When Do Sanctions on Terrorist Groups Work?

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A substantial literature studies the effects of sanctions against states, but far less is known about sanctions against violent non-state actors. We argue and show that the effectiveness of counterterrorism sanctions hinges on terrorist groups' financial adaptability. Groups with low financial adaptability are likely to reduce attacks due to sanctions. In contrast, groups with high financial adaptability are likely to adapt to sanctions and continue attacks. Case study analysis of the 80 U.S. Foreign Terrorist Organizations between 1997 and 2019, summarized in a systematic large-n qualitative study, support this claim. We find no evidence that FTO sanctions reduce attacks when terrorist groups possess high financial adaptability. FTO sanctions only led to reduced attacks for a few low/medium adaptability groups. Our analysis is the first to show a direct link between adaptability and counterterrorism sanctions, with important implications for adaptation and the role of sanctions as a foreign policy instrument.

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"FTO designations play a critical role in our fight against terrorism and are an effective means of curtailing support for terrorist activities and pressuring groups to get out of the terrorism business." *United States Department of State, Bureau of Counterterrorism*[1]

An extensive literature examines how economic sanctions impact states.[2] Despite their importance in counterterrorism policy, scholarship is comparatively silent about sanctions on violent non-state actors.[3] Researchers have evaluated other counterterrorism policies like leadership decapitation, but we know far less about the consequences of counterterrorism sanctions.[4] This is an important gap because many states and international organizations sanction terrorist groups.[5] In this article, we explore how financial sanctions impact terrorist groups. Do sanctions change terrorist groups' behavior? More specifically, when do sanctions reduce terrorist attacks?

Understanding how sanctions impact attacks is important. Terrorist violence imposes substantial human and material costs, often on noncombatants. As a result, many scholars

[1] United States Department of State, "Foreign Terrorist Organizations," Bureau of Counterterrorism, last accessed April 6, 2025, https://www.state.gov/foreign-terrorist-organizations/.

[2] See for instance, David Baldwin, *Economic Statecraft: New Edition* (Princeton, NJ: Princeton University Press, 2020); Navin Bapat, Tobias Heinrich, Yoshiharu Kobayashi, and T. Clifton Morgan, "Determinants of Sanctions Effectiveness: Sensitivity Analysis Using New Data," *International Interactions* 39, no. 1 (2013): 79-98; Lisa Martin, *Coercive Cooperation: Explaining Multilateral Economic Sanctions* (Princeton, NJ: Princeton University Press, 1994); and Robert Pape, "Why Economic Sanctions Do Not Work," *International Security* 22, no. 2 (Fall 1997): 90-136.

[3] There are some recent exceptions. See Rebecca Best and Simanti Lahiri, "Hard Choices, Soft Targets: Terror Proscription and Strategic Targeting Decisions of FTO," *International Interactions* 47, no.6 (2021): 955-985; Julia Morse, "Blacklists, Market Enforcement, and the Global Regime to Combat Terrorist Financing," *International Organization* 73, no. 3 (2019): 511-545; Yasutaka Tominaga, Chia-yi Lee, and Mengting Lyu, "Introducing a New Dataset on Designated Terrorist Organizations (DTO)," *Journal of Peace Research* 59, no. 5 (2022): 756-766. For the examination of how interstate sanctions impact terrorist group survival, see Elena McLean, Kaisa H. Hinkkainen, Luis De la Calle, and Navin A. Bapat, "Economic Sanctions and the Dynamics of Terrorist Campaigns," *Conflict Management and Peace Science* 35, no.4 (2018): 378-401.

[4] See Patrick Johnston, "Does Decapitation Work? Assessing the Effectiveness of Leadership Targeting in Counterinsurgency Campaigns," *International Security* 36, no. 4 (Spring 2012): 47-79; Jenna Jordan, "Attacking the Leader, Missing the Mark: Why Terrorist Groups Survive Decapitation Strikes," *International Security* 38, no. 4 (Spring 2014): 7-38.

[5] Tominaga, Lee, and Lyu, "Introducing a New Dataset."

examine the causes of attacks.[6] Blocking and disrupting terrorist groups' resource systems is a central goal of counterterrorism sanctions.[7] As such, if sanctions lead to substantial attack declines, it is a crucial manifestation that a group might be getting "out of the terrorism business."[8]

We argue that sanctions are most likely to reduce terrorist violence when a terrorist group has low financial adaptability. Financial adaptability is the pre-sanction capacity of a terrorist group to maintain or adjust their resource portfolio. Terrorist groups with high financial adaptability have funding autonomy, diverse resources, and an insulated fundraising environment, which facilitates continued attacks after sanctions. On the other hand, terrorist groups with low financial adaptability rely on others for funds, employ homogenous income sources, and are exposed to global financial flows, so they are vulnerable to sanctions. Terrorists' financial adaptability becomes the basis for their responses when sanctions are imposed. It is a form of power that enables some to maintain their capacity to carry out attacks.

We test our adaptability and sanctions argument with a systematic case study analysis of the 80 groups on the U.S. Foreign Terrorist Organization (FTO) list. The FTO list has been a prominent and influential counterterrorism tool from its inception in 1997, frequently studied because it is essentially a list of the terrorist groups that most concern the U.S. government.[9]

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[6] Jessica Di Salvatore, Sara Polo, and Andrea Ruggeri, "Do UN Peace Operations Lead to More Terrorism? Repertories of Rebel Violence and Third-Party Interventions," *European Journal of International Relations* 28, no. 2 (2022): 361-385; Jordan, "Attacking the Leader."

[7] United States Department of State, "Foreign Terrorist Organizations."

[8] See Jenna Jordan, "When Heads Roll: Assessing the Effectiveness of Leadership Decapitation," *Security Studies* 18, no. 4 (2009), 719-755, 749. Jordan operationalizes "organizational degradation" with decreases in attacks. Also see Bruce Hoffman, *Inside Terrorism* (New York, NY: Columbia University Press, 2006), 248. Hoffman describes incentives for terrorist organizations to keep attacking: "The terrorists' ability to attract – and, moreover, to continue to attract – attention is often predicated on the success of their attacks."

[9] For the terrorist designation politics, see Colin Beck and Emily Miner, "Who Gets Designated a Terrorist and Why?" *Social Forces* 91, no.3 (2013): 837-872. On the study of FTO list, see Max Abrahms, "Why Terrorism Does Not Work," *International Security* 31, no. 2 (Fall 2006): 42-78; Audrey K. Cronin, *How Terrorism Ends: Understanding the Decline and Demise of Terrorist Campaigns* (Princeton, NJ: Princeton University Press, 2011).

FTO sanctions attempt to constrain terrorism finance by criminalizing financial transactions, freezing funds, and stimulating international cooperation. High U.S. state capacity makes our analysis a useful test. If financial adaptability undermines U.S. sanctions, that means financial sanctions by less capable states are less likely to reduce terrorist violence.

The article presents aggregate summaries and some illustrative examples from case studies we conducted on 80 FT0s. All 80 case studies, a substantial data contribution, are in the Supplementary Material, although we refer to illustrative examples throughout the paper. Our study examines three waves of US FTOs: 1) initial designations (1997-2001), 2) al-Qa'ida associates (2001-2011), and 3) Islamic State affiliates (2011-2019). Grouping the FTOs in three generations provides a research design advantage of examining within as well as across each of the three generations. We also provide aggregate analysis of FTOs across all waves. This large-n qualitative approach complements quantitative studies of counterterrorism sanctions.[10] It provides a thorough assessment of the connection between financial adaptability, sanctions, and attacks in each FTO case, with narratives on the sequence of events and consideration of confounding factors, such as sanctions enforcement and other counterterrorism efforts.

We find little evidence that U.S. counterterrorism sanctions reduce attacks when terrorist groups possess high financial adaptability. Our assessment of the sanctions process leads us to conclude that sanctions are clearly linked to reduced attacks in 5% of groups (4 out of 80). All

[10] For related large-N methods, see Gary Goertz and Stephan Haggard, "Large-N Qualitative Analysis (LNQA): Causal Generalization in Case Study and Multimethod Research," *Perspectives on Politics* 21, no. 4 (2023): 1221-1239. Some relevant counterterrorism sanctions literature includes the following: Best and Lahiri, "Hard Choices."; Christopher Huber, *Imposing Sanctions on Violent Non-State Actors to Restore International Peace and Security* (Springer, 2022); Hyeran Jo, Brian Phillips, and Joshua Alley, "Can Blacklisting Reduce Terrorist Attacks?" in *The Power of Global Performance Indicators*, eds. Beth Simmons and Judith Kelley (New York: Cambridge University Press, 2020): 271-299; Brian J. Phillips, "Foreign Terrorist Organization Designation, International Cooperation, and Terrorism," *International Interactions* 45, no. 2 (2019): 316-343; Mitchell Radtke and Hyeran Jo, "Fighting the Hydra: United Nations Sanctions and Rebel Groups," *Journal of Peace Research* 55, no. 6 (2018): 759-773; Tominaga, Lee, and Lyu, "Introducing a New Dataset."

four sanctions-affected groups have low or medium financial adaptability. We also find that high-adaptability groups are more likely to financially adapt after sanctions imposition by shifting resources. Given that high adaptability groups are a substantial and increasing proportion of FTOs, a key policy implication is that the efficacy of sanctions against terrorist organizations has decreased over the life of the sanctions regime. Sanctions efficacy is unlikely to increase without changes to sanctions implementation or enforcement that address financial adaptability.

The findings contribute to our understanding of counterterrorism by showing how sanctions can sometimes contribute to the goal of reducing terrorism – and why they often do not. The financial adaptability of groups is a key obstacle to sanctions success. This concept, which captures the ability to shift or protect resources, is distinct from traditional measures of attack capacity. Our finding emphasizes the importance of financial adaptability in terrorist organizations by showing that it has increased in recent years.

Our research also speaks broadly to the sanctions literature by studying target responses. Terrorist groups, like other political actors, attempt to sanction-bust. Trading countries often leverage their trading portfolios before and after sanctions, as evinced by Russia's recent circumvention of sanctions.[11] Authoritarian regimes nationalize and expropriate foreign direct investment in response to economic sanctions.[12] Additionally, firms divert their trade routes to circumvent sanctions regulation.[13] By showcasing terrorist sanction busting behaviors, we contribute to the sanctions literature by studying target responses to economic coercion, in line

[11] See Kerim Kavakli, Tyson Chatagnier, and Emre Hatipoglu, "The Power to Hurt and the Effectiveness of International Sanctions," *Journal of Politics* 82, no. 3 (2019): 879-894. For topic of Russian sanctions evasion, see Multilateral Russian Elites, Proxies, and Oligarchs (REPO) Task Force, "Global Advisory on Russian Sanctions Evasion," March 9. 2023, https://home.treasury.gov/system/files/136/REPO_Joint_Advisory.pdf

[12] Hoon Lee, David Lektzian, and Glen Biglaiser, "The Effects of Economic Sanctions on Foreign Asset Expropriation," *Journal of Conflict Resolution*, *67, no.* 2-3 (2022): 266-296.

[13] Colin M. Barry and Katja B. Kleinberg. "Profiting from Sanctions: Economic Coercion and US Foreign Direct Investment in Third-Party States," *International Organization* 69, no. 4 (2015): 881–912.

with existing findings. Our analysis on the specific sources of terrorist group adaptability as well as the mode of financial adaptation provides a significant and specific departure from general targeted sanctions literature.

Understanding the source of adaptability and subsequent adaptation behaviors is especially important for the future viability of targeted sanctions, which are an increasingly popular foreign policy tool against states or against non-state actors.[14] Indeed, since the United States has drawn down the *military* part of its "war on terror," countering terrorism financing has become a primary tool. The recent Israeli crackdown on the al-Qard al-Hassan (AQAH), the Lebanese bank and the source of Hizbullah's financing, is also a reminder of the importance of terrorist financing and associated counterterrorism activities.[15] For these reasons, the study of this counterterrorism instrument will remain relevant.

Terrorism Financing and FTO Sanctions

Money is essential for terrorism. The cost of violence varies, but every act of terrorism requires resources.[16] Suicide bombing often costs several thousand dollars, while elaborate attacks like 9/11 require as much as $500,000.[17] Financing also allows terrorist groups to meet daily

[14] We cannot do justice to the full sanctions literature, but some works include: Thomas Biersteker, Sue Eckert, and Marcos Tourinho, eds., *Targeted Sanctions: The Impacts and Effectiveness of United Nations Action* (Cambridge, UK: Cambridge University Press, 2016); Clifton Morgan, Constantinos Syropoulos, and Yoto V. Yotov, "Economic Sanctions" *Journal of Economic Perspectives* 37, no. 1 (2023): 3-30; Tominaga, Lee, and Lyu, "Introducing a New Dataset."; Daniel Drezner, "Global Economic Sanctions," *Annual Review of Political Science* 27 (2024): 9-24; Magnus Lundgren, Emma Janson, and Martin Lundqvist, "Introducing the Proscription of Armed Actors Dataset," *Journal of Peace Research* (2024): 1-11.

[15] Details of AQAH in The Economist, "Hizbullah's Sprawling Financial Empire Looks Newly Vulnerable," October 21, 2024, https://www.economist.com/finance-and-economics/2024/10/21/hizbullahs-sprawling-financial-empire-looks-newly-vulnerable

[16] Michael Freeman, "The Sources of Terrorist Financing: Theory and Typology," *Studies in Conflict & Terrorism* 34, no. 6 (2011): 461-475.

[17] Matthew Levitt, *Hamas: Politics, Charity, and Terrorism in the Service of Jihad* (New Haven, CT: Yale University Press, 2006), 55; The 9/11 Commission, "The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States." *National Commission on Terrorist Attacks Upon the United States*, Washington, D.C., 2004, https://www.9-11commission.gov/report/911Report.pdf, 169.

operating costs.[18] As Louise Shelley notes, "Feeding, arming, and providing the high-level technical capacity to run a terrorist organization is not cheap."[19] Beyond everyday operations, many terrorist groups provide social services or compensate the families of terrorists killed in action.

Once the State Department designates a terrorist group as an FTO, several legal implications and sanctions procedures follow. Financial institutions seize funds associated with the group, "material support" of the group becomes a crime, and members of the group might be barred from the United States.[20] The first two elements, financial sanctions, are the most often discussed in the literature and are especially likely to be meaningful for the day-to-day operations and attack patterns.[21] Restrictions on group members entering the United States could have important consequences, such as reducing the likelihood of a 9/11-type foreign-originated attack. Seizures based on U.S. sanctions have been substantial: The U.S. Treasury froze more than $60 million in terrorist funds in 2020 alone.[22] Material support criminalization is important because it is likely to deter group supporters from, for example, sending money to the group.[23] Such strict financial sanctions could, at least in theory, seriously impede a group's ability to fund

[18] Levitt, *Hamas: Politics, Charity, and Terrorism*.

[19] Louise I. Shelley, *Dirty Entanglements: Corruption, Crime, and Terrorism* (New York, NY: Cambridge University Press, 2014), 269.

[20] These implications are summarized in United States Department of State, "Foreign Terrorist Organizations."

[21] See for instance, Bryan R. Early and Keith Preble, "Going Fishing versus Hunting Whales: Explaining Changes in How the U.S. Enforces Economic Sanctions," *Security Studies* 29 no. 2 (2020): 231-267; United States Government Accountability Office (GAO), *Terrorist Financing: Better Strategic Planning Needed to Coordinate U.S. Efforts to Deliver Counter-Terrorism Financing Training and Technical Assistance Abroad*, October 2005. https://www.gao.gov/assets/gao-06-19.pdf; Juan Zarate, *Treasury's War: The Unleashing of a New Era of Financial Warfare* (New York, NY: PublicAffairs, 2013).

[22] United States Department of the Treasury, "Terrorist Assets Report: Calendar Year 2020: Twenty-ninth Annual Report to the Congress on Assets in the United States Relating to Terrorist Countries and Organizations Engaged in International Terrorism," Office of Foreign Assets Control. 2020, https://ofac.treasury.gov/media/912651/download?inline, 9-11.

[23] The U.S. government frequently arrests people on this charge and publicizes the arrest and prosecution (e.g., Meko and Coleman 2024). See, for example, the reporting in Harubie Meko and Maia Coleman, "New York Woman Gets 18 Years for Funding Terrorism with Cryptocurrency," *New York Times*, 30 April 2024, https://www.nytimes.com/2024/04/30/nyregion/cryptocurrency-terrorism-victoria-jacobs.html.

and thus carry out attacks. There are other terrorist sanction lists, such as the Specially Designated Global Terrorist list, but there is a substantial overlap across these lists. For example, 85% of SDGTs are part of one or more FTOs.[24] Because of these reasons, these other sanction lists likely reinforce FTO effects.

In addition to direct enforcement by the United States, counterterrorism sanctions can also indirectly stimulate cooperation with host states, impacting the fate of terrorist groups.[25] U.S. terrorist designations are globally influential, encouraging other countries and international organizations to designate the same groups.[26] This could amplify the potential effects of U.S. sanctions. International organizations also bolster sanctions mechanisms. For example, the United Nations Sanctions Committee often coordinates sanctions enforcement with the United States.[27] Additionally, the Financial Action Task Force (FATF) regulations restrict some terrorist groups' funds when banks enforce anti-money laundering (AML) controls.[28] In sum, counterterrorism sanctions create direct and indirect financial pressures on terrorist groups.

[24] As reported in Seth Loertscher, Daniel Milton, Bryan Price, and Cynthia Loertscher, "An Examination of the U.S. Government's Counterterrorism Designation Efforts," *Combating Terrorism Center at West Point*. 2020, https://ctc.usma.edu/the-terrorist-lists-an-examination-of-the-u-s-governments-counterterrorism-designations-efforts/.

[25] On related analyses, see Navin Bapat, Luis De la Calle, Kaisa H. Hinkkainen, and Elena V. McLean, "Economic Sanctions, Transnational Terrorism, and the Incentive to Misrepresent," *Journal of Politics* 78, no. 1 (2016): 249-264; McLean, Hinkkainen, De la Calle, and Bapat, "Economic Sanctions and the Dynamics of Terrorist Campaigns."; Phillips, "Foreign Terrorist Organization Designation."

[26] On the significance of U.S. listing, see Mirna El Masri and Brian J. Phillips, "Threat Perception, Policy Diffusion, and the Logic of Terrorist Group Designation," *Studies in Conflict & Terrorism* 47, no. 8 (2021): 838-861; Chia-yi Lee, and Yasutaka Tominaga, "The Determinants of Terrorist Listing," *Journal of Conflict Resolution* 68, no. 1 (2023): 53-79.

[27] According to the State Department archive (United States Department of State, 2001-2009), the U. S. Government plays "an active role in each [UN] sanctions committee by working closely … in designating individuals and entities for sanctions, and in the implementation of sanctions." See United States Department of State. 2001-2009. "U.S. Support for UN Peacekeeping, UN Sanctions Committees, and UN Counter-terrorism Efforts" U.S. State Department Archive 2001-2009, https://2001-2009.state.gov/p/io/pkpg/#:~:text=The%20United%20States%20plays%20an,in%20the%20implementation%20of%20sanctions

[28] Morse, "Blacklists, Market Enforcement, and the Global Regime."

Financial Adaptability

We argue that sanctions affect terrorist groups that do not possess financial autonomy, diverse resources, or cannot protect their resources from sanctions pressure. Financial adaptability of terrorist groups is an important dimension for understanding why sanctions may or may not be effective. Sanctions effectiveness hinges on targets' resistance, vulnerability, and resilience. In the context of financial sanctions, the key determinant will be whether groups can muster and control its own resources; the speed with which they quickly divest in sanctioned resources and invest in alternatives; and the degree to which groups are insulated from sanctions pressure.

We define financial adaptability as the capacity of terrorist groups to maintain or adjust funding before sanctions onset. The concept of financial adaptability includes three elements: 1) financial autonomy, 2) diversification, and 3) invulnerability. Autonomy refers to direct control over resources without depending on other actors. Financial autonomy reduces the risk of sudden funding cuts and permits nimble responses to sanctions. Less autonomous terrorist financing depends on state sponsors, private donors, or other terrorist groups. When sanctions impact key intermediaries, terrorists can lose substantial resources.[29] In comparison, terrorists with autonomous funding, such as crime, have more control over their funding.

Diversification is the other important dimension of financial adaptability. Terrorist groups utilize a diverse set of resources, including 1) private funding from non-state donors such as charities or individuals, 2) criminal activities such as bank robberies or kidnapping, 3) terrorist networks that provide training or direct funds, and/or 4) state sponsorship. Tapping multiple resources facilitates continued violence after sanctions. For example, if sanctions reduce income

[29] For this logic, see David B. Carter, "A Blessing or a Curse? State Support for Terrorist Groups," *International Organization* 66, no. 1 (2012): 129-151.

from private donors, terrorist groups with criminal funding or terrorist networks have a ready source of replacement revenue. Diversification also facilitates quick adaptation to FTO sanctions. Groups with only one funding source must pay startup costs to establish new revenue streams.

Invulnerability adds further cushion to terrorists' financial portfolio. Invulnerability entails limited exposure to global financial markets. When terrorists move money through formal financial channels, sanctioning officials can track funds and cut financial flows using financial institutions and international partnerships. For example, private donations through established financial channels and charitable funds are vulnerable to sanctions enforcement.[30] However, when terrorist groups operate in states with few ties to the global financial system or rely on informal channels such as *hawala* transfers or local donations, standard financial sanctions lose potency.

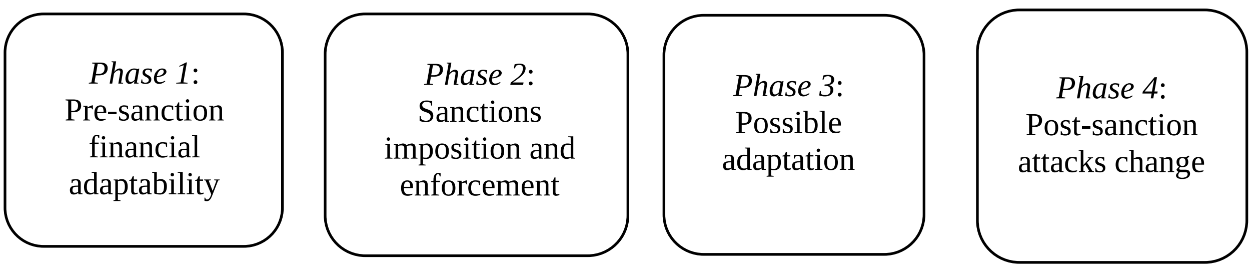
Adaptability and capability are not equivalent concepts. Some groups may develop substantial capabilities from resource base with low financial adaptability. For example, the LTTE was very capable of generating violence, but they had a resource base with limited adaptability due to dependence on private donations. Conversely, the Islamic Movement of Uzbekistan was much less capable in generating violence than the LTTE, but it had relatively higher financial adaptability, with various criminal activities and funds from al-Qa'ida. This means that groups with high capability may sometimes be more vulnerable to sanctions than their capability alone suggests. Some groups have substantial capacity for violence but limited flexibility to adjust to new financial constraints.

[30] United States Department of the Treasury, "Designated Charities and Potential Fundraising Front Organizations for FTOs," Terrorism and Illicit Finance, 2020, https://www.treasury.gov/resource-center/terrorist-illicit-finance/Pages/protecting-fto.aspx.

From Adaptability to Attacks

Financial adaptability shapes the impact of FTO sanctions in four stages, which we illustrate in Figure 1. At the initial stage before sanctions are imposed (Phase 1), terrorist organizations establish their funding with either a single source or a mix of private funding, criminal activities, terrorist networks, and state sponsorship. This *ex ante* funding portfolio that determines terrorist organizations' financial adaptability.

Figure 1. The Process from Adaptability to Sanctions: Pre- to Post-Sanctions



Once sanctions are imposed (Phase 2), the United States enforces them with varying severity. FTO enforcement and blocked funds usually appear in annual Terrorist Assets Reports (TAR). Seized assets can run from a few hundred to millions of dollars. Travel bans might make some groups leaders' travels difficult when they seek diaspora support and expand foreign private donations. At this stage, indirect enforcement via international collaboration or via host governments efforts can occur as well. As a result of sanctions enforcement, some groups may be directly pressured by sanctions. Their donors may be arrested for material support, with decreasing donations resulting in resource constraints.[31]

[31] Tom Keatinge, "The Role of Finance in Defeating Al-Shabaab," *Royal United Services Institute for Defence and Security Studies (RUSI)*, December 30, 2014, London, 12.

After the United States imposes sanctions, some groups will financially adapt while others do not (Phase 3). Groups with a greater degree of *ex ante* financial adaptability, with autonomous, diversified, and invulnerable financial portfolio, are more likely to eventually adapt. Such adaptation is different from the concept of financial adaptability, however. Adaptation refers to *ex post* behavioral change, while adaptability refers to the group's *ex ante* financial traits.

Behavioral changes can include strengthening autonomous funding (e.g. shift main resource from state sponsorship reliance to group-run criminal activities), the diversification of funding sources (e.g. to expand the single source to multiple), and/or the shielding of funds (e.g. changing from diaspora funds via bank transfers to *hawala* system of informal cashflow). Changing funding sources is akin to the displacement phenomenon in criminology – the idea that removing one opportunity does not prevent crime but rather moves it to other domains.[32]

In general, groups with higher adaptability are more likely to adapt when sanctioned. Nevertheless, adaptation after sanctions is not an automatic consequence of adaptability. Financial adaptability prior to sanctions does not guarantee adaptation after sanctions. Some groups with low financial adaptability may survive and thrive by revamping their organizations or finding new revenues despite sanctions. It is also possible that other groups with high financial adaptability might fail to adapt. Generally, however, adaptability increases the likelihood of subsequent adaptation.

[32] Frank Morgan, "Displacement of Crime," *Encyclopedia of Theoretical Criminology*, 2014; Cody Telep, David Weisburd, Charlotte Gill, Zoe Vitter, and Doron Teichman, "Displacement of Crime and Diffusion of Crime Control Benefits in Large-Scale Geographic Areas: A Systematic Review," *Journal of Experimental Criminology* 10 (2014): 515-548.

After an organization has been sanctioned, it might decrease its attacks, or it might continue with similar levels or even increase attacks (Phase 4). A decrease in attacks indicates a potential sanctions success, as terrorism reduction is one of the central goals of the FTO regime. In contrast, no decrease in attacks indicates sanctions failure.

Sanctions sometimes reduce attacks by constraining the resources available to fund attacks and sustain organizational capacity. Reduced finances make it harder to procure arms and fund manpower.[33] Limited financial reward, including compensation for dependents, may reduce individuals' likelihood of joining terrorist organizations and conducting violence. This is likely to be the situation for groups with low financial adaptability, groups unable to adjust after sanctions begin. However, when groups are better equipped to adjust after sanctions imposition, more flexible in the face of constraints, they will feel less pressure from sanctions and that attacks are more likely to continue or could even increase.

At Phase 4, other factors besides sanctions can also drive observed attack changes. Kinetic actions (e.g. leadership decapitation, military campaigns), non-kinetic actions (e.g. host government law enforcement actions), and internal factors (e.g., organizational fragmentation) can occur alongside sanctions imposition.[34] These counterterrorism efforts and internal group dynamics are critical to assessing the unique and independent role of sanctions in reducing attacks.

We expect that terrorist groups with high financial adaptability will be less likely to reduce attacks under sanctions, compared to groups with low financial adaptability. This is

[33] Shelley, *Dirty Entanglements, 214.*

[34] On the other factors besides sanctions, see Abrahms, "Why Terrorism Does Not Work"; Cronin, *How Terrorism Ends*; Seth Jones and Martin Libicki, "How Terrorist Groups End: Lessons for Countering al-Qa'ida," *RAND*. MG747, 2008; Jacob Shapiro and David Siegel, "Moral Hazard, Discipline, and the Management of Terrorist Organizations," *World Politics* 64, no. 1 (2012): 39-78.

because groups with high financial adaptability will either have autonomous or invulnerable resources that resist sanctions pressure, or the capacity to shift funding sources in ways that reduce financial pressure. Groups with low financial adaptability, by contrast, have greater vulnerability to sanctions. If sanctions reduce a critical funding source and a group with low financial adaptability cannot adjust, it will lose the capacity to finance attacks. We sum up our expectation in financial adaptability hypothesis as follows: Lower financial adaptability groups are more likely, compare to higher financial adaptability groups, to reduce attacks after sanctions.

Research Design

To assess our hypothesis, we analyze 80 terrorist groups on the U.S. FTO list between 1997 and 2019.[35] We rely on qualitative case studies of each group that draw on hundreds of government reports, news articles, academic articles, and other sources.[36] Because there are 80 separate case studies, we report aggregate findings and illustrative examples here. Tabulating the results of these cases shows patterns across the universe of FTO designates. Detailed analyses of each group are available in the Supplementary Material, with a coding compilation for each group, summary tables and references.

We employ a large-n qualitative approach because it provides rich evidence to identify the impact of sanctions, both in aggregate patterns and tracing sanctions impact.[37] By examining

[35] Our analysis excludes groups that the State Department placed on the FTO list in 2019 or later, as the Global Terrorism Database only covers through 2020 so there is insufficient data to track attack changes. These recent designations aside, we analyze the full set of FTOs.

[36] Sources include government reports (State Department Country Reports on Terrorism, Treasury Department Terrorist Assets Reports, Congressional Research Service), international organizations (FATF, UN sanctions committees), academic institutions (The START Center at the University of Maryland, Mapping Militant Organizations at Stanford), think tanks (RAND, Combating Terrorism Center at West Point, and Council on Foreign Relations), books, and newspaper and journal articles.

[37] Goertz and Haggard, "Large-N Qualitative Analysis."

each group, we can track every stage from pre- to post-sanctions, while accounting for other concurrent events such as infighting or leadership losses, as well as the impact of other policies, such as kinetic actions. The in-depth nature of our analysis permits us to sort out which factors matter more than others.

The U.S. FTO list is important to study because it is the most prominent terrorist list of arguably the most influential country regarding counterterrorism.[38] Groups on the list might larger or more resilient than typical armed groups, which suggests this might be a "hard case" for showing sanctions success. However, the United States has more counterterrorism capacity and global reach than most countries, so it is possible that U.S. sanctions are more effective than sanctions by other countries. Future research could analyze effectiveness of other counterterrorism sanctions.

We divide the 80 FTOs into three generations. The first generation of 38 FTOs starts with the initial 1997 designations and ends around 9/11, including many groups in civil wars (e.g., PKK and FARC) and some Middle Eastern organizations (e.g. Popular Front for the Liberation of Palestine and Hamas).[39] The second generation of 28 al-Qa'ida affiliates covers Salafi jihadists in the decade between 9/11 and the Syrian civil war (2001-2011). The third generation includes 14 Islamic State affiliated groups after with the Syrian civil war started (2011-2019).

Breaking the FTO list into three generations allows us to assess variation within and across comparable clusters. Examining groups within each generation allows us to compare groups with similar organizational lineages and historical experiences, thus holding some

[38] Abrahms, "Why Terrorism Does Not Work"; Beck and Miner, "Who Gets Designated a Terrorist."
[39] We follow the State Department list for spelling group names in United States Department of State, "Foreign Terrorist Organizations," except when citing references with aliases or other spellings.

contextual factors constant.[40] Each generation of FTOs reflects its time. Many of the first generation FTOs were legacy groups with insurgent histories. The second-generation al-Qa'ida affiliates were selected after 9/11 primarily because they were part of a salient and lethal network, although some affiliates were not as strong as AQ central. Along with accounting for these different contexts, we track the general patterns of adaptability, adaptation, and attacks, and every case description considers competing explanations and the process sequence.[41] Tracing the processes from adaptability to attacks, combined with congruence case analysis, covers the depth and breadth of information in our large-n sample.[42] Crucially, we can use the qualitative case studies to assess whether an observed change in attacks actually reflects sanctions impact.[43]

Grouping organizations across generations allows us to examine the interplay of sanctions and adaptability over time. The first generation is a diverse group and counterterrorism sanctions were relatively novel. Later terrorist organizations operated in a world with widespread and established sanctions. This may have affected the distribution of adaptability across groups by encouraging terrorist organizations to create more autonomous, diversified and invulnerable financial portfolios. Networks of al-Qa'ida and Islamic State affiliates also created structural changes in adaptability. The three-generation framework allows us to track and consider these processes.

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[40] Adam Przeworski and Henry Teune, *The Logic of Comparative Social Inquiry* (Wiley-Interscience, 1970); Dan Slater and Daniel Ziblatt, "The Enduring Indispensability of the Controlled Comparison," *Comparative Political Studies* 46, no. 10 (2013): 1301-1327.

[41] For approaches and methods see Adrian Kay and Philip Baker, "What Can Causal Process Tracing Offer to Policy Studies? A Review of the Literature," *Policy Studies Journal* 43, no. 1 (2015): 1-21; Christopher Blair, Michael Horowitz, and Philip Potter, "Leadership Targeting and Militant Alliance Breakdown," *Journal of Politics* 84, no. 2 (2022): 923-943.On process sequence, see David Collier, "Understanding Process Tracing," *PS: Political Science and Politics* 44, no. 4 (2011): 823-30.

[42] Approach outlined in Blatter, Joachim, and Till Blume, "In Search of Co-Variance, Causal Mechanisms or Congruence? Towards a Plural Understanding of Case Studies," *Swiss Political Science Review* 14, no. 2 (2011): 315-356.

[43] Following the method outlined in Goertz and Haggard, "Large-N Qualitative Analysis (LNQA)."

Measuring Attack Changes

Our dependent variable is the change in terrorist attacks after FTO designation.[44] Using information on attack trends, we code the outcome as either "decrease" or "no decrease" in attacks for each FTO. Cases of "decrease" occur when attacks fall after designation and do not return to the highest pre-designation level. "No decrease" cases capture all other attack patterns after designation, including increased attacks or no substantial change. We draw attack data primarily from the Global Terrorism Database (GTD) and triangulating with other sources. Additionally, Our analysis supplements GTD data for some FTOs. For example, the GTD does not include any attacks by FTOs such as Ansar al-Shari'a in Darnah, while qualitative sources indicate these groups have carried out attacks.

To determine changes in attacks for each group, we compared attacks three years before and three years after the designation. Setting a time window around designation assumes that sanctions take effect within a few years. Our main interest is in how adaptability at time t-1 affects the attacks at time t+1 after the sanctions at time t. Here, we assume that the Treasury Department immediately implements FTO designation, although enforcement practices might differ. We therefore acknowledge that the sanctions might lead to changes in adaptability at time t+2, which in turn might influence sanctions effectiveness. But our focus on relatively short-term effects reduces the likelihood of longer-term endogenous processes.

For long-running groups, the observation window of three years before and after is not a problem. For groups with few operations before designation, we look at monthly attack patterns to determine whether there is a "decrease" or "no decrease" in attacks. Given different group life cycles, the three-year window facilitates reasonable comparisons across most groups, especially

[44] We source FTO designation dates from United States Department of State, "Foreign Terrorist Organizations."

third generation groups with less information than the other two generations. We also code organizations that cease to exist or stop using violence within several years of designation as having an attack decrease.

Attacks are an important outcome because they match the key declared aim of the FTO regime, reducing terrorism.[45] Furthermore, our case studies discuss other common measures of counterterrorism success such as fatalities and group failure or longevity.[46] Attacks can change relatively quickly, and assessing attacks over three years gives us enough time to establish a potential trend, even if groups, for example, briefly engage in violence after designation to signal strength. However, years of sustained attacks require resilience, since attacks and attackers are not cost-free. Using attacks as an outcome is consistent with other studies of terrorist designation,[47] and other research on counterterrorism and counterinsurgency.[48]

Measuring Financial Adaptability

Financial adaptability is our main explanatory variable. This is an ordinal measure of low, medium, and high financial adaptability for each terrorist group. We constructed this measure by identifying the presence of private donations, criminal activities, terrorist networks, and state sponsorship in each group's funding portfolio. We then link the resource portfolio to three

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[45] United States Department of State, "Foreign Terrorist Organizations."

[46] We also examined fatality and casualty measures, especially when attack records are sparse or ambiguous. We complement this with qualitative accounts that indicate, for example, if the group had ceased to exist or carried out more or fewer attacks (without mentions of numbers).

[47] Best and Lahiri, "Hard Choices, Soft Targets"; Tominaga, Lee and Lyu, "The Determinants of Terrorist Listing."

[48] Johnston "Does Decapitation Work?"; Jesse Paul Lehrke and Rahel Schomaker, "Kill, Capture, or Defend? The Effectiveness of Specific and General Counterterrorism Tactics Against the Global Threats of the Post-9/11 Era," *Security Studies* 25, no. 4 (2016): 729–62; Joshua A Schwartz, Matthew Fuhrmann, and Michael C Horowitz, "Do Armed Drones Counter Terrorism, Or Are They Counterproductive? Evidence from Eighteen Countries," *International Studies Quarterly* 66, no. 3 (September 2022).

dimensions of financial adaptability: autonomy, diversification, and invulnerability, as explained in the theory section.

Criminal activities provide *autonomy*. Substantial reliance on private donors, state sponsorship, or terrorist networks creates dependency on donors, sponsors, and other terrorist organizations. *Diversification* requires multiple income sources, while a single income source is undiversified funding. *Invulnerability* comes from some combination of terrorist networks and criminal activities, while most private funding is relatively more vulnerable to financial sanctions.

Based on the three components of financial adaptability, we create a measure of financial adaptability for each FTO. If a terrorist group has autonomy, diversification, and invulnerability, it has high financial adaptability. If a terrorist group exhibits two of three adaptability dimensions, it has medium financial adaptability. If a terrorist group has one or none of the three dimensions, they possess low financial adaptability. High adaptability requires all three dimensions because their joint presence is qualitatively different from medium or low adaptability. When groups lack one of the three dimensions, sanctions are much more likely to have a plausible way to impact group funding. A diversified group that has some autonomy might still be vulnerable to losing some revenue from sanctions, for instance.

Detecting Financial Adaptation

We also look for evidence of financial adaptation, changes in financial behavior after sanctions. For instance, when a group moves its resource base from private donation to extortion by way of being more autonomous in funding, or when a group enters the drug trade or forges new terrorist networks by way of diversifying its funding, or when a group shields its funding stream to clandestine operations such as the informal exchange systems or illicit trades, we record those changed behaviors as financial adaptation.

The focus is financial adaptation, but we note other adaptations when relevant. For instance, financial adaptation can occur alongside other changes, such as technological adaptation, tactical adaptation, ideological adaptation, or organizational adaptation.[49] For example, tactical change due to a resource crunch, say from infrastructure bombing to suicide bombing, is closely related to financial adaptation. Organizational change that reshapes terrorist networks also generates financial adaptation.

Since the primary observation window is three years pre and post sanctions, we primarily observe short-term adaptation, but we note long-term adaptation in the Supplementary Material if relevant. There is a risk of undercounting adaptation. This provides a harder test for our adaptability hypothesis, especially for the third generation FTOs, for which the observation window is shorter than other older generations.

Determining Sanctions Success

We determine "success" cases with several criteria: 1) where FTO sanctions had a clear role with sign of implementation and enforcement, 2) where other salient factors, such as counterterrorism efforts or internal collapse, not playing a substantial role, and 3) attacks decreasing. Without the evidence of sanctions direct enforcement, it would be difficult to see whether sanctions measures

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[49] For topic of technological adaptation, see Audrey K. Cronin, *Power to the People: How Open Technological Innovation is Arming Tomorrow's Terrorists* (Oxford University Press, 2019); For topic of tactical adaptation, see Di Salvatore, Polo, and Ruggeri, "Do UN Peace Operations Lead to More Terrorism?"; For topic of ideological adaptation, see Barbara Walter, "The Extremist's Advantage in Civil Wars," *International Security* 42, no. 2 (Fall 2017): 7-39; For topic of organizational adaptation, see Michael Kenney, *From Pablo to Osama: Trafficking and Terrorist Networks, Government Bureaucracies, and Competitive Adaptation* (Pennsylvania State University Press, 2007).

impacted the behavioral outcome of terrorist groups. Also, with the prominent operation of other counterterrorism actions and internal dynamics of terrorist groups, it would be difficult to pinpoint that it was the sanctions that impacted the attacks.

As the key indicator of direct sanctions enforcement, we turn to the evidence presented in the Treasury Department's Terrorist Assets Reports (TAR). TAR reports the amount of seized assets of group resources. For instance, the 2020 TAR indicates that the U.S. government has seized $22,826,728 from Hizballah in 2019, and $23,481 from the Palestine Islamic Jihad.[50] The seized funds reported in TAR are clear indications that the direct enforcement of the FTO sanctions was implemented. In addition to the primary indicator of direct FTO sanctions enforcement in TAR, we collected evidence of direct sanctions enforcement, for instance, by looking at group members complaining about funding shortages, or arrests of donors for material support. We also collected information related to indirect enforcement of financial sanctions via international collaboration or host government actions but use this information only when we consider a relaxed criteria of sanctions success.

Whether factors other than financial sanctions played a substantial role was an important criterion for determining sanctions success. By "substantial" role, we mean the proximate, observable, and significant role of FTO sanctions, compared to other counterterrorism efforts or internal dynamics of terrorist groups. Consider, for example, a group has multiple leaders killed, and then its violence decreased, and we see very little evidence of sanctions effects (e.g., a small amount frozen in TAR, but the group is very wealthy and gets most of its money locally). We

[50] United States Department of the Treasury, "Terrorist Assets Report: Calendar Year 2020: Twenty-ninth Annual Report to the Congress on Assets in the United States Relating to Terrorist Countries and Organizations Engaged in International Terrorism," Office of Foreign Assets Control, 2020, https://ofac.treasury.gov/media/912651/download?inline, 10-11.

then qualitatively infer that the other counterterrorism approach was much more meaningful than sanctions. Such situations are not cases of sanctions success.

This consideration of sanctions playing a substantial role is important because in thirty percent of the cases of our sample, direct sanctions enforcement occurred in tandem with counterterrorism efforts. We chiefly relied on secondary sources to make the determination. For instance, the State Department designated Hizballah in 1997. In the subsequent three years, attacks declined, but secondary sources noted significant fragmentation and weakening of the group between 1997 and 1999 due to issues between the governments of Iran and Syria.[51] Even after taking into account Hizballah's shift into Lebanese politics as a party starting in 1992 (Norton 2007, 481; Wiegand 2009), sanctions' role is trivial compared to other factors in accounting for the attack decrease after the FTO designation. It is notable that seized funds from Hizballah only appear in TAR starting in 2007, 10 years after designation.[52]

We labeled cases where attacks decline but circumstances failed to meet the success standards as "short of success." These are the cases where attacks decrease where sanctions come with limited enforcement or with other confounding events, such as major counterterrorism operations or internal collapse. In this short-of-success category, we cannot be certain that sanctions had a clear role in bringing in down terrorist attacks. If there is no evidence of direct sanctions enforcement, we cannot attribute attack decrease to sanctions implementation. With major counterterrorism events or sudden internal collapse, it is difficult to say sanctions, not these other factors, brought about the decrease in attacks.

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[51] Henning Tamm, "Rebel Leaders, Internal Rivals, and External Resources: How State Sponsors Affect Insurgent Cohesion," *International Studies Quarterly* 60, no. 4 (December 2016): 599-610.

[52] FTO coding compilation, page 59.

The rest of the cases where attacks do not decrease are clear failures. "Sanctions failure" occurs in cases where terrorist attacks remain constant or increase after FTO designation. Sanctions failure can occur with or without financial adaptation. With terrorist groups adapting to sanctions, those groups seek new funders and resources, alleviating the sanctions pressure, and ultimately their attack capacity unscathed. Sanctions can also fail without adaptation, where we expect to observe in the groups that have initially low financial adaptability, with less diverse resource portfolio or vulnerable funding types.

Summing up the above discussion, Table 1 presents the summary of the four outcomes: 1) sanctions success, with clear evidence of direct FTO enforcement and little evidence of confounding events, 2) short of success, with little evidence of direct FTO enforcement and/or evidence of confounding events, 3) sanctions failure, unaccompanied by group adaptation, and 4) sanctions failure, accompanied by group adaptation.

We employ a relatively strict view of sanctions success because our goal is to identify the independent effect of sanctions apart from other counterterrorism efforts and to ensure that sanctions are enforced. We nevertheless recognize that the category of success in Table 1 uses demanding criteria. Of course, there may be many cases where sanctions and other counterterrorism events concurrently occur which can make the determination of substantial sanctions role difficult. Also, some of the enforcement activities might be hidden and covertly executed. It is also possible that some terrorists could have deterred before the sanctions imposition.[53] This is especially true in the case of FTOs that receive the initial attention because of their proven attack records. These criteria may also omit enforcement via indirect fashion by host governments. Travel bans are also part of FTO sanctions but they are not captured by the

[53] Drezner, "Global Economic Sanctions." As Drezner notes, deterrent effects are an especially challenging aspect of sanctions research.

asset seizure in the Terrorist Assets Reports. We therefore relax some criteria and present the results in the empirical analysis section.

Table 1. Criteria for Assessing Counterterrorism Sanctions Success and Failure

Outcome	Description	Coding criteria
Sanctions success	Attack decrease, substantial sanctions role	(1) attacks decrease; and (2) evidence of direct enforcement of FTO sanctions; and (3) less impact of other factors, such as military campaigns or organizational fragmentation.
Short of success	Attack decrease, but little or no sanctions role	(1) attacks decrease, with (2) little evidence of direct enforcement of FTO sanctions, and/or (3) greater impact of other factors, such as counterterrorism efforts or organizational fragmentation.
Sanctions failure, unaccompanied by group adaptation	No attack decrease, unaccompanied by group adaptation	Attacks stay the same or increase after sanctions, but we do not observe adaptation playing a role.
Sanctions failure, accompanied by group adaptation	No attack decrease, accompanied by group adaptation	Attacks stay the same or increase after sanctions, and we observe resource-shifting financial adaptation.

Three Generations of FTOs

We evaluate our financial adaptability hypothesis in the three generations of U.S. FTOs. For each generation, we present major patterns of financial adaptability, counterterrorism sanctions, financial adaptation, and terrorist attacks. We also present illustrative cases for each generation to show specific pathways from adaptability, sanctions, adaptation, to outcome, while providing contrasting comparisons across adaptability types. After the discussion of each generation, we draw out the overall assessment on counterterrorism sanctions effectiveness.

First-Generation FTOs (1997-2001)

The first generation of FTOs contains 38 terrorist groups. It includes the first block of FTO designations in 1997 and a dozen subsequent designees outside the al-Qa'ida or ISIS networks. This first generation is composed of many groups that observers describe as rebels or insurgents (Fortna 2015; Stanton 2013). Table 2 summarizes patterns of financial adaptability and attacks for these 38 first-generation groups.

The first pattern is that most first-generation FTO groups have low to medium financial adaptability. Only four out of 38 groups have high financial adaptability. Secondly, high-adaptability groups adapt to sanctions more often than low-/medium-adaptability FTOs. While all four high-adaptability groups undertook observable financial adaptation after sanctions, only a quarter of low-adaptability groups exhibited resource adaptation. Third, most groups decrease attacks – even though this is usually not directly related to sanctions. Fourth, the first-generation sanctions success rate is about 11% (4 out of 38). All four success cases are organizations with low or medium adaptability. The sanctions success rate falls as financial adaptability rises, which is consistent with our theory.

Table 2. First Generation of FTOs: Summary of Cases

Financial adaptability	Number of groups	Adaptation observed		Attack decrease		Sanctions success	
		Yes	*No*	*Yes*	*No*	*Yes*	*No*
Low	15	4 (27%)	11 (73%)	11 (73%)	4 (27%)	3 (20%)	12 (80%)
Medium	19	7 (37%)	12 (63%)	13 (68%)	6 (32%)	1 (5%)	18 (95%)
High	4	4 (100%)	0 (0%)	3 (75%)	1 (25%)	0 (0%)	4 (100%)
Total	38	15	23	27	11	4	34

The Liberation Tigers of Tamil Eelam (LTTE) was a medium-adaptability group that was affected by FTO sanctions. The group possessed medium adaptability at the time of designation due to its autonomous funding based on criminal activities as well as a somewhat diverse funding portfolio relying on criminal activities and diaspora donations. It was not coded as high adaptability since we consider its funding vulnerable – the diaspora donations came from people in countries like Canada and the United States, where financial institutions are monitored for potential sanctions violations. Tamil diaspora funding reportedly made up 80-90% of the LTTE's substantial financial base in the mid-1990s.[54] U.S. Tamil groups and individuals sued to get the LTTE removed from the FTO list as early as 1998 and fought court battles for more than a decade (Doyle 2010), suggesting designation was a serious concern. The terrorist designation, amplified by the shock of 9/11, made diaspora members less willing or able to contribute to the group.[55] The LTTE apparently tried to adapt, for example with robbery and extortion campaigns in the mid-2000s.[56] These shifts could not offset lost donations, however.

LTTE attacks generally decreased in the three-year window after the designation and remained lower afterward save for an exceptional spike in 2007, a last gasp before the group was defeated militarily in 2009. At the time of designation in 1997, the LTTE was still a formidable force, so the reduction in violence is not therefore due to the designation of weakened group, but partly due to sanctions impact and limited financial adaptation. The government's military offensive in 1997 was an important accompanying factor, but the course of events tells us that sanctions contributed substantially to the erosion of the LTTE funding base. Unable to adapt with its primary income source curtailed, LTTE's violence decreased.

In contrast, the Abu Sayyaf Group (ASG) in the Philippines is a high-adaptability first-generation group. We consider it to be high adaptability because it exhibited a diverse portfolio with various criminal activities and support from individuals in neighboring states like Malaysia due to its Islamist background.[57] Its funding was autonomous, diversified, and what we consider

[54] Peter Chalk, "Liberation Tigers of Tamil Eelam's (LTTE) International Organization and Operations: A Preliminary Analysis," Commentary No. 77, Canadian Security Intelligence Service, March 17, 2020; Rohan Gunaratna, "Bankrupting the Terror Business," *Jane's Intelligence Review*, 12, no. 8 (2000).

[55] Miranda Kennedy and Matthew Power, "The Buddha's Teardrop," *In These Times*. June 23, 2002. http://inthesetimes.com/article/587/the_buddhas_teardrop

[56] BBC, "Man Involved in Credit Card Fraud to Fund Sri Lanka Tamil Tigers Arrested," *BBC Monitoring South Asia*, 15 June 2008; Human Rights Watch, "Tamil Tigers Extort Diaspora for 'Final War' Funds," March 15, 2006. https://www.hrw.org/news/2006/03/15/tamil-tigers-extort-diaspora-final-war-funds

[57] Mapping Militant Organizations, "Abu Sayyaf Group," last modified February 1, 2022, https://cisac.fsi.stanford.edu/mappingmilitants/profiles/abu-sayyaf-group.

invulnerable, since the funds are unlikely to have passed through easily sanctionable institutions like U.S. banks. The 1997 terrorist designation and associated U.S. assistance to the Philippine government did not seem to curtail ASG activities. This was partly because the group relied on invulnerable funding streams, which sanctions could not penetrate easily. The group, in other words, did not have to adapt in the short term. ASG went through adaptation, mostly medium- to long-term adaptation, by adding jihadist terrorist networks after 2002 and expanding its financial portfolio, adding piracy and expanding kidnapping in the late 2000s.[58] Overall, groups with *ex ante* high adaptability were more likely to adjust their financial portfolio after sanctions imposition, and the FTO sanctions were more effective against the groups with low adaptability.

Second-Generation FTOs: Al-Qa'ida and its Allies (2001-2011)

After the 9/11 attacks, the State Department designated other al-Qa'ida allies, eventually naming more than two dozen other groups in multiple regions as FTOs. Al-Qa'ida partners shared a Salafi-jihadist ideology and many received financing from al-Qa'ida central.[59]

Table 3 summarizes the financial adaptability, adaptation patterns, and attack changes of the 28 second generation FTOs. Overall financial adaptability increases in the second-generation due to widespread criminal activity and funding from al-Qa'ida central. Four second-generation groups had low adaptability, nine had medium adaptability, and 15 groups had high financial adaptability. In addition, most of these groups adjusted their funding activities after sanctions.

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[58] On adding jihadist network, see IPAC, "Pro-ISIS Groups in Mindanao and Their Links to Indonesia and Malaysia." *Institute for Policy Analysis of Conflict* (IPAC), Report No. 33, October 25, 2016, http://file.understandingconflict.org/file/2016/10/IPAC_Report_33.pdf, 3. On expanding financial portfolio, see Rommel Banlaoi, "The Sources of the Abu Sayyaf's Resilience in the Southern Philippines," *Combating Terrorism Center (CTC) Sentinel* 3, no. 5(2010): 17-19.

[59] We use al-Qa'ida or al-Qa'ida central to refer to the core organization. On sharing ideology, see Assaf Moghadam, "Motives for Martyrdom: Al-Qaida, Salafi Jihad, and the Spread of Suicide Attacks," *International Security* 33, no. 3 (Winter, 2008/2009): 46-78.

Consistent with our financial adaptability categorizations, only one of the four low-adaptability groups adapted, while 70% (7 out of 10) of the medium-adaptability groups and 85% (12 out of 14) of the high-adaptability groups undertook financial adaptation after sanctions.

In the second generation, we find no cases of sanctions success. The four second-generation FTOs with low financial adaptability all reduced attacks, but other factors, especially kinetic interventions, were more influential. Groups with higher adaptability engaged in more financial adaptation and were less likely to reduce attacks. In addition, other factors besides sanctions better explain the cases where these groups failed to adapt and reduced attacks.

Table 3. Second Generation of FTOs: Summary of Cases

Financial adaptability	Number of groups	Adaptation observed		Attack decrease		Sanctions success	
		Yes	*No*	*Yes*	*No*	*Yes*	*No*
Low	4	2 (50%)	2 (50%)	4 (100%)	0 (0%)	0 (0%)	4 (100%)
Medium	10	7 (70%)	3 (30%)	5 (50%)	5 (50%)	0 (0%)	10 (100%)
High	14	12 (85%)	2 (15%)	5 (35%)	9 (65%)	0 (0%)	14 (100%)
Total	28	21	7	14	14	0	28

Al-Qa'ida is a second-generation FTO with high financial adaptability that weathered sanctions and continued attacks. The group already possessed high financial adaptability at the time of its 1998 designation, with diverse funding from Osama bin Laden's personal fortune and donors in the Persian Gulf as well as terrorist ties in Afghanistan and Pakistan.[60] Since Al-Qa'ida did not receive funds through traditional financial institutions, we do not consider its funding vulnerable. For instance, donors used the hawala system to avoid traceable transfers.[61] Attacks continued through the early 2000s, with the 9/11 attack occurring three years after FTO designation.

The Islamic Jihad Union, operating in Uzbekistan, provides a contrasting case of a low-adaptability group. We consider it to be low adaptability because it did not have diverse or autonomous funding. Its main funding source was ties to al-Qa'ida.[62] The group carried out three terrorist attacks in 2004 and made the FTO list in 2005. After that, the group attacked only two additional times, both in 2009, according to GTD. The group tried to adapt after sanctions: in 2007 it launched a campaign to try to recruit Turkish members, and Germans of Turkish descent.[63] But despite the adaptation attempts, a group member mentioned in an interview in 2008 that they were short of money.[64] In between, the Pakistani army offensive of October 2007 in North Waziristan, as well as the American drone attack on the Islamic Jihad Union's liaison to al-Qaida were salient intervening events.[65] The combination of low adaptability and decrease in attacks, as well as the group being pressured, suggests that sanctions may have played a role.[66]

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[60] The 9/11 Commission, "The 9/11 Commission Report," 170-172.

[61] See The 9/11 Commission, "The 9/11 Commission Report," 171.

[62] Guido Steinberg, "The Islamic Jihad Union: On the Internationalisation of Uzbek Jihadism," SWP-Berlin (Stiftung Wissenschaft und Politik-Berlin), German Institute for International and Security Affairs, April 2008, https://www.swp-berlin.org/fileadmin/contents/products/comments/2008C07_sbg_ks.pdf.

[63] Guido Steinberg, "A Turkish al-Qaeda: The Islamic Jihad Union and the Internationalization of Uzbek Jihadism," *Strategic Insight*. Monterey, CA: Naval Postgraduate School Center for Contemporary Conflict, 2008.

[64] On the event, see Einar Wigen, "Islamic Jihad Union: al-Qaida's Key to the Turkic World," *Norwegian Defence Research Establishment (FFI)*, 2009, https://publications.ffi.no/nb/item/asset/dspace:3546/09-00687.pdf.

[65] Steinberg, "The Islamic Jihad Union," 1.

[66] Significant intervening events, and a lack of substantial evidence of sanctions enforcement, lead us to code this case as "short of sanctions success" rather than a definite "success" case.

Either way, this low-adaptability group seemed unable to adapt to weather the terrorist designation.

In summary, among the second generation of FTOs, high-adaptability groups weathered sanctions enforcement and were generally more likely to successfully adapt than low-adaptability groups. As a result, second generation FTO groups were less vulnerable to sanctions pressure than the first FTO generation. The same pattern holds in the third generation of FTOs, which we discuss next.

Third-Generation FTOs: Islamic State and its Affiliates (2011-2019)

The third generation of FTOs comprises the Islamic State and its affiliates. In this paper, we use the Islamic State from the shortened form of the FTO-designated name "Islamic State of Iraq and the Levant." The U.S. FTO list uses both ISIL (e.g., ISIL Sinai Province, designated in 2014) and ISIS (e.g., ISIS-West Africa) for its affiliates.[67] The Islamic State of Iraq and the Levant (IS-core) was first designated in 2004 while operating as an al-Qa'ida affiliate. It sparked a new FTO generation as the 2011 Syrian Civil War gave the group a global notoriety. Formerly al-Qa'ida in Iraq (AQI), the Islamic State expanded into Syria in April 2013 and established "provinces" around the world to achieve their goal of establishing the Islamic Caliphate. Many affiliates aligned with the Islamic State for logistical, tactical, and funding support. Table 4 summarizes data patterns for the 14 Islamic State-related FTOs in the third generation.

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[67] We identified the cluster of IS affiliates using the following sources: Daniel Byman, "ISIS Goes Global: Fight the Islamic State by Targeting its Affiliates," *Foreign Affairs* 95, no. 2 (March/April 2016): 76-85; Yao-Li Chuang, Noam Ben-Asher, and Maria D'Orsogna, "Local Alliances and Rivalries Shape Near-Repeat Terror Activity of al-Qaeda, ISIS, and Insurgents," *PNAS.* 116, no. 42 (2019): 20898-20903; Brian Fishman, *The Master Plan: ISIS, Al Qaeda, and the Jihadi Strategy for Final Victory* (Yale University Press, 2016); Erin Miller and Sheehan Kane, "Global Terrorism Database ISIL Auxiliary Dataset," Harvard *Dataverse*. 2016, 3, https://doi.org/10.7910/DVN/KNERY9.

The first pattern is that adaptability is mixed in the third generation, with no dominance of either low or high-adaptability groups. Second, all low-adaptability groups decreased their violence after designation, and all high-adaptability groups managed to either maintain or increase attacks over time. The medium-adaptability groups had mixed attack changes, with four decreasing attacks, while one did not. Third, there are no cases of sanctions success in the third generation. When groups did decrease attacks, it was usually due more to kinetic counterterrorism actions. For instance, Jaysh Rijal al-Tariq al Naqshabandi (JRTN) in Iraq decreased attacks after designation in 2015, but U.S. military activity seems more important, as well as a fissure between JRTN and the Islamic State.[68] The Mujahidin Shura Council in the Environs of Jerusalem (MSC) in Gaza also decreased attacks, but an Israeli counterterrorism operation killed two MSC co-founders before FTO sanctions hit.[69]

Table 4. Third Generation of FTOs: Summary of Cases

Financial adaptability	Number of groups	Adaptation observed		Attack decrease		Sanctions success	
		Yes	*No*	*Yes*	*No*	*Yes*	*No*
Low	4	0 (0%)	4 (100%)	4 (100%)	0 (0%)	0 (0%)	4 (100%)
Medium	5	1 (20%)	4 (80%)	4 (80%)	1 (20%)	0 (0%)	5 (100%)

[68] Aymenn Jawad al-Tamimi, "Islamic State: The Myth of a Baathist 'Hidden Hand'," *HIS Jane's Terrorism and Insurgency Monitor*. Middle East Forum, 2015, https://www.meforum.org/5312/isis-baathist-hidden-hand

[69] See the detailed surrounding events in Emily Dyer and Oren Kessler, "Terror in the Sinai," *Henry Jackson Society Report.* London, 2014, https://henryjacksonsociety.org/wp-content/uploads/2014/05/HJS-Terror-in-the-Sinai-Report-Colour-Web.pdf

High	5	4 (80%)	1 (20%)	0 (0%)	5 (100%)	0 (0%)	5 (100%)
Total	14	5	9	8	6	0	14

The Islamic State is a group with high financial adaptability that adapted to sanctions. The State Department first designated the Islamic State in 2004 when it used the name al-Qa'ida in Iraq, and again when it re-named itself in 2013.[70] By 2015, when the group was once again a major sanctions target, the Islamic State possessed funding autonomy, diversity, and invulnerability.[71] In 2014, the group captured oil fields, controlled substantial territory, and started selling looted antiquities.[72] The Islamic State's versatile funding allowed it to maintain attacks even under intense pressure for several years until the caliphate collapsed under military pressure in 2019.[73]

The growth of IS provoked a massive response, including sanctions in summer 2015, with added airstrikes on oil fields by coalition forces during Operation Inherent Resolve in August 2014 as well as Operation Tidal Wave II in October 2015.[74] Between 2014 and 2017, the Islamic State maintained substantial attack capacity. Without oil revenue, the group could still tap funding from criminal activities such as extortion although these funds could not support a

[70] Mapping Militant Organizations, "The Islamic State," Last modified April 1, 2021, https://cisac.fsi.stanford.edu/mappingmilitants/profiles/islamic-state.

[71] Mara Revkin, "What Explains Taxation by Resource-Rich Rebels? Evidence from the Islamic State in Syria," *Journal of Politics* 82, no. 2 (2020): 757-764.

[72] Heather Pringle, Heather, "ISIS Cashing in on Looted Antiques to Fuel Iraq Insurgency," *National Geographic*, 2014, https://www.nationalgeographic.com/news/2014/6/140626-isis-insurgents-syria-iraq-looting-antiquities-archaeology/

[73] On the IS financing, see Patrick Johnston, Mona Alami, Colin Clarke, and Howard Shatz, "Return and Expand? The Finances and Prospects of the Islamic State After the Caliphate," RAND. RR-3406, 2019, 3, noting the group the group "diversifying revenue sources to maintain steady access to financing and raising money locally."

[74] On 2015 sanctions, see Seth Jones, James Dobbins, Daniel Byman, Christopher Chivvis, Ben Connable, Jeffrey Martini, Eric Robinson, and Nathan Chandler. 2017. "Rolling Back the Islamic State," *RAND*, 2017, 67. On the subsequent financial troubles, see Patrick B. Johnston, "The Islamic State's Money Problems," *The RAND Commentary*, March 5, 2016, https://www.rand.org/pubs/commentary/2016/03/the-islamic-states-money-problems.html

proto-state fighting on multiple fronts.[75] Even after losing territorial control, the Islamic State retained attack capacity. Sanctions might have helped weaken the Islamic State, but they did not reduce violence, as the group adapted by shifting resources.

Boko Haram is another example of a high-adaptability group with post-sanctions adaptation facilitating continued attacks. Formed in Nigeria around 2002, the State Department designated the group as an FTO in 2013. Before FTO designation, Boko Haram had autonomous funding through criminal activities and minimal reliance on external funding. Within criminal activities, Boko Haram employed a diverse portfolio of bank robberies, kidnapping, and extortion, and was invulnerable because it did not depend on the global financial system. Nigeria's 2013 state of emergency caused Boko Haram to lose some territorial control and reduced bank robberies.[76] However, the group quickly replaced robbery revenues with other financing such as kidnapping. Boko Haram's kidnapping increased substantially after 2013 and stayed higher than pre-2014 levels for at least seven years.[77] Around this time, a U.S. defense official remarked: "My sense is that we have applied the tools that we do have but that they are not particularly well tailored to the way that Boko Haram is financing itself".[78]

[75] On the use of oil revenue, see Quy-Toan Do, Jacob Shapiro, Christopher Elvidge, Mohamed Abdel-Jelil, Daniel Ahn, Kimberly Baugh, Jamie Hansen-Lewis, Mikhail Zhizhin, and Morgan Bazilian, "Terrorism, Geopolitics, and Oil Security: Using Remote Sensing to Estimate Oil Production of the Islamic State," *Energy Research & Social Science* 44 (2018): 411-418. On the financial decline, see Jacob Shapiro, "A Predictable Failure: The Political Economy of the Decline of the Islamic State," *CTC Sentinel*, Combating Terrorism Center at West Point, 9, no. 9 (2016).

[76] On Boko Haram's financial portfolio, see FATF, "Terrorist Financing in West and Central Africa," Financial Action Task Force, 2016, https://www.fatf-gafi.org/media/fatf/documents/reports/Terrorist-Financing-West-Central-Africa.pdf; Maza Kangdim Dingji, Umut Koldas, and Sait Aksit, "Challenges of Combating Terrorist Financing in the Lake Chad Region: A Case of Boko Haram," *Sage Open* (2020): 1-17. On the fluctuation of funding over time, see Jason Rock, *The Funding of Boko Haram and Nigeria's Actions to Stop it*. Thesis, Naval Postgraduate School, Monterey, CA., 2016, 7.

[77] Emma Leonard Boyle, "Boko Haram: Kidnapping as Theatre," *African Security Review* 33, no. 1 (2024): 16-32.

[78] Phil Stewart and Lesley Wroughton, "How Boko Haram is Beating U.S. Efforts to Choke its Financing," *Reuters*, July 1, 2014, https://www.reuters.com/article/us-usa-nigeria-bokoharam-insight-idUSKBN0F636920140701.

Although the smaller number of third generation groups somewhat limits our conclusions, we observe a consistent process of sanctions enforcement and adaptation by high-adaptability terrorist organizations in many cases. The lack of sanctions success cases in the third FTO generation highlights that groups with high adaptability such as the Islamic State and Boko Haram went through financial adaptation and did not reduce attacks.

Across Three Generations

Many groups in the first wave possessed low financial adaptability, compared to later generations. This meant that more first-generation groups were vulnerable to sanctions. Especially when sanctions hit one vulnerable income source, four groups failed to adapt and reduced attacks. In contrast, the second generation had higher financial adaptability due to funding from al-Qa'ida central and criminal activities. Financial adaptability allowed many second-generation groups to survive and sometimes thrive under sanctions. The third generation of Islamic State affiliates had mixed financial adaptability compared to the first and second generation but also proved a harder target than the first generation.

In addition to the analysis of each generation, we also evaluated aggregate patterns across three generations of all 80 groups. Figure 2 summarizes the percentage of FTO groups in each financial adaptability category by sanctions outcome. Three patterns stand out. First, the difference in success rates across adaptability types is clear. Sanctions failure is more likely as terrorist groups' financial adaptability increases, as the success rate is 13% (3 success cases out of 23) for low-adaptability groups, 3% (1 out of 34) for medium-adaptability groups, and 0% (0 out of 23) for high-adaptability groups.

Second, groups with high financial adaptability were more likely to engage in financial adaptations after sanctions. 70% of the 31 groups that weathered sanctions and maintained or increased attacks engaged in financial adaptation. On top of the regular problems state sanctions face, such as sanction-busting and secondary sanctions, counterterrorism sanctions confront adaptable targets.[79] States and firms can also adapt to sanctions, of course, but there are limits to adaptation as they participate in the formal global financial system and international institutions. Some terrorist groups are nimbler targets.[80]

Last, sanctions rarely reduced attacks. Sanctions played a critical and independent role in reduced attacks 5% of the time (4 groups out of 80: LTTE, MEK, Al-Ashtar Brigades, and Kahane Chai). Our FTO sanctions success rate is a conservative estimate, only including cases with clear evidence of direct enforcement and weaker evidence of other, more compelling explanations. The 5% aggregate success rate is less than prominent estimates of the success of interstate sanctions, which range from less than 5% or 10-30%. [81] In the context of the United Nations sanctions, the estimate of violent non-state actors altering behaviors is at least partially about 20%.[82]

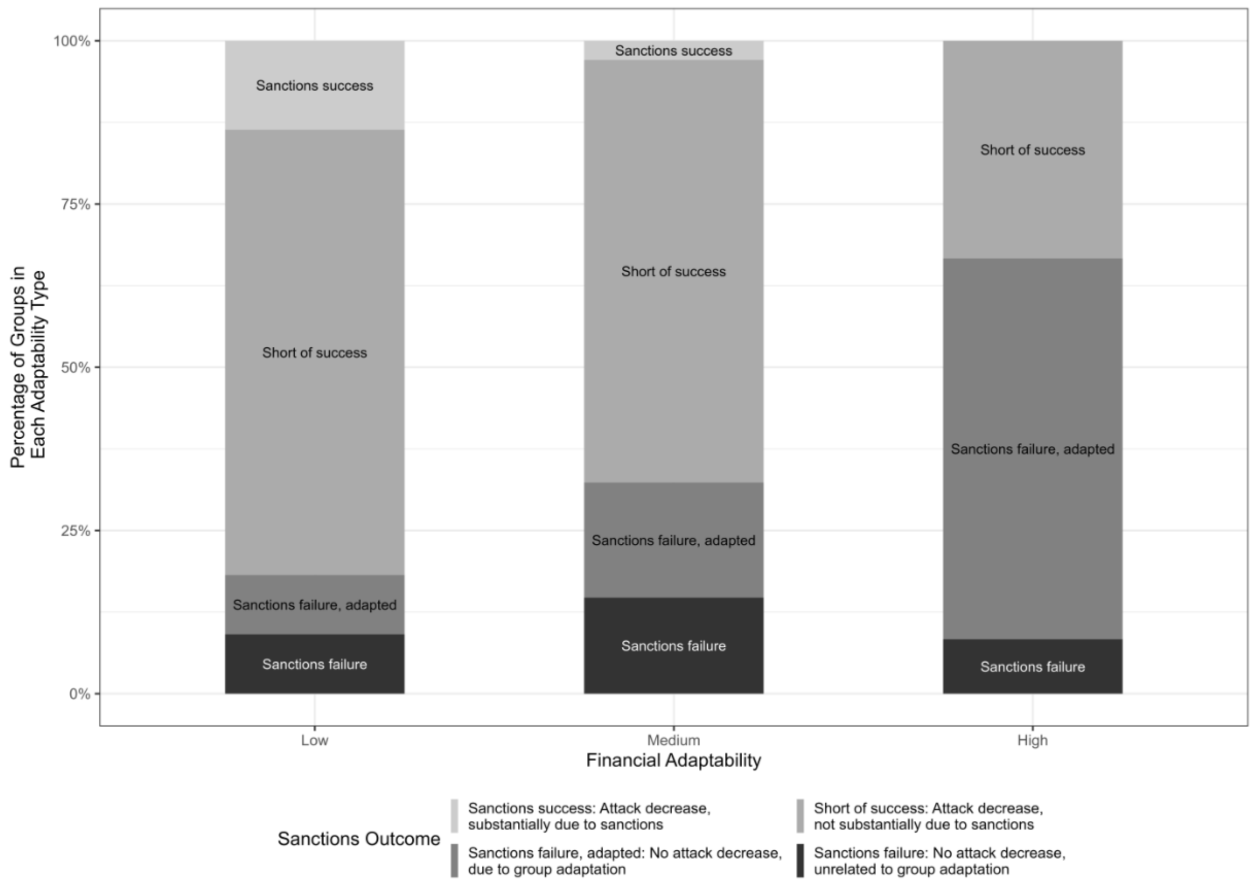
Figure 2. Sanctions Success and Failure in 80 U.S. FTOs

[79] On sanction busting, see Bryan R. Early, *Busted Sanctions: Explaining Why Economic Sanctions Fail* (Stanford University Press, 2015).

[80] For topic of sanctions adaptation by states and firms, see Jamal Ibrahim Haidar, “Sanctions and Export Deflection: Evidence from Iran,” *Economic Policy* 32, no. 90 (2017):319-355; Kavakli, Chatagnier, and Hatipoglu, “The Power to Hurt.”

[81] 5% figure comes from Pape, “Why Economic Sanctions Do Not Work,” 106; 10-30% figure comes from Gary Clyde Hufbauer and Jeffrey J. Schott, and Kimberley Ann Elliot, *Economic Sanctions Reconsidered: History and Current Policy,* 2nd ed. (Washington, DC: Institute for International Economics, 1990), 93.

[82] Huber, *Imposing Sanctions*.



We can relax the assumption about enforcement or other salient factors and arrive at more liberal estimates of sanctions success rates – but overall support for our hypothesis remains. For instance, if we relax the assumption of direct TAR enforcement and include indirect enforcement such as host government actions (which might not actually be a result of U.S. FTO sanctions) as well as direct TAR enforcement, the success rate becomes 35% (28 groups out of 80). However, it is very difficult to be sure if local government actions are the result of FTO sanctions, so considering such cases as sanctions success is questionable. Alternately, if we add the cases of "short of success" that come with the substantial presence of other counterterrorism measures, the success rate becomes 25% (20 groups out of 80). If we further add the cases of "short of success" due to internal issues such as fragmentation, another 6% of cases is added to the success ledger, leaving a possible success rate of 31% (26 groups out of 80).

Under different assumptions, the bounds for sanctions success rates ranges from 5 to 31%. However, we are far more confident about the conservative 5% success rate than other rates because we are only confident about a clear and substantial effect of sanctions in four cases. In the others, we lack evidence to substantiate the correlation between sanctions and reduced attacks. These cases closely reflect what we think to demonstrate the strong connections linking sanctions enforcement and attack decreases.

Additional Considerations

Several inferential issues merit discussion. The first issue is whether selection into the FTO list affects our conclusions about financial adaptability and attacks. The process of FTO designation suggests that policymakers do not designate FTOs based on financial adaptability, but on other factors. Terrorist groups enter the FTO list if they meet three statutory requirements of the group 1) being a "foreign" organization 2) with previous engagement in "terrorism" that poses 3) significant "threats to the U.S. national security."[83] These statutory requirements push policymakers to select FTOs based on factors besides sanctions efficacy. Along with legal requirements, groups that have carried out more attacks or have an Islamist ideology are more likely to be selected into the FTO list.[84] Policymakers also consider threats to U.S. partners and

[83] Congressional Research Service, "Foreign Terrorist Organization (FTO)" Updated February 8, 2024, https://crsreports.congress.gov/product/pdf/IF/IF10613.

[84] Beck and Miner, "Who Gets Designated a Terrorist."; Hyeran Jo, Brian Phillips, and Joshua Alley, "Can Blacklisting Reduce Terrorist Attacks?" in *The Power of Global Performance Indicators*, eds. Beth Simmons and Judith Kelley (New York: Cambridge University Press, 2020): 271-299; El Masri and Brian J. Phillips, "Threat Perception."

other geopolitical factors.[85] The overall selection of FTOs include obscure groups such as small affiliates as well as prominent groups such as al-Qaida central or the Islamic State. The collection of these considerations leads us to expect that the FTO group selection is not based on adaptability *per se*.

What about groups outside the FTO list? A few salient groups, like the Taliban (a non-state actor until 2021), were never listed as FTOs due to political considerations The U.S. government refrained from designating the Taliban as an FTO because it was thought this would complicate negotiations to end the Afghanistan civil war. Similarly, the Haqqani network took many years to be listed. [86] Our analysis suggests that when these groups possess high financial adaptability, they are likely to withstand financial pressure. For example, sanctions would be unlikely to impact drug revenues or local extortion for the Taliban. The Taliban has been subject to other types of sanctions beyond FTO listing, such as being declared Specially Designated Global Terrorists. But the group's financial adaptability – with funding from foreign donations, the drug trade, extortion, and other sources – helped it thrive despite these sanctions.[87] By contrast, obscure groups with few attacks are unlikely to be selected into the FTO list, as the FTO list includes the organizations of greatest concern to policymakers. These groups probably do not need much money to operate and therefore might not be affected much by sanctions. Overall, if these groups were included in FTO sanctions, the 5% success rate we find would probably fall.

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[85] Chantal de Jonge Oudraat and Jean-Luc Marret, "The Uses and Abuses of Terrorist Designation Lists," in *The Consequences of Counterterrorism*, eds. Martha Crenshaw (Russel Sage Foundation, 2010): 94-129.

[86] Cronin, "Why the Haqqani Network."

[87] Dawood Azami, "Afghanistan: How Do the Taliban Make Money?" *BBC*. August 28, 2021, https://www.bbc.co.uk/news/world-46554097.

Would it be the case that limited enforcement drove the result of low sanctions success rate? According to the Terrorist Assets Report (TAR) published by the Treasury, only 47 of 80 groups (59%) are ever listed in TAR. Starting 2016, the TAR reports "other" categories where the funds are unidentified with a certain group. Given that the amount associated with the "other" category is about half of the total sum, we recognize that some groups' funds might have been targeted and blocked but not reported. The overall TAR reporting could reflect limited enforcement capacity or invulnerable terrorist revenues. The primary sanctions office in the Treasury Department, the Office of Foreign Assets Control, has a small staff relative to the extent of its responsibilities enforcing U.S. sanctions.[88] In our sample, 13 of 23 low-adaptability groups faced direct enforcement (56%), compared to 17 out of 35 medium-adaptability groups (48%), and 17 out of 22 high-adaptability groups (77%). This suggests that despite *higher* enforcement rates for high-adaptability groups, those groups often adapt, so their attacks do not decrease.

It is also possible that reduced attacks occurred when terrorist groups did not want or need to undertake attacks. There may be strategic reasons to reduce or increase terrorism besides financial adaptability, especially as a signal to other actors. We attempted to account for this as we considered rival events. Especially after a major attack such as 9/11, it is natural to observe reduced attacks, a regression to the mean. If this is the case, it is surprising that 20 out of 35 high-adaptability terrorist groups did *not* reduce their attacks after sanctions imposition. Those groups appear to have maintained their capacity to attack as well as the willingness to generate violence.

[88] Keith Preble, "Sanctions Reform Should Start with the Treasury Office Enforcing Them," *War on the Rocks*, November 9, 2021, https://warontherocks.com/2021/11/sanctions-reform-should-start-with-the-treasury-office-enforcing-them.

Another point to consider is the policy goal of sanctions. Terrorist lists might serve only to send political signals.[89] If this were true, we would not see costly and extensive enforcement activities. Some designations may be political signals to allies to cooperate with the U.S. efforts abroad, but the general goal of sanctions in "altering target behavior" appears to stand, given the evidence of direct and indirect sanctions enforcement in the 80 FTO cases.

Conclusion

Our argument and results carry important scholarly and policy implications. On the scholarly front, we provide a systematic assessment of how counterterrorism sanctions impact terrorist attacks. We find that counterterrorism sanctions rarely reduce terrorism when used against terrorist groups with high financial adaptability. With autonomous, diversified, and invulnerable financial portfolios, high adaptability groups usually weather sanctions unscathed. Sanctions occasionally pressure groups with lower adaptability, however. Financial pressure can place acute pressure on groups who have one source of funding, ties to the global financial system, or limited autonomy. While some quantitative work finds negative correlations between sanctions on non-state actors and subsequent violence, our qualitative study suggests that such relationships depend on groups' financial adaptability.[90] The findings complement work on

[89] Tim Legrand, "More Symbolic – More Political—than Substantive: An Interview with James R. Clapper on the U.S. Designation of Foreign Terrorist Organizations," *Terrorism and Political Violence* 30, no. 2 (2018): 356-372.

[90] Such quantitative works include Best and Lahiri, "Hard Choices, Soft Targets"; Tominaga, Lee and Lyu, "The Determinants of Terrorist Listing."

sanctions against states, which shows that states and their economies adapt to avoid sanctions.[91] The findings also speak to research on how to constrain militant group adaptation.[92]

On the policy front, our analysis of counterterrorism sanctions offers several lessons. Our research shows counterterrorism sanctions are not usually effective in a strict sense. This does not necessarily mean leaders should not use sanction, however. Our analysis rather indicates that sanctions measures must evolve and adapt, too. More understanding of adaptability traits and adaptation behaviors can inform policy. Our findings regarding adaptation suggest that targeted sanctions can face special challenges. It might be easier for individuals or small organizations to adapt, compared to national governments. More generally, when analysts want to understand under what conditions sanctions might be more effective, they should seriously consider the financial adaptability of their target. While we analyzed the important case of the U.S. FTO list, future research could study other types of counterterrorism sanctions, including sanctions by other countries.

What worked in the past may not work in the future, however. Recent FTO generations contain more groups with medium and high adaptability. Terrorist groups adapt in various ways: by shifting funding channels, changing their names, conducting mergers and acquisitions, changing tactics, moving attack locations, and co-opting local authorities in weak states.[93] New

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[91] Bryan R. Early and Dursun Peksen, "Shadow Economies and the Success of Economic Sanctions: Explaining Why Democratic Targets Are Disadvantaged," *Foreign Policy Analysis* 16, no. 3 (2020):353-372.

[92] Michael Vasseur, Chad C. Serena, Colin P. Clarke, Irina A. Chindea, Erik E. Mueller, and Nathan Vest, "Understanding and Reducing the Ability of Violent Nonstate Actors to Adapt to Change," Santa Monica, CA: RAND Corporation, 2022, https://www.rand.org/pubs/research_reports/RRA324-1.html.

[93] These aspects are recognized in the government document, as in United States Department of the Treasury, "Memorandum for Department of Defense Lead Inspector General: Operation Inherent Resolve - Summary of Work Performed by the Department of the Treasury Related to Terrorist Financing, ISIS, and Anti-Money Laundering for First Quarter Fiscal Year 2021" OIG-CA-21-012, Washington, D.C., January 4, 2021, https://oig.treasury.gov/system/files/2021-01/OIG-CA-21-012.pdf, 4.

technology also heightens potential adaptation.[94] Predicting adaptation is inherently difficult, but our work suggests that understanding financial structures can help explain how terrorist groups respond to sanctions.

Our research underscores the need to study counterterrorism measures *in toto*. Examining counterterrorism measures in isolation makes assessing the efficacy of each measure difficult.[95] In many cases, sanctions accompanied military actions. This then raises the question of how counterterrorism policies work in concert. Are sanctions more effective when used with military approaches? Under what conditions should the measures be combined as the package of counterterrorism tools, with what sequence?

Scholars should also explore *unintended* consequences of sanctions against terrorist groups. Sanctions against states might discourage countries' use of the dollar as a reserve currency.[96] Some studies find that sanctions against non-state actors harm civil war peace processes.[97] Do sanctions against non-state actors provoke other effects, such as ideological hardening, reductions in remittances, or different kinds of terrorism? Continued research on the evolving nature of terrorism and other sanctions effects will be essential for understanding a central foreign policy tool.

Data Availability Statement: The data and materials that support the findings of this study are available through the Qualitative Data Repository at https://doi.org/10.5064/F6H86FUP.

[94] Cronin, *Power to the People;* Bryce Loidolt, "Lethal Targeting and Adaptation Failure in Terrorist Groups," *Security Studies* 33, no. 2 (2024): 224-253.

[95] This research gap is also identified in Gary LaFree and Laura Dugan. 2009. "Research on Terrorism and Countering Terrorism," *Crime and Justice* 38, no. 1 (2009): 413-477.

[96] A related argument is advanced in Daniel McDowell, *Bucking the Buck: US Financial Sanctions and the International Backlash Against the Dollar* (Oxford University Press, 2023).

[97] See, for instance, Sophie Haspeslagh, "The 'Linguistic Ceasefire': Negotiating in an Age of Proscription," *Security Dialogue* 52, no. 4 (2021): 361-379.