Conspiracy of Silk Road: Dread Pirate Roberts to Cybercrime and Money Laundering

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\textbf{ABSTRACT}

The Silk Road, as the pioneering online marketplace utilizing cryptocurrencies as a payment system, revolutionized illicit activities in the digital realm. This research delves into the implications of implementing cryptocurrencies within the Silk Road, focusing on the surge of cybercrime and money laundering. Through qualitative research methodologies, including case studies such as United States of America v. Ross Ulbricht, along with films, movies, and documentaries, the study sheds light on the nefarious consequences of cryptocurrency adoption in this dark web marketplace. Cryptocurrency was applied on Silk Road to provide an anonymous payment system shielded from the reach of law enforcement. By leveraging cryptocurrencies, the Silk Road facilitated illegal transactions, including the sale of illicit drugs, counterfeit identification documents, and various other illegal goods and services. Additionally, the platform acted as a hub for money laundering activities, enabling the conversion of cash into anonymous virtual assets, thereby obfuscating the authorities’ ability to trace the illicit funds. This research contributes to a comprehensive understanding of the intricate interplay between cryptocurrencies, cybercrime, and money laundering on the Silk Road. The insights gleaned from this study underscore the urgent need for regulatory measures to mitigate the risks associated with anonymous cryptocurrency transactions and enhance law enforcement.
1. Introduction

Bitcoin is the first and the largest cryptocurrency in blockchain technology. Bitcoin was introduced by Satoshi Nakamoto in 2008. Bill Gates described Bitcoin as a “techno tour de force” (Levin, O’Brien, & Osterman, 2014). However, he has a conflict of interest in cryptocurrency. Thus, he explained cryptocurrency allows for certain criminal activities and that it is better to get rid of it. He also added Bitcoin value can go up and down based on the mania or whatever the views are and cannot predict the progress (DeCambre, 2021; Browne, 2022). His theories were based on the actual events in various cases including Silk Road: Dread Pirate Roberts. Silk Road also commonly known as the first modern darknet market operated as Tor hidden service. It allows users to conduct transactions anonymously using cryptocurrency without legal traffic monitoring (Marric, 2021). Any activities conducted on Silk Road are untraceable.

Media has released several films and documentaries to expose the first major cryptocurrency case. For example, Deep Web: The Untold Story of Bitcoin and the Silk Road directed by Alex Winter is one of the behind-the-scenes documentary films covering the rise of the Deep Web including the trial of Ross Ulbricht. According to the documentary, the authorities or FBI were able to shut down the Silk Road and caught the creator of the dark web from alleged criminal activities outside of the online marketplace.

Silk Road becomes a major threat to the U.S. government which allow selling drugs, weapons, money laundering, or any activities which illegal by law. FBI agents disguised as the buyer of drugs on Silk Road to gather information on these illegal activities. Soon, they were able to arrest the founder of Silk Road, Ross Ulbricht on several charges including money laundering, hacking, and dealing drugs. The government also accused Ross Ulbricht of funding the murders even though there is no evidence of these actions. Ulbricht’s case has been taken to the United States District Court for the Southern District of New York under criminal proceedings. Based on this case, how did Ross Ulbricht connect with Silk Road and what was his authentic purpose to create this marketplace for the community? What is the cause and effect of Silk Road on cryptocurrency towards law enforcement?

This paper briefly analyses the chronology of the case United States of America v. Ross William Ulbricht. The objective of this paper to identify the cryptocurrency influences towards Silk Road that led to illegal online marketplace dark web. Cryptocurrency seems to be an economically weak point in payment systems which concealed the identities and locations of users. Moreover, cryptocurrency is able to be manipulated by the irresponsible person to use this technology for undercover illegal activities from legal authorities. If cryptocurrency is brought to trial case, which legal acts are able to execute the case?
2. An Overview of Silk Road: Dread Pirate Roberts

Silk Road is an online criminal marketplace intended to facilitate transactions that sell and buy illegal goods and services anonymously and hidden from law enforcement (Jardine, 2021). Silk Road was owned and operated by Ross William Ulbricht from January 2011 until October 2013. Ross Ulbricht is an American young man born on March 27, 1984. He grew up near Austin, Texas, and studied at the University of Texas in physics. Then, he pursues a master’s program in materials science. Even though he was majoring in physics, he has a passion for libertarian views of economic theory. In 2009, Ulbricht become an entrepreneur after he graduate from his master’s program but it failed. Despite that, he moved to different numbers of jobs such as trading, developing video games, and selling books online (Reiff, 2021).

In 2011, Ulbricht conceived the concept of establishing an internet marketplace called Silk Road. Silk Road employs Tor encryption and cryptocurrency to ensure user anonymity and security, effectively circumventing government surveillance measures. Tor, an open-source privacy network originally developed and exclusively employed by the U.S. Navy to safeguard confidential government communications, facilitates anonymous browsing (Frankenfield, 2022). Later, the network available to the public as an open-source platform. Tor is short for the Onion Routing project which encrypted protocols ensuring users’ online privacy for data and communications on the web is protected. Meanwhile, cryptocurrency is a virtual currency based on a network that is distributed across a large number of computers. Cryptocurrency applied a decentralized concept that allows any activities outside the control of central authorities including governments (Frakenfield, 2023). By adopting both Tor encryption and cryptocurrency, Silk Road is able to pass user information through a vast network of encryption procedures which is effectively disguising the identity and location of users and offers a decentralized and anonymous platform. Ulbricht chose ‘Dread Pirate Roberts’ as his anonymous identity in Silk Road. Ulbricht intended to create Silk Road by allowing people to buy anything anonymously without influence from a legal authority. He wrote a personal journal and it was used as a piece of evidence during his trial.

“While all of this was happening, I began working on a project that had been in my mind for over a year. I was calling it Underground Brokers, but eventually settled on Silk Road. The idea was to create a website where people could buy anything anonymously, with no trail whatsoever that could lead back to them....” Ross William Ulbricht Mullin (2015)

Silk Road served as the most sophisticated and extensive criminal online marketplace with unlawful goods and services including illegal drugs were bought and sold regularly by the users (U.S. Attorney, 2015). According to Ulbricht’s (n.d.) LinkedIn page, he wrote on the page of the reason he intended to introduce the Silk Road to the community. He stated, “I want to use economic theory as a means to abolish the use of coercion and aggression amongst mankind.....the most widespread and systemic use of force is amongst institutions and government.....the best way to change government is to change the minds of the governed.....I am creating an economic simulation to give people a first-hand experience of what it would be like to live in a world without the systemic use of force”. Silk Road become widely known and popular among users of the illegal market. Moreover, the authorities were also aware of the presence of Silk Road within a few months after its launch but it took over a couple of years to reveal Dread Pirates Roberts real identity. Ulbricht decided to cultivate his own psilocybin mushrooms as a starter product in Silk Road and sold all
10 pounds of his mushrooms. Within a short span, Silk Road managed to achieve revenue of more than USD1 billion and USD80 million in commissions (Bearman, Bilton, Davis, & Leckart, 2015). Figure 1 is the timeline of the Silk Road: Dread Pirates Robert between 2011 until 2015.

Figure 1: Timeline of The Silk Road

On 27th January 2011, an FBI expert codenamed Agent-1 located an early online mention of Silk Road when an anonymous user known as “Altoid” made a post on a forum for users of magic mushrooms (Hume, 2013). “Altoid” also made a similar post on Bitcoin Talk and recommended Silk Road with the website link. A few months later, “Altoid” wrote another posting which was he was hiring an IT pro in the Bitcoin community with an email to contact. A year later on April 20, Paul Leslie Howard also posted a message on a forum mentioning that he started drug selling and only shipping to Australia. He got the idea of selling drugs via Silk Road from a YouTube video and a newspaper article by Eileen Ormsby. However, Howard got arrested after federal officials raided his home and found drugs and guns in July 2012. Howard imported drugs into the country hidden and disguised in packages such as DVD cases, greeting cards, inside a thermometer, and baggies within cardboard since March 2012 (Matinez, 2013). Authorities were able to track the link between Howard and Silk Road from his computer. An image of a piece of paper with “shadh1’ is Howard’s account name in Silk Road. Authorities also found his Google history for “Does Australia Post record tracking” and “Silk Road Tor address”. Howard is the first convicted of a crime in Silk Road and faces 25 years in prison (Faircloth, 2013). The capture of Howard convinced the FBI to investigate further and capture the owner of DRP. According to U.S. Attorney (2015), law enforcement agents hire more than 60 individuals undercover to purchase controlled substances from Silk Road vendors and were able to purchase illegal drugs such as heroine, cocaine, ecstasy, and LSD.

However, the owner of the Silk Road was arrested in San Francisco. An agent in disguise posed as drug buyers and sellers to interact with “Dread Pirate Roberts”. At the same time, they were also able to identify low-level administrators of the site, encouraged them to cooperate, and took over their usernames to gather evidence (FindLaw, 2017). In early 2013, “Dread Pirate Roberts” contacted one of the agents called “Nob” to end a Silk Road employee known as “Green” and was willing to pay $40,000 (Armstrong, 2021). The authorities also track “Altoid” who has been posted about the Silk Road in forums that
might lead them to the “Dread Pirate Roberts” and found an email attached: rossulbricht@gmail.com. Later, “Dread Pirate Roberts” was arrested at the Glen Park Library in San Francisco with evidence which was a laptop accessed the Silk Road using the “Dread Pirate Roberts” account (International Business Times, 2013). The owner of the laptop was Ross Ulbricht. The FBI was able to solve the riddle of the owner of the Silk Road permanently and it was shut down by law enforcement authorities on October 2nd, 2013. Authorized able to seize more than $4 million in Bitcoin from the site.

3. Accusations and Legal Charges

According to the U.S. Attorney (2015) for the Southern District of New York, Preet Bharara, in 2015, Ross William Ulbricht was convicted on all seven charges related to his ownership and operation of Silk Road. These charges included the distribution of narcotics, distribution of narcotics via the internet, conspiracy to distribute narcotics, engaging in a continuing criminal enterprise, conspiracy to commit computer hacking, conspiracy to traffic in false identity documents, and conspiracy to commit money laundering (Reiff, 2021). Table 1 shows list of charges.

Table 1: List of charges to Ross Ulbricht or Dread Pirate Roberts

<table>
<thead>
<tr>
<th>Legislation/Statute/Code</th>
<th>Charge Details</th>
<th>Verdict</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 U.S.C. § 812, § 841(a)(1), § 841(b)(1)(A) and 18 U.S.C. § 2</td>
<td>Distribution and aiding and abetting distribution of narcotics</td>
<td>Guilty</td>
</tr>
<tr>
<td>21 U.S.C. § 812, § 841(h) and § 841(b)(1)(A)</td>
<td>Using the Internet to distribute narcotics</td>
<td>Guilty</td>
</tr>
<tr>
<td>21 U.S.C. § 846</td>
<td>Conspiracy to distribute narcotics</td>
<td>Guilty</td>
</tr>
<tr>
<td>21 U.S.C. § 848(a)</td>
<td>Engaging in a continuing criminal enterprise</td>
<td>Guilty</td>
</tr>
<tr>
<td>18 U.S.C. § 1030(a)(2) and § 1030(b)</td>
<td>Conspiring to obtain unauthorized access to a computer for purposes of commercial advantage and private financial gain and in furtherance of other criminal and tortious acts</td>
<td>Guilty</td>
</tr>
<tr>
<td>18 U.S.C. § 1028(f)</td>
<td>Conspiring to traffic in fraudulent identification documents</td>
<td>Guilty</td>
</tr>
<tr>
<td>18 U.S.C. § 1956(h)</td>
<td>Conspiring to launder monetary instruments</td>
<td>Guilty</td>
</tr>
<tr>
<td>Term of Imprisonment</td>
<td>Life imprisonment</td>
<td></td>
</tr>
</tbody>
</table>

Source: FindLaw (2017)

From January 13 to February 4, 2015, Ross Ulbricht stood trial under the jurisdiction of Judge Katherine Forrest in Manhattan’s US District Court for the Southern District of New York. Throughout the trial, the government presented evidence that implicated Ulbricht in various aspects of Silk Road’s operations. This evidence included his role in creating Silk Road, managing the site’s computer infrastructure, engaging with vendors, establishing user policies, determining the products available for sale, and overseeing a small team of administrators and software engineers (FindLaw, 2017). Table 2 shows types of evidence presented during the trial.
Table 2: Types of evidence during DRP trial

<table>
<thead>
<tr>
<th>Sources of evidence</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laptop</td>
<td>Pages of chat logs with Silk Road employees</td>
</tr>
<tr>
<td></td>
<td>Detailed journal entries describing Ulbricht's ownership of the site</td>
</tr>
<tr>
<td></td>
<td>List that tracked Ulbricht's tasks and ideas related to Silk Road</td>
</tr>
<tr>
<td></td>
<td>Copy of Silk Road Database</td>
</tr>
<tr>
<td></td>
<td>Spreadsheets cataloguing both servers hosted Silk Road and expenses</td>
</tr>
<tr>
<td></td>
<td>and profits associated with the site $18 million Bitcoin from the wallet</td>
</tr>
<tr>
<td>Ulbricht personal email</td>
<td>He conceived Silk Road as &quot;an online storefront that couldn't be traced back to [him]...where [his] customers could buy [his] products&quot; and pay for the &quot;anonymously and securely&quot;. Tr. 991.</td>
</tr>
<tr>
<td>Journal entries</td>
<td>He began to grow hallucinogenic mushrooms to sell on the site “for cheap to get people interested”. Tr. 899 ”creating a year of prosperity...I have experienced before. Silk Road is going to become a phenomenon...unknowing that I was its creator.” Tr. 899-900</td>
</tr>
<tr>
<td>Collection of fake IDs</td>
<td>Owned by Ross Ulbricht with his image</td>
</tr>
<tr>
<td>Bitcoin Wallet</td>
<td>Record of payment made to “red and white” for murders-for-hire</td>
</tr>
</tbody>
</table>

Sources O’Neil & Reed (2014) and FindLaw (2017)

The table above shows the evidence presented by the government as their argument for a broad attack against Ross Ulbricht or DRP. Those pieces of evidence directly point to Ulbricht who has a relation, a part of, and create the Silk Road or Dread Pirate Roberts. According to the FindLaw (2017), Judge Forest found the evidence was “ample and unambiguous” that Ulbricht “commissioned five murders as part of his efforts to protect his criminal enterprise and that he paid for these murders.” Even though there we murdering has been made. However, the Court also found by a preponderance of the evidence that several individuals died from the ingestion of drugs purchased on the Silk Road. Hence, Judge Forest sentenced Ulbricht to a minimum sentence of 20 years in prison to run concurrently as well as forfeiture of $183,961,921. Ulbricht pled in court to reduce the sentence but was rejected by Judge Forrest (Thielman, 2015). Ulbricht was also ordered to pay more than $183 million in restitution because prosecutors believed Silk Road made in sales.

4. The Impact of Silk Road towards Cryptocurrency

Ulbricht employed cryptocurrency as a payment system within Silk Road, enabling anonymous illicit transactions on the dark web that evaded easy detection by authorities. He capitalized on Bitcoin, a decentralized digital asset with an unregulated and cross-border payment mechanism that gained prominence within Silk Road. Bitcoin served as an alternative to traditional authorized banking systems, providing an anonymous payment solution (Sergeenkov, 2022). It is noteworthy that during that period, cryptocurrency regulations were not yet firmly established in the United States. Consequently, the trial confronted legal questions regarding the use of Bitcoin, the first cryptocurrency built on blockchain technology. Specifically, the court had to address whether financial transactions conducted with Bitcoin could be considered a form of money laundering. The court determined that Bitcoin was utilized on the site as a means of payment after being converted into a traditional currency. Although Bitcoin has not been officially recognized as legal tender or a form of currency for financial transactions
in the United States, the court concluded that Bitcoin functionally served as an equivalent and could be employed for money laundering purposes.

Ulbricht used cryptocurrency as a payment system in the Silk Road to allow anonymous illegal trades on the dark web without easy detection by the authorities. Ulbricht took advantage of Bitcoin as a digital asset with an unregulated and borderless payment system emerging in the Silk Road. Moreover, Bitcoin was able to replace a legal payment system from the authorized bank with an anonymous payment system. During that time, law enforcement regarding cryptocurrency has yet to be enforced in America. Hence, the trial had to address legal issues conducted with Bitcoins as the first cryptocurrency in blockchain, whether the financial transactions using bitcoins be used in money laundering. The court found that Bitcoin is used to pay for things on the site after being converted to currency. Even though Bitcoins have not been recognized as legal tender or currency or financial transactions in America, the Court decided that Bitcoin are functionally equivalent that can be used for money laundering.

Money laundering is a process that involves transforming illicitly obtained cash, funds, or assets from criminal, illegal, or unethical activities into legitimate-looking resources (Central Bank of Malaysia, 2019). Its purpose is to allow individuals who have engaged in such activities to enjoy the profits without disclosing the true origin of the funds. Money laundering can be used to finance terrorism, acquire weapons of mass destruction, or engage in other illicit activities. Its consequences include economic instability, embezzlement, theft, tax fraud, corruption, and various types of crimes, including drug and human trafficking. In Ulbricht’s case, he was convicted of money laundering in connection with the trafficking of 60,720 kilograms of illegal narcotics (Duhaime, 2019). More than $200 million in transactions were conducted on the site using Bitcoin to sell drugs and other illegal products to over 100,000 anonymous buyers (Huddleston, 2019). These transactions led to launder hundreds of millions of dollars from illegal sales.

Furthermore, the court also had to address legal issues that had not yet been litigated on cryptocurrency, whether the agreement required to support conspiracy charges could be established when the parties only interacted through automated, anonymous transactions. However, the court has reasoned the conspiracy agreement is sufficient to agree on the objective leading to the unlawful end of the conspiracy and does not necessarily require an express agreement with all of the detail of the conspiracy. During the trial, the government was able to prove Ulbricht conspiracy to collect commissions worth more than millions of dollars from illegal drugs, malicious computer software, and fake identification documents transactions (Weiser & Apuzzo, 2015). The government also managed to prove a piece of evidence for the purpose of Ulbricht creating the Silk Road on LinkedIn and his journal. In 2015, Ulbricht expressed the Silk Road was supposed to be a freedom for people to make their own choices (Knight, 2022). Ulbricht created the Silk Road to allow anonymous and unlawful transactions without the participation of third parties. However, any actions or activities on the site were carried out by the humans, hired by Ross Ulbricht. Hence, Ulbricht has engaged with other users including drug dealers and buyers to conduct the transactions (FindLaw, 2017). He also controlled Silk Road operations between buying and selling. The court found every agreement made in the transactions was anonymous transactions with a number of people using pseudonyms identities.

The article found that using cryptocurrency on the Silk Road dark web allows anonymous transactions without the involvement of third parties or the authorities have caused
conspiracy of money laundering, facilitate frauds, cybercrimes and enabled illegal activities. According to Ezquer (2021), cryptocurrency widely uses on the dark web as pseudonymous transactions. People spent more than $14 billion in cryptocurrency for illegal activities in 2021, as a proves that cryptocurrency is still being used in the dark web (Kaloudis, 2022). It seems cryptocurrency has threat centralized authorities to control, legalize and monitor them in any illegal activities. The users of cryptocurrency of the dark web should be aware to any risks might happen in the activities because it was unable to protect and monitor by centralized authorities.

5. Conclusions

The Silk Road is the first dark web to use cryptocurrency as payment system in the transactions has been seized by law enforcement authorities. Cryptocurrency was applied on Silk Road to provide an anonymous payment system without the influence of legal authorities. Another purpose of applying cryptocurrency on the site is to hide cybercrime activities by providing illegal transactions such as illegal drugs, fake ids, and others. Moreover, money laundering was also one of the legal activities on the Silk Road converting cash to anonymous virtual assets as a medium exchange to obscure the authorities. Ulbricht as a creator of Silk Road has been sentenced to jail for seven charges including distributing drugs on the Internet, computer hacking, false identity documents, cybercrimes, and money laundering. Ulbricht creates the Silk Road to facilitate buy and sale of illegal products and services anonymously without law enforcement from the authorities. He implements the Tor network and cryptocurrency on the site to conceal the true IP address, identities, and locations of users. Even though the site was anonymous but the FBI was able to capture the creator of the Silk Road by disguising themselves as the users of the site to make contact with “Dread Pirate Roberts” within two years. Although the Silk Road has been shut down, cryptocurrency is still in use in the dark web to conduct money laundering and cybercrime activities. However, cryptocurrency has not been recognized as a legal tender in most countries but law enforcement on cryptocurrency must be aware of authorities to protect themselves from economic crimes.

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Conflict of Interest

There is no conflicts of interest for this work and no potential conflict of interest with respect to the research, authorship, or publication of this article.
References


Browne, R. (2022, June 15). Bill Gates says Crypto and NFTs are '100% Based on Greater Fool Theory’. CNBC. https://tinyurl.com/5xjjj7xd


