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THESIS

**DEPARTMENT OF DEFENSE COUNTERDRUG
MISSION: CAN THE EFFECTIVENESS BE MEASURED?**

by

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December 2019

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**DEPARTMENT OF DEFENSE COUNTERDRUG MISSION: CAN THE
EFFECTIVENESS BE MEASURED?**

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ABSTRACT

For the last 30 years, the Department of Defense (DoD) has been asked in various ways to measure the effectiveness of the DoD counterdrug mission. In this thesis, I advance the idea of using the drug purity data as the best and only stand-alone metric to determine if drug interdiction efforts are reducing the amount of illicit drugs available in the United States. I also present a cost-benefit equation the DoD can utilize to determine the cost effectiveness of the counterdrug mission. The intangible benefits and unintended consequences of the DoD counterdrug mission are relayed and include developing partner nation relations and building partner capacity, positive and negative impacts on military readiness, and promoting the incorrect idea that the military can and should be used to solve any national problem. I conclude that the DoD cannot measure the outcomes of the counterdrug mission; however, it can combine counterdrug mission data already collected with key performance indicators inside of a pattern and trend methodology to better correlate the DoD counterdrug mission and supply-side outcome goals.

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LIST OF ACRONYMS AND ABBREVIATIONS

DEA	Drug Enforcement Agency
DHS	Department of Homeland Security
DoD	Department of Defense
JIATF	Joint Interagency Task Force
JP	Joint Publication
JTF	Joint Task Force
NDCS	National Drug Control Strategy
ONDCP	Office of National Drug Control Policy

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I. INTRODUCTION

In 2017, United States Northern Command submitted a question for research that has been asked multiple times in various ways since the Department of Defense (DoD) started executing counterdrug operations¹: Can metrics be created to measure the effectiveness of the DoD counterdrug mission?² The question has not been sufficiently answered in over 30 years because as written the question is ambiguous in regards to what is being asked.

If the effectiveness question is interpreted as how to measure the effectiveness of the DoD counterdrug mission in relation to combatting drug use in America, the responsibility to develop metrics that answer that question belongs with the Office of National Drug Control Policy (ONDCP) and the United States Congress. Additionally, determining the importance of counterdrug supply-side policies versus policies aimed at demand reduction and a discussion on the limitations of using the DoD to combat the opioid

¹ Jorge Jaramillo, “United States Air Force Element, NPS Advanced Academic Degree Research Topics by Geographic Combatant Command” (unpublished consolidated list of Joint Chiefs of Staff proposed research topics, June, 2018), 7.

² The question of measuring the effectiveness of the DoD counterdrug mission or measuring the effectiveness of drug interdiction as a strategy appears in the following government think tank reports and studies and professional military thesis: *Sealing the Borders: The Effects of Increased Military Participation in Drug Interdiction*, Peter Reuter, Gordon Crawford, and Jonathan Cave; *Campaign Planning and The Drug War*, Murl D. Munger and William W. Mendel, February; *In Search of Measures of Effectiveness for Counterdrug Operations*, William H. Dunn; *Measuring The Leverage: Assessing Military Contributions to Drug Interdiction*, Carl Builder; *Counterdrug Operations: A Necessary DoD Mission*, Ervin Pearson; *The Role of U.S. Special Operations Forces in Counter-Drug Activities*, Thomas M. Ryan; *An Empirical Examination of Counterdrug Interdiction Program Effectiveness*, Dr. Barry D. Crane, Dr. A. Rex Rivolo, and Dr. Gary C. Comfort; *DoD Involvement in the Counterdrug Effort, Contributions and Limitations*, Kimberly J. Corcoran; *The Military and The Drug War: Operational Art at an Impasse*, Stephen L. Guse; *Analysis of the Military Role in America’s Domestic Counterdrug Effort*, Scott Taylor; *Performance Measures of Effectiveness For the National Guard Counterdrug Program*, Dallen Attack, 2009.

epidemic would be critical to the assessment.³ However, because the DoD does not write policy, if the question is for the DoD, it must be interpreted another way.

The DoD is tasked to execute drug interdiction as part of the United States drug control strategy.⁴ If the effectiveness question is simply about how effective the DoD is at seizing money and drugs, I would argue the question has already been answered. We can look at data collected by the DoD and surmise that the DoD is reasonably effective and has good metrics in place, such as seizure and arrest numbers⁵ to measure how effective they are at eliminating, restricting, or disrupting the supply chain and finances of illicit drug traffickers.⁶ Therefore, if the effectiveness question is about DoD's efficacy at conducting interdiction operations, the DoD has always reported those metrics, and the question should no longer be asked in multiple military officer theses, government think tank reports, and studies. More importantly, one of the three unified combatant commands with command authority⁷ over a counterdrug agency would not be submitting the question for research unless the question was about more than measuring the outputs of the DoD counterdrug

³ Office of National Drug Control Policy, *National Drug Control Strategy*, (Washington, DC: Office of National Drug Control Policy, 2019), 1, <https://www.whitehouse.gov/wp-content/uploads/2019/01/NDCS-Final.pdf>. Arron Cooper, Kristina Squegila, and Holly Yan, "4 pharmaceutical companies accused in the opioid epidemic reach a \$260 million settlement just before trial," CNN, last modified October 21, 2019, <https://www.cnn.com/2019/10/21/health/ohio-opioid-settlement-monday/index.html>. "This crisis alone has resulted in more American deaths in just two years than in the course of the entire Vietnam War. In 2017, there were more than 70,200 drug overdose deaths in the United States according to the Centers for Disease Control and Prevention (CDC). More than 47,500 of these deaths involved an opioid, and more than half of these deaths involved a synthetic opioid such as illicit fentanyl or one of its analogues. From 2014 to 2017, the number of deaths attributed to synthetic opioids like fentanyl and its analogues increased 413 percent, and these synthetic opioids are now involved in more deaths than any other drug such as prescription opioids, heroin, or cocaine."

⁴ Joint Chiefs of Staff, *Counterdrug Operations*, JP 3-07.4, (Washington, DC: Joint Chiefs of Staff, 2019), GL-6, <https://www.jcs.mil/Doctrine/Joint-Doctrine-Pubs/3-0-Operations-Series/>. Drug interdiction is defined as "a continuum of events focused on interrupting illicit drugs smuggled by air, sea, or land."

⁵ Joint Chiefs of Staff, GL-7. "Seizures in counterdrug operations, includes drugs and conveyances seized by law enforcement authorities and drug-related assets confiscated based on evidence that they have been derived from or used in illicit narcotics activities."

⁶ Seizure and arrest numbers were recorded in 2014–2019 United States Indo-Pacific Command Posture Statements, 2014–2019 United States Southern Command Posture Statements, 2014–2018 United States Northern Command Posture Statements, 2011 Strategic Perspective article, *Joint Interagency Task Force–South: The Best Known, Least Understood Interagency Success, Strategic Perspectives*, 964 EAACS counterdrug performance reports, evaluations, and decorations from January 1, 2011 through Dec 31, 2011.

⁷ Joint Chiefs of Staff, I-2-I-3.

mission. It is my assessment that the question has never been about the DoD's ability to measure the outputs of the counterdrug mission. The effectiveness question has always been about the DoD's ability to measure the outcomes of the counterdrug mission. It is with that understating, I answer the following research question.

A. MAJOR RESEARCH QUESTION

Can the DoD create outcome-based metrics to measure the effectiveness of the DoD counterdrug mission? Additionally, if outcome-based metrics cannot be created, what can the DoD measure regarding the counterdrug mission to better inform national policy makers?

The DoD counterdrug mission consists of both source-zone and transit-zone interdiction that is designed to prevent illicit drugs and precursor chemicals from reaching the United States and partner nations.⁸ The overall outcome goal of the DoD drug interdiction mission is to reduce the amount of illicit drugs available in the United States. Based on multiple factors, I conclude it is impossible for the DoD to create outcome-based metrics to measure the effectiveness of the counterdrug mission. However, the DoD can measure more than just the outputs of the DoD counterdrug mission, to better inform the public and national policy makers.

Before explaining what prevents the DoD from creating outcome-based metrics to measure the effectiveness of the DoD counterdrug mission it is necessary to address the difference between input, output, and outcome metrics. To measure inputs is to use metrics that look at what capital was expended to conduct a mission. To measure outputs is to use metrics that evaluate short-term isolated results of a mission. To measure outcomes is to use metrics that evaluate if what you are doing is achieving the larger campaign objective or desired end state of a mission.⁹ For enforcement missions, outcome-based metrics are needed because they help determine whether the mission is meeting the intended goals and

⁸ Precursor chemicals refers to chemicals required to manufacture drugs such as methamphetamine.

⁹ Bryan Roberts, *Measuring the Metrics: Grading the Government on Immigration Enforcement* (Washington, DC: Bipartisan Policy Center, 2015), 15, <https://bipartisanpolicy.org/report/measuring-the-metrics-grading-the-government-on-immigration-enforcement/>.

they inform the public while providing data to policy makers.¹⁰ Outcome-based metrics are also preferred by the DoD, however, they are referred to as end state objectives or goals in DoD joint publications.¹¹ So what prevents the DoD from creating outcome-based metrics for the counterdrug mission?

The barriers to the DoD creating valid outcome-based metrics for the counterdrug mission are the complexity of the overall counterdrug mission, the difficulty in developing or finding a universally accepted methodology, the interconnectedness of supply and demand reduction policies, and the scarcity of available data.

The complexity of the counterdrug mission refers to multiple items. First, the number of agencies involved at all levels of government, which make it difficult to isolate the actions of one actor. Next, United States counterdrug policy objectives and outcomes are not persistent over time. The constant change in policy objectives between presidential administrations makes it difficult to measure policy effectiveness over a sustained period of time.¹² Additionally, advances in technology and the availability of chemicals allow for non-traditional drug production, alternative drug purchase platforms, and alternate drug shipping routes. Lastly, external factors outside of government interdiction policy such as economic changes, changes to prescription drug prices, and distribution laws significantly affect the behaviors of illicit drug users and suppliers.

Finding a universally or even widely accepted methodology to measure interdiction effectiveness is difficult because of the contentious nature regarding the over-criminalization of drug use in America and the disagreement between proponents of

¹⁰ Roberts, *Measuring the Metrics*, 15.

¹¹ Joint Chiefs of Staff, *Joint Operations*, JP 3-0, (Washington, DC: Joint Chiefs of Staff, 2017), II-10-11, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_0ch1.pdf?ver=2018-11-27-160457-910. Joint Chiefs of Staff, *Joint Planning*, JP 5-0, (Washington, DC: Joint Chiefs of Staff, 2017), xxix, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp5_0_20171606.pdf. JP 3-0 states commanders and their staffs should develop operational assessments, to include indicators that measure effectiveness and performance. JP 5-0 states planners should ensure “effects, objectives, and end states are linked to tasks through carefully selected measures of performance and measures of effectiveness.”

¹² Matthew B. Robinson and Renee G. Scherlen, *Lies, Damned Lies, and Drug War Statistics: A Critical Analysis of Claims Made by the Office of National Drug Control Policy*, 2nd ed. (Albany, NY: State University of New York Press, 2014), 196, <https://ebookcentral.proquest.com/lib/ebook-nps/detail.action?docID=3408821>.

demand reduction versus advocates for supply-side policies. The ONDCP annually evaluates drug use in America by using the measures of performance and effectiveness listed in the National Drug Control Strategy (NDCS). However, in the book *Lies, Damned Lies, and Drug War Statistics* the authors systematically demonstrate how the ONDCP cherry picks data and methods to demonstrate success. The authors conclude that the ONDCP changes both the methodologies and statistics every year to demonstrate success in the War on Drugs in order to mislead congress and the American public about the effectiveness of the NDCS. Next, the authors select what they determine to be a better methodology and metrics to demonstrate vastly different results.¹³ Ultimately, the results presented were so different it is impossible not to conclude that either the ONDCP or Robinson and Scherlen purposely selected specific metrics and methodology to reach their desired conclusions.

At this point, it is universally accepted that efforts on the supply-side must be matched or exceeded by efforts on the demand-side to have any real impact on drug use or drug availability. It is also accepted that a combination of supply and demand reduction policies are needed to solve the drug crisis in America; the only disagreement is what should be the primary line of effort. Ultimately, this means demand reduction and supply-side policies are intrinsically linked, making it impossible to isolate supply-side policy measures for outcome-based evaluation.

Lastly, the scarcity of data available regarding all aspects of drug use make it difficult to develop metrics that can be consistently used to evaluate patterns over time. For example, the amount of drugs coming into the United States in any given year is unknown. A *World Drug Report* from the United Nations stated at that time only about 10% of the countries in the world have accurate methods to record data regarding illegal drugs.¹⁴ Additionally, accurate data on illegal drug consumption and prices is not readily available

¹³ Robinson and Scherlen, *Lies, Damned Lies, and Drug War Statistics*, 135.

¹⁴ United Nations Office for Drug Control and Crime Prevention, *World Drug Report 2000*, (Oxford: Oxford University Press, 2012), http://www.unodc.org/pdf/world_drug_report_2000/report_2001-01-22_1.pdf.

and national drug surveys are either incomplete or inaccurate for various reasons.¹⁵ The problems with the lack of accurate drug data led the National Academy of Sciences to conclude, “the nation possesses little information about the effectiveness of current drug policy, especially of drug law enforcement.”¹⁶

These barriers make it impossible for the DoD to create outcome-based metrics to measure the effectiveness of the DoD counterdrug mission. Until the barriers are removed the DoD should focus on developing metrics that show a correlation between DoD interdiction efforts and illicit drug use at home and abroad. Additionally, the DoD can develop metrics that evaluate costs versus benefits. Finally, the DoD should evaluate both the intangible benefits and unintended consequences associated with multi-national joint interagency counterdrug operations when measuring the overall effectiveness of the DoD counterdrug mission.

B. SIGNIFICANCE OF THE RESEARCH QUESTION

Determining whether the DoD can create outcome-based metrics to measure the effectiveness of the counterdrug mission, and, if not, determining what metrics the DoD can use to better inform policy makers is significant for three reasons. First, the DoD spends a significant amount of taxpayer money on the counterdrug mission and there should be metrics that inform the American public and national policy makers whether that is a good use of taxpayer money. Accounting practices used by the DoD and the lack of a federal audit make it difficult to determine exactly how much the DoD spends on the counterdrug mission. However, we know the DoD allocates just shy of \$1 billion dollars a year to the DoD Drug Interdiction and Counterdrug Activities defense account.¹⁷ According to *JP 3-07.4*, “the DoD supports federal, state, and local (including territorial and tribal) law enforcement agencies in their efforts to disrupt the transport and transfer of illicit drugs

¹⁵ Robinson and Scherlen, *Lies, Damned Lies, and Drug War Statistics*, 58.

¹⁶ Robinson and Scherlen, 58.

¹⁷ Numbers pulled from DoD comptroller reports show the following actual and estimate amounts spent by the DoD: 2001 (\$970.4 million), 2002 (\$852.6 million), 2003 (\$871.9 million), 2004 (\$817.4 million), 2005 (\$833.5 million), 2018 (\$934.8 million). That allocation does not include funding to build partner nation capacity for counterdrug operations or overseas contingency funding.

and drug-related materials, such as precursor chemicals, into the US.”¹⁸ In 2018, congress allocated \$934.8 million to the Drug Interdiction and Counterdrug Activities, defense account.¹⁹ That money was then allocated throughout the DoD to execute various counterdrug operations.²⁰ The lack of metrics to measure effectiveness, including cost-effectiveness, is an impediment to proper oversight by the United States Congress. Additionally, the DoD has allocated roughly 28% of its total counterdrug budget, including 97% of money allocated for domestic support, to the National Guard Counter Drug Program.²¹ As a recent Government Accountability Office report recently concluded, the National Guard Counter Drug Program has been allocated \$3.67 billion dollars over the last fifteen years with little to no oversight of whether the money is being effectively spent.²² A primary reason for civilian oversight of the DoD is to ensure efficiency in the department and better metrics are required to accomplish that.

Second, the ultimate consequence of any DoD mission is the loss of American life. Assessments regarding whether the potential outcomes of a mission are worthy of that risk are the solemn obligation of any leader overseeing a DoD mission. This is why, by instruction from the Chairmen of the Joint Chiefs of Staff, military commanders at all levels are required to measure the effectiveness and performance of missions they conduct against overall mission objectives and desired end states.²³ Commanders at all levels have a moral obligation to ensure military missions are measured for risk versus reward to uniformed personnel. At the initiation of the War on Drugs, the primary problem was the flow of

¹⁸ Joint Chiefs of Staff, *Counterdrug Operations*, I-1.

¹⁹ Elizabeth Field, *DRUG CONTROL: DoD Should Improve Its Oversight of the National Guard Counterdrug Program*, GAO 19-27 (Washington, DC: Government Accountability Office, 2019), 9, <https://www.gao.gov/assets/700/696480.pdf>.

²⁰ Field, 9.

²¹ Field, 10.

²² GAO 19-27 concluded that the DoD has not produced valid policies or management to execute the National Guard Counterdrug Program. Additionally, the DoD does not adequately oversee or approve individual state counterdrug plans prior to allocating money as required by law.

²³ Joint Chiefs of Staff, *Joint Operations*, II-10-11. Joint Chiefs of Staff, *Joint Planning*, xxix.

cocaine from Latin American to the United States.²⁴ Because Latin America was the main source of cocaine the argument that high seizures and arrests demonstrated an effective disruption of supply routes in those countries and would result in fewer drugs in the United States seemed valid. This meant seizure and arrest data was good enough for military commanders to assess progression toward the desired end state of the counterdrug mission. However, as multiple books and drug studies point out, high seizures and arrest do not equate to a reduced flow of illicit drugs to United States.²⁵

The global nature of the twenty-first century drug trade combined with dramatic changes in how drugs are produced, delivered, and used make seizure and arrest numbers even less useful today as stand-alone metrics. Therefore, the DoD must find a better way to measure counterdrug mission effectiveness. As Carl Builder argued in his military drug interdiction mission study, the ultimate price for military operations is the potential loss of human life, therefore, it must be determined if those operations produce results worthy of such a risk.²⁶ Builder went on to state, regardless of whether a soldier is willing to execute an assigned mission without a proper assessment, those in charge owe it to them to ensure the assessment is done.²⁷

Third, my research contributes to the existing bodies of literature regarding what metrics best determine the effectiveness of interdiction efforts and how the DoD can use both intangible benefits and unintended consequences to better evaluate the effectiveness of the counterdrug mission. The majority of the literature regarding measuring the effectiveness of drug interdiction focuses on whether using changes in retail drug prices is a valid way to determine the amount of drugs available to the consumer, and whether a

²⁴ Roberto Martinez Zepeda and Jonathan D. Rosen, *Cooperation and Drug Policies in the Americas: Trends in the Twenty-First Century*, (Lanham: Lexington Books, 2015), X, <https://ebookcentral.proquest.com/lib/ebook-nps/detail.action?docID=1903378>.

²⁵ Jonathan P. Caulkins, *How Goes the War on Drugs: An Assessment of U.S. Drug Problems and Policy*, P-121-DPRC, (Santa Monica, CA: RAND Corporation, 2005), <https://doi.org/10.7249/OP121>. Zepeda and Rosen, *Cooperation and Drug Policies in the Americas*, X.

²⁶ Carl H. Builder, *Measuring the Leverage: Assessing Military Contributions to Drug Interdiction*, (Santa Monica, CA: RAND Corporation, January 1993), 17, <http://www.dtic.mil/docs/citations/ADA282388>.

²⁷ Builder, 17.

better indication of the effectiveness of drug seizures is the total amount of drugs consumed or the total number of people consuming drugs.²⁸ However, I argue that while all of the metrics used to determine interdiction effectiveness have flaws, the best and only independent measure to determine the effectiveness of supply-side interdiction is drug purity. The purity argument is not a new idea; however, it is usually an afterthought regarding measuring the effectiveness of drug interdiction. I submit that because change in drug purity is the least externally influenced drug interdiction metric, drug purity data paints a more accurate picture of drug interdiction efforts. This does not mean changes in drug purity equates to less illicit drugs being consumed or the number of people consuming them, because if demand remains high, diluted or alternative drugs will be trafficked and consumed.

I also add to the common body of literature that views measuring the DoD counterdrug effectiveness as a zero-sum game. There are nuances to measuring the DoD counterdrug mission. While I submit the DoD cannot create valid outcome-based metrics, the DoD can select better metrics to demonstrate a correlation between the counterdrug mission and illicit drug use at home and abroad. Additionally, I argue any discussion of measuring the effectiveness of the DoD counterdrug mission must include a discussion of both the intangible benefits and unintended consequences associated with the DoD counterdrug mission. The intangible benefits include relationship building with partner nations, building partner capacity, and military training. The unintended consequences are negative impacts on military retention because of increased ops tempo and deployments and the potential overreliance on the military for missions other than war. These benefits and consequences must be considered when measuring the effectiveness of the DoD counterdrug mission.

²⁸ See, *Measuring the Leverage: Assessing Military Contributions to Drug Interdiction*, Carl H. Builder; *An Empirical Examination of Counterdrug Interdiction Program Effectiveness*, Dr. Barry D. Crane, Dr. A. Rex Rivolo, and Dr. Gary C. Comfort; *United Nations World Drug Report 2000*; *How Goes the War on Drugs: An Assessment of U.S. Drug Problems and Policy*, Jonathan P. Caulkins; and, *Lies, Damned Lies, and Drug War Statistics: A Critical Analysis of Claims Made by the Office of National Drug Control Policy*, Matthew B. Robinson and Renee G. Scherlen.

C. LITERATURE REVIEW

The relevant literature regarding the need for the DoD to measure the effectiveness of the counterdrug mission and the difficulty in creating outcome-metrics for supply-side drug policies was covered in the major research and significance sections of this chapter. However, it is also important to understand the history of DoD involvement in the War on Drugs and how the NDCS fits into determining the outcome goals of drug interdiction efforts. This following literature review provides a chronological history of DoD involvement in the War on Drugs, and a brief overview of the NDCS.

1. DoD Involvement in the War on Drugs

The United States War on Drugs started in 1971 under President Nixon. Nixon believed the use of illegal narcotics presented a direct threat to national security. Nixon established the Drug Enforcement Agency in 1973 to go after illegal drug trafficking.²⁹ However, Nixon recognized “drug traffickers will continue to traffic drugs as long as they have a market, and therefore, the United States must concentrate on demand reduction.”³⁰ Nixon understood the basic economic model as it applied to drug trafficking; as long as demand remains high, supply will be difficult to eliminate. Since Nixon, American presidents have placed less emphasis on reducing demand, in favor of declaring a war on drug traffickers by attacking their supply routes and infrastructure. As Rosen and Zepeda write in *Cooperation and Drug Policies in the Americas*, “Nixon’s emphasis on the economic nature of drug trafficking—the role of supply and demand—was forgotten by his predecessors.”³¹ The Reagan administration decided to focus United States drug control efforts primarily on supply reduction.³² Holden-Rhodes writes, “on October 14, 1982, following a decade of increasing political pressure for a firmer stance on illegal drugs, President Reagan declared a War on Drugs.” Holden-Rhodes concludes, Reagan

²⁹ Zepeda and Rosen, *Cooperation and Drug Policies in the Americas*, IX.

³⁰ Zepeda and Rosen, X.

³¹ Zepeda and Rosen, X.

³² Zepeda and Rosen, X.

was committed to combatting the drug crisis in America by any means necessary,³³ and it was at that moment drug interdiction and crop eradication became the preferred tactics in War on Drugs and those tactics required significant DoD participation.

In the book *Sharing the Secrets: Open Source Intelligence and the War on Drugs*, Holden-Rhodes dedicates an entire chapter to how and why the DoD was dragged into the War on Drugs. In his chapter titled, *The Militarization of the War on Drugs*, he writes, “from the time of the amendment of the Posse Comitatus Act in 1981 until late 1989, the U.S. military establishment fought entry into the war on drugs.”³⁴ During the decade of 1980–1989 the DoD was singularly focused on warfighting and a potential war with an equally powerful Soviet Union military. DoD leaders did not see a place for the DoD in the War on Drugs and resisted the notion that uniformed personnel would be used for a complicated domestic issue. However, the United States Congress grew frustrated with the lack of progress by domestic law enforcement agencies and through a series of legislative measures slowly forced the military into the War on Drugs.³⁵ In 1989, the United States Congress designated the DoD as the lead agency for surveillance of drug trafficking entering the United States, and the United States Coast Guard the lead agency for the

³³ J. F. Holden-Rhodes, *Sharing the Secrets: Open Source Intelligence and the War on Drugs*, (Westport, CT: Praeger, 1997), 41.

³⁴ Holden-Rhodes, 55.

³⁵ Zepeda and Rosen, X. Holden-Rhodes, 55–63. Ronald F. Lauve, *Military Cooperation with Civilian Law Enforcement Agencies*, (Washington, DC: United States General Accounting Office, 1983). <http://archive.gao.gov/d40t12/122004.pdf>. The following legislative measures were used to allow the DoD to conduct the counterdrug mission: 1981 amendment of the Posse Comitatus Act, which gave the military the authority to support domestic law enforcement agencies, National Security Decision Directive 221, which declared America’s drug problem a threat to national security, Public Law 97-86, which authorized the DoD to provide equipment, personnel, intelligence sharing, and other support to law enforcement functions, and The National Defense Act of 1989, which directly assigned the counterdrug mission to the DoD.

seizure of illicit narcotics and arrest of drug traffickers.³⁶ Even though First Lady Nancy Reagan was spearheading the “just say no” campaign,³⁷ United States drug policy was focused on reducing the supply of drugs and not on policies designed to decrease drug demand in the United States.³⁸

National Security Decision Directive 221, declared “drug trafficking a national security threat to the United States”³⁹ and by 1990 “the National Security Strategy included a reference to a counter narcotics role.”⁴⁰ At this point, the DoD was fully involved in the War on Drugs and began conducting extensive interdiction and eradication campaigns against the two biggest suppliers of coca in the world. However, DoD interdiction efforts did not result in a reduction of cocaine in the United States because demand was not significantly reduced. Simply put, DoD interdiction efforts fell victim to the balloon effect. During counterdrug operations, the balloon effect is when interdiction efforts result in the transfer of drug production capacity from one region to another. For example, in 1985 25% of coca in the world came from Bolivia, while 65% came from Peru.⁴¹ The United States combined its military power with partner nation law enforcement agencies and destroyed the coca supplies and production capability in Bolivia and Peru.⁴² However, the production capabilities of Bolivia and Peru were simply transferred. By the year 2000 roughly 90%

³⁶ Evan Munsing and Christopher Lamb, *Strategic Perspectives 5: Joint Interagency Task Force South: The Best Known, Least Understood Interagency Success* (Washington, DC: National Defense University Press 2011), 10, <https://permanent.access.gpo.gov/gpo16331/Strategic-Perspectives-5.pdf>. The United States Coast Guard was part of the United States Department of Transportation until 1989 and subsequently transferred to the Department of Homeland Security in 2002. However, according to 14 U.S. Code § 103, “Upon the declaration of war if congress so directs in the declaration or when the president directs, the Coast Guard shall operate as a service in the Navy, and shall so continue until the president, by Executive order, transfers the Coast Guard back to the Department of Homeland Security. While operating as a service in the Navy, the Coast Guard shall be subject to the orders of the Secretary of the Navy, who may order changes in Coast Guard operations to render them uniform, to the extent such Secretary deems advisable, with Navy operations.”

³⁷ “Just Say No,” Her Causes, Nancy Reagan, Ronald Reagan Presidential Foundation and Institute, accessed November 3, 2019, <https://www.reaganfoundation.org/ronald-reagan/nancy-reagan/her-causes/>.

³⁸ Decreasing demand includes strategy designed to dissuade drug use and long-term treatment options aimed at reducing the recidivism rates of drug users.

³⁹ Zepeda and Rosen, *Cooperation and Drug Policies in the Americas*, X.

⁴⁰ Holden-Rhodes, *Sharing the Secrets*, 41.

⁴¹ Zepeda and Rosen, X.

⁴² Zepeda and Rosen, *Cooperation and Drug Policies in the Americas*, X.

percent of the world's coca was coming from Colombia.⁴³ The balloon effect and other complications with supply-side drug policies make it difficult for the DoD to determine what success in drug interdiction looks like. Therefore, the DoD should rely on the NDCS to find the outcome goals associated with interdiction efforts.

2. National Drug Control Strategy

The Anti-Drug Abuse Act of 1988 created the ONDCP and tasked it with designing, implementing, and overseeing a comprehensive national counterdrug strategy.⁴⁴ That strategy would first be articulated to congress and the American public via the NDCS. As part of the first NDCS President George H. W. Bush wrote:

This report is the product of an unprecedented national effort over many months. America's fight against epidemic illegal drug use cannot be won on a single front alone; it must be waged everywhere. Accordingly, we have conducted a thorough, intensive, and unflinching review of Federal anti-drug efforts to date. And we have solicited advice and recommendations. The result is a comprehensive blueprint for new direction and effort—and for success in the near- and long-term future.⁴⁵

The NDCS has continuously struggled to balance the counterdrug equation, and it is now universally accepted that the United States has focused too much on supply-side polices over the past thirty years. A point highlighted in a book by drug policy expert Bruce Bagley. According to him, the United States can no longer afford to “ignore the overwhelming body of research that shows that only a balanced approach between supply- and demand-reduction programs will have any real effect on America's drug consumption...”⁴⁶ The current NDCS attempts to balance the counterdrug equation along three primary lines of effort aimed at combating illegal drug use in the United States. The

⁴³ Zepeda and Rosen, X.

⁴⁴ “Authorizations Language,” Office of National Drug Control Policy, accessed November 3, 2019, <https://www.whitehouse.gov/ondcp/additional-links-resources/authorizations-language/>.

⁴⁵ J. F. Holden-Rhodes, *Sharing the Secrets*, 41.

⁴⁶ Bruce Bagley, “Drug-Control Policies in the United States: Patterns, Prevalence, and Problems of Drug Use in the United States,” in *Drug Trafficking, Organized Crime, and Violence in the Americas Today*, ed. Bruce M. Bagley, and Jonathan D. Rosen, (Gainesville, FL: University Press of Florida, 2015), 133–134. <https://muse-jhu-edu.libproxy.nps.edu/book/39885>.

three lines of effort are prevention, treatment, and reducing the availability of illicit drugs in the United States.⁴⁷ Of the three primary lines of effort only reducing availability is aimed at the supply-side of the counterdrug equation. Additionally, the *2019 NDCS* list twenty-five minor lines of effort that fall under the three primary lines of effort. Of the twenty-five minor lines of effort only nine are aimed at reducing the supply of illegal drugs in the United States.⁴⁸ Of the nine minor lines of effort aimed at reducing the supply of illicit drugs available in the United States, the DoD is expected to play a significant role in the following four:

1. Disrupting, dismantling, and defeating drug traffickers and their supply chains.
2. Interdicting the flow of drugs across the physical borders and into the United States.
3. Disrupting and dismantling the illicit drug production infrastructure.
4. Leveraging the full capabilities of multi-jurisdictional task force programs.⁴⁹

The DoD should evaluate the counterdrug lines of effort they are tasked with supporting against the performance and effectiveness measures listed in the NDCS. The *2019 NDCS* list three measures of performance and four measures of effectiveness to measure the overall effectiveness of United States drug control policies. Performance measure three and effectiveness measures one and four outline the current outcome goals

⁴⁷ Office of National Drug Control Policy, *National Drug Control Strategy*, 3.

⁴⁸ Office of National Drug Control Policy, 20.

⁴⁹ Office of National Drug Control Policy, 13–18.

of national supply-side policy efforts.⁵⁰ Therefore, those are the measures the DoD should grade the DoD counterdrug mission against.

D. POTENTIAL EXPLANATIONS AND HYPOTHESES

This thesis argues that the DoD cannot create objective outcome-based metrics to measure the effectiveness of the counterdrug mission. The complexity of the counterdrug mission, the difficulty in finding or developing a universally accepted methodology, the interconnectedness of supply and demand reduction policies, and the scarcity of available drug data combine to make it impossible to objectively measure the outcomes of DoD counterdrug efforts. However, the DoD can select better metrics and a methodology that will demonstrate a correlation between DoD interdiction efforts and the availability of illicit drugs in the United States. Additionally, the DoD can measure the inputs to the counterdrug mission against the outputs of the counterdrug mission to better understand the costs versus benefits.

⁵⁰ Office of National Drug Control Policy, *National Drug Control Strategy*, 19–20. Measures of Performance: (1) Educate the public, especially adolescents, about drug use, specifically opioids increase, mandatory prescriber education and continuing training on best practices and current clinical guidelines; and increase PDMP interoperability and usage across the country. (2) Encourage expanded access to evidence-based addiction treatment in every state, particularly Medication-Assisted Treatment for opioid addiction; support legislative changes to allow Medicaid to reimburse certain residential treatment at facilities with more than 16 beds; and encourage states to apply for state Medicaid demonstration projects that address barriers to inpatient treatment as a part of a comprehensive opioid/substance use disorder strategy. (3) Significantly reduce the availability of illicit drugs in the United States by preventing their production outside the United States, disrupt their sale on the internet, and stop their flow into the country through the mail and express courier environments, and across our borders. Measure of Effectiveness: (1) The number of Americans dying from a drug overdose is significantly reduced within five years. (2) Nationwide opioid prescription fills are reduced by one-third within three years and within five years all healthcare providers have adopted best practices for opioid prescribing. (3) Evidence-based addiction treatment, particularly Medication-Assisted Treatment for opioid addiction, is more accessible Nationwide for those who need it. (4) The production of plant-based and synthetic drugs outside the United States has been significantly reduced, illicit drugs are less available in the United States as reflected in increased price and decreased purity, and drug seizures at all U.S. ports of entry increase each year over five years.

The DoD already collects data that demonstrates efficacy in seizing large quantities of drugs and money and the ability to facilitate the arrests of drug traffickers.⁵¹ To better demonstrate a correlation between DoD interdiction efforts and drug availability in the United States the DoD can combine data already collected with additional key performance indicators (metrics) regarding illegal drug use in the United States. Finding reliable drug data is difficult, but that should not prevent the DoD from making every effort to obtain data from various agencies (international, federal, state, and local) regarding the number of reported drug overdoses, number of new patients seeking drug rehabilitation, number of drug related arrests or crimes, purity of drugs seized, and street price of drugs. Those key performance indicators combined with seizure and arrest data will allow the DoD to use the pattern and trend analysis methodology to demonstrate how the counterdrug mission correlates with changes in illicit drug use in America.

To accurately assess the costs and benefits of the DoD counterdrug mission the DoD must utilize value-based metrics. By assigning values to non-tangible factors like arresting a drug trafficker, saving a life, or preventing a metric ton of cocaine or heroin from reaching the United States the DoD can determine the costs versus benefits of the counterdrug mission by using a cost-benefit equation. The cost-benefit will be inherently subjective because of the assigned values to non-tangible factors; however, it is an acceptable way for the DoD to inform policy makers and the American public about the costs and benefits of the DoD counterdrug mission.

Lastly, measuring the effectiveness of DoD counter drug efforts cannot focus solely on inputs, outputs, and outcomes. The DoD counterdrug mission must be viewed holistically, which includes accounting for the intangible benefits of developing partner nation relationships and building partner military and law enforcement capacity.

⁵¹ Northern Command Posture Statements: (2015) \$3.5 billion in assets seized from trans-criminal organizations in 2013. (2017) 10,000 pounds of marijuana seized at the border. Pacific (Indo-Pacific) Command Posture Statements: (2016) 750 kilograms of cocaine seized. (2017) 16.6 metric tons of methamphetamine precursor chemicals, nine small vessels carrying cocaine or methamphetamine, and removal of over 1.5 billion dollars in revenue from the trafficking organizations. (2019) Roughly 116,000 kilograms of methamphetamine precursor chemical seized. Southern Command Posture Statements: (2014) eradication of 100,446 marijuana plants and the seizure of 330 pounds of marijuana. \$12.5 million worth of marijuana in Belize, and the interdiction of 1.4 metric tons of cocaine and seven aircraft. 2015, 2016, and 2018 Southern Command Posture Statements report similar seizure numbers.

Additionally, the impacts on military readiness must be taken into consideration when assessing the DoD counterdrug mission.

E. RESEARCH DESIGN

This thesis on measuring the effectiveness of the DoD counterdrug mission focused on five key areas. First, I reviewed literature regarding measuring the effectiveness of the DoD counterdrug mission. I specifically focused on what is being asked of the DoD and why it is impossible for the DoD to determine outcome effectiveness. I used various studies, reports, and academic literature to demonstrate why it is not possible for the DoD to create objective outcome-based metrics to measure the effectiveness of the counterdrug mission.

Second, I used existing literature to demonstrate why it is important for the DoD to do a better job correlating the outputs of the counterdrug mission with the availability of illicit drugs in America. I explained why measuring the inputs to the counterdrug mission against the outputs of the counterdrug mission to determine costs versus benefits will better inform policy makers and the American public. I reviewed the DoD budget to determine how much money the DoD spends on counterdrug efforts and examined the moral obligation of leaders to make every effort to determine if missions conducted by military personnel are progressing toward the desired end states.

Third, I presented the data currently collected by the DoD in unified combatant command congressional posture statements, reports on JIATFs and JTFs, articles on the National Guard Counter Drug Program, and deployed unit performance reports, evaluations, decorations, and awards. I used studies and academic literature to demonstrate why the data collected by the DoD is insufficient because it is divorced from outcome goals and does not evaluate the cost.

Fourth, this thesis used existing research on measuring supply-side counterdrug effectiveness to demonstrate how metrics in the form of key performance indicators can be used to show a correlation between DoD counterdrug efforts and the availability of illicit drugs in the United States. The DoD can use the trend and pattern methodology presented in a RAND study on measuring the effectiveness of the DoD counterinsurgency mission to

better measure the effectiveness of the DoD counterdrug mission. Additionally, I presented evidence to show why drug purity is the best and only independent metric to determine how interdiction and eradication efforts are affecting the availability of illicit drugs. Lastly, I demonstrated how the DoD can use value-based metrics to determine costs versus benefits of the DoD counterdrug mission. This includes my own cost-based equations to conduct a counterdrug cost-benefit analysis.

In the fifth area of focus, I reviewed the intangible benefits and unintended consequences of the DoD counterdrug mission. I used congressional posture statements and other literature to outline the benefits of developing partner relations and building partner capacity. Additionally, I used military readiness studies to evaluate the impacts the DoD counterdrug mission has on military readiness.

F. THESIS OVERVIEW AND CHAPTER OUTLINE

This thesis is organized into three chapters. After this first chapter, chapter two evaluates the current data collected by the DoD and introduces new metrics and methodology the DoD can use to better correlate the counterdrug mission and supply-side outcome goals. Chapter 2 presents the idea of using drug purity as the premier metric for correlating supply-side efforts and illicit drug availability. Chapter three evaluates the importance of including the intangible benefits and unintended consequences of DoD's counterdrug mission when attempting to measure the effectiveness. Chapter three concludes with a summary of the thesis and final recommendations.

II. MEASURES OF EFFECTIVENESS

In this Chapter I examine what data the DoD currently collects and reports regarding counterdrug operations and why the data falls short in measuring the outcomes of the DoD counterdrug mission. Additionally, recognizing the DoD cannot create objective outcome-based metrics to measure the counterdrug mission, this chapter presents metrics and methodologies the DoD can adopt to better evaluate the effectiveness of the counterdrug mission. The metrics and methodology presented in this chapter will better demonstrate a correlation between DoD interdiction efforts and illicit drug use, as well as measure the costs versus benefits of the DoD counterdrug mission. Before I discuss DoD counterdrug data collection and reporting efforts it is important to understand how the DoD is organized to execute counterdrug operations.

JP 3-07.4 list four JTFs (East, West, North, and Investigations), two JIATFs (South and West), and the Air and Marine Operations Center⁵² as organizations tasked in the National Interdiction Command and Control Plan with stopping the flow of illegal drugs into the United States and partner nation countries and denying terrorist organizations revenue by stopping them from profiting from the distribution of illegal drugs.⁵³ DoD equipment and personnel can be assigned to any of the seven joint agencies to participate in counterdrug operations. However, the DoD only exercises command authority over three of the agencies, JIATF-South which is subordinate to United States Southern Command, JIATF-West which is subordinate to United States Indo-Pacific Command, and JTF-North which is subordinate to United States Northern Command. The other four agencies are assigned to the Department of Homeland Security.⁵⁴ Understanding the organization of the DoD counterdrug mission provides insight into where to find the data collected by the DoD to measure effectiveness.

⁵² Joint Chiefs of Staff, *Counterdrug Operations*, I-3. Air and Marine Operations Center “is the only federal law enforcement center tasked to coordinate drug interdiction operations in the Western Hemisphere.”

⁵³ Joint Chiefs of Staff, I-2.

⁵⁴ Joint Chiefs of Staff, I-2-I-3.

A. CURRENT DATA COLLECTED BY THE DoD

As mentioned, DoD commanders at all levels are required to measure mission effectiveness. Since the Commanders of Southern, Northern, and Indo-Pacific Commands exercise command authority over agencies tasked with counterdrug missions, a review of their congressional posture statements is the best place to find data collected by the DoD regarding the effectiveness of the counterdrug mission. Additionally, some seizure data from various National Guard units is included in the posture statements from United States Northern Command, although it is not clear which state National Guard data Northern Command chooses to incorporate. Finally, even though only three unified combatant commands exercise command authority over agencies responsible for counterdrug operations, seven unified combatant commands are listed in *JP 3-07.4* as supporting counterdrug operations. Therefore, I reviewed congressional posture statements to the House Armed Services Committees from all seven unified combatant commanders from 2014 to 2019 to evaluate trends in reporting. After my review two reporting trends were noted. First, seizure and arrest numbers and mission and sortie data is the primary data collected and reported by unified combatant commanders that exercise command authority over counterdrug agencies. Second, partner nation relationship building efforts and the links between organized crime, terrorism, and illicit drug production and trafficking is the only data reported by the unified combatant commands that do not have a counterdrug agency aligned under them.⁵⁵

1. Seizure and Arrest Numbers

Seizure and arrest numbers are the easiest metric to track and the most tangible numbers the DoD can highlight to demonstrate efficacy. In the article *Joint Interagency Task Force–South: The Best Known, Least Understood Interagency Success*, seizure and

⁵⁵ Review included Posture Statements presented to the United States House Armed Services Committee from United States European Command (2014-2019), United States Indo-Pacific Command (2014-2019), United States Southern Command (2014-2019), United States Africa Command (2014-2019), and United States Central Command (2014-2019), United States Northern Command (2014-2018), and United States Special Operations Command (2014-2015, 2017–2019). United States Special Operations Command does not mention counterdrugs as a mission. The only drug reference by Special Operations Command is in reference to policies to address illicit drug use by special operations unit members and their families in the 2018 Posture Statement.

arrest numbers are presented to support the high praise given to JIATF-South in the article. The authors state, in 2009 JIATF-South was responsible for seizing forty percent of global cocaine seized by law enforcement.⁵⁶ The article goes on to highlight that over a twenty-year span JIATF-South has “arrested 4,600 traffickers, captured nearly 1,100 vessels, and deprived drug cartels of \$190 billion in profits.”⁵⁷ Additionally, a review of Air Force letters of evaluation, performance reports, decorations, and individual, team, and unit awards from squadrons assigned to execute counterdrug operations shows the primary metric used as justification is seizure and sortie data.⁵⁸ Lastly, while the National Guard Counterdrug Program is actually fifty-four separate state and territory programs. The National Guard Counterdrug Program combines the individual state and territory seizure and arrest numbers to highlight the successes of the National Guard Counterdrug Program. In a recent article celebrating 30 years of the National Guard Counterdrug Program, Captain Nadine De Moura relies primarily on seizure and arrest data to demonstrate how effective the National Guard Counterdrug Program has been. De Moura writes, “since 2011, the national program has assisted law enforcement agencies in seizing \$103.7 billion of drugs, 337,000 weapons and the denial of \$109 billion of illicit revenue.”⁵⁹ The article also highlights the California National Guard by stating, the California National Guard “supported 2,229 cases, which led to the disruption of 446 drug trafficking cases and the dismantlement of 62 drug trafficking organizations.”⁶⁰ Additionally, California National Guard efforts resulted in the seizure of \$2.2 billion in “drugs, weapons, property, and currency.”⁶¹ In Table 1, I compile the reported seizure and arrest numbers from the combatant command posture statements.

⁵⁶ Munsing and Lamb, *Strategic Perspectives*, 3.

⁵⁷ Munsing and Lamb, 3.

⁵⁸ Review includes 964 EAACS units that participated in counterdrug interdiction operations from January 1, 2011 through Dec 31, 2011.

⁵⁹ Nadine Wiley De Moura, “National Guard Counterdrug Program Celebrates 30 Years,” U.S. Army, last modified August 21, 2019, https://www.army.mil/article/226032/national_guard_counterdrug_program_celebrates_30_years.

⁶⁰ De Moura, “National Guard Counterdrug Program Celebrates 30 Years.”

⁶¹ De Moura, “National Guard Counterdrug Program Celebrates 30 Years.”

Table 1. Reported Seizures and Arrests (2014-2019)⁶²

Seized Item	Southern Command	Northern Command	Indo-Pacific Command
Marijuana	330 lbs	10,000 lbs	
Cocaine	1,180.9 Ts		7.25 Ts
Methamphetamine			274.1 Ts
Vessels/Aircraft	485		9
Assets and Illicit Goods		3.65B	
Money	\$50.6M		\$1.5B
Arrests/Detentions	3,237		

The problem with using seizure and arrest data as stand-alone metrics is that only output data is assessed, and, output data that is not compared against inputs to determine cost-benefit or combined with other data to assess progress towards outcome goals is relatively meaningless. As the 2005 RAND study, *How Goes the War on Drugs* concluded, “...the amount of drugs seized, are too gross to be meaningful. If more drugs are seized this year than last year, does that mean that more drugs are being removed from U.S. streets or that more drugs are being sent?”⁶³

2. Mission and Sortie Data

United States Southern Command reported the following sortie data when evaluating Air Forces Southern counterdrug efforts from 2014 through 2017. Air Forces Southern executed 2,736 missions, 15,027 flight hours, produced over 60,385 images, 2,000 signals intelligence reports and 39,732 minutes of video.”⁶⁴ JTF-North reported in

⁶²Adapted from 2014–2019 United States Indo-Pacific Command Posture Statements, 2014–2019 United States Southern Command Posture Statements, and 2014–2018 United States Northern Command Posture Statements.

⁶³ Caulkins, *How Goes the War on Drugs*, 7.

⁶⁴ *United States Southern Command Posture Statements*: Hearing before House Armed Services Committee, House of Representatives, 113th and 114th Cong. Data combined from 2014–2017 Posture Statements.

2014 they supported “23 missions involving over 500 personnel”⁶⁵ and in 2015 “provided support to 51 specific multi-domain and multi-LEA operations, including detection and monitoring, ground surveillance, and mobility support.”⁶⁶ The National Guard Counter Drug Program reported a combined “75,000 analytical products in support of 20,000 U.S. law enforcement agency counterdrug investigations,” and over 1,000 “priority targets linked to drug trafficking organizations” destroyed in 2017.⁶⁷ Additionally, the United States Air Force and Navy routinely deploy intelligence, surveillance, and reconnaissance aircraft such as the E-3 AWACS, RC-135 Rivet Joint, E-8 Joint STARS, P-3 Orion, and EP-3 Aries to execute counterdrug operations. In 2011, I was assigned to Forward Operating Location, Curacao as the Chief of Counterdrug Mission Planning for the E-3 AWACS squadron. During that time, MPC chiefs were required to report mission and sortie data to Air Forces Southern and JIATF-South. Specifically included in this data was information on the total number of tracks of interest detected, reported, and intercepted.⁶⁸

During drug interdiction, aerial and maritime targets are designated tracks of interest based on where they originate from.⁶⁹ Those tracks are then monitored and logged until it is determined whether they are trafficking illicit narcotics or contact is lost by the assigned surveillance platform. The detection, identification, monitoring, cueing, and eventual intercept of tracks of interest describes the phases of a drug interdiction from start to finish.⁷⁰ Once seizure and arrest numbers are reported by the owning JTF, JIATF or combatant command, DoD units are free to correlate tracks of interest detected, identified, monitored, cued, or intercepted with reported seizure and arrest numbers. This process is

⁶⁵ *United States Northern Command 2015 Posture Statement*: Hearing before House Armed Services Committee, House of Representatives, 114th Cong., 12.

⁶⁶ H.R., *United States Northern Command*, 16.

⁶⁷ De Moura, “National Guard Counterdrug Program Celebrates 30 Years.”

⁶⁸ A Track of Interest (TOI) is a surface or air vessel that is moving along or near a suspect or known drug trafficking route.

⁶⁹ Joint Chiefs of Staff, *Counterdrug Operations*, GL-7.

⁷⁰ Joint Chiefs of Staff, *Counterdrug Operations*, III-7 - III-8.

how United States Southern Command correlated the efforts of JIATF-South with a 53% decrease in illicit air tracks (tracks of interest) destined for Central America in 2016.⁷¹

Mission and sortie data are a very good metrics to determine aircraft and ship capability rates and to determine if aircraft or ship mission systems are full mission capable. Tracks of interest data is extremely useful for future assessments by intelligence agencies because it allows them to predict future behavior and better focus counterdrug surveillance efforts.⁷² However, mission and sortie data provides very little regarding the outputs of a mission and virtually nothing about progress toward the desired end state of a mission. During traditional combat Air Force missions' commanders set mission objectives prior to execution. During the post-mission debrief the objectives are then graded to determine the effectiveness of the mission. However, because drug interdiction missions do not always result in seizures or arrests, mission objectives are primarily built around the ability to be on-station during your assigned time with mission systems fully operational.⁷³ This ultimately means during drug interdiction mission effectiveness is a measurement of flight and mission crew capability and efficiency and is not tied to overall mission outcome goals.

B. WHY DATA IS NOT ENOUGH

In a study titled, *Measuring the Leverage: Assessing Military Contributions to Drug Interdiction*, the author Carl Builder uses the example of dropping bridges to display the difficulty in measuring the effectiveness of interdiction and why collecting output data is not enough. Following is an excerpt from the study:

If wartime interdiction calls, among other things, for knocking out the bridges across some river-over which the flow of supplies or reinforcements is presumed possible or probable-how should one assess the operations to effect that result? Suppose two out of four bridges are dropped? Is that interdiction operation then 50 percent successful? Few would be willing to conclude so. Dropped bridges are a measure of something, possibly, but not

⁷¹ *United States Southern Command 2016 Posture Statement*: Hearing before House Armed Services Committee, House of Representatives, 114th Cong., 23.

⁷² J. F. Holden-Rhodes, *Sharing the Secrets*, 35.

⁷³ Objectives pulled from 964 EAACS Crew Step Briefs, January, 1, 2011 through December 31, 2011.

necessarily of interdiction. They might come closer to measuring interdiction if:

- All of the bridges had previously been used to their full capacity for supplies and reinforcements
- No other means were available to transport those supplies and reinforcements
- The outcome of the conflict really depended upon getting those supplies and reinforcements across the river.

If all of those conditions cannot be reasonably ensured, dropped bridges are not a measurement of interdiction but a measure of performance for the operations to drop bridges. The indirect nature of interdiction-and its complex relationships with the larger conflict-makes such assurances difficult.⁷⁴

The drug interdiction data currently collected by the DoD only provides information about what has been accomplished and not on progression towards outcome goals. Additionally, the United Nations views increased seizures and arrests as an indication the drug problem in a nation is increasing not decreasing. Lastly, the data collected by the DoD does not allow for objective assessments regarding the claimed success of the DoD counterdrug mission. For example, in the 2016 Posture Statement, United States Southern Command reported that JIATF-South participated in Operation MARTILLO, an operation against transnational organized crime that produced huge successes in the War on Drugs.⁷⁵ The Posture Statement went on to say “operations like MARTILLO not only strike a blow to powerful criminal networks, they ultimately save U.S. lives and resources by stopping hundreds of tons of cocaine, heroin, and other drugs destined for our cities and towns.”⁷⁶ While the data confirms drugs seized during Operation MARTILLO will not make it to the United States, the data does not indicate how those seizures impacted the overall War on Drugs or the availability of illicit drugs in the United States. Nor does the data indicate how much it cost the DoD to seize those drugs.

⁷⁴ Carl H. Builder, *Measuring the Leverage*, 19.

⁷⁵ H.R., *United States Southern Command*, 12.

⁷⁶ H.R., *United States Southern Command*, 12.

The DoD has access to data that would allow for a better assessment of the counterdrug mission. This data includes overall aircraft and maritime fuel costs, overflight fees, and total man hours spent training, planning, and executing counterdrug missions. Additionally, the DoD can request data from other federal, state, and local agencies involved in United States counterdrug policy. This data may be limited but would include information on domestic seizures and production, street price of drugs (both wholesale and retail), price and availability of precursor chemicals, purity of drugs seized, drug-related arrests and convictions, and illicit drug overdose statistics. All this data is valuable when trying to evaluate the DoD counterdrug mission against the outcome goals listed in the NDCS. The data can be input into a single methodology or combination of methodologies to better evaluate the effectiveness of the DoD counterdrug mission and determine how much it cost the DoD to seize drugs and arrest traffickers.

C. BETTER METRICS AND METHODOLOGY

Measures of effectiveness are subjective and largely depend on who is doing the measuring and what they are measuring for. Using the same data different metrics can be created to demonstrate both effectiveness or ineffectiveness and ability or inability at a given task. Additionally, metrics can be creatively designed to help advocate for or against something. Figure 1 displays how United States Southern Command developed metrics to show the negative impacts of one metric ton of cocaine.⁷⁷

⁷⁷ *United States Southern Command 2018 Posture Statement: Hearing before House Armed Services Committee, House of Representatives, 115th Cong., 15.*



Figure 1. Potential Effects of One Metric Ton of Cocaine⁷⁸

To develop the metric Southern Command combined data from the Office of National Drug Control Policy, Consolidated Counterdrug Data Base, Department of Justice, United Nations Office of Drugs and Crime, World Bank, JIATFs, and Law Enforcement Agencies. The metric was used to highlight to congress the potential negative outcomes of not fully resourcing JIATF-South’s drug mission. In the *2018 Posture Statement*, Southern Command Commander stated, “last year we were unable to target approximately 800 metric tons of cocaine due to lack of assets.”⁷⁹ The implication by the Southern Command Commander is that a lack of resources potentially leads to the prescribed negative outcomes multiplied by 800. The entire DoD can follow the lead of Southern Command and use key performance indicators (metrics) commonly presented in drug literature combined with the pattern and trend analysis framework presented in a counterinsurgency study by RAND to better assess progression toward supply-side policy outcome goals. To determine the cost-benefit of the counterdrug mission the DoD will need to use value-based metrics and methodology.

1. Key Performance Indicators

A tool used in the private sector to measure performance and effectiveness is key performance indicators. Key performance indicators are independent metrics that when

⁷⁸ H.R., *United States Southern Command*, 15.

⁷⁹ H.R., *United States Southern Command*, 15.

combined offer an analytical way to measure performance and effectiveness by using both quantitative and qualitative data. As the book, *Designing Performance Measurement Systems: Theory and Practice of Key Performance Indicators* highlights, a process to measure performance is critical to an organization's ability to improve. "However, constructing and implementing a measurement system is easier said than done." The correct indicators must be identified and examined, "the so-called Key Performance Indicators," for the process to work.⁸⁰ When good key performance indicators are selected they should "represent targets effectively, be simple and easy to interpret, be able to indicate time trends, respond to changes within or outside the organization, be updated easily and quickly, and the relevant data collection and data processing should be easy."⁸¹ However, the selection of inappropriate key performance indicators can lead to ill informed decisions that create goal progression problems for an organization. The most commonly used and debated key performance indicator to evaluate the effectiveness of supply-side drug policies is retail drug price. However, before I discuss the pros and cons of using retail drug price and other key performance indicators, it is important to understand the methodology required to demonstrate the correlation between the key performance indicators and the DoD counterdrug mission.

A methodology the DoD can adapt and use to best demonstrate correlation between the outcome goals listed in the NDCS and the DoD counterdrug mission is pattern and trend analysis.⁸² In *Embracing the Fog of War*, the author presents pattern and trend analysis as a valid methodology to measure the effectiveness of the DoD counterinsurgency mission. "Pattern and trend analysis is a centralized assessment that leverages a number of statistical methods to show the direction of a campaign over time."⁸³ The results of the

⁸⁰ Fiorenzo Franceschini, Maurizio Galetto and Domenico Maisano, *Designing Performance Measurement Systems Theory and Practice of Key Performance Indicators*, (Switzerland: Cham Springer International Publishing, 2019), 7, <https://doi.org/10.1007/978-3-030-01192-5>.

⁸¹ Franceschini, Galetto and Maisano, 7.

⁸² Ben Connable, *Embracing the Fog of War: Assessment and Metrics in Counterinsurgency*, MG-1086-DoD (Santa Monica, CA: RAND Corporation, 2012), 52, <https://www.RAND.org/pubs/monographs/MG1086.html>.

⁸³ Connable, 54.

analysis are then displayed in reports or graphs to assess for specific patterns and trends.⁸⁴ Patterns can be shown over time or in a single snap shot and can be useful when trying to predict future operations. Trends display events over time as they change or remain consistent and are useful when trying to assess causation or correlation of events. For example, reduced drug use in a specific area during a specified time period was caused by an increased law enforcement presence is an example of either causation or correlation between events. Evaluating key performance indicators within the pattern and trend analysis methodology is the best way for the DoD to tell the story regarding the effectiveness of the counterdrug mission.

a. *Retail Price: The Most Used and Most Controversial*

In 2005, the RAND Corporation released a report titled *How Goes the “War on Drugs”: An Assessment of U.S. Drug Problems and Policy*. RAND developed metrics by grading the goals listed in every NDCS policy document from 1989 through 2004. The report concluded the best measure for how United States drug control strategy has impacted the supply of drugs into the country is to look at the retail price and availability of drugs in America’s neighborhoods. The report goes on to say, if the availability of illicit drugs was truly reduced, that should be reflected by an increase in the retail price of those drugs.⁸⁵ RAND used this metric to conclude that during the timeframe studied cocaine and heroin retail prices in the United States decreased, which “suggests greater availability of drugs on the street in the United States, not less.”⁸⁶

To use retail drug price as a metric the DoD would need to first determine the baseline price for all drugs that will be evaluated.⁸⁷ Once a baseline price is determined, the retail drug price metric could be presented for evaluation via a multi-axis graph. The graph would be structured the following way: DoD interdiction missions plotted on the left

⁸⁴ Connable, 53. The two elements of pattern and trend analysis are pattern, which is “a consistent arrangement or behavior over time” and trend, which is a prevailing tendency over time.

⁸⁵ Caulkins, *How Goes the War on Drugs*, 7.

⁸⁶ Caulkins, *How Goes the War on Drugs* 7.

⁸⁷ Must be drugs targeted by the DoD during interdiction missions, to accurately assess DoD efforts.

vertical axis, evaluated years plotted on the horizontal axis, and the retail drug price plotted on the right vertical axis. Based on the hypothesis presented by RAND, increases in the retail price of drugs that align with increases in DoD interdiction efforts demonstrate a positive correlation and possible causation between the DoD counterdrug mission and the amount of illicit drugs available as displayed in Figure 2.

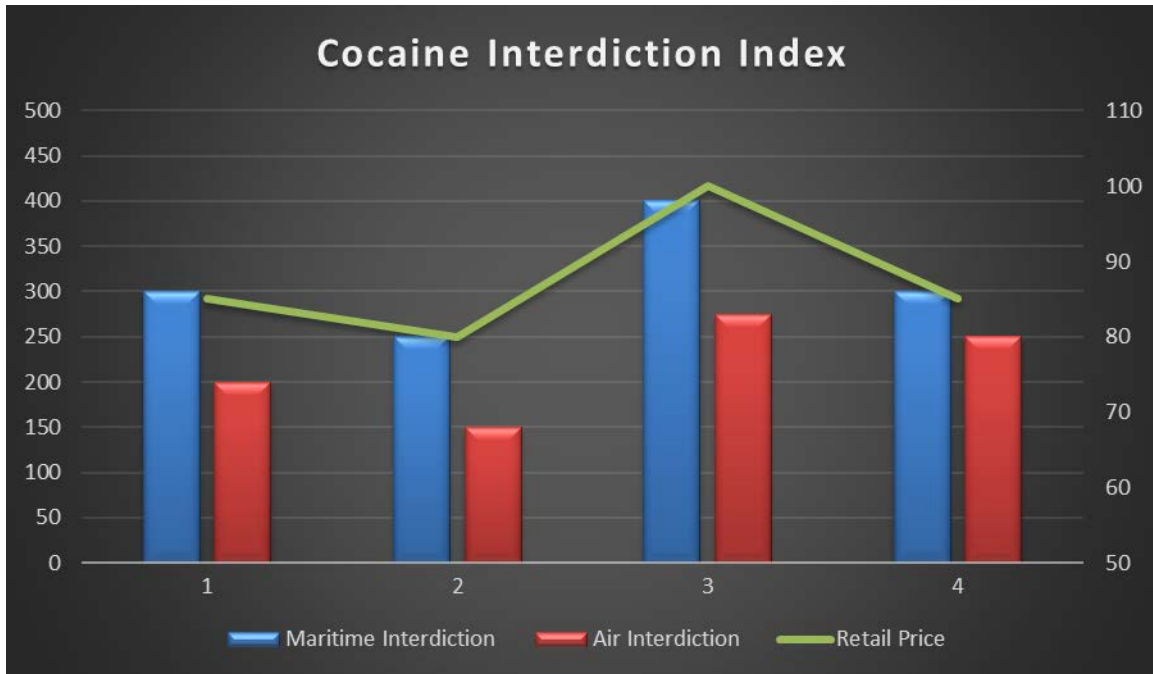


Figure 2. Example Index with Price as Sole Indicator

The hypothesis presented in *How Goes the War on Drugs* is not new and it is not universally accepted. There is an ongoing debate regarding the correlation between retail drug price and drug availability, even the study states “drug prices and demand vary over time in response to numerous factors unrelated to government action, just as the price of, and demand for, other goods vary.”⁸⁸ Also, multiple drug studies argue traffickers control the retail price of drugs independently from interdiction efforts and retail price alone is not a reliable metric to evaluate interdiction efforts. Even those that support using retail street

⁸⁸ Caulkins, *How Goes the War on Drugs*, 9.

price as the best metric disagree on whether all drugs should be evaluated using an additive pricing market or if certain drugs should be evaluated using a multiplicative market structure. An additive market model states that the increased costs brought on by source-zone and transit-zone interdiction efforts early in the distribution process is only added to the final retail price of the drug. A multiplicative market model states that the increased costs brought on by source-zone and transit-zone interdiction efforts early in the distribution process are shared between the various phases of the trafficking process.

The difference in market structure is highlighted in an Institute for Defense Analyses study that outlines why considering the cocaine market as additive is incorrect. The study argues the cocaine market is actually a multiplicative market. This distinction in method is important when viewing changes in the retail price of drugs caused by source-zone and transit-zone interdiction efforts. Under an additive model the changes in the retail price of cocaine are relatively small because “import costs are only a small percentage of the final retail price for cocaine.”⁸⁹ However, when using a multiplicative model, which accounts for price changes at all levels, changes in the adjusted retail price of cocaine are much more extreme and suggest interdiction efforts are contributing to reducing the amount of cocaine available in the United States.⁹⁰ Ultimately, regardless of market model, using the retail drug price as the sole measure to determine if the availability of illicit drugs is increasing or decreasing is insufficient. However, assuming the correct market model (additive or multiplicative) for each drug evaluated can be determined, using retail price in combination with other key performance indicators is an effective strategy and would better demonstrate the effectiveness or ineffectiveness of the DoD counterdrug mission.

b. Combining Key Performance Indicators

Trend and pattern analysis is a good methodology for the DoD to adopt for the counterdrug mission because multiple key performance indicators can be easily added to

⁸⁹ Barry D. Crane, A.R. Rivolo, and Institute For Defense Analyses, *An Empirical Examination of Counterdrug Interdiction Program Effectiveness*, (Alexandria, VA: Institute For Defense Analyses, 1997), II-1, <http://www.dtic.mil/docs/citations/ADA320737>.

⁹⁰ Crane, Rivolo, and Institute For Defense Analyses, II-13.

demonstrate increased or decreased effectiveness. Indicators such as the number of drug overdoses, new patients seeking drug rehabilitation, drug related arrests or crimes, drug purity, and domestic law enforcement seizures inside the United States border could be assessed in conjunction with retail drug price. These key performance indicators could be plotted on the same graph to assess trends and patterns and to evaluate the correlation between changes in the key performance indicators and DoD interdiction efforts. For example, when evaluating the DoD counterdrug mission over a four-year period. If a spike in DoD interdiction missions' correlates to a rise in retail cocaine prices and a fall in cocaine related overdoses and arrests a positive correlation between the DoD counterdrug mission and a reduction in the amount of cocaine available in the United States could be inferred. I use pattern and trend methodology to demonstrate the correlations in Figure 3.

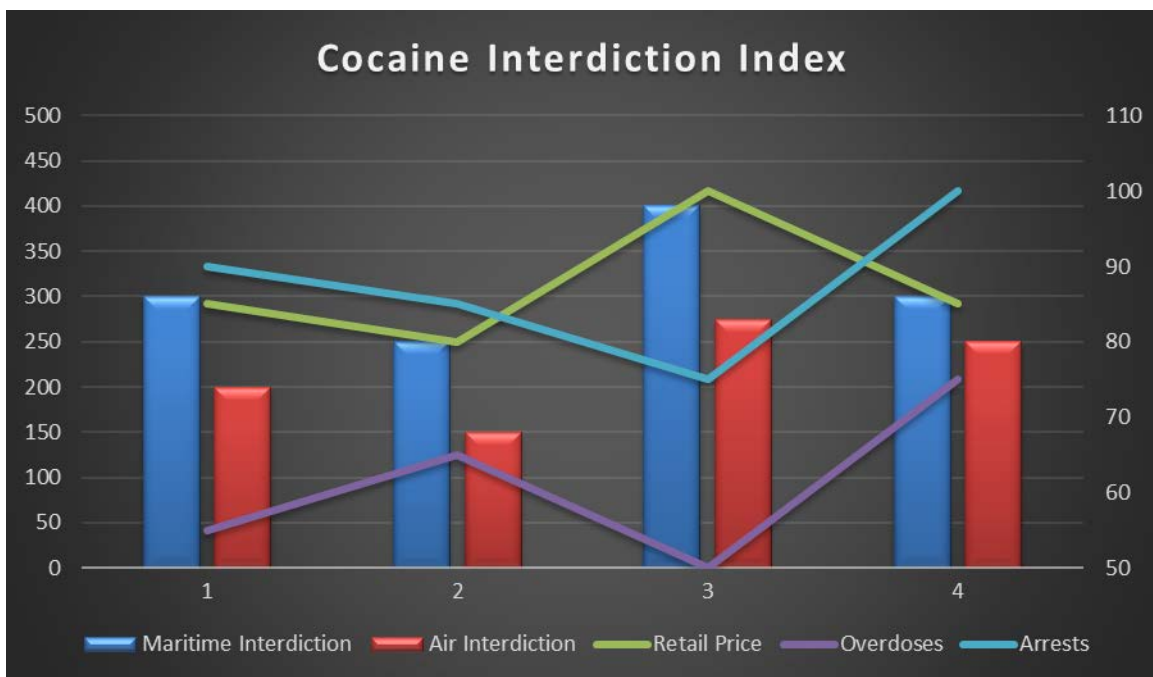


Figure 3. Example Index with Multiple Key Performance Indicators

Using key performance indicators is not without risk when trying to evaluate the effectiveness of the DoD counterdrug mission. First, finding reliable drug data has proven to be difficult and is required to make informed correlations. Next, even if reliable data is found,

it may be difficult to accurately separate the various types of illicit drug data. If data about each drug is not isolated, the accuracy of the findings are less conclusive because drugs not targeted by DoD missions may be included in the data. Lastly, whether the data demonstrates a positive or negative correlation between the DoD counterdrug mission and the availability of illicit drugs, it is impossible to know how demand reduction efforts contributed to the overall outcomes.

Ultimately, while using multiple key performance indicators to assess the DoD counterdrug mission has some risk, using them will better evaluate the DoD counterdrug mission against overall outcome goals. Additionally, using multiple key performance indicators will help identify outlier statistics and confirm or disprove theories about interdiction efforts and various types of illicit drug data. Lastly, the complicated nature of the illicit drug trade can make it difficult to correlate drug data and interdiction efforts, however, a thorough understanding of the relationships between illicit drug traffickers and consumers and drug availability, price, and purity reveals that increases and decreases in drug purity is the best way to measure the effectiveness of interdiction efforts.

c. Drug Purity: The Least Known Best Measure

Drug purity is the least mentioned key performance indicator in drug interdiction literature. However, a hard look at drug reports and studies suggest whenever a suspected reduction in a specific illicit drug occurs, if purity is evaluated, a significant reduction in the purity of that drug can also be found.⁹¹ In the Institute for Defense Analyses study that argued for the cocaine market to be viewed as multiplicative versus additive purity as a key performance indicator was also factored into the calculation. While the study highlighted the difference in the retail price of cocaine depending on the market model used, the reduction in the purity of the cocaine remained constant as a measure.⁹² Additionally, a 2016 DEA report

⁹¹ See the following studies: An Empirical Examination of Counterdrug Interdiction Program Effectiveness, Institute of Defense Analyses; Lies, Damned Lies, and Drug War Statistics, Robinson and Scherlen; How Goes the War on Drugs, Caulkins; National Drug Price and Purity Data report, United States Drug Enforcement Agency; and *United Nations World Drug Report 2000*, United Nations Office for Drug Control and Crime Prevention.

⁹² Crane, Rivolo, and Institute For Defense Analyses, *An Empirical Examination of Counterdrug Interdiction Program Effectiveness*, Ch II and V.

titled, *National Drug Price and Purity Data* points to purity and price as the primary measures to show that the availability of cocaine, heroin, and methamphetamine has rebounded and increased in the United States since 2012.⁹³

Many objections and market model disagreements have been raised regarding the validity of the inverse relationship between retail drug prices and illicit drug availability. Yet I can find no substantial arguments that disagree there is a direct relationship between drug purity and illicit drug availability. A reduction in drug purity is the only drug interdiction key performance indicator primarily unaffected by external factors. An increase or decrease in the purity of a specific drug can be directly correlated to source- zone and transit-zone interdiction efforts (especially seizures and destructions). Therefore, I surmise reductions in drug purity is the best indicator of successful source-zone and transit-zone interdiction efforts and the only indicator that can stand-alone to determine the impact of interdiction efforts. So why is drug purity not used as the premier stand-alone metric to evaluate the effectiveness of interdiction efforts?

The reason drug purity is not used as a stand-alone metric to evaluate the effectiveness of interdiction efforts is because reducing the availability of drugs as an outcome measure is largely focused on either the amount of drugs being consumed or the number of people consuming drugs as the ultimate arbiters of drug availability. The effects of interdiction are far more nuanced than simply looking at consumption as the ultimate measure. When drug interdiction efforts successfully reduce the amount of illicit drugs in the United States that does not necessarily mean there will be fewer drugs consumed or fewer drug consumers. Drug production and consumption is primarily about money and addiction. Therefore, if the amount of cocaine flowing into the United States is reduced, there is nothing stopping a drug trafficker who wants to continue to profit, from selling less pure cocaine mixed with other chemicals at a cheaper price to an addicted drug consumer.

Let me set up a fictional scenario. The previous year the DoD interdiction mission resulted in the seizure of 300 million metric tons of cocaine. In an attempt to determine if DoD

⁹³ DEA Intelligence Report, *2016 National Drug Price and Purity Data*, (DEA-DCW-DIR-023-18: July 2018), <https://ndews.umd.edu/sites/ndews.umd.edu/files/dea-2016-national-drug-price-purity-data.pdf>.

efforts led to a reduction in the amount of cocaine available in the United States I first look at the retail price of cocaine as a metric. In this scenario, the retail price of cocaine has decreased from the previous year. Next, I look at overdose and arrest data and determine there is no substantial change from the previous year. Lastly, I look at purity data and determine the purity of cocaine seized by law enforcement or detected in drug tests of overdose patients is significantly lower than the previous year. How do I explain this contradiction in data? Which metric should I value more and was the overall amount of cocaine available reduced? The answer is yes, the amount of cocaine available was reduced and the purity data confirms it. However, the other key performance indicators do not reflect this because the demand for the drug was not decreased at an equal rate, therefore, both producers and consumers found a viable substitute to combat against the decrease in supply. For an addict, less pure cocaine is better than no cocaine, and in this scenario, the retail price of cocaine decreased because the drug is cheaper in a less pure form, not because there is greater availability. Lastly, overdose and arrest data showed no significant decrease because a cocaine arrest is a cocaine arrest and an overdose is an overdose, the purity of the cocaine is not factored into those statistics.

There are some that could argue traffickers will randomly control the purity of their drugs just as they control the supply. However, I can find no substantial evidence that demonstrates how it would be in a trafficker's best interest to dilute the purity of a drug beyond the acceptable street norm unless they have a limited supply of that drug. In fact, anecdotal evidence suggests it is more likely traffickers will attempt to control the supply of drugs to ensure retail prices remain high, and diluting the purity of a drug will most likely negatively affect the price, resulting in reduced profit margins for traffickers and a potential loss of customers. Therefore, it is unlikely a trafficker would intentionally delete the purity of a drug beyond what is acceptable on the street in fear of losing business and reducing profits. Additionally, at times of increased supply and competition street dealers have been known to increase the purity of street drugs to beat back competition from emerging and rival dealers.

It is my overall assessment that purity data is the best way to determine if interdiction efforts have reduced the amount of drugs available. When other key performance indicators contradict purity data, purity data should be viewed independently to evaluate interdiction efforts. Doing this not only provides a better way to determine the success or failure of

interdiction efforts, it also highlights potential problems like drug substitutes and synthetic production that are counteracting interdiction efforts. Finally, while key performance indicators are good to assess progress toward supply-side outcome goals, key performance indicators cannot be used by the DoD to measure inputs against outputs and determine cost-benefit. The DoD must use value-based metrics and methodology to assess the costs and benefits of DoD counterdrug efforts

2. Measuring the Cost

A key economic tool for determining cost-effectiveness is a cost-benefit analysis. At its core, a cost-benefit analysis is a process that evaluates the benefits of specific action or actions, including financial benefits, against the costs (or negative consequences) of that action.⁹⁴ Cost benefit-analyses are conducted to help decision makers understand the cost and associated risk of a proposed course of action. There is a debate whether a cost-benefit analysis is an appropriate tool when moral or ethical decisions are involved. However, in the book *Chasing Ghosts*, John Mueller and Mark Stewart provide detailed examples of how value-based metrics can be used when trying to evaluate the appropriate level of spending on counter-terrorism efforts in the United States.

Mueller and Stewart set out to assess counter-terrorism efforts in the United States since Sept 11, 2001, specifically looking at spending by the United States Government on terrorism prevention. The question proposed by Mueller and Stewart is, “How much terrorist destruction must these expenditures have waylaid in order to justify the outlays?”⁹⁵ Mueller and Stewart rely on three value-based analytical techniques to answer their question, the cost per life saved, acceptable risk, and a cumulative cost-benefit analysis.

When dealing with non-tangible decisions such as saving life or capturing a drug trafficker it is difficult and controversial to assign a dollar amount. However, using Table 2,

⁹⁴ Rodreck David, Patrick Ngulube, and Adock Dube, “A cost–benefit analysis of document management strategies used at a financial institution in Zimbabwe: A case study,” *SA Journal of Information Management*, 15, no. 2 (September 13, 2012), <https://sajim.co.za/index.php/sajim/article/view/540>.

⁹⁵ John E. Mueller and Mark G. Stewart, *Chasing Ghosts: The Policing of Terrorism* (Oxford, Oxford University Press, 2016), 134.

Mueller and Stewart look at the approach used by safety regulators when estimating how much it will cost to save a single human life, to show it is already done by various government agencies.

Table 2. Regulatory Expenditure Per Life Saved⁹⁶

Regulation	Year	Agency	Cost per Life Saved in 2010 Dollars
Steering column protection standards	1967	NHTSA	140,000
Unvented space heater ban	1980	CPSC	140,000
Front seatbelt/air bag for autos	1984	NHTSA	140,000
Aircraft cabin fire protection standard	1985	FAA	140,000
Underground construction standards	1989	OSHA	140,000
Auto fuel system integrity	1975	NHTSA	710,000
Trihalomethane in drinking water	1979	EPA	850,000
Aircraft seat cushion flammability	1984	FAA	850,000
Alcohol and drug controls	1985	FRA	850,000
Aircraft floor emergency lighting	1984	FAA	990,000
Concrete and masonry construction	1988	OSHA	990,000
Passive restraints for trucks and buses	1989	NHTSA	1,100,000
Children's sleepwear flammability ban	1973	CPSC	1,400,000
Auto side impact standards	1990	NHTSA	1,400,000
Metal mine electrical equipment standards	1970	MSHA	2,400,000
Trenching and evacuation standards	1989	OSHA	2,600,000
Hazard communication standard	1983	OSHA	2,700,000
Truck, bus, and multipurpose vehicle side impact	1989	NHTSA	3,700,000
Grain dust explosion prevention	1987	OSHA	4,700,000
Rear lap/shoulder belts for autos	1989	NHTSA	5,400,000
Standards for radionuclides in uranium mines	1984	EPA	5,800,000
Ethylene dibromide in drinking water	1991	EPA	9,700,000
Asbestos occupational exposure limit	1972	OSHA	14,000,000
Benzene occupational exposure limit	1987	OSHA	15,000,000
Electrical equipment in coal mines	1970	MSHA	15,800,000
Arsenic emission standards for glass plants	1986	EPA	22,900,000
Cover/move uranium mill tailings	1983	EPA	76,100,000
Acrylonitrile occupational exposure limit	1978	OSHA	87,000,000
Coke ovens occupational exposure limit	1976	OSHA	107,400,000
Arsenic occupational exposure limit	1978	OSHA	180,800,000
Asbestos ban	1989	EPA	187,200,000
1,2-Dichloropropane in drinking water	1991	EPA	1,103,900,000
Hazardous waste land disposal ban	1988	EPA	7,084,000,000
Municipal solid waste landfills	1988	EPA	32,300,000,000
Formaldehyde occupational exposure limit	1987	OSHA	145,723,000,000
Atrazine/alachlor in drinking water	1991	EPA	155,640,000,000
Hazardous waste listing for wood-preserving chemicals	1990	EPA	9,635,870,000,000

⁹⁶ Source: Mueller and Stewart, *Chasing Ghosts*, 134.

For their analysis, Mueller and Stewart decide to rely on a Department of Homeland Security study and place the value a life saved at \$15 million dollars. The study concludes the value of a saved life is actually only \$7.5 million dollars, however, because of the traumatic nature of terrorism, the value of a life saved from such an attack is doubled to \$15 million dollars. Mueller and Stewart take the total counter-terrorism spending in the United States in 2014 (\$115 billion dollars annually) and divide it against the value of a saved life. They determine for counter-terrorism efforts to be cost-effective at \$115 billion annually, the United States government needs to prevent 7,000-8,000 terrorism related deaths per year.⁹⁷ To determine acceptable risk, Mueller and Stewart “compare the annual fatality rates caused by terrorism with those caused by other hazards.” For this evaluation Mueller and Stewart look at the willingness of the American public and government to accept the risk of death in other areas of life as compared to the risk of death from terrorism. Mueller and Stewart conclude that based on the historic numbers of terrorist incidents and deaths the risk of death from terrorism is significantly lower than the risk of death from other hazards we accept in our daily lives, therefore, terrorism presents an acceptable risk.⁹⁸ Table 3 displays the data used by Mueller and Stewart as the basis for their conclusion.

⁹⁷ Mueller and Stewart, *Chasing Ghosts*, 134–135.

⁹⁸ Mueller and Stewart, 136–137.

Table 3. Comparison of Annual Fatality Risks⁹⁹

Hazard	Territory	Period	Total Fatalities for the Period	Annual Fatality Risk
World War II	Worldwide	1939–1945	61,000,000	1 in 221
Cancers	US	2009	560,000	1 in 540
War (civilians)	Iraq	2003–2008	113,616	1 in 1,150
All accidents	US	2007	119,000	1 in 2,500
Traffic accidents	US	2008	37,261	1 in 8,200
Traffic accidents	Canada	2008	2,431	1 in 13,500
Traffic accidents	Australia	2008	1,466	1 in 15,000
Homicide	US	2006	14,180	1 in 22,000
Traffic accidents	UK	2008	2,538	1 in 23,000
Terrorism	Northern Ireland	1970–2013	1,780	1 in 50,000
Industrial accidents	US	2007	5,657	1 in 53,000
Homicide	Canada	2008	611	1 in 55,000
Intifada	Israel	2000–2006	553	1 in 72,000
Homicide	Great Britain	2008	887	1 in 67,000
Homicide	Australia	2008	290	1 in 76,000
Terrorism	US	2001	2,982	1 in 101,000
Natural disasters	US	1999–2008	6,294	1 in 480,000
Drowning in bathtub	US	2003	320	1 in 950,000
Terrorism	UK	1970–2013	2,221	1 in 1,200,000
Home appliances	US	yearly average	200	1 in 1,500,000
Deer accidents	US	2006	150	1 in 2,000,000
Commercial aviation	US	yearly average	130	1 in 2,300,000
Terrorism	US	1970–2013	3,372	1 in 4,000,000
Terrorism	Canada	1970–2013	336	1 in 4,300,000
Terrorism	Great Britain	1970–2013	441	1 in 5,900,000
Peanut allergies	US	yearly average	50–100	1 in 6,000,000
Lightning	US	1999–2008	424	1 in 7,000,000
Terrorism	Australia (incl Bali)	1970–2013	120	1 in 8,000,000
Transnational Terrorism	World outside war zones	1975–2003	13,971	1 in 12,500,000
Terrorism	US	2002–2013	33	1 in 110,000,000

⁹⁹ Source: Mueller and Stewart, *Chasing Ghosts*, 136.

The cost-benefit analysis was the final measure of effectiveness done by Mueller and Stewart, which in their words, “brings this all together.” To conduct the cost-benefit analysis, Mueller and Stewart used the following formulas:

$$\text{(benefit of a specific security measure)} = \text{(probability of a successful attack absent all security measures)} \times \text{(losses sustained in the successful attack)} \times \text{(reduction in risk furnished by the specific security measure under consideration)}^{100}$$

and

$$\text{(cost of the specific security measure under consideration)} = \text{(probability of a successful attack absent all security measures)} \times \text{(losses sustained in the successful attack)} \times \text{(reduction in risk furnished by the specific security measure under consideration)}^{101}$$

When combined, the final formula was written as:

$$\text{(probability of a successful attack absent all security measures)} = \text{(cost of the specific security measure under consideration)} / [\text{(losses sustained in the successful attack)} \times \text{(reduction in risk furnished by the specific security measure under consideration)}]^{102}$$

The formula was applied to the overall costs of homeland security counter-terrorism efforts by the United States government by calculating how many terrorist attacks would need to be prevented to justify the increase in counter-terrorism spending. Mueller and Stewart used collected data to estimate the increased costs of counter-terrorism measures, losses sustained in a successful terrorism attack, and the reduction risk furnished by the security measure. The data was then used to create Table 4, which is a cost-benefit analysis, that evaluates the benefits of counter-terrorism efforts as compared to the money spent.

¹⁰⁰ Mueller and Stewart, *Chasing Ghosts*, 139.

¹⁰¹ Mueller and Stewart, 140.

¹⁰² Mueller and Stewart, 141.

Table 4. Counter-terrorism Spending Cost-Benefit Analysis¹⁰³

Risk Reduction Caused by Enhanced Counterterrorism Expenditures	Losses from a Successful Terrorist Attack						
	\$100 million	\$500 million	\$1 billion	\$5 billion	\$200 billion	\$1 trillion	\$5 trillion
	<i>Ft. Hood shooting</i>	<i>Boston Marathon bombing</i>	<i>Times Square bombing</i>	<i>London bombing</i>	<i>9/11</i>	<i>nuclear port</i>	<i>nuclear Grand Central</i>
10 percent	7,500	1500	750	150	4	.75	.15
25 percent	3,000	600	300	60	2	.30	.06
50 percent	1,500	300	150	30	.75	.15	.03
75 percent	1,000	200	100	20	.50	.10	.02
90 percent	833	167	83	17	.42	.08	.02
100 percent	750	150	75	15	.38	.08	.02

The cell entries indicate the number of terrorist attacks that would need to occur each year in the absence of all counter-terrorism measures in order to begin to justify a yearly counter-terrorism expenditure of \$75 billion. If the \$75 billion expenditure is expected to reduce the risk (the likelihood of, and/or the damage caused by, a successful terrorist attack) by 50 percent, those expenditures would need to deter, disrupt, or protect against at least half of the attacks in each entry in the 50 percent line. For the boxed entries, that would be 150 Boston-type attacks per year, 15 London-type attacks each year, or one 9/11-type attack about every three years.

The DoD can use similar methodology to determine the overall cost-effectiveness of the counterdrug mission. The DoD already collects the required input (sortie and mission data) and output data (seizures and arrests) to conduct a cost-benefit analysis. The only additional step required is to assign dollar amounts to non-monetary things like the value of man hours (which should vary depending on rank of uniformed personnel) and the value of an arrested drug trafficker. I developed equations to measure the cost-benefit of the DoD counterdrug mission:

$$[(\text{dollar value of metric tons of illegal narcotics seized}) \times (\text{actual dollars seized}) \times (\text{dollar value of equipment seized}) \times (\text{dollar value of traffickers arrested})] = (\text{total dollars seized})$$

and

¹⁰³ Source: Mueller and Stewart, *Chasing Ghosts*, 136.

[(dollar value of man hours (training + intelligence + support + planning + executing + maintenance + debriefing)) x (dollar value of hours expended (fuel/maintenance cost of hours flown + fuel/maintenance cost of vessel at sea))] = (value of support required)

When combined the final equation is:

(cost of military counterdrugs interdiction mission) = (total dollars seized) / (value of support required)

Assigning dollar values to many components of the DoD counterdrug equation would allow the DoD to assign a cost to all or some components of the counterdrug mission. The DoD could determine how much it cost to seize a metric ton of cocaine or how much it cost to arrest a drug trafficker in a specific country. The good thing about using a formula to determine cost-benefit is the inputs and outputs can be changed to assess different aspects of the counterdrug mission. Additionally, the DoD could compare the cost of air interdiction versus maritime interdiction to determine which is more efficient.

As discussed in Chapter 1, for multiple reasons it is not possible for the DoD to create universally accepted objective outcome measures to evaluate the counterdrug mission. However, measuring counterdrug inputs against the outputs to determine cost-effectiveness and collecting key performance indicator data and demonstrating it using pattern and trend methodology to correlate interdiction efforts and progression or regression towards outcome goals will better inform the public and policy makers on the effectiveness of the DoD counterdrug mission. Finally, when using drug data as metrics to evaluate if interdiction efforts are reducing the availability of illicit drugs, drug purity is the most reliable metric because it is primarily unaffected by external factors. We must also keep in mind that the availability of the final street drug may not be reduced by a reduction in purity because a less pure form of the drug is being trafficked. However, a reduction in purity does mean interdiction efforts have contributed to reducing the amount of illicit drugs available. The final consideration when evaluating the DoD counterdrug mission is understanding how to factor in the intangible benefits and unintended consequences.

III. INTANGIBLE BENEFITS AND UNINTENDED CONSEQUENCES

Using the United States military for law enforcement is generally frowned upon by the American public and civilian and military leadership and the Posse Comitatus Act, signed into law by President Rutherford B. Hayes, expressly forbids it.¹⁰⁴ However, as subsequent laws and regulations eased the restrictions on military involvement in law enforcement the military found itself involved in multiple non-warfighting missions such as riot control, humanitarian relief, and counterdrugs.¹⁰⁵ The counterdrug mission is unique because it is the only non-warfighting mission the DoD contributes to on a continuous basis. Therefore, both the intangible benefits and unintended consequences of the counterdrug mission must be evaluated when attempting to measure the effectiveness of the DoD counterdrug mission.

In the book *Militarised Responses to Transnational Organised Crime: The War on Crime*, chapters 15 through 19 are dedicated to the militarization of the war on drugs. The book paints a bleak picture of unintended consequences around the world that stem from using militaries to fight the War on Drugs. The author relies on a book by Julia Buxton to conclude that using the military during the War on Drugs was bad for democracy because it “legitimized the deployment of the military in other areas of law enforcement” which ultimately led to the military being used, at times, to clampdown on social dissent.”¹⁰⁶

¹⁰⁴ Use of Army and Air Force as Posse Comitatus, 18 U.S. Code § 1385, (1956), <https://www.law.cornell.edu/uscode/text/18/1385>. The Department of the Navy is not subject to this code but has elected to operate under its guidance. The United States Coast Guard is not subject to this code when operating under the Department of Homeland Security. National Guard forces are not subject to this code when operating under the authority of the state’s Governor.

¹⁰⁵ Maria Jose Moyano Rasmussen, *The Military Role in Internal Defense and Security: Some Problems*, (Monterey, CA: Center for Civil-Military Relations, Occasional Paper #6, 2001), 9–17, <https://calhoun.nps.edu/handle/10945/25355>. Adam Isacson, Mission Creep: “The U.S. Military’s Counterdrug Role in the Americas,” in *Drug Trafficking, Organized Crime, and Violence in the Americas Today*, ed. Bruce M. Bagley, and Jonathan D. Rosen, (Gainesville, FL: University Press of Florida, 2015), 88, <https://muse-jhu-edu.libproxy.nps.edu/book/39885>.

¹⁰⁶ Julia Buxton, “The Political Economy of Narcotics: Production, Consumption, and Global Markets,” (2000), quoted in Tuesday Reitano, Sasha Jespersen, and Lucia Bird Ruiz-Benitez de Lugo, *Militarised Responses to Transnational Organised Crime: The War on Crime*, (Cham: Switzerland, Palgrave Macmillan, 2018), 308, <https://doi.org/10.1007/978-3-319-57565-0>.

Additionally, the author surmises in dramatic fashion, there is almost nothing positive to take from using the military during the war on drugs. Military intervention into the drug crisis facilitated “human rights abuses and displacement, destroyed livelihoods and undermined democratic accountability,” and wasted resources that could have been used to assist the very people, military interdiction efforts were designed to help.¹⁰⁷ The conclusions reached in the book are not without merit, however, the conclusions are based on a macro view of the global War on Drugs. In this chapter, I take a more micro view of both the intangible benefits and unintended consequences of using the DoD for counterdrug operations. I specifically look at how the DoD counterdrug mission impacts partner nation relations and building partner capacity and military readiness.

A. PARTNER NATION RELATIONS AND BUILDING PARTNER CAPACITY

When using the military internationally to support law enforcement increased cooperation and relationship building with partner nations naturally occurs. Those relationships can be useful when partner cooperation is needed to conduct more traditional military operations. Additionally, using uniformed personnel as interlocutors has proven to be a useful tool for conducting foreign policy as I witnessed first-hand in 2017 when a tweet from President Trump jeopardized military air operations in Afghanistan. On January 1, 2018 President Donald Trump expressed his displeasure with Pakistan on Twitter and threatened to withhold United States financial assistance from the country.¹⁰⁸ This tweet was not well received by Pakistani officials who in turn threatened to deny the United States military over flight privileges of their country. The air routes required for the United States to successfully conduct counter-terrorism operations in Afghanistan flow through sovereign Pakistan airspace. Access to those air routes is important to the overall success of United States counter-terrorism efforts throughout the region. The existing relationship

¹⁰⁷ Health Poverty Action, “The Development Impacts of the ‘War on Drugs,’” in *Militarised Responses to Transnational Organised Crime: The War on Crime*, ed. Tuesday Reitano, Sasha Jespersen, and Lucia Bird Ruiz-Benitez de Lugo, (Cham: Switzerland, Palgrave Macmillan, 2018), 311, <https://doi.org/10.1007/978-3-319-57565-0>.

¹⁰⁸ Kyle Balluck, “Trump rips Pakistan in first tweet of 2018,” The Hill. Last modified on January 1, 2018, <https://thehill.com/policy/international/366965-trump-rips-pakistan-in-first-tweet-of-2018>.

between the Combined Forces Air Component Commander of United States Central Command and the Chief of the Pakistan Air Staff ensured the threat to close the air routes in Pakistan never materialized while the presidents of both nations worked out their differences. In the end American and Pakistani counter-terrorism efforts were unaffected.

In the *2018 National Defense Strategy* the DoD list eleven defense objectives that align defense strategy with the National Security Strategy. Four of the eleven objectives require successful partner nation relations and building partner capacity.¹⁰⁹ Additionally, the primary DoD method for dealing with transnational threats abroad is called by, with, and through. The “Counter Coercion and Subversion Section of the 2018 National Defense Strategy” says, “we will support U.S. interagency approaches and work by, with, and through our allies and partners to secure our interests and counteract this coercion.”¹¹⁰ Additionally, in the “Support Relationships to Address Significant Terrorist Threats in Africa” section it states, “we will bolster existing bilateral and multilateral partnerships and develop new relationships...we will focus on working by, with, and through local partners.”¹¹¹ The relationships, trust, and partner capacity required to execute successful by, with, and through operations must be developed prior to facing the threat and the DoD counterdrug mission provides that unique opportunity.

DoD counterdrug operations are executed using multi-national interagency partners primarily under the command authority of a unified combatant commander. These operations are executed by, with, and through partner nations. The development of successful partner nations relations and building partner capacity during the counterdrug mission has provided the DoD with the infrastructure to utilize the by, with, and through

¹⁰⁹ Department of Defense, *Summary of the 2018 National Defense Strategy of The United States of America*, (Washington, DC: Department of Defense, 2018), 4, <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>. The following four objectives are listed in the *2018 National Defense Strategy*; (1) Enabling U.S. interagency counterparts to advance U.S. influence and interests. (2) Maintaining favorable regional balances of power in the Indo-Pacific, Europe, the Middle East, and the Western Hemisphere. (3) Defending allies from military aggression and bolstering partners against coercion, and fairly sharing responsibilities for common defense. (4) Preventing terrorists from directing or supporting external operations against the United States homeland and our citizens, allies, and partners overseas.

¹¹⁰ Department of Defense, 5.

¹¹¹ Department of Defense, 10.

approach during other missions. A review of posture Statements from Southern, Indo-Pacific, and Northern Command reveals the respective Combatant Commanders see a positive correlation between counterdrug operations and partner nation relations and building partner capacity.¹¹² Here are a few key excerpts from the combatant command posture statements that demonstrate the direct relationship between the DoD counterdrug mission and developing partner nation relationships and building partner capacity.

United States Southern Command:

Strengthening our partnerships is our best bid for addressing regional and global threats. We work by, with, and through partners to enhance the security of both the United States and our partners, and to help grow bilateral security relationships into regional and global security initiatives.¹¹³

Enabling our network of partner nations. Building partner capacity (BPC) remains the primary way we improve interoperability and enable partner nations to take the lead in countering transregional threats.¹¹⁴

Our capacity-building activities, whether at the tactical, operational, or institutional level, play a key role in this fight. For example, after years of USSOF training, Guatemala's Fuerzas Especiales Navales (FEN) is now among Central America's most competent and responsive maritime interdiction units.¹¹⁵

United States Indo-Pacific Command:

Security cooperation and capacity-building engagements in the region build ally and partner capabilities, information sharing, and interoperability.¹¹⁶

JIATF-W continues to build partner capacity to counter illicit trafficking of narcotics in the coastal areas of Philippines, Vietnam, Indonesia, Malaysia, and Sri Lanka; and the border regions of Bangladesh and Thailand. In order

¹¹² Review included Posture Statements presented to the United States House Armed Services Committee from United States Indo-Pacific Command (2014-2019), United States Southern Command (2014-2019), and United States Northern Command (2014-2018).

¹¹³ *United States Southern Command 2019 Posture Statement*: Hearing before House Armed Services Committee, House of Representatives, 116th Cong., 5.

¹¹⁴ H.R., *United States Southern Command*, 11.

¹¹⁵ H.R., *United States Southern Command*, 13.

¹¹⁶ *United States Indo-Pacific Command 2019 Posture Statement*: Hearing before House Armed Services Committee, House of Representatives, 116th Cong., 25.

to develop cooperative solutions and procedures to address the transnational criminal threats in the region, bilateral and multilateral cooperative engagements are also a focus in building the capacity of our partner nations.¹¹⁷

United States Northern Command:

That fight has come at a high price for our partners, and the toll continues to mount as the Mexican government has implemented an assertive strategic effort to interdict the flow of drugs and precursor chemicals at its southern border. The united effort to counter such well-financed and brutal adversaries will continue to rely heavily on prudent investment in building partner capacity.¹¹⁸

USNORTHCOM's ability to provide focused engagements, professional exchanges, and military training with Mexico is dependent on the many warrior-diplomats who build trust and confidence with their military counterparts.¹¹⁹

There are multiple studies that point to how successful United States Southern Command has been at utilizing the counterdrug mission to develop partner nation relationships and build partner capacity throughout Latin America.¹²⁰ Additionally, a 2013 study that reviewed security cooperation mechanisms in four geographic combatant commands pointed to the effective and efficient use of resources available to build partner

¹¹⁷ *United States Indo-Pacific Command 2018 Posture Statement*: Hearing before House Armed Services Committee, House of Representatives, 115th Cong., 53.

¹¹⁸ *United States Northern Command 2018 Posture Statement*: Hearing before House Armed Services Committee, House of Representatives, 115th Cong., 16.

¹¹⁹ *United States Northern Command 2017 Posture Statement*: Hearing before House Armed Services Committee, House of Representatives, 115th Cong., 21.

¹²⁰ Molly Dunigan, Dick Hoffmann, Peter Chalk, Brian Nichiporuk, and Paul Deluca, *Characterizing and Exploiting the Implications of Maritime Irregular Warfare*, (Santa Monica, CA: RAND Corporation 2012), 40–44, <https://doi.org/10.7249/mg1127navy>. Jennifer Moroney, David Thaler, and Joe Hogler, *Review of Cooperation Mechanisms Combatant Commands Utilize to Build Partner Capacity*, RR-413-OSD, (Santa Monica, CA: RAND Corporation 2013), 47–48, https://www.rand.org/pubs/research_reports/RR413.html. Peter Chalk, *The Latin American Drug Trade; Scope, Dimensions, Impact, and Response*, MG1076-AF, (Santa Monica, CA: RAND Corp, 2017), 67–70, <https://www.rand.org/pubs/monographs/MG1076.html>. Munsing and Lamb, *Joint Interagency Task Force–South*, 85–86.

capacity throughout the Indo-Pacific Command area of responsibility.¹²¹ Those relationships will be key for future DoD missions that require a by, with, and through approach. Also, the increases in partner nation capacity allow the DoD to share the responsibility for security and combatting transnational crime with partner nations throughout the respective regions. At this point, there is little argument that a major intangible benefit of the DoD counterdrug mission is multi-national interagency relationship development and increased partner capacity. However, there are those that say the relationship development and capacity building is costing the American taxpayer too much.

A review of the 2019 defense budget indicates somewhere between \$5-10 billion dollars requested by the DoD for building partner capacity.¹²² Even when accounting for the difficulties in interpreting the DoD budget and the National Defense Authorizations Act and the fact that other executive departments allocate significant foreign aid designed to develop partner nation relationships and build partner capacity, the total amount of money spent on building partner capacity seems relatively small compared to the \$686 billion dollar DoD budget request.¹²³ The Moroney study that highlights the successes in building partner capacity also details specific spending on building partner capacity by the combatant commands reviewed. For example, to counter transnational crime throughout the world, congress allocates \$40 million dollars to the DoD to build partner capacity. United States Southern Command receives half of the \$40 million to distribute in their area of responsibility.¹²⁴ In 2013, Indo-Pacific Command requested \$68 million to “maintain

¹²¹ Moroney, Thaler, and Hogler, *Review of Cooperation Mechanisms*, 3 and 8. “This report refers to a concept that we are calling “SC mechanism,” which we define as the collection of key elements that together are able to deliver security cooperation to partner countries.” The geographic combatant commands reviewed were United States European Command, Southern Command, Pacific Command, and Africa Command. United States Pacific Command was changed to United States Indo-Pacific Command in 2018.

¹²² \$5-10 billion is a combined number of overseas contingency funding allocated to items in the 2019 DoD budget request I consider partner nation capacity building efforts.

¹²³ Office of the Under Secretary of Defense (Comptroller) Chief Financial Officer, *Defense Budget Overview: United States Department of Defense Fiscal Year 2019 Budget Request*, (Washington, DC: Department of Defense, 2019), 1–2. https://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/FY2019_Budget_Request_Overview_Book.pdf.

¹²⁴ Moroney, Thaler, and Hogler, *Review of Cooperation Mechanisms*, 47.

Philippine aircraft that the partner was having difficulty sustaining.”¹²⁵ After reviewing the RAND study and DoD budget, the best I can surmise is that each combatant command spends between \$500 million and \$1 billion annually on building partner capacity.¹²⁶

The money spent building partner capacity is far less than what the DoD would have to spend in both blood and treasure if the DoD had to conduct operations throughout these various regions without pre-established relationships and reliable partner nation capacity. Additionally, the link between the money spent developing partner nation relationships and building capacity and DoD counterdrug operations is indirect at best. I submit, the relationships developed and capacity built are in United States national security interests, and if the DoD counterdrug mission did not exist or did not facilitate developing these relationships and building partner capacity the United States would have to find an alternative mission to do just that. Because, at the end of the day, effective partner nation relationships and building partner nation capacity are prerequisites to utilizing the by, with, and through strategy.

B. MILITARY READINESS

To accomplish the counterdrug mission the DoD takes significant time, money, and equipment from the military’s primary war fighting role and redirects it to a mission in support of law enforcement.¹²⁷ In most cases resource allocation is a zero-sum equation, meaning every DoD asset used for the counterdrug mission is one less asset available for warfighting or training. Therefore, how the counterdrug mission impacts military readiness, specifically their ability to organize, train, and equip for warfighting missions is a question that should be evaluated. The evidence suggests the answer is not black and white. While the DoD counterdrug mission has positive impacts on military training, it has

¹²⁵ Moroney, Thaler, and Hogler, 41.

¹²⁶ Moroney, Thaler, and Hogler, 38, 41, 44–55, 177–184.

¹²⁷ Paul Shemella, “The Spectrum of Roles and Missions of The Armed Forces,” in *Who Guards The Guardians and How: Democratic Civil-Military Relations*, ed. Thomas C. Bruneau, and Scott D. Tollefson (Austin, TX: University of Texas Press, 2006), 126–127, <https://ebookcentral.proquest.com/lib/ebook-nps/detail.action?docID=3443009>.

negative impacts on military retention in the form of increased operations tempo and deployments.

The counterdrug mission provides the DoD with low intensity conflict, restrictive rules of engagement, and multi-national interagency training and experience that can be transported to other DoD missions. The need for this training was highlighted in a 2008 RAND study regarding DoD training for interagency operations and a 2010 report by the Government Accountability Office on interagency practices and challenges at Southern and Africa Commands.¹²⁸ The 2008 study articulates the DoD must “combine military and nonmilitary means, such as intelligence, diplomacy, and humanitarian assistance” to execute missions.¹²⁹ The 2010 report cited a lack of interagency organization and training at Southern Command adversely affected humanitarian relief efforts after the devastating earthquake in Haiti in 2010. The report found, “the structural weakness were significant enough to impede Southern Commands response to the humanitarian crisis created by the earthquake.”¹³⁰

The counterdrug mission provides the relationships and opportunities needed to conduct interagency training and evaluate interagency organizational practices that may be required for success in other DoD missions. The previously reviewed posture statements from United States Northern, Southern, and Indo-Pacific Commands all reflect how their focus on interagency training resulted in successes across multiple mission sets.¹³¹ Additionally, DoD uniformed personnel routinely transition between combatant commands, service components, and coalitions (such as North American Treaty

¹²⁸ *Interagency Collaboration Practices and Challenges at DoD’s Southern and Africa Commands: Testimony before the Subcommittee on National Security and Foreign Affairs, Committee on Oversight and Government Reform, House of Representatives*, 111th Cong. 2 (2010), <http://www.dtic.mil/docs/citations/ADA525458>. Michael Spirtas, Jennifer D. Moroney, Harry J. Thie, Joe Hogler, Thomas-Durell Young, *Department of Defense Training for Operations with Interagency, Multinational, and Coalition Partner*, (Santa Monica, CA: RAND, 2008), <http://www.dtic.mil/docs/citations/ADA485500>.

¹²⁹ Spirtas, Moroney, Thie, Hogler, Young, *Department of Defense Training for Operations with Interagency*, xiii.

¹³⁰ H.R., *Interagency Collaboration*.

¹³¹ Review included Posture Statements presented to the United States House Armed Services Committee from United States Indo-Pacific Command (2014-2019), United States Southern Command (2014-2019), and United States Northern Command (2014-2018).

Organization). Those transitions allow personnel to carry forward the best practices for successful interagency collaboration to other DoD organizations. This has become critical to mission accomplishment as DoD operations have become so complex interagency collaboration is almost always required for success. This was recently highlighted by United States Special Operations and European Commands.

United States Special Operations Command: In addition to leveraging the Department's strengths, we invest heavily in relationships with interagency partners; we have approximately 40 Special Operations liaison officers working across 16 agencies in order to ensure interoperability to support national objectives.¹³²

United States European Command: As we expand the competitive space with Russia, USEUCOM is working with the interagency to effectively compete below the level of armed conflict.¹³³

While the DoD counterdrug mission positively impacts DoD training and interagency organization, an argument can be made that it negatively impacts service retention. The combatant commands do not have enough DoD personnel on staff to adequately plan day-to-day counterdrug operations, therefore, they rely on deployed personnel to augment their staffs. Additionally, the priority of the DoD counterdrug mission leaves it to be executed as a secondary mission by home units or as a primary mission by personnel deployed specifically for counterdrug operations. Because of this, combatant commanders prefer deployed units that will be directly under their operational and tactical command and control and singularly focused on counterdrug operations. Either way the DoD counterdrug mission results in increased operations tempo and additional time deployed for DoD personnel. In this case it really is a zero-sum equation, increases in operations tempo and deployments, without increased personnel, equals less time for service members to be with their families and less time available for personal and professional development.

¹³² *United States Special Operations Command 2018 Posture Statement:* Hearing before House Armed Services Committee, House of Representatives, 115th Cong., 15.

¹³³ *United States European Command 2019 Posture Statement:* Hearing before House Armed Services Committee, House of Representatives, 116th Cong., 16.

Multiple studies point to increased operations tempo and deployments as key detriments to military retention.¹³⁴ In the “Recruiting and Retention to Sustain A Volunteer Military Force” chapter of the *Routledge Handbook of Defence Studies*, the authors conclude deployments do have an effect on retention and the effects can be either positive or negative depending on the length of deployments, area of deployments, and total number of deployments a service member has been sent on.¹³⁵ The study found that “deployment had a positive but decreasing effect on Army first and second-term reenlistment from 1996 to 2005, and the effect turned sharply negative in 2006.”¹³⁶ The significant finding of the study was that soldiers that went on multiple long deployments were less likely to reenlist, therefore, “extensive deployments eventually reduced reenlistment in the Army.”¹³⁷

The evidence that high operations tempo and deployments negatively impact military retention is undisputable and that must be evaluated when assessing the DoD counterdrug mission. However, after 22 years of military service, I would argue we must also keep in mind increased ops tempo and deployments are far less important to military retention, as compared to the status of the United States economy. In chapter 2 of *The Eleventh Quadrennial review of Military Compensation* titled “The Effect of the Civilian Economy on Recruiting and Retention,” John Warner concludes the overwhelming evidence suggests there is an inverse relationship between the civilian economy and military recruitment. Warner continues by writing, “as the U.S. economy improves, we can expect that the declining civilian unemployment rate and rising civilian real earnings will

¹³⁴ RAND Research Brief, *How Does Deployment Affect Retention of Military Personnel*, RB-7557-OSD, (Santa Monica, CA: RAND, 2003), https://www.rand.org/pubs/research_briefs/RB7557/index1.html. James Hosek, Jennifer Kavanagh, and Laura L. Miller, *How Deployments Affect Service Members*, 1st ed, (Santa Monica, CA: RAND, 2006), <https://www.rand.org/pubs/monographs/MG432.html>. Beth J. Asch and John T. Warner, “Recruiting and Retention to Sustain A Volunteer Military Force,” in *Routledge Handbook of Defence Studies*, ed. David J. Galbreath, and John R. Deni, (Taylor and Francis, 2018), 94. <https://www-taylorfrancis-com.libproxy.nps.edu/books/e/9781315650463/chapters/10.4324/9781315650463-8>.

¹³⁵ Asch and Warner, 94.

¹³⁶ Asch and Warner, Recruiting and Retention, 94.

¹³⁷ Asch and Warner, 94.

pose challenges for recruiting and for retention.”¹³⁸ This means when viewing the negative impacts the DoD counterdrug mission has on retention we must keep in mind deployments caused by the counterdrug mission is only one part of the multi-layered DoD retention cake. The final issue that needs to be taken into account is difficult to assess because in many ways it deals with the mindset of policy makers and the American public. More specifically, how using the military for a law enforcement mission like counterdrugs can serve as a gateway to overreliance and overuse of the military that can severely hurt warfighting readiness.

Overreliance and Overuse of the Military

A 2008 CATO institute article warned of the dangerous precedent being set by using the military for domestic law enforcement. At the time, the United States Army was using active duty personnel as a non-lethal domestic response force for a “chemical, biological, radiological, nuclear or high-yield explosive” incident.¹³⁹ On the surface this seems like a reasonable use of the United States military, however, as Healy and Friedman write in the article, “neither the terrorist threat nor the hazards of bad weather require rethinking our traditional reluctance to use standing armies at home.” In 1992, Lieutenant Colonel Charles Dunlap Jr. wrote an article for *Parameters Journal* titled *The Origins of the American Military Coup of 2012*. In his article, Dunlap concludes the most likely outcome of over using the military for non-traditional missions is a military led coup.¹⁴⁰ However, I believe the structure and strength of United States civilian led institutions like the DoD make a military coup highly unlikely. As Healy and Friedman state, the danger is

¹³⁸ John T. Warner, “The Effect of the Civilian Economy on Recruiting and Retention,” in *The Eleventh Quadrennial review of Military Compensation*, (Washington, DC: Department of Defense, 2012), 89. https://militarypay.defense.gov/Portals/3/Documents/Reports/SR05_Chapter_2.pdf.

¹³⁹ Gene Healy and Benjamin H. Friedman, “Be Wary of Using Military as Police,” CATO Institute, last modified December 26, 2008, <https://www.cato.org/publications/commentary/be-wary-using-military-police>.

¹⁴⁰ Charles J. Dunlap Jr., “The Origins of the American Military Coup of 2012,” *Parameters Journal*, (December 2010): 107–125, <http://search.proquest.com/docview/867412838/>. In the 1992–93 issue of *Parameters*, retired General Charles Dunlap (a Lieutenant Colonel at the time) wrote an essay titled “The Origins of the Military Coup of 2012.” In his article, Gen Dunlap argues that the involvement of the military in multiple non-traditional missions reduces military readiness, drains needed resources, and brings “the military into the political process to an unprecedented degree.” Dunlap argues, the most likely outcome of using the military in this way is a military led coup.

not in a military led coup, the danger is in “misusing our busy military for civilian tasks and developing an tendency to rely on the troops to answer every scare.”¹⁴¹

Around the world, public trust from civilians in their nations military institutions remains high as compared to any other intuitions. Pew Research Center conducted a study in 2018 that found that in eight Western European countries and the United States a significant majority of the public said they have confidence that the military will act in the best interests of the public. The poll results are displayed in Figures 4 and 5.

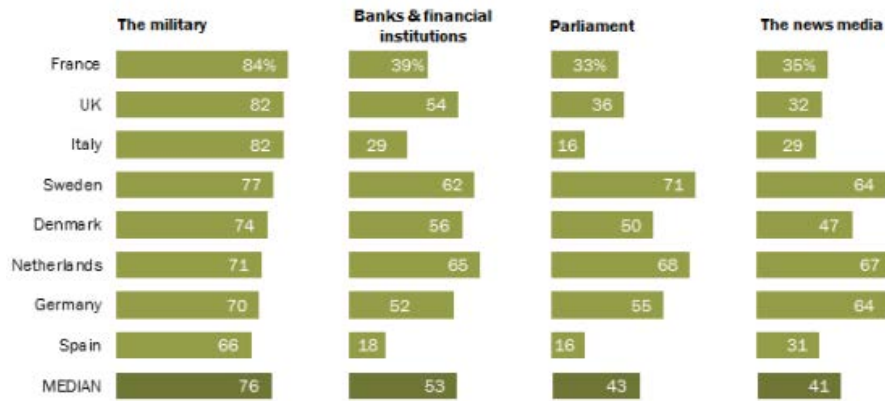


Figure 4. Western European Public Trust Poll Results¹⁴²

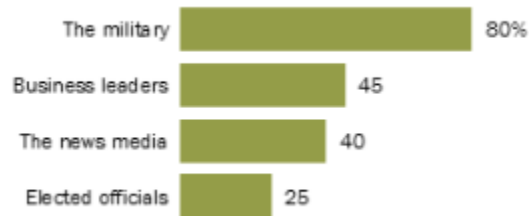


Figure 5. United States Public Trust Poll Results¹⁴³

¹⁴¹ Healy and Friedman, “Be Wary of Using Military as Police.”

¹⁴² Source: Courtney Johnsons, “Trust in the Military Exceeds Trust in Other Institutions in Western Europe and U.S.,” Pew Research Center, last modified September 4, 2018, <https://www.pewresearch.org/fact-tank/2018/09/04/trust-in-the-military-exceeds-trust-in-other-institutions-in-western-europe-and-u-s/>.

¹⁴³ Source: Johnsons.

Because public trust in the military remains high and public opinion polls influence many decisions made in the United States, American leaders have become more inclined to use the military to solve any perceived crisis regardless of how it impacts national security or military readiness. Perceived successes by the military during counterdrug operations can reinforce those inclinations.

The DoD has been conducting the counterdrug mission so long it should now be considered a standard mission set. To that end, the DoD already accounts for being tasked with counterdrug operations when determining how to ensure readiness for the warfighting mission remains high. Therefore, the danger to readiness is not in continuing the counterdrug mission, the danger is in allowing the perceived successes of the DoD counterdrug mission to open the door for military use in other domestic law enforcement situations. For example, after September 11, 2001 the Secretary of Transportation suggested using military special operations teams as law enforcement on domestic flights. As the Healy and Friedman article states “along with the “war on drugs,” we contemplate using our military to fight hurricanes, floods, immigrants, Mumbai-style attacks, and more, as if it’s the national Swiss army knife.”¹⁴⁴ A United States General Accounting Office report on the military being used for homeland security missions after September 11, 2001 highlighted the readiness concerns associated with overreliance on the military. The report concluded that the increasing pace at which the military, specifically the Army and Air Force, was being used for traditionally domestic missions was not sustainable and if the nation continued down the current path of using the military in this manner it could “significantly erode their readiness to perform combat missions and impact future personnel retention.”¹⁴⁵ Another concern is the potential change in the American way of life that may occur by overusing of the military, especially for domestic law enforcement.

¹⁴⁴ Healy and Friedman, “Be Wary of Using Military as Police.”

¹⁴⁵ Raymond J. Decker, *DoD Needs to Assess the Structure of U.S. Forces for Domestic Military Missions*, GAO-03-670 (Washington, DC: United States General Accounting Office, 2003), <https://gao.justia.com/department-of-defense/2003/7/homeland-defense-gao-03-670/GAO-03-670-full-report.pdf>.

It is obvious we must consider the threat to national security versus the damage to military readiness when deciding whether to employ the military in a law enforcement role. But more importantly we must consider the danger in setting new precedents that alter the American way of life. We should not allow Americans to become comfortable with the idea of domestic militarization, because it is “inconsistent with democratic life.”¹⁴⁶ So, even though the DoD counterdrug mission has become normal practice, including the domestic use of National Guard troops for domestic drug support and border interdiction, when evaluating the DoD counterdrug mission, we should continue to consider the potential consequences that come with over reliance and overuse of the military and be mindful not to allow the DoD counterdrug mission to expand into other segments of domestic law enforcement.

C. SUMMARY AND RECOMMENDATIONS

This thesis relied on existing literature to evaluate what was being asked of the DoD in multiple research projects, studies, and literature regarding measuring the effectiveness of the DoD counterdrug mission. Once the ambiguity surrounding the question was resolved, this thesis used existing research to answer the following questions: Can outcome-based metrics be created to measure the effectiveness of the DoD counterdrug mission? If outcome-based metrics cannot be created, what can the DoD measure regarding the counterdrug mission to better inform national policy makers?

Ultimately, this thesis concludes that outcome-based metrics cannot be created because of the interconnectedness and complexities of the DoD counterdrug mission. Additionally, measuring the effectiveness of enforcement actions has always been a challenge and the number of stakeholders involved in United States drug control policy adds to that challenge for the DoD. However, because outcome-based metrics cannot be created does not mean the DoD should continue with business as usual. This thesis provides four recommendations for the DoD to consider going forward when measuring the effectiveness of the counterdrug mission.

¹⁴⁶ Healy and Friedman, “Be Wary of Using Military as Police.”

First, the DoD should align DoD counterdrug objectives with the overall outcome measures listed in the NDCS. The NDCS is the only place the DoD can find the desired end state of the United States War on Drugs. Understanding the desired end state is critical when trying to determine how to assess whether the DoD counterdrug mission is helping the nation progress towards the overall outcome goals.

Second, the DoD must take data already collected during counterdrug operations and combine it with new metrics in the form of key performance indicators to better measure the DoD counterdrug mission against interdiction outcome goals. The DoD can accomplish this by using trend and pattern analyses and selecting appropriate key performance indicators regarding illicit drug use in the United States. Combining the key performance indicators with the DoD counterdrug sortie and maritime mission data allows the DoD to demonstrate a correlation between DoD interdiction missions and illicit drug use in America; including a subjective assessment about the amount of illicit drugs available in the United States.

Third, the DoD can and should use value-based metrics to determine the costs versus benefits of the counterdrug mission to better inform policy makers and the American public about the cost-effectiveness of the DoD counterdrug mission. The DoD can do this by using the counterdrug cost-benefit equation developed in this thesis.

Fourth, the DoD must consider the intangible benefits and unintended consequences of using the military for non-warfighting missions like counterdrugs. With regards to the DoD counterdrug mission, this thesis concludes the intangible benefits the nation receives in developing partner relations and building partner capacity and military training outweigh the unintended consequences of decreased military retention and advancing the idea of using the military to solve all the nations crisis.

Additionally, this thesis advances the idea of using drug purity as the ultimate arbiter on whether drug interdiction efforts are reducing drug availability. To accomplish this requires a reset on how we view interdiction efforts. If the amount of drugs being consumed or the number of people consuming drugs remains the final authority on the success or failure of interdiction efforts, than drug purity data is not relevant because drugs can be produced and consumed with reduced purity. However, if interdiction efforts are measured against whether

the amount of available drugs has been decreased, drug purity is the best and only stand-alone metric to use. Even though changes in drug purity will not indicate whether interdiction efforts have solved the drug crisis in America. Because as this thesis points out, supply-side policies can only be effective when demand is decreased. However, this thesis concludes, a thorough understanding of how to evaluate drug purity data will better inform the ONDCP on what factors are counteracting interdiction efforts and that information should facilitate better policy decisions by the ONDCP going forward. In popular culture, Albert Einstein has been quoted many times saying “the definition of insanity is doing the same thing and expecting different results.”¹⁴⁷ By not understanding how to interpret drug purity data the ONDCP may be headed down that road with regard to drug interdiction efforts.

In conclusion, while I do not evaluate whether the DoD should be used for counterdrug operations, I would like to offer one final thought. Illicit drug use is a significant problem in the world. The devastation caused to families, communities, and society because of illicit drug is unquantifiable. Whether it was the crack-cocaine epidemic of the eighties and nineties or the current opioid epidemic, the destruction caused is in many ways irreversible. The United States has a moral obligation to continue to work with other world governments to address the drug crisis that continues to burden societies and contributes to human rights atrocities around the globe. Those efforts should include the decriminalization of certain drugs, a renewed focus on drug treatment versus punishment, and economic reforms to address the reality that illicit drugs disproportionately affect minority and underprivileged communities; usually resulting in lengthy prison sentences and broken homes. However, I also believe as long as drug use is illegal in the United States, the federal government should continue to employ all reasonable means to eliminate, restrict, or disrupt the supplies and finances of illicit drug traffickers. While supply-side policies like interdiction will never be enough to solve the global drug crisis, at the end of the day, America is a nation of laws and those laws should be enforced unless they are unconstitutional or immoral.

¹⁴⁷ This quote is attributed to Albert Einstein in popular culture. However, officially it remains unattributed as there is no official source demonstrating the quote was made by Albert Einstein.

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