Cannabis in the Digital Age: Understanding the Dynamics of Cannabis Distribution in the UK

Youth, Drugs and Alcohol Social Science Approaches

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Introduction

This paper will engage with question three and concentrate on the theme of drug markets. The illicit drug market is essential to drug consumption and distribution. Further, it reflects the drug control efforts (Buxton & Bingham, 2015; Babor et al., 2018). In terms of region, this paper will tackle the United Kingdom (UK) for its extensive existing research and its global supply chain of drug markets. This paper argues that the landscape of the UK cannabis market, shaped by digitalisation and social supply networks, poses significant challenges for law enforcement and public health agencies, thus, innovative responsive strategies are essential. Firstly, this paper will provide a case study of the UK cannabis market, identifying the key themes and topics for this paper. Secondly, the discussion will shift to the theoretical fields that include multi-disciplinary contributions and focus on the recent dynamics of digitalised cannabis distribution. Then the analysis will primarily tackle how academics and law enforcement should respond to this development and how youths were affected by it. Lastly, the paper will critically discuss the strengths and limitations of current research on the cannabis market, particularly criminology and economics.

Case study of the UK Cannabis Drug Market

Cannabis is the most widely used illicit drug in the UK (Smith & Flatley, 2011). According to British official statistics (2024), the police and border forces in England and Wales made approximately 140,370 seizures of cannabis in 2022/23. This number contributed to 73 per cent of the total seizures, while the second most common drug, Powder Cocaine was only seized by the police 18,978 times. Therefore, the Cannabis Drug Market is arguably the most significant type of illicit drug market and thus will be the focus of this paper.

The social and economic costs of the illegal drug trade are assessed to be £10.7 billion per year (HM Government, 2017). In the UK, most illicit drugs are categorised into three groups Classes A, B, and C, based on their threats to society under the Misuse

of Drugs Act 1971 (Baika & Campana, 2020). Compared to Cocaine, Heroin and Ecstasy, which are Class A illegal drugs, Cannabis is not viewed as equally harmful and therefore it is classified as a Class B drug. However, it does not imply that Cannabis is relatively harmless or has less influence on society.

According to May & Hough (2004: 554), the distribution system which imports or produces and then distributes the products is essential to the existence illicit drug market. Therefore, an illicit drug market could be understood from diverse aspects, such as supply, demand, consumption, market space, policing, legislation, and stigmatisation. This essay will primarily tackle the drug distribution system within the Cannabis Market. Specifically, the following sections will unpack the structure, actors and price of the Cannabis distribution system.

Scholars have researched the UK Cannabis Drug Market and its drug distribution system extensively. In terms of actors in the system, Chatwin & Potter (2014) indicated that the overlapped identity of Cannabis suppliers and users at the bottom level of the UK Cannabis Market. In addition, Baika & Campana (2020) explored the Gwent Drug Market in Wales and argued that the drug distribution system is overall fragmented. It indicated that the cannabis distribution in the UK is not highly structured or pyramidal. Moreover, organised crime groups are primarily trading heroin and cocaine since they are more profitable. Cited in Baika & Campana (2020: 121), less than 25 per cent of organised crime group members are dealing cannabis. In addition, Babor et al. (2018: 77) indicated that the retail distribution of cannabis mostly happened within friendship networks. Therefore, it is rational to believe that the distribution of cannabis in the UK heavily relies on social supply.

Coomber et al. (2016) reflected on the social supply research in the UK from the 1980s, arguing that social supply involves strong social ties and distinguishes itself from the commercial profit-oriented supply processes. More importantly, more efforts to examine and explain the social supply are necessary. According to May & Hough (2004: 551), friendship-based cannabis supply generally happens in closed market

settings. Furthermore, Bræmer & Søgaard (2023) recorded similar patterns in the Danish context. Therefore, the following sections will primarily analyse the closed market and social supply of the UK cannabis distribution system.

In summary, this section narrowed and justified the scope of this paper. Throughout this section, a wide range of evidence has been presented to indicate the necessity to study the Cannabis Market, the distribution system behind it, its social supply, and the closed-market spaces. The following sections will further engage and discuss these mentioned topics and concepts.

Theoretical Framework and the Key Topics

On the topic of the UK Cannabis Market, various researchers have studied it from multiple disciplines including Economics, Criminology, Law and Criminal Justice, Public Health, and Medical. Within the academia, researchers have recognised the recent dynamics of digitalised and online forms of the cannabis market. The coming paragraphs will unpack the online cannabis market with the concepts of social supply, closed-market spaces and the pricing system of illicit drugs.

The structure of cannabis markets radically transformed over the last decades. Cited in Barrat and Aldridge (2016) and Moyle et al. (2019), illicit drug markets moved from the early use of IRC chats in the 1990s to darknet crypto markets and currently to social media and encrypted applications in the late 2010s. For example, the United States prosecuted a Canadian CEO, Vincent Ramos for providing criminal organisations with encrypted infrastructure for drug distribution (UNODC, 2024). Ramos's company, Phantom Secure, sold modified BlackBerry phones that enabled encrypted messaging, which criminal groups used for drug trades (ibid.). The key challenge in convicting him was that Phantom Secure's products were not fundamentally different from anonymous chat software such as Snapchat and Telegram. Therefore, it could be realised that social media and messaging applications are facilitating contemporary cannabis distribution and trade. Moyle et al. (2019) also captured this trend and further indicated that

applications provide a notably accessible platform for users to connect with drug suppliers and other substances. As a result, the cannabis market is becoming increasingly intangible and discreet, imposing challenges to policing.

However, Duffy et al. (2008) argued that the social supply instead of purchases from drug dealers consists of a large part of users' cannabis consumption. In their analysis, social supply is an alternative means of accessing drugs compared to commercial illicit drug markets. More explicitly, the prevalence of social supply will undermine the importance of studying the online illicit drug market, because social supply generally does not involve violence or profit-driven motivation (Taylor & Potter, 2013). In contrast to the above argument, Potter (2009) indicated that within the social supply networks, somebody must be engaging with larger-scale traditional dealers at some point, therefore social supply is not separate from the wider market. As a result, instead of considering social supply independent from the illicit drug market, it is better to consider it as an extension of the illicit drug market.

According to Chatwin & Potter (2014: 538), research on the cannabis market widely agreed that illicit cannabis is supplied within a "closed" market. May & Hough (2004: 550) referred "closed" market as a setting where sellers and buyers will only do business if they know and trust each other. In comparison, an "open" market is where drug dealers are open to selling to any buyer, with no barriers to access (Hough & Natarajan, 2000: 4). Cited in Taylor & Potter (2013: 401), the essence of the social supply of cannabis is closed. Among their participants: "None of the suppliers sold to strangers; new customers would be gained through a process of introduction by trusted friends". Closed markets demonstrate significant resistance to conventional and aggressive law enforcement methods (Chatwin & Potter, 2014). This is largely because the close market network is safeguarded by trust. For dealers, selling to friends is a form of risk management, reducing the possibility of being reported to the police as well as theft of goods (Werse, 2008; Potter, 2009). The closed market also benefits customers

by ensuring that products are of high quality and quantity, while reducing the risks of being sold counterfeit drugs (Taylor & Potter, 2013).

Criminological research has addressed the different models of drug distribution structures and their implications for the security of illicit drug trade (May & Hough, 2004; Murji, 2007). Based on security concerns, scholars indicated that drug dealers would occasionally prioritise network security over the efficiency of drug distribution (Bouchard, 2007; Benson & Decker, 2010). Examining the perspective of prices, economists argued that the risk of getting arrested gradually contributed to increasing prices as the illicit drugs moved down the supply chains (Reuter and Kleiman, 1986; Caulkins and Reuter, 2010). They use the term "risk compensation" to suggest that the participants in the distribution system all demand compensation equivalate to the expected value of the risk they took. For example, suppose drug smugglers faced a ten per cent chance of receiving fourteen years prison term, and their willingness to pay to avoid such prison term is £100,000. They indicated the smugglers would demand half of £100,000 in addition to the regular compensation for traditional factors such as effort and time. Payment for risk compensation of that size could significantly raise the expenses associated with drug distribution, leading to higher drug prices. Cited in Caulkins (2014: 19), although the prices of a marijuana joint are quite affordable (around three dollars) in most Western nations, that price still increased by over one thousand per cent compared to source countries. According to Babor et al. (2018: 80), the most noticeable mark-ups typically happen when drugs are transported across international borders, while the most significant absolute price increases happen within wealthy consumer countries. Similarly, Boivin (2014) indicated that drug prices increase more sharply when drugs are headed to countries where law enforcement imposes higher costs on traffickers.

The conventional wisdom generally assumed that tougher policies on drugs would push up the price considerably and eliminate drug consumption. This traditional viewpoint is based on deterrence theory (Gibbs, 1968; Moeller et al., 2016), which

offers a framework to explain how drug sellers respond to law enforcement with strategic, temporal and geographic adjustments. Closed marketspaces and only dealing with familiar partners demonstrate this response of drug sellers. Moreover, the crypto markets and the online markets could better illustrate this. A growing share of illicit drug transactions has moved to online markets, where the technology provides anonymous communication and payment methods (Moeller et al., 2017). The traditional viewpoint does not predict the reality where drug prices often fall when the enforcement intensity increased (Grossman et al., 1998; Caulkins & Reuter, 2010). There are two possible explanations for this phenomenon: on one hand, based on the increasing expected risk of drug dealing, drug dealers are willing to sell the products they possess fast to avoid being seized by the police in the near future. On the other hand, dealers are willing to sell at lower prices to drug users in more disadvantaged groups, thus reducing the risk of being arrested.

In summary, the theoretical framework surrounding the UK cannabis market showcase a complex and evolving landscape. Researchers from diverse fields have documented the significant shift from traditional drug distribution methods to digital and online platforms. This transformation has introduced new challenges in policing and drug control due to the discreet nature of online transactions facilitated by social media and encrypted applications. The prevalence of social supply adds another layer of complexity, suggesting the necessity to view it as a crucial component of the broader illicit drug market rather than a separate entity.

The concept of closed-market spaces, characterised by trust-based transactions among familiar partners, underscores the resilience of these networks against conventional law enforcement strategies. Furthermore, the economic implications of risk compensation demonstrate how enforcement efforts can influence drug pricing dynamics unintentionally. The paradox of declining drug prices amid intensified enforcement highlights the adaptive strategies of drug dealers, who prioritize rapid distribution and targeting less risky customers, which demonstrates the reason for the

digitalisation of illicit drug markets. Overall, this section illustrated complex relations between digital innovation, market structures and enforcement strategies within the contemporary cannabis market, and built a strong foundation for further discussion.

Original Analysis: Trends in Online Cannabis Market

The online cannabis market introduced a hybrid of traditional and modern distribution channels, blending physical and digital elements into the drug distribution system. In contrast to the observed straightforward supply chains or the pyramidal structure illicit drug market in the past, the contemporary cannabis market is characterised by its high level of mobility and fragmentation. Digital platforms enable a strong connection between individual social supply networks and larger commercial distribution systems. This hybrid and complexified structure reflect a significant shift in market dynamics, where the traditional boundaries between social and commercial supply are increasingly blurred. This means that academics need more innovative methodologies, data-gathering approaches, and analytical perspectives to capture the newest trend in the illicit drug market.

Technological advancements have not only transformed the cannabis market but have also necessitated a paradigm shift in policing strategies. Western countries have widely shifted the policy focus from criminalisation and drug control to harm reduction and rehabilitation. I understood the arguments supported this shift; however, I argued that the efforts combatting drug dealing, smuggling and trafficking are still essential and therefore should not be reduced. Traditional enforcement methods are inadequate for encrypted communications and decentralised networks (Moyle et al., 2019). Therefore, law enforcement agencies must now increase their investment in cyber capabilities, including digital forensics and cyber intelligence. More importantly, global cooperation is essential to combatting drug trafficking networks and eliminating the drugs imported from neighbouring countries. For instance, a large portion of illicit drugs in the UK is imported from Ireland (Hourigan et al., 2018), while Mexico is the most significant source country for illicit drugs in the United States (Puyana et al.,

2017). If the policing strategy does not address the supply chains across the broader, it simply fails. Another challenge lies in balancing the need for effective enforcement with the protection of civil liberties and privacy rights. This balancing act is crucial in a digital age where the boundaries between personal privacy and law enforcement are continually tested.

Consumers in the evolving cannabis market are also worth noticing. The convenience of online purchasing, combined with the anonymity provided by digital platforms, has attracted a new demographic of consumers who may have been hesitant to engage in physical transactions. This shift has implications for public health and safety, as it necessitates new approaches to education, prevention, and harm reduction. Understanding the motivations and behaviours of online cannabis consumers is critical for developing targeted interventions that can effectively address the risks associated with digital cannabis use. Considering the youth population in this trend, youths are more likely to be exposed to pro-cannabis content, including posts from peers who glamorise or normalise cannabis use. This can create a social environment where cannabis use is perceived as acceptable or even desirable, further encouraging experimentation among young people. In addition, the sophisticated marketing techniques used in digital advertising can make cannabis products appear appealing and harmless, undermining public health messages about the risks associated with cannabis use.

Discussion of strengths and limitations

Regardless of the researchers' discipline, the most prevalent and prominent shortcoming of their research is the lack of explanatory power to the drug market on a different scale or region. This is due to the extreme heterogeneity of the drug market and its distribution system. According to Ritter (2006), the single discipline research should be strengthened to develop knowledge of particular issues of drug markets, however, the approach to studying the drug market is inevitably multi-disciplinary.

For the criminological and economic literature primarily covered in this paper: the economists offered great descriptive research insights and robust analysis of the complex drug market (ibid.). However, economic research generally tackled the broad and abstract drug market and almost failed to explain the prevalent phenomenon of social supply. Additionally, economic research is relatively not accessible for most people, since there is a certain barrier to understanding the numbers in economic articles. Criminologists as a heterogenous academic community, would adopt a wider range of theories and approaches to data gathering compared to economists. Therefore, criminological research showed a higher level of accessibility than economic research. In addition, the criminological approach to the drug market is more holistic and nuanced since it often involves fieldwork and interviews in the data-gathering process or could introduce more theories from relevant disciplines to explain crimes and offence in drug markets.

Conclusion

In summary, the evolution of the cannabis market in the UK, significantly influenced by digitalisation and social supply networks, presents concerns for law enforcement and public health departments. This paper has explored the complexities of the illicit cannabis distribution system, emphasising the blurring lines between traditional and digital markets, as well as the critical role of social supply. The relationship between closed-market settings and trust-based transactions highlights the resilience of these networks against conventional policing strategies. Moreover, the shifting consumer dynamics, particularly among youths, raise critical concerns about the accessibility and normalisation of cannabis use through digital platforms. As the landscape continues to evolve, academics and law enforcement need innovative methodologies and comprehensive approaches to achieve the United Nations drug control agendas. Ultimately, recognising the impact of digitalisation on the cannabis market is essential for developing strategies that protect public health while effectively managing the challenges of illicit drug distribution. Online and hybrid drug markets will become more mainstream and attract more sellers and users in the future.

Reference List

Babor, T., Caulkins, J., Fischer, B., Foxcroft D., & Humphreys, K. (2018). *Drug Policy and the Public Good.* Oxford Academic. https://doi.org/10.1093/oso/9780198818014.003.0005

Baika, L., & Campana, P. (2020). Centrality, Mobility, and Specialization: A Study of Drug Markets in a Non-metropolitan Area in the United Kingdom. *Journal of Drug Issues*, 50(2), 107-126. https://doi-org.ucd.idm.oclc.org/10.1177/0022042619891962.

Barratt, M. J., & Aldridge, J. (2016). Everything you always wanted to know about drug cryptomarkets*(* but were afraid to ask). *International Journal of Drug Policy*, 35, 1-6.

Boivin R. (2014). Risks, Prices, and Positions: A Social Network Analysis of Illegal Drug Trafficking in the World-economy. *The International journal on drug policy, 25(2)*, 235–243. https://doi.org/10.1016/j.drugpo.2013.12.004

Bræmer, M. H., & Søgaard, T. F. (2023). "Do You Need Someone to Share With?": Exchange and Demand Sharing in Social Cannabis Supply. *Contemporary Drug Problems*, 50(1), 46-62. https://doi.org/10.1177/00914509221146794.

Buxton, J., & Bingham, T. (2015). The Rise and Challenge of Dark Net Drug Markets. *Policy Brief*, 7(2), 1-24.

Caulkins, J. P., & Reuter, P. (2010). How Drug Enforcement Affects Drug Prices. *Crime and Justice*, 39(1), 213–271. https://doi.org/10.1086/652386.

Caulkins, P. (2014). "Effects of Prohibition, Enforcement and Interdiction on Drug Use." In J. Collins. (Ed.), *Ending the Drug Wars: Report of the LSE Expert Group on the Economics of Drug Policy*(pp. 16- 32). LSE IDEAS, http://www.lse.ac.uk/IDEAS/publications/reports/pdf/LSE-IDEAS-DRUGS-REPORT-FINAL-WEB01.pdf.

Chatwin, C., & Potter, G. (2014). Blurred Boundaries: The Artificial Distinction Between "Use" and "Supply" in the U.K. Cannabis Market. *Contemporary Drug Problems*, 41(4), 536-550. https://doi.org/10.1177/0091450914567120.

Coomber, R., Moyle, L., South, N. (2016). Reflections on three decades of research on 'social supply' in the UK. In: Werse, B., Bernard, C. (eds) *Friendly Business*(pp. 13-28). *Springer VS, Wiesbaden.* https://doi.org/10.1007/978-3-658-10329-3_2.

Duffy, M., Schafer, N., Coomber, R., O'Connell, L., & Turnbull, P. (2008). *Cannabis supply and young people: 'It's a social thing'*. York, UK: Joseph Rowntree Foundation.

Gibbs, J. P. (1968). Crime, Punishment, and Deterrence. *The Southwestern Social Science Quarterly*, 48(4), 515-530.

Grossman, M., Chaloupka, F. J., & Anderson, R. (1998). A Survey of Economic Models of Addictive Behavior. *Journal of Drug Issues*, 28(3), 631-643. https://doi.org/10.1177/002204269802800304.

HM Government (2017). 2017 Drug Strategy. London: Home Office.

Home Office (2024) *Seizures of drugs in England and Wales, financial year ending 2023.* Home Office Statistics. Available at: https://www.gov.uk/government/statistics/seizures-of-drugs-in-england-and-wales-financial-year-ending-2023#full-publication-update-history (Accessed 24 July 2024).

Hough, M., Natarajan, M. (2000). Introduction: Illegal drug markets, research and policy. In Natarajan M., Hough M. (Eds.), *Illegal drug markets: From research to prevention policy, Crime Prevention Studies*, 11, (pp. 1- 18). Monsey, NY: Criminal Justice Press.

Hourigan, N., Morrison, J., Windle, J., & Silke, A. (2018) Crime in Ireland North and South: Feuding Gangs and Profiteering Paramilitaries. *Trends Organized Crime*, 21, 126-146. https://doi.org/10.1007/s12117-017-9312-9.

May, T., & Hough, M. (2004). Drug markets and distribution systems. *Addiction Research and Theory*. 12(6), 549-563.

Moeller, K., Copes, H., & Hochstetler, A. (2016). Advancing restrictive deterrence: A qualitative meta-synthesis. *Journal of Criminal Justice*, 46, 82-93. https://doi.org/10.1016/j.jcrimjus.2016.03.004.

Moeller, K., Munksgaard, R., & Demant, J. (2017). Flow My FE the Vendor Said: Exploring Violent and Fraudulent Resource Exchanges on Cryptomarkets for Illicit Drugs. *American Behavioral Scientist*, 61(11), 1427-1450. https://doi.org/10.1177/0002764217734269.

Moyle, L., Childs, A., Coomber, R., & Barratt, M. J. (2019). #Drugsforsale: An exploration of the use of social media and encrypted messaging apps to supply and access drugs. *International Journal of Drug Policy*, 63, 101-110.

Murji, K. (2007). Hierarchies, Markets and Networks: Ethnicity/Race and Drug Distribution. *Journal of Drug Issues*, 37(4), 781-804. https://doi.org/10.1177/002204260703700403.

Potter, G. (2009). Exploring Retail-level Drug Distribution: Social Supply, "Real" Dealers and the User/Dealer Interface. In Z. Demetrovics, J. Fountain, L. Kraus (Eds.), *Old and New Policies, Theories, Research Methods and Drug Users Across Europe*(pp. 50- 74). Pabst Science Publishers.

Puyana, J. C., Rubiano, A. M., Montenegro, J. H., Estebanez, G. O., Sanchez, A. I., & Vega-Rivera, F. (2017). Drugs, violence, and trauma in Mexico and the USA. *Medical Principles and Practice*, 26(4), 309-315. https://doi.org/10.1159/000471853.

Reuter, P., & Kleiman, M. (1986). Risks and Prices: An Economic Analysis of Drug Enforcement. *Crime and Justice*, 7, 289–340. https://doi.org/10.1086/449116.

Ritter, A. (2006). Studying illicit drug markets: Disciplinary contributions. *International Journal of Drug Policy*, 17(6), 453-463. https://doi.org/10.1016/j.drugpo.2006.09.004.

Smith, K., & Flatley, J. (2011). *Drug Misuse Declared: Findings from the 2010/11 British Crime Survey.* Home Office Statistics. London: Home Office Statistical Bulletin.

Taylor, M., & Potter, G. (2013). From "Social Supply" to "Real Dealing": Drift, Friendship, and Trust in Drug-Dealing Careers. *Journal of Drug Issues*, 43(4), 392-406. https://doi.org/10.1177/0022042612474974.

Unodc.org. (2024). *United States of America v. Ramos.* Retrieved from: https://sherloc.unodc.org/cld//case-law-doc/drugcrimetype/usa/2019/united_states_of_america_v._ramos_no._318-cr-01404-wqh_s.d._cal._jun_12_2019.html?lng=en&tmpl=sherloc .

Werse, B. (2008). Retails Markets for Cannabis: Users, Sharers, Go Betweens and Stash Dealers. In Korf D. J. (Ed.), *Cannabis in Europe: Dynamics in Perception, Policy and Markets*(pp. 106- 123). Pabst Science Publishers.