TRANSNATIONAL CRIME DURING A PANDEMIC: HOW CRIMINALS ARE CAPITALIZING ON THE CHAOS CAUSED BY COVID-19

Layla M. Hashemi, Sarah Meo, and Louise Shelley

The COVID-19 pandemic has dramatically escalated criminal activity from violent exploitation of youth to complex financial scams. Much of this activity is linked to the increasing dependency on online platforms, social media, and cellphones. This chapter examines the impact of the COVID-19 pandemic on transnational crimes, including human and drug trafficking, environmental and financial crimes, and trade in counterfeits. It demonstrates how the COVID-19 crisis poses new and unprecedented threats to public health and human security. Creative criminals have capitalized on the chaos caused by COVID-19 to expand their illicit activities. For example, drug traffickers are

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employing new techniques and initiating new trade routes and delivery strategies. Online exploitation has grown significantly during the pandemic as young people become victims of child sexual exploitation and senior citizens are targeted by financial scammers. Criminals exploit timber and other natural resources as these environmental products are inadequately protected during COVID-19. The drastic increase in the volume of the online activity surrounding the COVID-19 pandemic makes it difficult to combat these transnational crimes and requires new strategies and tactics.

Introduction

The COVID-19 pandemic has been much more than a health crisis. In addition to killing millions of the more than 180 million infected worldwide,[1] it has caused significant economic and social harm and poses new and unprecedented threats to public health and human security. The global economy declined more than 4 percent in 2020,[2] and international trade by much more. As a result, in October 2020, the World Bank predicted "that between 71 million and 100 million people will be pushed into extreme poverty this year, erasing almost all progress made in the last five years in the fight against extreme poverty."[3] Women have suffered disproportionate harm from the pandemic, which has set back economic advances they had made in the United States and globally.[4, 5] This impoverishment has increased human trafficking and sexual exploitation of women, particularly online. Social connections also have eroded as many, especially the elderly, have become isolated. The increased use of online services and communications has been pronounced globally. School closures, in particular, have resulted in youth spending more time online, making them more vulnerable to recruitment by criminals.

The challenges of online criminal activity, evident before the COVID-19 pandemic, have accelerated in 2020 and 2021. Criminals have capitalized on health vulnerabilities, isolation, and economic

hardship to make significant profits during this challenging period. Massive amounts of fraudulent equipment and medical supplies such as counterfeit masks have entered supply chains, which has possibly compounded the death rate as individuals are not adequately protected by masks or are treated by personnel with inferior or substandard counterfeit respirators.[6,7] Isolation has increased vulnerability to frauds. Scams and the illegal recruitment of money mules and youth for child sexual exploitation online have grown during the pandemic.

In addition to pandemic's impacts on transnational crimes, including human and drug trafficking, this chapter will focus on environmental and financial crimes, as well as the trade in counterfeits. At the March 2021 United Nations Congress on Crime Prevention and Criminal Justice, speakers highlighted the need for continued international cooperation in combating cybercrime and environmental crime.[8] Natural resources have been particularly hard hit as tourism has declined, reducing a major revenue source in Africa and complicating guardianship of forests from illicit timber cutters. Many regions have noted a growth in environmental crime and in trade in counterfeits, which based on customs seizures had already represented more than $500 billion annually in business before the pandemic. In 2016, trade in counterfeit and pirated goods was 3.3 percent of world trade[9] and represented the most significant illicit trade component.[10]

Growth of Online Fraud (COVID-19 Payments)

As the pandemic has pushed large parts of society onto their phones, tablets, and laptops, online fraud has grown rapidly. In its COVID-19 Cybercrime Analysis Report, INTERPOL noted a sharp rise in online scams and cybercrimes, including phishing, disruptive technology, data harvesting, malware, malicious domains, and pandemic-related misinformation schemes, all of which capitalize on the uncertainty of the pandemic.[11] Many organizations hastily moved to a "work

from home" system without the cybersecurity needed to protect their remote working environments, which provided ample opportunity for cybercriminals to obtain sensitive user data.[12] Similarly, banking Internet technology systems were unequipped to handle the public's newfound dependency on remote banking. Money exchange apps allow for fraudulent transactions, the theft of personally identifiable information (PII) through cyberattacks, and human error.[13] Populations with less technical experience and capabilities, including elderly and low-income individuals, are particularly susceptible to these cybercrimes.

Cybercriminals are using phishing emails and misinformation schemes to capitalize on the fear surrounding the pandemic.[14] The FBI has issued warnings against scam emails that claim to provide information on pandemic-related payments such as stimulus checks, airline carrier refunds, and charitable donations but are actually aimed at gaining responders' PII.[15, 16] Cybercriminals operating both on the dark and open webs have also used fear of the virus and confusion surrounding vaccine distribution in phishing campaigns advertising for individuals to personally pay for vaccines or to pay to get on a waiting list for a vaccine. There were also unsubstantiated claims of FDA approved vaccines advertised online.[17] Fake forms offering vaccines have been sent to large organizations and .edu email addresses to steal email credentials and intellectual property.[18] Similarly, criminals are conducting fraudulent phone scams to gather PII from the growing pool of teleworkers and exploit an increasingly isolated population.[19]

Cybercriminals worldwide are also using malicious domains that masquerade as authoritative bodies, such as the World Health Organization (WHO) and the Centers for Disease Control (CDC), to fool users, often in conjunction with disruptive malware.[20] INTERPOL reported a dramatic increase in the registration of malicious domains using keywords such as "COVID" and "Corona," with a large portion of these newly registered domains claiming to provide COVID-19 updates and statistics.[21] A corporate partner of INTERPOL "detected

a 569 percent growth in malicious registrations" between February and March 2020.[22] An article in the *Journal of the American Medical Association* called misinformation a "serious threat to public health" that "likely accelerated the spread of COVID-19," making these fraudulent domains even more distressing.[23]

Widespread unemployment has provided cybercriminals a significant opportunity to target both individuals and government relief programs. Within the United States, the unprecedented influx of unemployment claims has opened the doors for illicit actors to defraud COVID-19 relief programs or gain fraudulent unemployment insurance.[24] One Seattle software developer, for example, was charged with wire fraud after attempting to defraud COVID-19 relief programs of more than $550,000.[25] Another scam involved buying and selling PII on the dark web to submit fraudulent relief applications.[26] By selling these "fraud kits" to Internet users with less experience stealing PII data, cybercriminals can further monetize the pandemic.[27] In a recent article on dark web marketplaces, experts found that of 788 COVID-19-specific listings, 99 fell under the category of "guides on scamming" that offered "manuals on how to earn money exploiting flaws in COVID-19 related government relief funds" and manipulating online banking and delivery systems.[28] These occurrences began in March 2020 and became more frequent after the introduction of the Coronavirus Aid, Relief, and Economic Security (CARES) Act and the extension of the Small Business Association loan program, until finally beginning to fall in September.[29]

With rising unemployment during COVID-19, criminals use work-from-home, employment, and romance scams to launder stolen funds. The use of money mules—individuals who transfer illicit profits on a criminal's behalf—has increased during the pandemic. Using money mules to move funds through bank transfers and cash transactions is intended to obfuscate the money trail and avoid detection by law enforcement investigations.[30] In Northern Virginia, for example, criminals used school emails and the Nextdoor app to

target several George Mason University students at the beginning of the pandemic—offering fake jobs paying hundreds of dollars per week for minimal remote "work."[31] From January 2020 to early August 2021, the U.S. Federal Trade Commission recorded almost 348,000 fraud reports worth more than $519 million in fraud loss. The top categories were online shopping and vacation/travel,[32] which illustrates transnational criminals' interest in capitalizing on the high levels of isolation caused by the pandemic.

The rise in unemployment also enables the spread of malware such as info-stealers and more sophisticated banking Trojan horses. According to the Organized Crime Corruption and Reporting Project (OCCRP), in conjunction with the cybersecurity firm Check Point, malware is being dispersed through employment-related documents such as curriculum vitae (CV) and medical leave forms. The number of malicious CV files doubled in just two months in 2020.[33] According to INTERPOL data, a significant number of disruptive malware campaigns are now targeting larger institutions such as government agencies and the healthcare industry rather than individuals and smaller companies.[34] In March 2020, the second largest hospital in the Czech Republic suffered a ransomware attack that blocked the sharing of medical information between departments until a "ransom" had been paid. Since then, many other hospitals have been targeted.[35, 36] The same month, the U.S. Department of Health and Human Services website was the target of a denial-of-service attack and subsequently crashed.[37] As recently as December 2020, the Financial Crimes Enforcement Network (FinCEN) issued a notice urging financial institutions to stay alert to potential fraud concerning the COVID-19 vaccine, indicating that vaccine research has been the target of certain known ransomware.[38]

Trends in the Drug Trade

Trends in the drug trade have fluctuated in response to the COVID-19 outbreak and countries' subsequent containment measures. Country

lockdowns and movement restrictions initially disrupted global drug supply chains, and widespread flight cancellations placed considerable stress on those working as drug mules.[39] However, traffickers proved resilient and quickly adapted to the "shock" of the pandemic by shifting routes, production, and distribution and using the dark web for certain substances.[40, 41, 42]

Across various regions, border closures and restrictions on land, air, and maritime travel initially interrupted drug traffickers. Mexican production of fentanyl and methamphetamines was temporarily curtailed by a lack of necessary precursor chemicals from China.[43] Evidence suggests, however, that production was reinstated quickly; fentanyl seizures in Mexico increased 465 percent between January and mid-September of 2020 compared to the first three quarters of 2019.[44, *] In northern Central America, the cancellation of commercial flights hindered the delivery of synthetic drugs and cocaine, typically transported in small quantities by drug mules.[45] Countries in North Africa and the Middle East experienced a similar interference in the drug trade, reporting a reduction in seizures following the initial COVID-19 restrictions and instances of rising wholesale and retail prices.[46] In Europe, social distancing measures sharply curtailed trade on the distribution level, while shortages and stockpiling of cannabis resin and herbal cannabis pushed retail prices higher.[47] Similarly, the street price of marijuana increased 55 percent from March to May in New York City.[48]

Drug cartels and organized crime groups, however, adapted quickly to the shifting conditions of the drug trade. The MS-13 and 18th Street gangs quickly began to emphasize the marijuana retail

* The COVID-19 production fluctuations did not ease the U.S. "fentanyl epidemic" because of stockpiling by drug traffickers and domestic illegal production. U.S. fentanyl-related deaths increased at the start of the pandemic. Louise Shelley, "Fentanyl, COVID-19, and Public Health," *World Medical & Health Policy* 12, no. 4 (July 2020): 390-91, 393. https://doi.org/10.1002/wmh3.355.

market and synthetic drugs being processed in northern Central America, capitalizing on drug production in Guatemala and Honduras.[49] According to the OCCRP, the cocaine industry in Colombia also fared well during the lockdown, courtesy of large stockpiles of cocaine that had been warehoused before the pandemic.[50] Reports also indicate a strong cocaine market in Honduras where authorities had confiscated more of the drug by late September 2020 than in all of 2019.[51]

Restrictive measures related to COVID-19 have had a considerable impact on drug trafficking routes. In late May 2020, the OCCRP reported Colombian cocaine smugglers, who could no longer use preferred maritime methods like speedboats and fishing vessels because of COVID-19 restrictions, had developed approximately six new or revived land routes through Panama.[52] Adaptation has also been noted in the transit countries of Honduras and Guatemala, where an increase in coca cultivation camps has been detected, suggesting that the countries may be developing as production locations.[53] New strategies have also been adopted in North Africa, where reports suggest traffickers are relying more on maritime and overland routes that avoid control points.[54]

Reported innovations in drug distribution methods include the increased use of darknet markets for small quantities of cannabis.[55] The European Monitoring Centre for Drugs and Drug Addiction's analysis of online drug markets during an early phase of COVID-19 lockdowns† shows a rise from January to March of 2020 in dark web activity and encrypted use of messenger services to sell cannabis products.[56] Experts indicate that dark web markets for cocaine and cannabis are typically more significant at the distribution level than with wholesale production and supply.[57] The OCCRP, however, has reported examples of "coronasales" where large quantities of drugs are sold to dealers at a discount via the dark web.[58] For street-level

† The observational window of the study closed at the end of March 2020.

distribution in Europe and North America, dealers facilitated their business mainly through WhatsApp, coordinating "no contact drops" and door-to-door deliveries, using or masquerading as essential workers.[59, 60]

Human Trafficking and Child Pornography

The spread of COVID-19 has exacerbated the underlying circumstances which contribute to human trafficking and has motivated an enormous increase in online child sexual abuse material (CSAM). Rising unemployment and global economic insecurity have increased the vulnerability of groups already disproportionately exploited in human trafficking—including women, migrants, refugees, domestic workers, and children.[61] This phenomenon occurs on a global scale, putting vulnerable populations at risk in the United States and less developed countries.

Lockdowns and pandemic containment measures have heightened the exposure to trafficking for women and girls in households with domestic violence and for domestic workers who may be trapped in quarantine with their abusers. The significant global increase in domestic abuse observed in relation to social distancing—which UN Women, an organization dedicated to gender equality, describes as a "shadow pandemic"—only intensifies the danger of intimate partner trafficking victims.[62] Similarly, abuse victims may be exposed to exploitation while attempting to escape their situation, as domestic abuse is a commonly recognized push factor toward trafficking.[63]

The socio-economic footprint of COVID-19 and its restriction measures have isolated victims within patterns of abuse and separated survivors from vital rehabilitation aid. Many services typically offered by anti-trafficking NGOs, such as victim rescue missions, shelters, counseling, and legal assistance, have been cancelled or limited because of economic instability and COVID-19 restrictions.[64]

Similarly, the need for law enforcement and criminal justice agencies to prioritize pandemic restrictions has reduced antitrafficking operations and created delays in the court system for survivors awaiting justice.[65]

Many survivors who have escaped their traffickers are at considerable risk of returning to the sex trafficking cycle because they lack income and support services.[66] Polaris, an NGO dedicated to ending human trafficking, has also noted a growing trend toward sextortion. Landlords capitalize on their tenants' financial hardship by pressing for sexual acts in exchange for rent.[67] While speaking at a July 2020 forum on sextortion, organized in part by the Partnership for Transparency, Dr. Ortrun Merkle noted that sextortion is a global phenomenon and emphasized the increased vulnerability of migrant women with disabilities, traveling with small children, and in the LGBTQ community.[68] Transactional sex has been reported extensively, along with other potentially dangerous activities imposed on women and girls, such as becoming drug couriers.[69]

Within the sector of migrant smuggling, several reports suggest border closures and mobility restrictions have created a greater dependency on smugglers, who, in turn, have increased transportation fees.[70] In a survey of migrants conducted by the Mixed Migration Centre in July 2020, most respondents said smugglers had begun using more dangerous routes after the spread of COVID-19.[71] This response was widespread in Malaysia, Nigeria, and Tunisia, where more than 70 percent of respondents reported more dangerous routes were being used.[72]

The health crisis has further complicated the already perilous migrant route across the Mediterranean Sea. Several public and private search and rescue missions were suspended in 2020, and vessels carrying migrants were required to remain offshore while quarantining—elongating a dangerous and painful journey.[73] Evidence provided by the UN Office of Drugs and Crime shows that smugglers are abandoning migrants in transit countries, compounding their

exposure to violence, trafficking, and COVID-19.[74] Additionally, health policies that require the forced return of migrant laborers can endanger children who may be separated from their parents or stranded if not given proper aid.[75] By June 2020, 1,359 migrant children—many unaccompanied—had been returned to Ethiopia from various countries in Africa and the Middle East, where mandatory quarantine required them to be held at the borders for 14 days with social workers and medical professionals.[76]

Migrants working under government-regulated mass labor contracts that were terminated because of the pandemic found themselves stranded in their countries of former employment and left with no ability to return home.[77] In the Gulf Cooperation Council states, hundreds of thousands of workers from Pakistan and India were left jobless after the pandemic outbreak, with only a minority succeeding in receiving government-sponsored flights to return to their home countries.[78] According to an October 2020 press release, the International Organization for Migration estimated that, as of July 2020, at least 2.75 million migrants were stranded worldwide, with many left in inhumane conditions without basic hygiene or necessary distancing protection against the virus.[79]

Increased travel restrictions and lockdowns have intensified the demand for child pornography,[80] and school closures and the shift to online learning have increased the opportunity for online child exploitation. Both domestically and internationally, social distancing and the conversion of schools and workplaces to virtual environments have drastically increased time spent online, leaving school-age children particularly vulnerable to recruitment, grooming, and sextortion from online predators.[81] These children may be pressured to livestream sexual material by online predators or by family members attempting to offset financial difficulties caused by COVID-19.[82] Professionals working in Northern Virginia communities tell of older men approaching young girls during the lockdown on popular social media apps such as Instagram, Lemon, Snapchat, Tinder, Twitter, and YOLO.[83, 84]

Children are further victimized by the drastic increase in the production and circulation of online CSAM observed throughout the pandemic. During the first nine months of 2020, the National Center for Missing and Exploited Children "experienced a 98.66 percent increase in online enticement reports" compared to the same period in 2019.[85] A September 2020 INTERPOL report addressing the issue of CSAM as a global phenomenon indicated a substantial increase in CSAM being shared on peer-to-peer networks, social media platforms, and messaging applications, as well as continued discussion of CSAM on dark web fora.[86] National and international agencies report uninvited participants sharing CSAM on videoconferencing platforms, such as Zoom—simultaneously victimizing the material's subject and potentially victimizing other participants on the call.[87, 88] In a tragic extension of this explosion of online CSAM, in February 2021, two FBI agents were fatally shot during an investigation into a Florida-based suspect of violent crimes against children, the first agents to be shot and killed while on duty since 2008.[89]

Environmental Crime

The effects of the COVID-19 pandemic have undercut wildlife conservation efforts.[90] Ecotourism, which provides significant funding for conservation activities, has declined massively.[91] TRAFFIC, an NGO devoted to combating wildlife crime, reported in 2020 that damage to the economy and migration from urban to rural spaces are "increasing pressure on already stressed wildlife areas."[92] Widespread job loss and a lack of surveillance of restricted wildlife areas have boosted food and trade poaching.[93]

The situation is aggravated by governmental corruption related to the COVID-19 response contributing to environmental crimes, such as illegal logging, deforestation, and poaching.[94] Despite restrictive lockdown measures, illegal logging and deforestation continue to flourish in parts of Africa and the Amazon rainforest. In Brazil,

the Igarapé Institute estimates that "70 percent of timber products from the Amazon come from illegal operations."[95, 96] The Environmental Investigation Agency has reported that 80 percent of lumber production in Peru is illegal or illicit.[97, 98] Rather than being curtailed by three months of COVID-19 restrictions, Peruvian timber exports grew by 25 percent in July 2020.[99]

Public and private corruption facilitate the illicit timber trade, and both are bolstered by the pandemic's creation of insecure economic and regulatory environments.[100] In Peru, privately produced fake harvest permits—called forest inventories—have long been corruptly approved by public officials.[101, 102] Under the pretense of "reactivating" the economy, several regional authorities in Brazil, Peru, and elsewhere have pushed for relaxing timber trade regulations, opening the door to further deforestation and corruption.[103] Similarly, in Mozambique, which has experienced significant deforestation and related labor abuses, donors' main concerns regarding COVID-19 related corruption have centered on public PPE procurement and donor assistance rather than preventing deforestation.[104]

Evidence suggests poaching for subsistence purposes—for food and trade—has increased to offset economic distress caused by the pandemic.[105] As detailed in a recent Targeting Natural Resource Corruption (TNRC) panel, roughly 90 percent of African tour operators have suffered a 75 percent decline in bookings.[106] Rural residents who depend on tourism supply chains in many regions are being driven to poaching: the Uganda Wildlife Authority reported that poaching cases in Africa between February and June 2020 were double the number recorded in 2019.[107] During India's lockdown period, the poaching of ungulates, which are typically hunted for their meat, also doubled, rising from 22 percent of total reported poaching cases pre-lockdown (February/March) to 44 percent during lockdown (March-May).[108]

The impact of COVID-19 on the future of the legal and illegal wildlife trade remains unclear. In certain regions, such as Central

Africa, illicit wildlife trafficking has continued with little resistance. Uganda, for example, continues to serve as both a source and transit country, facilitating trafficking between the Democratic Republic of the Congo and Kenya.[109] Nevertheless, the pandemic has raised global concern about wildlife trade in general, as significant evidence points to the live animal markets ("wet markets") in Wuhan, China, as the original COVID-19 transmission source between animal and human.[110, 111] Pandemic-induced fear and stigma surrounding wildlife food products did manifest in specific areas: in March 2020, a survey conducted in Hong Kong, Myanmar, Thailand, and Vietnam "suggested that the vast majority of respondents (84 percent) would be unlikely or very unlikely to engage in future consumption of wildlife products."[112] Experts contend, however, that not only will COVID-19 not bring about the end of the illegal wildlife trade, but the trade itself must be regulated to help prevent future pandemics.[113, 114] Unfortunately, during COVID-19, those trying to safeguard natural resources are restricted because of lockdowns or targeted by illicit traders. This problem has been especially problematic for indigenous people who are on the frontline of protecting trees and wildlife.[115] They have suffered disproportionately from COVD-19 while simultaneously being targeted by poachers and illegal loggers.[116]

Corruption, Counterfeits, and Threats to Public Health

The pandemic has created windows of opportunity for corrupt networks that facilitate money laundering, counterfeiting, and other transnational crimes. The shutdown and resulting economic stagnation led to the implementation of financial management systems, such as cash transfers, that involved several corruption risks especially in developing countries where levels of corruption are high.[117] In contexts where the rule of law is weak and there is little transparency and accountability, corrupt government officials

can misappropriate emergency aid funds.[118] The urgency surrounding the pandemic has impeded proper oversight and due diligence regarding international financial flows.

We're not just fighting an epidemic; we're fighting an infodemic. Fake news spreads faster and more easily than this virus, and is just as dangerous.

— TEDROS ADHANOM GHEBREYESUS, WHO DIRECTOR-GENERAL, AT MUNICH SECURITY CONFERENCE 2020[119]

As noted by the World Health Organization (WHO) and other intergovernmental organizations, a massive "infodemic"—or overabundance of information—has accompanied the COVID-19 pandemic. Similar to the virus, medical misinformation and disinformation spread rapidly, threatening national health and security. This flood of information, both accurate and false, impedes individuals' ability to obtain trustworthy guidance critical to preventing the spread of the virus and protecting public health. In some cases, this public information mismanagement fomented distrust of governments and medical professionals and hindered efforts to stop the virus's spread. In other cases, medical misinformation and rumors of false cures proved deadly. For instance, in Iran, false claims that drinking methanol can cure the coronavirus led to more than 500 deaths; dozens went blind, and thousands were hospitalized. The Iranian government and traditional media outlets initially denied that COVID-19 was present to influence voter turnout during national elections in February 2020. Once public information was made available, much of it was unreliable.[120]

Much of the misinformation and disinformation surrounding COVID-19 involved promoting unverified treatments and cures for the virus. Former U.S. President Donald Trump's Twitter account was

suspended in mid-2020 after he shared a video of a doctor falsely claiming the antimalarial drug hydroxychloroquine could cure the coronavirus. According to an observational medical study, "From March 1 to April 30, 2020, Donald J Trump made 11 tweets about unproven therapies and mentioned these therapies 65 times in White House briefings, especially touting hydroxychloroquine and chloroquine."[121] Consumers' rush to purchase hydroxychloroquine led to the medication being unavailable for treating the diseases for which it has been approved, such as malaria and the autoimmune conditions lupus and rheumatoid arthritis.[122] On June 15, the U.S. Food and Drug Administration (FDA) revoked the emergency use authorization for hydroxychloroquine and chloroquine in treating COVID-19, based on evidence that the medicines did not decrease the likelihood of death or speed recovery.[123] This points to the urgent need for effective public education and media outreach to ensure individuals do not fall prey to medical misinformation that could exacerbate the virus's spread. To inform the public and prevent the purchasing of counterfeits of sought-after products such as respirators or face masks, the FDA, CDC, and others have conducted extensive media and educational outreach efforts and released guidelines raising awareness of the rapid increase in counterfeit PPE.

Shortages of PPE and medical supplies encouraged the counterfeiting of COVID-19 related products, including respirators (N95 masks), ventilators, and other medical supplies, such as gloves, gowns, and sanitizing products. Shortages of toilet paper, paper towels, and cleaning supplies led to price gouging. In response, U.S. Immigration and Customs Enforcement's Homeland Security Investigations (HSI) launched Operation Stolen Promise in April 2020 to combat COVID-19 related fraud and other criminal activity.[124] Under Operation Stolen Promise, HSI formed partnerships with government, law enforcement, and private companies to strengthen global supply chain security and protect the American public from victimization. In May, HIS reported that "HSI and CBP have collaborated to seize 494 shipments

of mislabeled, fraudulent, unauthorized, or prohibited COVID-19 test kits, treatment kits, homeopathic remedies, purported antiviral products and personal protective equipment (PPE)."[125]

In addition to the proliferation of counterfeit goods, vendors used fraud, price gouging, and other crimes to exploit rising demand. In some cases, criminals defrauded consumers and companies through the nondelivery of products.[126] In late March-early April 2020, a New Jersey car dealer tried to sell "7 million of the 3M-branded masks to New York City's Office of Citywide Procurement for about 500 percent above the typical list price." He was also accused of offering to sell "3 million Mexican-made N99 face masks to Florida's Division of Emergency Management for $5.46 million, a more than 500 percent markup."[127] As a result, he was charged with wire fraud and two conspiracy charges, including Conspiracy to Violate the Defense Production Act.[128]

Terrorists and other criminal organizations also took advantage of the ongoing supply shortages surrounding the pandemic. In the summer of 2020, the U.S. Department of Justice shut down an ISIS-affiliated scam involving the attempted sale of 100,000 fake N95 masks and counterfeit PPE through websites and social media accounts. According to the website Facemaskcenter.com, the masks were manufactured in Turkey but were certified by the U.S. FDA or other U.S. agencies. The website also claimed it had been operating since 1996 as "the original online personal protective equipment supplier and was the first of its kind," even though it was only established in late February 2020.[129]

Counterfeiting concerns surrounding COVID-19 are not limited to medical supplies. To be effective, COVID-19 vaccines must be distributed by approved and licensed manufacturers and properly administered by medical professionals. Concerns have arisen that illegitimate or counterfeit vaccines will be sold on the open and dark webs. Even though licensed vaccines are not being sold online, advertisements for COVID-19 vaccines have been found before they were publicly available on the dark web and encrypted messaging platforms such as Telegram for "as much as US $150 per dose."[130]

Counterfeit vaccines are offered on darknet markets alongside ads for weapons, narcotics, and other illicit goods, such as counterfeit currency, demonstrating the convergence of illicit trade in medical products and other forms of transnational crime. [131]

Conclusion

Criminals are often highly flexible and innovative. Although it is hard to identify beneficiaries of the COVID-19 pandemic, criminals and their corrupt associates have certainly been able to profit in this difficult time. This is particularly evident for those engaged in fraud and financial crime against the vulnerable, as well as for those who operated effectively online and through social media. The damage caused by criminal elements is not confined to the virtual world; it is occurring in the real world as well. Environmental destruction proliferates, individuals can still access narcotics, and the large-scale distribution of counterfeit PPE through existing supply chains is exacerbating the costs and morbidity of COVID-19.

The isolation required to prevent the spread of COVID-19 has inhibited the response to this growth in criminality. Moreover, the sheer volume of online trade in child sexual images and counterfeit medical products, as well as other forms of cybercrime, strains a law enforcement system more accustomed to on-the-ground investigations than the investigative techniques required to address this new criminality. The large-scale data analytics and artificial intelligence needed to address these phenomena are not adequately applied by law enforcement. Methods only now in development need to be applied with alacrity.

The growth of life-threatening criminality under COVID-19 shows that traditional response methods are not adequate. To address this activity, we need a whole-of-society perspective that requires the cooperation of civil society, corporations, journalists, governments, and international bodies.[132] Only by identifying rapidly changing criminality and encouraging collaboration between different sectors

of society can we hope to stem the crime that devastates our health, social fiber, economic well-being, and the sustainability of our planet.

About the Authors

Dr. Layla M. Hashemi is a researcher and data analyst at the George Mason University (GMU) Terrorism, Transnational Crime and Corruption Center (TraCCC) focusing on international supply chains, cybercrime, and illicit trade. She currently is analyzing the supply chains of counterfeit PPE, fentanyl, and pharmaceuticals for the National Science Foundation project Disrupting Operations of Illicit Supply Networks (D-ISN). She earned her Ph.D. in public policy at GMU's Schar School and her master's in international relations and comparative politics at New York University with a concentration in Middle Eastern and Islamic studies.

Sarah Meo is pursuing a Ph.D. in public policy at GMU. She completed a Fulbright scholarship in Palermo, Sicily, working with the anti-mafia organization Fondazione Falcone. Her research focuses on transnational crime and corruption, mafia-type criminal organizations, and human trafficking in Europe. Currently she is working with Dr. Louise Shelley on an National Science Foundation-funded project analyzing human trafficking supply chains in the United States.

Dr. Louise Shelley is the Omer L. and Nancy Hirst Endowed Chair and a University Professor at GMU. Within the Schar School of Policy and Government, she founded and directs the TraCCC. She specializes in transnational crime, corruption, illicit financial flows, and money laundering. As an inaugural Andrew Carnegie Fellow, she wrote her most recent book, *Dark Commerce: How a New Illicit Economy is Threatening our Future* (Princeton University Press, 2018), on illicit trade.

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