



## DISPLACEMENT EFFECTS OF ENFORCEMENT OF SYNTHETIC DRUG PRODUCTION

Restricting access to chemicals used to produce synthetic drugs restricted supply and caused displacement of methods and sources of production.

According to the United Nations Office on Drugs and Crime, the Netherlands is one of the major world producer and exporter of synthetic drugs. In 2008, for example, 42% of ecstasy drug that was seized globally was produced in the Netherlands. In 2008, like many police agencies worldwide, Dutch law enforcement authorities began adopting a strategy of tight control and severe restriction of access to both the precursor chemicals, or raw chemicals that are essential for the production of synthetic drugs, as well as adjunct chemicals that are necessary to create the chemical synthesis during the production cycle. Access to essential hardware, special glass vessels that are needed for production of synthetic drugs, was also tightly controlled.

Policing of any criminal activity can produce a displacement phenomenon, whereby criminals alternate their methods or activities in response to an increase of policing activities. Displacement may occur in different forms:

- 1) *spatial displacement* (new locations are sought by criminals);
- 2) *temporal displacement* (criminals commit crimes at different times);
- 3) *offense displacement* (criminals commit different types of crime);
- 4) *methodical or tactical displacement* (criminals change their methods of committing crimes);

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- 5) *target displacement* (criminals find new targets for their crimes); and
- 6) *offender displacement* (new criminals replace the old ones).

It is generally very difficult to isolate displacement effects following an increase or change in enforcement strategies. The displacement effects of policing of individual or isolated offences can be estimated with mathematical modelling. On the other hand, the displacement effects of policing of organized crime activities are much harder to estimate due to the complex structure of those activities. Nevertheless, it is generally agreed that displacement effects never cause 100% resurgence of crime. In other words, the

displaced crime is usually not as widespread, harmful or serious as before.

To examine the displacement effects of initiatives by the Netherlands police to control and break down the synthetic drug production market in the Netherlands, three data sources were used. First, the author examined 36 large-scale investigations by Netherlands police on organized synthetic drug crimes. Second, weekly briefings with the centre for drug expertise from 2010 to 2011 were examined for details on investigations. Third, in-depth interviews with experts from the centre for drug expertise were conducted.

The crime displacement effects of three initiatives by the Netherlands police were considered for analysis. First, access to the main chemical ingredients of ecstasy and amphetamine, Piperonyl Methyl Ketone (PMK) and Benzyl Methyl Ketone (BMK) was severely restricted and controlled. When it became evident that organized crime groups began searching for other international sources of PMK and BMK, Netherlands police began cooperating with international organizations in order to secure restricted access to the chemicals. Further, contact and cooperation was sought with China and Russia – two of the major source countries for the chemicals, which led to a closure of two major BMK factories in Russia in 2007 and 2009.

Second, access to the other adjunct chemicals necessary for the production of synthetic drugs was restricted and tightly controlled. Since Belgium was one of the main source countries for these chemicals, the Dutch police set up a Quick Response project which allowed the easy sharing of information between the two countries, thus contributing to swift police response when suspicious transactions were taking place.

Third, access to special hardware such as 20-litre round-bottom flasks was restricted. Manufacturers of these vessels were made aware that supplying of these vessels for the purpose of drug production was considered illegal under Netherlands law.

These initiatives by the Dutch police, the author argues, have indeed made a significant impact on the

production of synthetic drugs in the Netherlands. The amount of ecstasy and methamphetamine seized by the Dutch police have been decreasing between 2007 and 2010, and only slightly increased in 2011 (in case of ecstasy, however, the increase began in 2010). In addition, the street price of PMK has doubled between 2008 and 2010, probably due to shortage of supply of the chemical. The number of chemical dumpsites used by drug producers to illegally dispose of the chemical waste generated during the production cycle has also decreased significantly between 2007 and 2010. Finally, according to the discussions on Internet forums, the quality of the synthetic drugs has significantly decreased, indicating the producers' inability to achieve the same concentration of psychoactive ingredients in the drugs.

While these successes to control the production of synthetic drugs are significant, there are some noticeable displacement effects that the initiative caused. First, a *methodical displacement* is noticeable when it comes to controlling and restricting access to precursor chemicals. Rather than importing PMK and BMK from other countries, organized crime groups began producing them domestically from chemicals that are readily available and not controlled. Safrole-rich oils and methyl 3-(3'4'-(methylenedioxy)phenyl)-2-methyl glycidate (MMDMG) were used to produce PMK, and BMK bisulphate was used to produce BMK through a chemical process.

Second, *spatial* and *methodical displacements* can be identified when it comes to controlling and restricting access to adjunct chemicals. The *spatial displacement* is found in the criminals switching the smuggling of the chemicals from countries other than Belgium and China. For example, Poland became an important source of adjunct chemicals.

Lastly, *spatial and methodical displacements* can be identified when it comes to the controlling and restricting access to special hardware. The *spatial displacement* can be observed when criminals began importing glass vessels from China, Poland and Germany. Further, *methodical displacement* occurred when drug producers began using different hardware, such as second-hand pharmaceutical lab equipment.

While police initiatives aimed at curbing the production of synthetic drugs may indeed have a significant impact on the production cycle, some displacement effects can occur. Measuring the impact of government initiatives on the synthetic drug market is a complex task due to numerous criminal processes involved in the production cycle. It is further difficult to establish the relationship between the measures taken and their effect because factors other than the government initiatives, such as the evolving nature of consumer markets, may come into place. In addition, data on drug markets is usually aggregated and only becomes available with time, sometimes measured years after the collection. This would severely impede the required response on behalf of law enforcement authorities. Finally, there is a danger of drawing a causal link where there is none. The classic example in this case is when police forces invest more into crime investigation, it would ultimately lead to discovering more crime; this, however, does not mean that more intense fights against crime lead to increases in crime.

Vijlbrief, M. F. J. (2012). "Looking for Displacement Effects: Exploring the Case of Ecstasy and Amphetamine in the Netherlands." *Trends in Organized Crime*, 15,198-241.

## VIOLENCE, ORGANIZED CRIME, AND ILLICIT MARKETS

Illicit drug markets that are considered to be stable can experience conflict and violence if an organized crime group challenges their entrance to or monopoly of the market.

It has long been established that lethal and non-lethal violence is usually present where organized crime elements are active in illicit markets. In Canada, organized crime-related homicides became a serious issue in the past two decades. The rate of organized crime-related homicides increased from 13 in 1993 to 138 in 2008 according to police-reported data. Despite the seriousness of the issue, there has been little empirical research that connected organized crime violence with illicit markets.

From a theoretical standpoint, the extent of stability in an illicit market of any kind is an important contributor to the presence or absence of violence. Markets that are

stable function in a business-like manner, where the sellers and the buyers engage in a more or less business operations. The relationships between the producers, suppliers, sellers, and customers are clearly defined and understood by all. Deviant behaviour is punished by actions that are understood and accepted by all. Because of this stability, these types of markets are not typically characterized by violence.

On the other hand, in unstable markets, especially newly emerging markets, the relationships between market participants are not clearly defined and are oftentimes in conflict. Entrepreneurs and freelancers are more likely to participate in unstable markets with an aim to secure larger shares of the market. Competition is prevalent among these entrepreneurs and more established operators in the market, thus further destabilizing the market and ultimately leading to violence.

Thus, markets that have established operators and function in a business-like manner tend to be more stable and much less violent than markets that are new or emerging, where competition over market share is present. Further, markets that are of a monopolistic or oligopolistic nature tend to be more stable and less violent compared to markets where more than one person or group is in control of the market operations.

The author uses the so-called "biker war" in the province of Québec, and in particular in the city of Montreal between 1994 and 2001, as a case study to test the theory that connects organized crime violence to illicit markets. The chronology of events that led up to the eruption of violence in 1994 and followed suit, demonstrate that the cocaine market in Québec in 1980's and early 1990's was of an oligopolistic nature. Four organized crime groups – the Hells Angels, the West End Gang, the Rizutto mafia family, and the Colombian drug cartels – participated in the cocaine market with roles and boundaries clearly defined and agreed upon. These organized groups oftentimes worked in conjunction with each other and even cooperated in their illicit activities. It could therefore be argued that the cocaine market in Québec in the 1980's and early 1990's was stable with very little violence.

The violence erupted in 1994 with a murder of a member of a Hells Angels affiliated gang. What followed was a series of retaliation attacks that eventually evolved into an all-out biker gang war. Analysis of these events reveals that the extreme violence was driven mainly by the Hells Angels' new strategic objective of consolidating and monopolizing the cocaine market in Montreal and eventually in the province of Québec. This drive for a monopoly of the market was met with resistance from both the existing organized crime groups who did not want to lose their share of the market, as well as freelancers who saw an opportunity to meet elements of market demand.

It would be incorrect to conclude that the violence caused by biker wars between 1994 and 2001 stemmed from instability of the cocaine market in Québec, either due to overseas supply issues or law enforcement actions. The market was rather stable prior to the eruption of the violence. Instead, it could be argued that it was one group's drive to monopolize the cocaine market that caused the violence. In this sense, the case study of the Quebec biker wars shows that markets of monopolistic or oligopolistic nature can indeed become unstable and experience violence. The monopolistic or oligopolistic market conditions restrict competition, which is one of the main traits of illicit markets. Organized crime groups will always want to enter and compete in the drug market simply due to their illicit profit seeking motivation. When these groups challenge their business goals, conflict and violence can follow suit.

Schneider, S. (2013). "Violence, Organized Crime, and Illicit Drug Markets." *Sociologia, Problemas e Practicas*, 71, 125-143.

## ESTIMATE OF THE UNDERGROUND SEX TRADE STRUCTURE AND ECONOMY

Illicit sex work operations are small and specialized, but facilitated by a surprisingly wide business network; with some overlap with larger criminal organizations.

The underground commercial sex economy (UCSE) is a large and pervasive illicit market that accrues millions of dollars annually, yet challenges prevent an

accurate estimate of its exact cost and little is known regarding its market structure. The current study offers a potentially more rigorous method for estimating the UCSE while also examining the structure of the underground sex industry.

Eight major US cities were included in the study: San Diego; Seattle; Dallas; Denver; Washington, DC; Kansas City; Atlanta; and Miami. A multi-method approach was conducted involving interviews and discussion with law enforcement and prosecutors, interviews with convicted offenders that included pimps or sex traffickers, sex workers, and child pornographers. This was combined with a quantitative analysis based on knowledge about the UCSE gathered from these interviews and comparisons to the size of illicit drug and gun markets in the respective cities in order to derive a more rigorous estimate of existing UCSE size.

Among the key findings are that the UCSE in 2007 ranged from \$39.9 to \$209 million in each of the cities included in this study and that the size of the underground sex industry decreased from 2005 to 2007 in five of the eight cities assessed. The weekly income of pimps and sex traffickers ranged from \$5,000 to \$32,833. Due to the limitations in being able to contact people working in this illegal arena and the lack of exact information, the results are potentially underestimations of actual incomes and market sizes.

While no concrete evidence linked illicit weapons trafficking with underground sex markets, the same is not true for illicit drug markets which do share a relationship with certain, not all, underground sex market venues. Specifically, 25% of pimps from street and Internet sex work venues were involved in the drug trade prior to the sex trade, and 18% continued to work in both illicit markets.

Although the pimps interviewed claimed inaccuracy in media portrayals of their use of violence to control sex workers, many admitted to psychological coercion. They adjust their tactics, promising either romantic interest or material comforts, and fostering a sense of mutual dependency contingent upon the vulnerabilities they would spot and exploit in their workers. Furthermore, pimps see the sex trade as comprising

less risk to them than drug trafficking or other forms of crime (e.g., lower risk of arrest, less risk of violence).

The coercion tactics of pimps are not the only reason people get involved in the sex trade. Interviews with sex workers revealed that friends and family can act as “drivers” in introducing people into sex work. Findings indicated that pimps and sex workers joined the sex trade for similar reasons: financial reasons or lack of job options, neighborhood exposure, and pressure from a significant other or peer. Sex workers cited additional reasons, including childhood trauma and social acceptance as critical factors for participating in the sex trade.

Another key finding is that the UCSE supports and is benefited by a larger social network than first thought. Drivers, nannies, and secretaries, among other non-sex workers, are employed to facilitate the running of the UCSE. Organized crime organizations such as street gangs often assist the relatively independent pimps for the sake of mutual financial benefits.

Among key results is that the Internet is changing the UCSE market. The accessibility of the Internet expands the boundaries of the ability of the UCSE to recruit and advertise. Most common methods used include online classifieds such as Craigslist.com and Backpage.com, social media, and networking websites. While the use of the Internet expands the ability of the UCSE to promote the sex trade, it also allows law enforcement to better track UCSE activity.

While the Internet provides opportunities for law enforcement to track UCSE, it also has allowed child pornography to flourish. Results regarding child pornography indicate that it is easily accessible online, requires little effort for offenders to access material, traverses international borders and is expanding child pornography offending substantially.

Furthermore, the content of child pornography appears to be including younger victims, including toddlers and babies. While many child pornography offenders interviewed expressed wanting treatment, a large number, specifically the non-contact offenders, view it as a “victimless” crime.

The authors suggest that employing the following strategies could assist in best measures in targeting the underground commercial sex trade and deterring it:

- Cross-train drug, sex, and weapons trade investigators to better understand how these markets and offenders overlap.
- Establish federal and local partnerships to identify pimps and disrupt travel circuits.
- Train law enforcement in victim and offender interviewing techniques, sensitizing them to the signs of psychological manipulation.
- Deter victimization and entry by increasing awareness among the general public, particularly school officials, about the realities of sex trafficking.
- Diminish the perception that offending of this type is low-risk, by consistently enforcing sex work and sex trafficking laws.
- Impose fines on websites that host sex work advertising.

Dank, M., Khan, B., Downey, P. M., Kotonias, C., Mayer, D., Owens, C., Pacifici, L., & Yu, L. (2014). “Estimating the Size and Structure of the Underground Commercial Sex Economy in Eight US Cities.” *Urban Institute*. Accessed March 18, 2015 from: <http://www.urban.org/UploadedPDF/413047-Underground-Commercial-Sex-Economy.pdf>

## TRENDS IN GUN CARRYING AND ILLICIT DRUG MARKETS

Methamphetamine and multi-commodity drug markets operating out of residences have the highest probability of gun related violence.

The illicit drug market is one that has little to no means for legal avenues to resolve disputes. It is a market fraught with robbery, territory disputes, debt enforcements, and retaliates “against perceived slights and disloyalty” (2). Lacking viable legal means to resolve these issues, gun carrying is used by some drug traffickers to illegally protect their business.

The authors identify theories and factors in gun carrying among drug traffickers from prior research. The psychopharmacological model suggests gun violence arises from the use of drugs that cause disinhibition or excitement or heavy use of drugs that

can lead to violent behaviour. Research, however, shows mixed support for this model.

The economic-compulsive model submits that gun related violence occurs because of criminal activity deemed necessary by drug traffickers to facilitate their illegal market in the acquisition of drugs and cash. Little research exists in support of this model and what research does exist indicates that this model is potentially a weak predictor of gun carrying.

The systemic model purports that gun carrying in drug markets “is a function of the conflicts that occur among market actors due to territorial disputes, street-code enforcement, and drug dealer robberies and retaliation—conflicts that are very often resolved with guns” (3). The model contains two sets of factors. First are defensive factors, such as gun carrying due to fear of victimization, threat of violence, and presence of armed competitors, that contribute to self-protective motivations. The second set of factors are based on offensive motivations, such as predatory and aggression factors. The empirical research to support this model, however, is mixed, showing different types of factors predictive of gun carrying while other research does not.

A sub-cultures model suggests that “a common set of background factors, such as acculturation within a deviant lifestyle or subculture” contributes to gun carrying and violence in drug markets (3). Empirical research has found that risk factors, including age, ethnicity, trouble in school, interpersonal risk factors, and identifying with “code of the street,” were predictive of occurrences of gun-drug connected violence.

Empirical research demonstrates that structural and contextual factors are associated with the gun-drug nexus of violence. These risk factors include “the type and value of the drugs sold, the point in the chain of distribution, and the level of gang or organizational involvement” (4). Research shows that the likelihood of gun violence increases based on type of drug. For example, the highly competitive and transient markets for crack cocaine and methamphetamines are the highest predictors of gun violence. Other research demonstrates that the higher the value of the drug, the

greater the likelihood of gun carrying, and the lower an individual is in the supply chain, the more likely they are to carry a gun.

To determine the structure of gun carrying among drug market participants, the authors quantitatively assessed drug market features and offender characteristics based on data from the 2004 Survey of Inmates in State and Federal Correctional Facilities (SISFCF) in the US. The sample comprised 4,765 convicted drug offenders in total.

Findings indicate that gun carrying among drug market participants is a low occurrence. Results showed that only a small proportion of drug offenders carried a gun during a drug offence (7%). Despite this figure, violence in the drug market persists. Factors associated with gun carrying include psychopharmacological and economic-compulsive factors. For instance, 41% of offenders were under the influence of illicit drugs at the time of the offence compared to 20% of offenders who had used alcohol.

In examining protective factors, it was found that drug market participants that were previously victimized or threatened were more likely to carry a gun. Similarly, support was also found for predatory factors in that those with prior weapon convictions were more likely to be carrying guns. However, having prior violent convictions did not increase the likelihood of gun carrying among drug market participants, providing mixed results for the predictive influence of predatory factors in gun carrying within drug markets.

Unlike what previous research has indicated, the researchers found that crack cocaine dealers were among those that carried guns less often. Methamphetamines and multi-commodity drug offenders had over twice the probability of carrying a gun and taking part in gun-drug violence than a crack cocaine offender.

Results showed mixed support for structural and contextual factors. In line with previous research, offenders with higher quantities of drugs had 81% greater odds of carrying a gun than those of lowest quantity levels. However, outdoor transactions between strangers and at night did not show greater tendencies

of gun carrying drug related violence than other factors, contrary to previous research. Results did show that offenders who operated out of their residence were more likely to carry guns than offenders that operated in other venues.

Based on these findings, the authors make a number of recommendations. Targeting emerging and existing multi-commodity drug markets is recommended to deter lethal violence. Furthermore, drug market interventions that use a “pulling levers” approach may prove more effective in reducing drug-related gun violence by targeting places where a gun-drug nexus is most likely to occur, such as residential areas where drug marketing is most likely to result in gun carrying drug-related violence. For instance, conducting lawful search and seizure of weapons in targeted residential areas may prove helpful in deterring drug-gun violence. Lastly, providing clear drug desistance messages and substance abuse programs might assist in reducing gun carrying violence in illicit drug markets.

Sevigny, E. L., & Allen, A. (2014). “Gun Carrying Among Drug Market Participants: Evidence from Incarcerated Drug Offenders.” *Journal of Quantitative Criminology*, 71,1-24.

## ANONYMOUS ONLINE MARKETS FOR ILLEGAL DRUGS

Online marketplaces are changing the way drugs are trafficked. Sales are a mix of business-to-business and direct-to-consumer transactions.

Silk Road was a cryptomarket for illicit drug trade that ran successfully for over two years until it was seized by the FBI. By examining Silk Road’s transactions, the authors were able to determine the type of business it ran, the type of buyer who used it, and if it was a business-to-consumer marketing vehicle (i.e., “an eBay for drugs”).

The authors describe a cryptomarket as an online market that employs strategies “to hide the identity of its participants and transactions, and the physical location of its servers” (4). This is achieved through the use of anonymization services to obscure computers IP addresses when accessing the site, use of “cryptocurrencies like Bitcoin and Litecoin” (4) to

conduct transactions that are difficult to trace, and encrypted communications between the online service and purchasers.

Silk Road is described by the authors as a ‘transformative criminal innovation’ because it transcended geographical restrictions and physical boundaries by allowing local drug dealers to: (a) sell to a geographically dispersed market worldwide; (b) access a larger customer base; (c) buy and sell anonymously; and (d) conduct illegal drug trading in an environment low in risk of violence from drug market participants or detection by law enforcement (4). By creating a worldwide, low risk marketplace that allowed for anonymous transactions, cryptomarkets such as Silk Road are considered to have substantially altered the paradigm of illicit markets.

To determine if Silk Road was a ‘business-to-customer’ marketplace as previously asserted, the authors assessed available transaction data. Their examination included price values and ranges, number of transactions per day per listing, yearly revenue, market shares, and quantities sold. Their aim was to understand better what services the cryptomarket provided, to ascertain if dealers, not only individuals buying drugs for personal consumption, used the cryptomarket, and to determine the revenue of Silk Road operators.

Results showed that while Silk Road did have transactions low enough in quantity to denote the drugs were being purchased for personal use, data collected also indicated that large quantities were being bought by drug dealers. That Silk Road was strategically geared towards drug dealers was shown by the offer of significant discounts when buying in bulk. Furthermore, Silk Road facilitated the sale of precursors, that is, chemicals and other ingredients used to create drugs. Therefore, Silk Road sellers generated profit not only from personal drug users and drug dealers, but also from drug producers.

The monthly revenue for Silk Road over the 15 months had grown from \$14.4 million USD to \$89.7 million. The increase in revenue in just over a year was over 600%. The substantial increase in revenue in such a short period was considered by the authors to indicate a

significant demand for illicit marketplaces such as Silk Road. It was assessed that 31 to 45% of all Silk Road's revenue was due to sales to drug dealers, indicating it is also a significant business-to-business (B2B) market and not solely a business-to-customer market. Instead, results indicate illegal businesses were key players for this kind of market, sourcing stock and buying large quantities in bulk.

The authors suggest that the existence and demand of cryptomarkets such as Silk Road may significantly alter drug markets. Buyers may change what they choose to purchase based on 'feedback ratings' and what is available online. Also local dealers may be able to access types of illicit drugs they would not have been able to previously, thus changing the local illicit drug markets based on online availability.

Silk Road is only one example of a cryptomarket. Many exist and the authors point out that drugs are not the only illicit market out there. Cryptomarkets selling stolen credit cards, money laundering services, contract killing, illicit weapons and ammunition, stolen or fraudulent documents for identity theft or fraud, child pornography, even plagiarized essays, are all up for bids in this rapidly growing criminal arena. For criminologists and researchers to better understand this transition, the authors recommend applying 'webometrics' (Thelwall, 2009) to better analyze these types of online criminal undertakings. More research on online illicit markets may assist in informing law enforcement on policies and strategies that could help lead to arrests.

Aldridge, J., & Décary-Héту, D. (2014). "Not an 'Ebay for Drugs': The Cryptomarket 'Silk Road' as a Paradigm Shifting Criminal Innovation." Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2436643](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2436643)

Associated papers:

Thelwall, M. (2009). *Introduction to Webometrics: Quantitative Web Research for the Social Sciences*. Vol. 1, *Synthesis Lectures on Information Concepts, Retrieval, and Services*.

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