Mapping the Terrorism/Trafficking Nexus in Central Asia
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A group of alleged Islamist militants assailed a Tajik military convoy in September 2010 killing at least 26 soldiers in one of the largest attacks on the Tajik government’s outpost. The ambush came in the wake of two terrorist blasts and a daring prison escape by 25 convicted militants the same year. The following year both Tajikistan and Kazakhstan saw a spate of terrorist violence blamed on the Islamists. What these and other incidents of organized violence committed in Central Asia have in common is their connection to the trade and trafficking in drugs.

In the first example, the Tajik Defense Ministry implicated the former warlord – Mullo Abdul – who was reluctant to give up drug trafficking in the mountain ambush in the Rasht Valley. Furthermore, the government found the Jamaat Ansarullah’s banner at the headquarters of Abulo’s group suggesting the existence of ties between a criminal gang led by Abdul and the banned religious extremist organization designated as a terrorist group in Tajikistan. Links with drug trafficking were present in the 2009 attack by Tajik and foreign fighters, and subsequent insurgencies in 2010, 2011, and 2012.

The Nazarbayev government blamed a series of explosions and shootouts with security forces on the Islamist groups, including Jund al-Khilafah (JaK), although the criminal past of Kazakh extremists seems to support the original interpretation of these incidents as violence committed by organized criminal groupings. The very identity of the JaK cells in Kazakhstan – criminal or Islamist – has been in question because of their dubious religious foundations and involvement in organized crime. Suffice it to mention that Tokhtar Tuleshov, a Kazakh businessman charged with “terrorist violence” re-framed as the foiled coup d’état attempted in June 2016 in Kazakhstan, was also charged with drug trafficking, human trafficking, and financing of a transnational organized criminal group a few months earlier.

What these examples demonstrate is the growing complexity of political violence emerging from convergence of different kinds of organized crime. While linkages between crime and terrorism make take different forms, drug trade, in particular, has risen to the top of fund raising activities for various terrorist organizations. At the same time, transnational and national criminal groups have increasingly engaged in violent tactics or supported their terrorist counterparts with funds.

Central Asia is an important site where terrorism, insurgency, and organized crime intersect. Because of its geographic position between the major narcotics producing territories (Afghanistan and Pakistan) and the major narcotics markets in Europe and Russia, Central Asia naturally serves as a transit area for drugs. By some estimates about 25-30% of drugs produced in Afghanistan (an annual average of 90-120 tons, primarily heroin) are transported through the region. For some states, such as Kyrgyzstan and Tajikistan, drug trafficking is one of the few fully functioning, income-generating activities that bring most of the cash into the underdeveloped local economies. Central Asia is also home to over a dozen of native and foreign terrorist groups, some with a proven record of violence and operations inside and outside Eurasia, and established ties with Al Qaeda, Taliban, and ISIS.

1 The Rasht Valley is historically known as the Karategin Valley.
2 The relevance of Eurasian countries continues to grow in light of the efforts to counter drug trafficking in the Balkans that caused a shift in drug trafficking routes toward the Caucasus, and more stringent drug trafficking policies in Iran that contributed to the increase in drug trafficking volumes through Central Asia (Arasli 2007).
3 Burnashev 2007; Madi 2004; UNODC 2012.
4 Kupatadze 2012, 1. See also Latypov 2012.
5 TRAC
6 There are also several extremist organizations that have eschewed violence in Central Asia: Hizb ut-Tahrir, the Tablighi Jamaat, and Akromiya.
Despite the evidence of intersection between trafficking activities and terrorism, the nature of the crime-terror nexus is still poorly understood. The science examining terrorism/trafficking interaction remains incomplete and uneven. The literature on the nexus lacks systematic evidence, and there are studies that dismiss the claim that the nexus is a real and serious threat. In 2010, the National Institute of Justice sponsored an international expert working group to examine the role of science in fighting transnational organized crime. On the topic of terrorism/trafficking connections, the group noted their disappointment with the status of research. The most significant obstacles identified included the anecdotal nature of the existing evidence, the lack of datasets upon which to conduct empirical studies of the nexus, and the failure to develop theories of the phenomenon.

As a step toward assessing the links between drug trafficking and terrorism, this study seeks to “map” the crime-terror nexus in Central Asia. As used in the context of this work, “mapping” refers to both placing the activities of drug traffickers and terrorists on the map and examining ways in which these activities are related. Specifically, the study carries out a series of tests of the relationship between drug trafficking and terrorism and considers how this relationship may play out in practice.

I begin with providing a broad overview of the literature on terrorism-trafficking nexus focusing on the ways in which drug trafficking may intersect with terrorism. Next, I present a research design of the study followed by the discussion of results and their implications for research and practice.

The “Nexus” of Drug Trafficking and Terrorism

In the contemporary literature, the “nexus” between organized crime and terrorism most commonly refers to the use of crime, such as drug trafficking, by terrorist groups as a source of funding. In a broader sense, the “nexus” has been conceptualized as a continuum tracing changes in organizational dynamics and the operational nature of terrorism and organized crime over time. Along this continuum, different types of relationships - alliances, tactical uses of terror or criminal activities for operational purposes, and convergence into a single entity displaying characteristics of both groups – may develop between criminal and terrorist organizations.

Most of the examples found in the literature addressing the terrorism-trafficking nexus highlight an operational relationship between organized criminal groups and terrorist organizations, which turn to organized violence and/or terrorism as a means of advancing their specific objectives. For example, a terrorist organization may divert into the business of drug trafficking in order to raise money for financing its activities, or a criminal organization may seek out ties with a terrorist group as a customer in trade in illicit goods. Furthermore, criminal organizations can turn to anti-government violence for advancing their economic aims, especially when stakes are high, like those in drug trade.

There are, however, other ways in which drug trafficking can facilitate terrorist activity. First, the perpetrators of terrorist attacks have been known to occasionally drug themselves before committing violence to “take the edge off” before the attack. The existence of drug trafficking criminal networks can provide a platform and logistical support used in the preparation and carrying out of terrorist attacks. Drug trafficking further corrupts the government.

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7 Wang 2010.
8 Dishman 2001.
9 Makarenko 2004, 130.
10 Makarenko 2004; Mincheva and Gurr 2013.
thus decreasing its capacity to detect, prevent, and respond to terrorist activity. The trafficking in narcotics also adversely impacts governance, stability, and development, and the problems of governance and development, in turn, create conditions precipitous for the rise of organized violence.

In the context of Central Asia, drug trafficking has not only been used as a source of funding for terrorist organizations, but it was also a trigger of intra-state conflict, such as the 2010 ethnic clashes in Southern Kyrgyzstan.\textsuperscript{11} It is now well established that the Islamic Movement of Uzbekistan (IMU) was a leading trafficker of opiates from Afghanistan, especially under the leadership of Jumaboi Namangani.\textsuperscript{12} It remains likely that the remnants of the IMU and its splinter groups (e.g., the Islamic Jihad Union) continue depending on drug trafficking to secure funding for their operations. There are speculations that Hizb ut-Tahrir cells have been engaged in drug sales, using the same infrastructure as the IMU and other trafficking organizations.\textsuperscript{13} D-company, a radicalized organized crime group with key links along the drug trafficking routes flowing out of Afghanistan into Pakistan and Central Asia, has much to offer in terms of support to terrorists.\textsuperscript{14} Furthermore, as examples used in the introduction to the paper demonstrate, there is evidence of the criminal past, specifically, involvement in drug trafficking, of the Islamist militants in Central Asia. Thus, the expectation is that drug trafficking and terrorist activities will coincide spatially and temporally. Furthermore, drug trafficking will be positively related to terrorism in Central Asian states.

**Research Design**

To assess the relationship between drug trafficking and terrorism, the study uses a mixed-method research design combing the elements of GIS-enabled visualizations and statistical tests implemented on three Central Asian states – Kyrgyzstan, Kyrgyzstan, and Tajikistan.\textsuperscript{15} These tools will enable us to identify areas where these criminal activities occur and overlap, and in this way extend our knowledge beyond its current state where these activities are regarded as discrete types of violence and crime. The temporal scope of the study covers 2008-2015, also determined by the availability of data on drug trafficking.

Drug trafficking activity is measured by the total volume of all reported drug seizures of all drug substances and the total volume of opioids seized by the state officials (see Table 1). The data comes from the UNODC Database on Drug Seizures.\textsuperscript{16} The UNODC gathers information on illicit drug seizures worldwide that are drawn from the Annual Reports sent to all UN Member States and supplemented by information from other sources such as Interpol and UNODC Field Offices. Systematically and methodically collected over time, it represents the most comprehensive database of seizure events in Eurasia (though it is still only as accurate as each UN member state’s contribution and is rather spotty). In 2011, the Institute for Defense Analyses (IDA) examined the UNODC drug seizure event data to assess their quality and utility for the U.S. Department of Defense law enforcement programs in Southwest Asia. The IDA concluded

\textsuperscript{11} Zelichenko 2012.

\textsuperscript{12} The IMU’s incursions in Kyrgyzstan in 1999, which have been commonly portrayed as an attempt of a radical Islamist movement’s intrusion into Uzbekistan for overthrowing the secular government of President Karimov, pursued a different purpose, namely, securing drug trafficking route from Afghanistan. The stockpiles of opium and heroin had built up in the Afghan territory following one of the largest harvests of opium and waited to be transported to Russia and Western Europe (Falkenburg 2013; Madi 2004; Makarenko 2002).

\textsuperscript{13} Ahmed Rashid, as cited in Curtis 2002, 18.

\textsuperscript{14} Shelley 2014, 47.

\textsuperscript{15} These states were selected due to the availability of the data at sub-national level.

that the UNODC data did have significant utility for assessing various aspects of drug trafficking in Southwest Asia and improving the U.S. Government counter-narcotics efforts there. The drug seizure data available in the UNODC Database include date, location, drug type, amount, description of where it was seized, and the organization that claimed the seizure. All locations of drug seizures were geo-referenced for mapping.

The data on terrorist incidents is derived from the Global Terrorism Database (GTD) maintained by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland. The GTD is an open-source database that contains information on more than 125,000 incidents around the world from 1970 through 2013. It has been widely employed by the academics and mass media, especially for the purpose of mapping and visualization of terrorist incidents. For each incident included in the database, information is available on its date and location, the weapons used and the nature of target, the number of casualties, and the group or individual responsible for the attack, when the perpetrator can be identified. Statistical information contained in the GTD is based on the scrutiny of reports from a variety of credible media sources on the basis of the detailed rules of coding. GTD defines terrorism as an “intentional act of violence or threat of violence by a non-state actor.” In addition, two of the following three criteria have to be met for inclusion into the database:

1. The violent act was aimed at attaining a political, economic, religious, or social goal;
2. The violent act included evidence of an intention to coerce, intimidate, or convey some other message to a larger audience (or audiences) other than the immediate victims; and
3. The violent act was outside the precepts of International Humanitarian Law.

These criteria offer analysts and scholars flexibility in applying various definitions of terrorism to meet their research needs and are appropriate for the current project, which defines terrorism broadly as the premeditated use of illegal force or threat of illegal force by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation. The GTD data is geo-coded at the level of the city, in which the event occurred (latitude and longitude are recorded using WGS1984 standard) and provides a geocoding specificity if the exact latitude and longitude of the event are unknown.

ArcGIS software will be used for GIS-enabled visualizations and analyses. For the purpose of statistical tests, where the unit of analysis is province/year, I recorded the total volume of all drugs seized in the province and the total volume of opiates seized in the province per year (in kilograms). I measured terrorist activity using a total count of all terrorist attacks, and totals of killed and injured in all terrorist attacks in a province per year.

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17 Institute for Defense Analyses 2011.
18 Available at http://www.start.umd.edu/gtd/.
19 See, for example, Godwin 2008; Lee 2008; Wang et al. 2008.
20 START 2014.
21 This definition is largely consistent with the original definition of terrorism as “the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation.” that was used in data collection through 1997.
22 Kazakhstan has 13 oblasts (Akmolinskaya, Akmolinskaya, Almatinskaya, Aktyuraiskaya, West Kazakhstan, North Kazakhstan, East Kazakhstan, Karagandinskaya, Karagandinskaya, Kyzylorodinskaya Mangystauskaya, Pavlodarskaya) and the cities of Astana and Almaty; Kyrgyzstan consists of 7 oblasts (Batken, Chuy, Jalal-Abad, Naryn, Osh region, Issyk-Kul, Talas) in addition to the cities of Osh and Bishkek. Tajikistan is divided into the Districts of Republican Subordination, Gorno-Badakhstan, Sughd, Khatlon, and the city of Dushanbe.
23 Missing values were imputed.
The studies of terrorism and political violence typically use predictors associated with the three concepts of motive, opportunity, and incentive. These concepts describe a range of considerations and strategic evaluations that rational actors make about their operational environment. Motive refers to a need or a grievance that causes a person to act. While individuals can experience a range of grievances and social frustrations, analyses of violence have pinned explanatory value on the socio-economic grievances due to poverty and inequalities in income and wealth.\(^\text{24}\) This motivation will be amplified when there are structural impediments to social mobility, such as, for example, ethnic discrimination.

Although all societies have grievances, violence or other types of collective action arise only in a subset of social contexts characterized by conditions in which discontent can be organized. This refers to the opportunity structure for a motivated actor to engage in terrorism or crime. It has become somewhat a cliché over the last decade to think of failed or weak states as particularly attractive locations for terrorism and crime. Although terrorist groups take advantage of the lawlessness afforded by state failure, organized criminal organizations need some basic infrastructure to conduct their business. This is not to say that criminal groups do not benefit from a diminished capacity or willingness of the state to crack down on criminality.\(^\text{25}\) Therefore, some degree of institutional degradation that can be found in difficult-to-govern territories provides ideal bases for transnational criminal enterprises involved in the trafficking of drugs, weapons, people, and other illicit commodities, as well as for insurgencies and terrorism.\(^\text{26}\)

The challenges to governing these territories may be linked to their geographic/topographic characteristics\(^\text{27}\) or stem from the general weaknesses of the central government, which are common in conflict and post-conflict zones as well as states characterized by factionalized politics and sectarian divisions. Borderlands, areas of overlapping or contested sovereignty,\(^\text{28}\) and breakaway states are also considered to be the geographical hubs of criminal activities providing “a haven that is geographically, socially, economically, and politically highly conducive for allowing the activities of organized crime, Islamic terrorist groups, and corrupt officials.”\(^\text{29}\) These geographical hubs of criminality and terrorism can be remote and relatively isolated from the power centers, but they are nonetheless connected to the major markets of the licit economy. The latter can be found in urban mega cities,\(^\text{30}\) which serve as the dominant hubs for both the licit and illicit economy.

Incentive refers to the strategic evaluation that the actor will be better off materially from engaging in terrorism or crime; it refers to the consideration of benefits and costs. If a rational actor calculates that her material gain (for instance, from the sale of drugs) will offset whatever personal or community sacrifices she will have to make (e.g., to forgo the legitimate earnings), she will likely respond to the incentive to engage in crime. Severe constraints on the actor’s


\(^{25}\) Keefe 2013.

\(^{26}\) Patrick 2006.

\(^{27}\) The long common border between the countries of Central Asia and Afghanistan has amplified opportunities for drug trafficking, human trafficking and terrorism. Effectively policing the rugged and remote Tajik/Afghan border is a daunting task. The mountainous topography of the area is a major attraction to traffickers. Central Asian enclaves, most of which are located in the Ferghana valley, represent another poorly governed territory.

\(^{28}\) Several explanations have been suggested for why borderlands are prone to crime. Any location providing access to two or more countries will diminish accountability and increase the likelihood of corruption at the border, particularly where the border divides identity groups with common languages and cultures. The different levels of developing in the neighboring states will also be conducive to smuggling (Keefe 2013).

\(^{29}\) Library of Congress 2003.

\(^{30}\) Laitin and Fearon 2003; Rollins and Wyler 2013.
actions imposed by the geographical features of the environment (e.g., mountainous terrain, lack of transportation networks), or states’ counterterrorism and counter-narcotics policies may alter her decision.

For the purpose of the paper, I chose to focus on poverty, the lack of opportunity, discrimination, corruption, and law enforcement capabilities as determinants of terrorism in addition to drug trafficking. Poverty, discrimination, and the lack of opportunity are the sources of grievances; corruption offers a window of opportunity; and law enforcement capabilities can constrain or limit terrorist action.

In light of the available sub-national data, I chose several empirical proxies to measure the underlying concepts (see Table 1). Infant deaths per 1000 born alive has been used as a proxy for poverty. I use the rate of youth employment and population density to measure the extent of pressures and opportunities for social mobility in the local populations. Net migration (the difference between inflows and outflows of migrants) also taps both the opportunity for social movement, population pressure, and quality of living. The states of Central Asia are highly corrupt at all levels of public administration and social service. I chose a combined number of all those employed in public administration (divided by population), education, and health services as a measure of corruption. The assumption is that the greater the volume of those employed in these sectors of economy, the more likely the people are to face these service providers, and the more likely they are to experience both corruption and discrimination. Finally, to measure law enforcement capabilities I used the total registered crimes indicator.

<table>
<thead>
<tr>
<th>Concepts</th>
<th>Empirical Indicators</th>
<th>Sources of Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug trafficking</td>
<td>Total volume of drugs seized</td>
<td>UNODC</td>
</tr>
<tr>
<td></td>
<td>Total volume of opiates seized (in kg)</td>
<td></td>
</tr>
<tr>
<td>Terrorism</td>
<td>Total number of terrorist incidents per year</td>
<td>GTD</td>
</tr>
<tr>
<td></td>
<td>Total number of persons killed in all terrorist incidents per year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total number of persons injured in all terrorist incidents per year</td>
<td></td>
</tr>
<tr>
<td>Poverty Unemployment</td>
<td>Infant deaths per 1000 born alive</td>
<td>Statistical agencies of states</td>
</tr>
<tr>
<td></td>
<td>Youth (15-28YR) unemployed (%)</td>
<td></td>
</tr>
<tr>
<td>Corruption/discrimination</td>
<td>Total number of people employed in public administration, education, and health services (divided by population)</td>
<td>Statistical agencies of states capital</td>
</tr>
<tr>
<td>Lack of opportunity</td>
<td>Net migration</td>
<td>Statistical agencies of states capital</td>
</tr>
</tbody>
</table>
(Dis)Incentives  Total number of registered crimes (divided by population)  Statistical agencies of states capital

Population density

Since the dependent variable – terrorism – is measured by counts of incidents and all those killed and injured, and it contains excessive number of zeros, the zero-inflated negative binomial models work the best and they, therefore, are used in the study.

**Results**

Figures 1-4 shows the maps of terrorist incidents and drug seizures in Central Asia. Figure 1 depicts the map of drug seizures in Tajikistan and Kyrgyzstan (2004-2014) and Figure 2 shows terrorist incidents that have occurred in all republics of Central Asia since their independence. Figure 3 zeros in on Tajikistan and Kyrgyzstan and compares the maps of drug seizures and terrorism in 2011. Figure 4 does the same for 2012.

The visual analysis of the maps suggests a considerable overlap in the locations of drug seizures and terrorist incidents. A closer inspection of the maps for Tajikistan and Kyrgyzstan also suggests that drug trafficking and terrorism can coincide both by location and time in these states. For example, in 2011, the greatest volume of drug trafficking occurred around the Bishkek area in Kyrgyzstan, where the terrorist attack was recorded as well. Other terrorist attacks were registered in the Talas and Zhambyl oblasts in Kazakhstan. The map of drug trafficking in Kazakhstan is still in production, but the tentative analysis of the tables of data seems to indicate that there, too, terrorist activity coincided with drug trafficking. For 2012, terrorist activity occurred in close proximity to drug trafficking in Tajikistan as well.

**Figure 1: Drug Seizures in Tajikistan and Kyrgyzstan, 2004-2014.**
Figure 2. Map of Terrorist Incidents in Central Asia

![Map of Terrorist Incidents in Central Asia](image)

Figure 3: Drug Seizures and Terrorism in Tajikistan and Kyrgyzstan, 2011

![Drug Seizures and Terrorism in Tajikistan and Kyrgyzstan, 2011](image)
Figure 4: Drug Seizures and Terrorism in Tajikistan and Kyrgyzstan, 2012

The relationship between drug trafficking and terrorism is further supported by statistical tests. Table 2 below presents the results of zero-inflated negative binomial models: Models 1a and 1b report findings in the regressions with total number of people killed as a dependent variable. Models 2a and 2b were tested on the total number of people injured in terrorist incidents. Models “a” use the total volume of drugs seized as a predictor. Models “b” single out opiates as a predictor.

Statistical results provide strong evidence in support of the positive relationship between drug trafficking and terrorism in Central Asia, across all model specifications and statistical tests. For each kilogram of drug seized, there is an expected increase in about 2 persons (1.995) being killed as a result of terrorist attacks, and 0.005 injured; and for each kilogram of opiates seized, there is an expectation of more than 3 people killed (3.4599) killed and 0.058 injured. In substantive terms, there is a greater impact of drug trafficking on terrorist killings, especially if drug trafficking volume is measured by the total seizures of opiates.

Table 2. Tests of the Relationship between Drug Trafficking and Terrorism

<table>
<thead>
<tr>
<th></th>
<th>Model 1a Total Killed</th>
<th>Model 1b Total Injured</th>
<th>Model 2a Total Killed</th>
<th>Model 2b Total Injured</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total volume of drugs</strong></td>
<td>0.008** (0.003)</td>
<td>0.147** (0.004)</td>
<td>0.0018*</td>
<td>0.15**</td>
</tr>
<tr>
<td><strong>opiates seized</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

31 In addition to the zero-inflated negative binomial models, I performed zero-inflated Poisson and GLM models that returned statistically significant results on the measures of terrorism.
<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>95% Confidence Interval</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opiates seized</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant deaths</td>
<td>0.27</td>
<td>0.22</td>
<td>(0.0048)</td>
<td>0.06</td>
</tr>
<tr>
<td>Youth unemployment</td>
<td>0.07</td>
<td>0.07</td>
<td>(0.0045)</td>
<td>0.232</td>
</tr>
<tr>
<td>Net migration</td>
<td>0.001*</td>
<td>0.0046</td>
<td>(0.0004)</td>
<td>0.0004</td>
</tr>
<tr>
<td>Population density</td>
<td>-0.0006**</td>
<td>0.002</td>
<td>(0.0002)</td>
<td>0.005</td>
</tr>
<tr>
<td>Employment in public service</td>
<td>-36.38*</td>
<td>18.26</td>
<td>(18.187)</td>
<td>8.22</td>
</tr>
<tr>
<td>Registered crime</td>
<td>-0.00003</td>
<td>0.00003</td>
<td>(0.00004)</td>
<td>0.0006</td>
</tr>
<tr>
<td>Constant</td>
<td>3.37</td>
<td>1.81</td>
<td>(3.08)</td>
<td>0.997</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>238</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Both infants death and youth unemployment rates – the measures of poverty and the lack of opportunity – also returned statistically significant results in the expected direction in the models with total seizures of opiates. When infant deaths rates go up by 1 person per 1000 born alive, the rate of terrorism can be expected to increase by 0.0284 killings, or it takes an increase from 0 to about 30 infant deaths per 1000 born alive to see an increase by 1 in the total number of killings in terrorism. The substantive relationship is more pronounced in the model that utilizes opiates as a predictor. There, an increase in infant deaths by one is associated with 2.72 increase in the total number of killings in terrorist attacks.

For each percent of growth in youth unemployment, terrorism increases by 0.004 persons killed and 0.02 persons injured when the total volume of opiates seized is used as a predictor. Net migration, too, is positively associated with terrorism in all models indicating that as more migrants come to live and work in the province, it is more likely to experience terrorism. The results on population density are somewhat counterintuitive: higher population density (i.e., people per square kilometer) is associated with fewer terrorist attacks.

The number of people employed in public service returned a statistically significant result but in the opposite direction. One possible interpretation is that the proxy measure used in the analysis actually taps the accessibility of services, rather than the extent of corruption or discrimination associated with these services. To measure corruption through employment in public and social services may require the creation of an index that takes into account the level of corruption at the state level as reported by Transparency International.

Registered crime did not return significant results except in the model regressing the total number of people injured on the total volume of drug seizures. Although, the negative sign on the coefficient suggests that higher levels of registered crimes is associated with the lower levels of terrorist activity in the province per year. If the number of registered crimes could be interpreted as an indicator of the law enforcement capabilities (higher registered crimes, higher enforcement capability to detect and respond to it), the results would be consistent with the expectations.

**Discussion**
The static maps of terrorist incidents and drug seizures for Tajikistan and Kazakhstan produced as part of the project corroborate visually the connections of trafficking and terrorism. While the nature of these connections still needs to be explored, there is important evidence of temporal and spatial intersections of crime and terrorism. Still, the mere overlap of terrorism with drug trafficking conceals the multifaceted and constantly changing nature of the relationship between these types of activities. In the context of Central Asia, only a small portion of drug trafficking is carried out by terrorist organizations.

Drug trafficking, however, is a strong predictor of terrorist activity. While the funding for a range of Islamists groups operating in the region comes from a variety of sources, drug trafficking from Afghanistan is an important tool that partly explains the strength of the Islamic Movement of Uzbekistan (IMU), Islamic Jihad Union (IJU), and Al-Qaeda, among others. Drug trafficking has benefitted jihadists indirectly by strengthening local mafias and feeding deep-seated corruption that has eroded the functioning of security forces, judiciaries, and local governments throughout the region.\(^{32}\)

Other predictors of terrorism include poverty and the lack of opportunities, which are inevitable corollaries of the weak rule. The low living standards compel destitute people migrate internally (from rural to urban areas) or seek jobs overseas. The unstable economic and political situations and various ethnic problems within Central Asian countries impact the migration process, both within the region and from the outside. That is why net migration is also positively associated with terrorist activity.

While this project focused on several socio-economic determinants of drug trafficking and terrorism, the GIS capabilities allow for examining various geographic factors enabling or constraining the movement of drug traffickers and terrorists. The long common border between the countries of Central Asia and Afghanistan, for example, has amplified opportunities for drug trafficking, human trafficking and terrorism. Effectively policing of the rugged and remote Tajik/Afghan border is a daunting task. The mountainous topography of the area is a major attraction to traffickers, who are quick to take advantage of any strategic location where the probability of detection of crossing borders with illicit goods is minimized. In Tajikistan, for example, fighting between Tajik security force and armed groups of drug dealers and/or insurgents often occur on the banks and islands of the Panj river that forms the border between Tajikistan and Afghanistan. The territorial rights of some islands in the Panj river and further west in the Amu Darya are disputed because both rivers often change their courses. It is not surprising, therefore, that locations in border areas as well as those characterized by large settlements of people are the primary markets for drugs. The most important such markets are Dushanbe and Khudjand in Tajikistan; Osh and Bishkek in Kyrgyzstan; Tashkent in Uzbekistan; and Almaty in Kazakhstan. All these locations are also major nodes in transportation networks – highways, railways, and airways. Dushanbe, Osh, Bishkek, Tashkent, and Almaty airports are actively used for drug transit and human trafficking.

Central Asian enclaves, most of which are located in the Ferghana valley, represent another poorly governed territory. These include Uzbek enclaves - Sokh, Shakhimardan, Qalacha and Khaimion - in Kyrgyz territory, and Uzbek enclaves – Vomkh and Chrkuh – in Tajikistan’s territory. The power vacuum, lack of allegiance to and remoteness from the central authorities, and lawlessness make these areas perfect for storage and transit of drugs and other illicit goods.

There are very few constraints for the transit of drugs and humans or the conduct of insurgency operations in Central Asia. When obstacles do emerge, criminal organizations have

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\(^{32}\) Balci and Chaudet 2014.
shown to be quite adept at identifying and exploiting new weaknesses, thus, circumventing the law enforcement, border control, and counterterrorism efforts. For example, Kyrgyzstan became a preferred transit country (especially for Uzbeks and Tajiks travelling to UAE) because of the ease with which Kyrgyz passports could be forged. As the border check points at the international airports in the region began employing stricter border control and immigration control measures, the traffickers began relying more on automobile and railroad transport for the movement of people and drugs. According to the UNODC (2012), thanks to the well-developed road and rail network in Central Asia, around 70-75% of opiates from Afghanistan are transported by truck or another vehicle across the region. Trains and planes account for approximately 15-25% of trafficking.

With the establishment of the common customs and free trade zone in the region, these republics have seen a considerable increase in the regional trade. Yet, the higher volume of trade handled by local officials has not been accompanied by an expansion of law enforcement capabilities to discourage traffickers from exploiting the new situation. Of particular concern are the various trade agreements with Afghanistan, which have made it easier for heroin to be trafficked through Central Asia en route to markets in Russia and Eastern Europe. When combined with already poor border control in countries such as Tajikistan and Kyrgyzstan, the trade has become much more difficult to stop.

The importance of ethnic cross-border ties and/or the present of ethnic networks of traffickers have not been supported in all instances. For example, Balkh province in Afghanistan that borders Uzbekistan is dominated by ethnic Turkmens and Uzbek is a minority language in Balkh province. The main traffickers there are ethnic Pashtuns, rather than ethnic Uzbeks, as has been simplistically portrayed in some reports. Good cooperation and trust between Tajik and Afghan traffickers have also been explained by the common language (e.g., deals between Afghan and Tajik traffickers are often settled by phone), rather than a shared ethnicity (UNODC 2012, 64). However, in Gorno-Badakhshan, ethnic (Islameli) connections run much deeper and are a key facilitator to cross-border insurgency and trafficking in drugs.

References


