No. w10004, September 2003, 3, at www.nber.org/papers/w10004

²³ Steven D. Levitt and Sudhir Alladi Venkatesh, “An Economic Analysis of a Drug-Selling Gang’s Finances,” *Quarterly Journal of Economics* 115:3 (August 2000): 755-89; and Sudhir Alladi Venkatesh and Steven D. Levitt, “Are We a Family or a Business? History and Disjuncture in the Urban American Street Gang,” *Theory and Society* 29:4 (August 2000): 427-62, at www.sociology.columbia.edu/people/professors/sv185/miscellaneous/family_or_business.html

²⁴ Paul Collier, et al, *Breaking the Conflict Trap: Civil War and Development Policy* (Washington, D.C.: World Bank, 2003); Paul Collier and Anke Hoefler, “On Economic Causes of Civil War,” *Oxford Economic Papers* 50 (1998): 563-73. A series of research studies that emphasize the multiplicity of agendas in civil wars is Karen Ballentine and Jake Sherman, eds., *The Political Economy of Armed Conflict: Beyond Greed and Grievance* (Boulder, CO: Lynn Rienner Publishers, 2003).

²⁵ David Keen, *The Economic Functions of Violence in Civil Wars*, Adelphi Paper No. 320 (Oxford: Oxford University Press/International Institute of Strategic Studies, 1998).

²⁶ Jessica Stern, *Terror in the Name of God: Why Religious Militants Kill* (New York: HarperCollins, 2003), 213-17.

²⁷ See R. E. Bell, “The Confiscation, Forfeiture and Disruption of Terrorist Finances,” *Journal of Money Laundering Control* 7:2 (Autumn 2003), especially 106-7.

²⁸ Douglas Farah, “Al Qaeda Gold Moved to Sudan,” *Washington Post*, September 3, 2002; Owais Tohid, “Bumper Year for Afghan Poppies,” *Christian Science Monitor*, July 24, 2003; Bronwyn Curran, “Afghan Opium Trade Widens, Taliban and al-Qaeda Linked to Drugs Money,” *Agence-France-Presse*, October 30, 2003.

²⁹ See the cases in Ballentine and Sherman, *Political Economy of Armed Conflict*.

³⁰ Walter Enders and Todd Sandler, “The Effectiveness of Anti-Terrorism Policies: Vector Autoregression-Intervention Analysis,” *American Political Science Review* 87:4 ([Author: year? 1993]): 829-44. A similar pattern has been observed regarding Israeli retaliation against Palestinian attacks.

³¹ See, e.g., Enders and Sandler, “The Effectiveness of Anti-Terrorism Policies”; and Jurgen Brauer, “On the Economics of Terrorism,” March 12, 2002, at www.aug.edu/%7Esbajmb/.

³² Daniel Machalaba, “Lack of Funding Hampers Efforts to Secure U.S. Ports,” *Wall Street Journal*, April 21, 2003.

³³ Cindy Williams, a former Congressional Budget Office defense budget specialist, has estimated that shifting \$5 billion from the Defense Department’s budget would allow the U.S. to increase inspection of shipping containers by a factor of ten. Cindy Williams, “Paying for the War on Terrorism: U.S. Security Choices since 9/11,” paper prepared for ECAAR panel, Allied Social Sciences Association annual meetings, January 5, 2004, at www.ecaar.org/Articles/AEA2004.htm. Al Qaeda, of course, has utilized maritime tactics in the past, as in the bombing of the U.S. Navy destroyer *Cole* in the port of Aden, Yemen.

³⁴ See Steven Kosiak, “Cost Growth in Defense Plans,” Center for Strategic and Budgetary Assessments, August 26, 2003, at www.csbaonline.org; and David Gold, “The Coming Bush Defense Budget Train Wreck in Historical Perspective,” paper presented at the New School University Study Group on the Economics of Security in a Post 9/11 World, November 14, 2003, at www.worldpolicy.org/projects/110503SG.html. For an analysis of how the Department of Defense has attempted to redefine the mission of the F-22, see United States General Accounting Office, *Changing Conditions Drive Need for New F/A-22 Business Case*, GAO-04-391, March 15, 2004, at www.gao.gov/cgi-bin/getrpt?GAO-04-391.

³⁵ Richard Lugar, “Eliminating the Obstacles to Nunn-Lugar,” *Arms Control Today* 34:2 (March 2004), at www.armscontrol.org/act/2004_03?lugar.asp.

³⁶ Robert Block, Gary Fields, and Jo Wrighton, “U.S. ‘Terror’ List Still Lacking,” *Wall Street Journal*, January 2, 2004.

³⁷ Daniel Benjamin and Steven Simon, *The Age of Sacred Terror* (New York: Random House, 2002), 132-33.

³⁸ Carla Anne Robbins, “In Giving Up Arms, Libya Hopes to Gain New Economic Life,” *Wall Street Journal*, February 12, 2004. As one immediate benefit following Libya’s public termination of its nuclear

weapons program, the United States removed all travel restrictions and once again permitted oil companies to negotiate for the development of Libya's substantial oil reserves; see Edward Alden, "U.S. Groups Freed to Resume Libya Oil Lease Talks," *Financial Times*, February 27, 2004.

³⁹ Gary Clyde Hufbauer, Jeffrey J. Schott, and Barbara Oegg, "Using Sanctions to Fight Terrorism," Policy Brief no. 01-11, Institute for International Economics, November 2001, at

www.iie.com/policybriefs/news01011.htm; Meghan L. O'Sullivan, *Shrewd Sanctions: Statecraft and State Sponsors of Terrorism* (Washington, D. C.: Brookings Institution Press, 2003).

⁴⁰ George J. Tenet, "The Worldwide Threat 2004: Challenges in a Changing Global Context," Testimony of Director of Central Intelligence before the Senate Armed Services Committee, March 8, 2004, at www.cia.gov/cia/public_affairs/speeches/2004/tenet_testimony_03092004.html. See also Jessica Stern, "The Protean Enemy," *Foreign Affairs* 82:1 (July/August 2003): 27-40.

⁴¹ Jessica Stern, "The Protean Enemy," *Foreign Affairs*, 82:1 (July/August 2003): 27-40.

⁴² Mark Basile, "Going to the Source: Why Al Qaeda's Financial Network is Likely to Withstand the Current War on Terrorist Financing," *Studies in Conflict and Terrorism*, 27 (2004), p. 173.

⁴³ Jonathan M. Winer and Trifin J. Roule, "Fighting Terrorist Finance," *Survival* 44:3 (Autumn 2003): 87-104; Loren Yager, "Combating Terrorism: Federal Agencies Face Continuing Challenges in Addressing Terrorist Financing and Money Laundering," United States General Accounting Office, Testimony Before the Caucus on International Narcotics Control, U.S. Senate, GAO-04-501T, March 4, 2004, at www.gao.gov/cgi-bin/getrpt?GAO-04-501T.

⁴⁴ President George W. Bush, "President Proposes \$5 Billion Plan to Help Developing Nations," Remarks by the President on Global Development, Inter-American Development Bank, March 14, 2002, at www.whitehouse.gov/news/releases/2002/03/print/20020314-7.html.

⁴⁵ See, e.g., The World Bank, *Assessing Aid: What Works, What Doesn't, and Why* (New York, Oxford University Press, 1998).

⁴⁶ Kim Cragin and Peter Chalk, *Terrorism and Development: Using Social and Economic Development to Inhibit a Resurgence of Terrorism* (Santa Monica, CA: RAND, 2003).

⁴⁷ See, e.g., Steven Radelet, "Will the Millennium Challenge Account Be Different?" *The Washington Quarterly* 26:2 (Spring 2003): 171-87; and Lael Brainard, "U.S. Foreign Assistance After September 11: Major Changes, Competing Purposes and Different Standards – Is There an Overall Strategy?" Testimony, Committee on International Relations, U.S. House of Representatives, February 26, 2004, at www.house.gov/international_relations/108/brain022604.htm.

⁴⁸ For a thorough analysis of the issues in security sector reform in a society prone to violence, see Mark Sedra, ed., *Confronting Afghanistan's Security Dilemma: Reforming the Security Sector*, Brief 28, Bonn International Center for Conversion, September 2003, at www.bicc.de/publications/briefs/briefs.html.