

Prince Sultan University
Department of Computer & Information Science

ETHIC303
Research Paper

***The Impact of The Dark Web on The Increase of The Illegal Businesses:
Weapons and Drugs***

Repaired by:

Lama Alghzzi 220410092

Norah Alrubayan 220410543

Hatoon Alsayyari 219410459

Taif Alsaloom 219410269

Danah Alsuliman 218410173

Ms. Reham Alskireen

Table of Contents

Abstract.....	3
Introduction.....	4
Literature Review.....	6
Research Methodology.....	9
<i>Ethical Issues.....</i>	<i>9</i>
<i>Survey Findings.....</i>	<i>10</i>
Conclusion.....	12
Appendix.....	13
References.....	14

Abstract

The dangers of purchasing illegal weapons and drugs on the dark web has a huge impact which results in the increase of illegal business activities. Illegal commerce on the dark web creates several ethical difficulties. The dark web is purposely concealed and anonymous. It has respectable purposes but is also known for enabling criminal activity. For example, illicit drug trade, weapons sales, human trafficking, child exploitation and identity theft. Previous research relied on data collected from dark web markets to show the quantities of illegal products on the dark web such as weapons and drugs. The studies did not explain in detail the effect of the dark web on increasing illegal businesses, but only the quantities were mentioned. To fill this gap, we use data from an online questionnaire and interview of a diverse group of 100 individuals of age 16 and above to establish the public's growing concern about the Dark Web's impact on the Increase of Illegal Businesses related to Weapons and Drugs. Also we reviewed three literature research papers which gave actual insights on different drugs and illicit firearms and other weapons available on the dark web. The findings revealed a very drastic growth of illegal drug and weapon market on dark web with around 4042 products with more than 72 drug vendors between Aug 2018 and Feb 2020, drugs are dominating the dark web market constituting around 80% of the items sold online on dark web. Concerns are raised due to this organized crime done online with anonymous identity. The Firearms available freely on the dark web around 2124 weapons, mostly handguns, raise concerns for public safety and easy access to deadly firearms. There is a need to have cybersecurity measures, strengthen law enforcement efforts and increased international cooperation to curb this growing concern.

Introduction

The dark web is estimated to be much larger than the surface web, which refers to the visible and searchable part of the internet. While the exact size of the dark web is difficult to measure, some estimates suggest that it is several times larger than the surface web. The Tor network, which is the most popular way to access the dark web, was originally developed by the US government as a way to protect communications for intelligence agents and political dissidents. It was later released to the public as an open-source project. Some of the most notorious activities on the dark web are illegal like Human Trafficking, Hitman Hiring, and the marketplaces that sell drugs, weapons, counterfeit documents, stolen data, and other illegal goods and services. These marketplaces use cryptocurrency to facilitate transactions and often have sophisticated systems in place to protect the anonymity of buyers and sellers. The dark web is also a hub for the production and distribution of child pornography and other forms of child exploitation. The common users of the dark web are whistleblowers and activists, who use the dark web to communicate anonymously and share sensitive information. And criminals who used to sell and purchase illegal goods and services. And hackers and cyber crimes, who use the dark web to communicate and trade tools. The most common crime on the dark web is the sale of illegal drugs. On the dark web, drug sales typically take place on marketplaces that operate similarly to legitimate e-commerce websites. These marketplaces allow vendors to list various drugs for sale, and buyers can browse the listings, read reviews, and purchase drugs using cryptocurrencies like Bitcoin. The richest drug dealer according to Forbes is currently Joaquin Guzman Loera (Mexico) who has an estimated fortune of USD£1 billion (GBP£722 million) gained from drug trafficking. For consumers looking to buy drugs, whether that's a bag of weed, some prescription painkillers, or a wrap of heroin, the perceived anonymity of the dark web means it can seem like an attractive alternative to physically sourcing narcotics.

Firstly, prices on the dark web tend to be higher than street drugs. You're paying a premium for anonymity, ease, and convenience. Also, you obviously have no idea what you'll be receiving. Heroin could be cut with fentanyl, prescription pills might be counterfeit. Buying drugs from the dark web can have a significant impact on the illegal drug market, contributing to the growth of illegal businesses involved in drug production and distribution. The availability of drugs on the dark web has made it easier for individuals to access illicit substances and has provided a platform for drug dealers and traffickers to expand their operations. This increased demand for drugs can lead to an increase in the production and distribution of illegal drugs, which can in turn lead to an increase in drug-related crime, addiction, and health problems. The profits generated from the illegal drug trade can also be used to fund other criminal activities, such as human trafficking and terrorism. This can contribute to the growth of illegal businesses involved in these activities, further exacerbating the negative impact on society. Overall, the impact of buying drugs from the dark web on illegal businesses is largely negative, contributing to the growth of

criminal enterprises involved in drug production and distribution, and other related illegal activities. It is important for individuals to be aware of the risks associated with purchasing drugs from the dark web and to make informed decisions about their actions. Law enforcement agencies should continue to work to prevent the sale and distribution of illegal drugs and to disrupt the operations of illegal businesses involved in drug trafficking. The dark web is also associated with the trade of illegal weapons, including firearms, explosives, and other types of weapons. Like with drug sales, the anonymity of the dark web makes it an attractive platform for the sale of illegal weapons, as buyers and sellers can conduct transactions without revealing their identities. These marketplaces offer a range of illegal weapons, including handguns, assault rifles, and even military-grade weapons. Some vendors may also offer to customize weapons or provide tutorials on how to use them. Buying illegal weapons from the dark web can have a significant impact on the illegal weapons market, contributing to the growth of illegal businesses involved in the production and distribution of illicit firearms. The availability of illegal weapons on the dark web has made it easier for individuals to access firearms that would otherwise be difficult or impossible to obtain through legal channels. This increased demand for illegal weapons can lead to an increase in the production and distribution of illicit firearms, which can in turn lead to an increase in violent crime, including mass shootings and terrorist attacks. The use of cryptocurrencies to purchase illegal weapons on the dark web can also make it difficult for law enforcement agencies to track and prevent illegal weapons transactions. This can make it easier for illegal businesses to operate and expand their operations, further exacerbating the negative impact on society. Overall, the impact of buying illegal weapons from the dark web on illegal businesses is largely negative, contributing to the growth of criminal enterprises involved in the production and distribution of illicit firearms, and other related illegal activities. It is important for individuals to be aware of the risks associated with purchasing illegal weapons from the dark web and to make informed decisions about their actions. Law enforcement agencies should continue to work to prevent the sale and distribution of illegal weapons and to disrupt the operations of illegal businesses involved in the illegal weapons trade.

Literature Review

A portion of the internet known as the "dark web" is inaccessible to search engines and accessible only with particular software, setups, or authorization. It is frequently used for communication and anonymous information exchange, as well as for illicit operations like the selling of narcotics, firearms, and stolen data. Through encrypted networks like Tor, individuals may browse the black web while being anonymous and untraceable (Broadhurst et al., 2021). The dark web is used by people for a variety of purposes, including security, privacy, and anonymity. Some people utilize it to obtain material that isn't offered by the standard internet, such official papers or scholarly study. Whistleblowers and activists in oppressive regimes are only two examples of those who utilize it for anonymous communication and information sharing. However, the dark web is also utilized for criminal communication and planning, as well as the selling of illegal goods including narcotics, firearms, and stolen data (Broadhurst et al., 2021). The rise in illicit trade, notably the selling of narcotics, firearms, and stolen data, has been significantly influenced by the dark web. The dark web's anonymity and encryption have made it simpler for criminals to commit crimes without being caught by law authorities. Transnational criminal networks that may operate across borders and avoid conventional law enforcement procedures have also grown as a result of the dark web. The development of organized crime and the difficulty for law enforcement to dismantle criminal networks are both a result of the selling of unlawful products and services on the dark web. There are legitimate applications for the secrecy and seclusion the dark web offers, therefore it's crucial to keep in mind that not all activity on it is unlawful (Broadhurst et al., 2021).

In this section, we review some research papers on the impact of using the dark web for illegal business, such as drugs and weapons. The research papers provide information about the products sold on the dark web markets and try to identify the characteristics of their vendors. Moreover, the studies give recommendations to policy makers on how to reduce illegal trading on the dark web. Zambiasi looked into how the closure of dark web markets affected the distribution of drugs on the street and related crimes. The study also looked at the effectiveness of permanently closing a single dark web market (Zambiasi, 2022). To determine the causal relationship between the closure of dark web marketplaces and the street drug trade and related crimes, the researcher employed a regression discontinuity approach (Zambiasi, 2022). The researcher recommended that when shutting down a dark web marketplace, policymakers should take into account potential spillovers on street drug dealing and be aware that doing so will be ineffective in the long run because new dark web marketplaces will appear and criminals will resume their usual operations on the new platform (Zambiasi, 2022).

Copeland et al. examined the issue of the selling of weapons on the dark web, as well as the lack of awareness of the procedures and goods of dark web firearm merchants, in their study. The paper's goal was to give insights into these vendors' activities and goods in order to benefit law enforcement and policymakers (Copeland et al., 2020). The article assessed the activities and goods of dark web weapon merchants using a qualitative case study approach. Where applicable, the writers utilized exact excerpts from the adverts to illustrate their conclusions (Copeland et al., 2020). According to the article, law enforcement might focus their efforts on developing convincing undercover adverts to lure potential customers to participate in sting operations. The authors also recommended that posting advertising with constantly cycling supply and price may be a good strategy for increasing confidence in a market with little to no user input. The study also stressed the importance of ongoing research to examine the condition of illicit items supplied through online markets operating on the clear and dark web (Copeland et al., 2020). The study emphasized the similarity in activities identified between dealers of weapons and those selling drugs. The report also stressed the importance of ongoing research into the condition of illicit items traded through online markets on the transparent and dark web. The authors proposed that law enforcement focus their efforts on developing compelling undercover ads to lure potential customers to participate in sting operations (Copeland et al., 2020).

The goal of Lee's study was to describe the features of online black marketplaces for illicit substances, including the selling of narcotics on the dark web. The author wanted to give comprehensive information on the following topics: average product pricing; communication channels used; preferred payment methods; delivery methods; and feedback from customers. The research sought to assist policymakers, law enforcement organizations, and other stakeholders in their attempts to address the problems created by these marketplaces by highlighting the possible hazards connected with online black markets for illicit drugs (Lee, 2020). The growth of several unlawful internet markets, including the selling of illegal narcotics on the dark web, was the issue this study attempted to solve. The author underlined the possible dangers connected to online illicit drug markets while describing the characteristics of drug merchants on the open and dark web. The goal of this study was to present comprehensive data on the online illegal drug market economy, including typical product prices, channels of communication utilized, preferred payment platforms, means of delivery, vendor trust and service communications, and customer feedback (Lee, 2020). A descriptive examination of 4,042 goods from 74 distinct medication retailers on the open and dark web was done by the author. In-depth information was supplied by the author covering the typical product pricing, communication channels used, preferred payment methods, delivery options, vendor trust and service communications, and customer feedback (Lee, 2020). Descriptive information for 4,042 goods from 74 distinct drug suppliers on the open and dark web was supplied by the research. The author gave comprehensive information on the typical product pricing, popular payment methods, delivery methods, vendor trust and service communications, and customer feedback. The study outlined the dangers that

may arise from the selling of contaminated or fake pharmaceuticals, the possibility of violent crime, and the difficulties in regulating such marketplaces because of their decentralized and anonymous character. According to the author, politicians, law enforcement agencies, and other stakeholders must be aware of how drug crime is evolving and take the necessary steps to address the problems that online illegal drug marketplaces are posing (Lee, 2020).

The article by Baravalle et al. sought to shed light on the nature of the market as well as obtain insights into the goods and services offered within Agora, one of the more significant dark web markets for narcotics, fraudulent identification, and firearms on the Internet. The nature of the market and the involvement of organized crime within Agora, one of the biggest online markets for drugs, fraudulent identification, and firearms, were the issues this essay sought to explore. From Agora, the researchers gathered more than 30,000 records. Information regarding the goods and merchants in Agora was included in the data that were gathered. To examine the data gathered, the researchers employed the Weka tool together with Java and Python scripts. The researchers discovered that narcotics accounted for nearly 80% of the goods offered in Agora. The majority of these medications' vendors were from the UK and the USA. Additionally, according to market size, the top two nations were Germany and the United States (Baravalle et al., 2016).

A worldwide issue that imperils the rule of law, police operations, and the security of civilian populations, the illicit trade in illegal firearms and weaponry was addressed by Broadhurst (Broadhurst et al., 2021). The purpose of the paper was to explore trends and problems in criminal justice and crime, particularly the illegal trade in weapons and guns. Data analysis was done by the authors utilizing a list of search phrases related to firearms, ammo, explosives, accessories, and other weapons that are normally not categorized as SALE. To identify wordlists qualitatively, the writers also made market observations. The study work is also a part of the peer-reviewed Trends & Issues in Crime and Criminal Justice series (Broadhurst et al., 2021). According to the study, international law enforcement initiatives akin to the Joint Criminal Opioid and dark web Enforcement (J-CODE) task force, which unites the US and Europe, are necessary to alert dark web traders of SALW and CBRN to the danger they pose and to influence marketplaces to forbid their sale. According to the authors, these actions are required to stifle the criminal businesses that are volatile and always changing, the dark web trade in illicit firearms and weapons (Broadhurst et al., 2021). The study discovered a tiny but significant illicit market for small arms and light weapons (SALW) on the dark web, including specialty marketplaces that operate "under the radar" and away from the volatility of "High Street" markets. The investigation found more firearms and other weapons than earlier research, as well as the selling of explosives like RDX and synthetic opioids turned into weapons like carfentanil. Law enforcement investigations into the dark web trade in SALE, according to the authors, should concentrate on high-risk vendors and marketplaces to disrupt supply, but they should also be directed at specialist markets. In order to stop the dark web trade in illicit firearms and weapons

and to influence markets to forbid their sale, the study came to the conclusion that international law enforcement operations are necessary (Broadhurst et al., 2021).

Research Methodology

Illegal commerce on the dark web creates several ethical difficulties. The dark web, sometimes known as the dark web, is purposely concealed and anonymous. It has respectable purposes but is also known for enabling criminal activity. Examples of ethical difficulties related to Dark Web illicit enterprise are below:

1. Illicit Drug Trade:

Drugs are sold anonymously on the dark web. Drug misuse, addiction, and its effects on people, families, and society present ethical considerations. For instance, Silk Road sold heroin, cocaine, and prescription pharmaceuticals unregulated.

2. Weapons Sales:

The dark web facilitates illegal gun sales, which may lead to bloodshed, crime, and injury to innocent people. Dark web marketplaces sell pistols and assault firearms without background checks or laws.

3. Human Trafficking:

Traffickers sell victims on the dark web, prolonging modern slavery and human rights crimes. Victims' pain and abuse raise ethical issues. Example: Human trafficking networks promote and sell victims on the dark web.

4. Child Exploitation:

Dark web forums and websites host and share illicit child pornography, which abuses and exploits children. This creates ethical concerns about protecting vulnerable people and enabling horrible acts.

5. Hacking Tools and Services:

Hackers trade hacking tools, stolen data, and services in dark web markets. Privacy breaches, financial losses, and harm to persons and organizations raise ethical problems. Example: dark web marketplaces sell hacking services like DDoS assaults.

6. Identity Theft:

Dark web retailers sell credit card and social security numbers, enabling financial crime and identity theft. Privacy, trust, and data protection are ethical challenges.

7. Counterfeit Goods:

The dark web sells counterfeit goods, which may damage customer confidence, hurt genuine firms, and spread low-quality, hazardous goods. Example: dark web marketplaces sell counterfeit luxury, gadgets, and medications.

8. Cybercrime-as-a-Service:

Dark web markets allow non-technical criminals to commit crimes. This poses ethical problems concerning criminal democratization and society.

Finally, utilizing the Dark web for unlawful operations harms people and communities and erodes faith in online activities. These ethical issues must be addressed by law enforcement and society.

Survey Findings

Survey was conducted with a diverse group of 100 individuals of age 16 and above. The data was collected using an online questionnaire and interviews regarding the dark web's impact on illegal businesses, focusing on weapons and drugs.

-Knowledge of Dark Web

85% of the users were aware about this but only 30% had understanding of the actual functioning of the dark web. 60% users have heard about trading of Illegal Businesses: Weapons and Drugs on dark web.

-Perception of Dark Web's impact on illegal business

80% of the users believed that the dark web has significantly contributed to the trading of Illegal Businesses: Weapons and Drugs on the dark web. 65% think that the anonymity provided by the dark web encourages such business to occur and rise on the dark web.

-Ethical Concerns

88% individuals raised very strong ethical concerns about the dark web being involved in illegal businesses. 85% believe that it is a threat to public safety due to increased availability of weapons and drugs using the dark web.

-Laws and Policies

75% respondents agreed that lawmakers should make stricter laws and policies in tackling illegal activities on the dark web. 55% believed that the government should make more strict policies to prevent the growth of dark web's illegal trades.

-Individual's Personal Responsibility

60% believed that it is an individual's personal responsibility not to indulge in any illegal trade or activities on the dark web and they should act ethically.

The results of the survey clearly shows the public's growing concern about the Dark Web's impact on the Increase of Illegal Businesses related to Weapons and Drugs. A significant number of individuals acknowledged the presence of illegal businesses of weapons and drugs on dark web. People believe the dark web significantly facilitates and encourages these activities. This is majorly fuelled by the anonymity which is provided by the dark web. The majority of respondents are concerned that the lawmakers and the government should bring more stricter laws to curb this.

There was a recent operation called "SpecTor," which was led by Europol in collaboration with nine countries. This resulted in bringing down nine illegal dark web marketplaces and arrest of 288 suspects involved in the buying and selling of drugs on dark web. This operation led to the seizure of EUR 50.8 million in cash and virtual currencies, 850 kg of drugs, and 117 firearms. Significant drugs was seized which included amphetamines, cocaine, MDMA, LSD, and ecstasy pills. Also, people feel it is a personal responsibility not to indulge in any illegal trade or activities on the dark web and they should act ethically as it poses a serious threat to public safety.

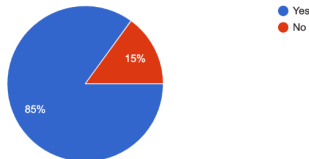
Conclusion

In conclusion, the dark web has a huge impact on increasing the number of illegal businesses, including the sale of drugs and weapons. The use of cryptocurrencies to facilitate transactions on the dark web makes it difficult for law enforcement agencies to track and prevent illegal activities, contributing to the growth of criminal enterprises involved in these activities. In this research the survey findings indicate that while a majority of people are aware of the Dark Web, only a minority understand its actual functioning. However, a significant number of individuals believe that the Dark Web has significantly contributed to the trading of illegal businesses such as weapons and drugs and that the anonymity provided by the Dark Web encourages such activities. The survey also highlights strong ethical concerns and a perceived threat to public safety due to increased availability of weapons and drugs using the Dark Web. There is a need for greater awareness and education about the Dark Web and its implications, as well as for stronger measures to prevent illegal activities and ensure public safety. It is important for individuals to be aware of the risks associated with using the dark web and to make informed decisions about their actions. Law enforcement agencies must continue to work to prevent and disrupt illegal activities on the dark web to protect society from the negative impact of these criminal enterprises, and there is a demand for stricter laws and policies to tackle illegal activities on the Dark Web. Lastly, individuals have a personal responsibility not to engage in any illegal trade or activities on the Dark Web. We recommend that researchers search more for ways to reduce the risk of using the dark web and make it more of a safe environment for everyone to use it in a more beneficial way.

Appendix

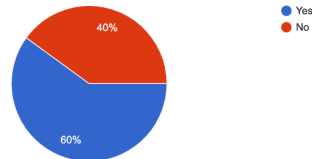
Are you aware of the dark web and its existence?

100 responses



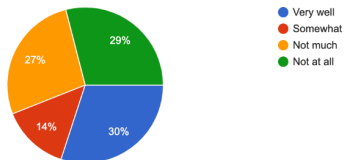
Have you heard about illegal businesses such as weapons and drugs being traded on the dark web?

100 responses



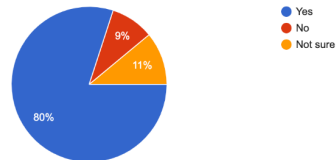
How well do you understand the functioning of the dark web?

100 responses



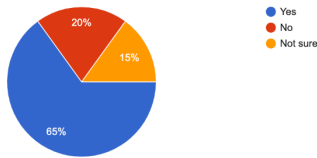
In your opinion, has the dark web significantly contributed to the trading of illegal businesses, particularly weapons and drugs?

100 responses



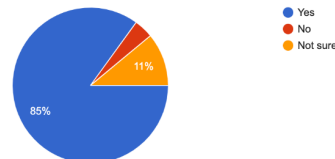
Do you think the anonymity provided by the dark web encourages the trading of illegal businesses such as weapons and drugs?

100 responses



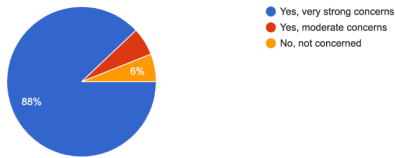
Do you believe the increased availability of weapons and drugs on the dark web poses a threat to public safety?

100 responses



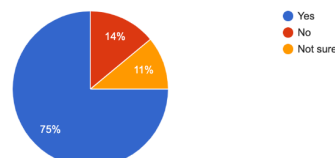
Do you have ethical concerns about the dark web being involved in illegal businesses, including the trading of weapons and drugs?

100 responses



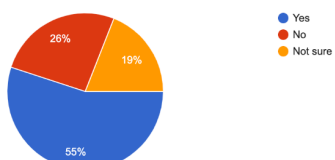
Do you think lawmakers should enact stricter laws and policies to tackle illegal activities on the dark web?

100 responses



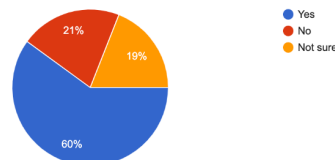
Should the government implement more stringent policies to prevent the growth of illegal trades on the dark web?

100 responses



Do you believe it is an individual's personal responsibility not to indulge in any illegal trade or activities on the dark web and act ethically?

100 responses



References

- Baravalle, A., Lopez, M. S., & Lee, S. W. (2016). Mining the Dark Web: Drugs and Fake Ids. IEEE International Conference on Data Mining Workshops, ICDMW, 0, 350–356. <https://doi.org/10.1109/ICDMW.2016.0056>
- Broadhurst, R., Foye, J., Jiang, C., & Ball, M. (2021). Illicit firearms and other weapons on darknet markets. Trends and Issues in Crime and Criminal Justice [electronic resource], (622), 1-20.
- Copeland, C., Wallin, M., & Holt, T. J. (2020). Assessing the Practices and Products of Dark Web Firearm Vendors. Deviant Behavior, 41(8), 949–968. <https://doi.org/10.1080/01639625.2019.1596465>
- Europol. (2023, June 27). 288 dark web vendors arrested in major marketplace seizure. Retrieved from <https://www.europol.europa.eu/media-press/newsroom/news/288-dark-web-vendors-arrested-in-major-marketplace-seizure>
- Goldsmith, M. (2016). The dark web: A primer. Journal of Cybersecurity, 2(1), 1–12.
- Lee, J. (2020). The Online Illicit Drug Market Economy, School of Criminal Justice, Michigan State University
- Thinkuknow. (n.d.). The dark web. Retrieved from <https://www.thinkuknow.co.uk/professionals/our-views/the-dark-web/>
- Tulane University School of Professional Advancement. (n.d.). Everything you should know about the dark web. Retrieved from <https://sopa.tulane.edu/blog/everything-you-should-know-about-dark-web>
- Zambiasi, D. (2022). Drugs on the Web, Crime in the Streets. The Impact of Shutdowns of Dark Net Marketplaces on Street Crime. Journal of Economic Behavior and Organization, 202, 274–306. <https://doi.org/10.1016/j.jebo.2022.08.008>