

THE FUSION OF BLOCKCHAIN, PORNOGRAPHY AND HUMAN TRAFFICKING IN A GLOBAL DIGITAL DRAGNET THAT FORMS THE ONLINE CHILD SEX TRAFFICKING.

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Abstract: *The twists and turns of eradicating child sex trafficking have transformed into a complicated enigma for citizens of the world, especially law enforcers and students. It's hard to deny, the direction bar of technological development has also presented new ways for criminals to carry out their activities and even seems to help build a solid wall that can hinder law enforcement efforts against them. Blockchain, pornography, and prostitution are suspected to be part of the large mosaic of online sex trafficking crimes today, so studies are needed to see their attachment to each other so that it is hoped that they can break the chain of these crimes from upstream to downstream. The research method used is normative juridical with a comparative law approach. The research results reveal that the presence of Blockchain has triggered the pornography industry to transform payment methods through crypto-currencies and tokens that prioritize anonymity, so that their activities can still run and develop but are difficult to detect. In its operations, the pornography industry has taken advantage of live streaming which eventually encouraged sex workers to switch to selling themselves online, and in fact opened up opportunities for traffickers to conduct online sexual trafficking of children by exploiting children on adult sites, as well as live streaming shows. The regulations imposed by America in 2018 through FOSTA/SESTA can be considered to be enforced in Indonesia, because they have succeeded in putting pressure on service providers and even making them close the site, even though Indonesia has issued Permenkominfo No. 5 of 2020.*

Keywords: *Blockchain; Online Child Sexual Trafficking; Pornography.*

Table of Contents

1. INTRODUCTION
2. RESULTS
3. CONCLUSION
4. ACKNOWLEDGMENTS

1. INTRODUCTION

Serious challenges are increasingly overshadowing efforts to eradicate online sex trafficking, after a series of studies have shown the magnitude of the influence of technology in the activity of human trafficking crimes. It is generally known that there are four stages in human trafficking, namely: recruitment, transportation, exploitation and profit management.¹ Currently, criminals have taken advantage of social media², instant messaging applications, to online games to recruit victims, to trigger the vulnerability of victims to be exploited physically or online, given the extraordinary ability of the internet to be able to distribute pornographic content through special websites or live streaming. Not only that, internet technology has also fueled an increase in the production and distribution of pornography which has led to the crime of trafficking in persons, after the presence of blockchain technology was used as a means of payment. The enthusiasm of perpetrators to use cryptocurrencies or tokens in their transaction traffic is increasingly burdening law enforcement, considering that it is difficult to be able to clearly know the activities of these financial transactions, especially the anonymous identities of their users.

Blockchain is said to be a technology that is very likely to change future business, even described as a haven for criminal activity, ponzi schemes, to the road to anarchy and authoritarianism. The root of this problem is due to the uncertainty of blockchain's relationship with the law. Supporters of blockchain technology describe it as a democratization escape from the failure of the territorial law system, while critics see it as a clever trick to avoid legal

¹ Landron, Gabriela. "Human Trafficking and its Evolution into Cyberspace : How has Technology Transformed Human Trafficking Over Time". *Theses, University of Central Florida, Departmen of Criminal Justice*, (2021):1.

² Aktivitas *oversharing* anak saat ini memberikan peluang para *trafficker* untuk menjerat target dan menjadikannya korban perdagangan orang dalam Noval, Sayid Muhammad Rifqi. "Oversharing and its Impact for Children: A Comparative Legal Protection". *Varia Justicia*, Vol. 17, No.2, (2021) : 187.

liability.³

Blockchain uses complex technology, but its basic function is simple, namely providing distributed but accurate records. Everyone can perform maintenance on a dynamically updated copy of the ledger. This approach offers two basic benefits. First, one can have confidence in a transaction without trusting the integrity of any individual, intermediary, or government. Second, a single distributed ledger replaces multiple private ledgers that require reconciliation to maintain consistency, thereby reducing transaction costs.⁴ So in simple terms, it can be described if the blockchain is a distributed and decentralized database where each member of the network keeps a complete, verified, and synchronized copy of all transactions. The architecture incorporates advanced cryptography, complex incentive and reward systems, and a distributed consensus model that ensures data integrity without a central authority.⁵

Cryptocurrency itself is a form of digital currency that is distributed by its developers. Different from other digital currencies, cryptocurrencies are not only supported by the credibility and control of their developers, but primarily supported by the technological base of the transaction unit. Most cryptocurrencies are based on blockchain technology. Cryptocurrency works on a decentralized ledger system, with transactions in a given currency verified through use of the developer's processing power.⁶ Cryptocurrency was first devised by David Chaum in the 1980s. Chaum designed an algorithm that is very secure and allows for encryption (coded/coded writing) in conducting electronic fund transactions.⁷ The use of cryptocurrencies makes tracking and identifying criminals even more difficult as they are unregulated in most of the world and provide strong anonymity to those who use them.⁸

In recent years, cryptocurrencies have been increasingly accepted by many companies, with Whole Foods, Expedia, Microsoft, Dell, Dish, Cheap-Air, eBay, PayPal, Square, Bloomberg, Wikipedia, WordPress, Reddit and Tesla also accepting currency. virtual like Bitcoin (BTC). In the United States, the Financial Action Task Force defines virtual currency as a digital representation of value that can be displayed digitally and functions as: (1) a medium of exchange; and/or (2) account units; and/or (3) a store of value but not legally tendered, issued or guaranteed by any jurisdiction. Instead, the function is performed by a community of virtual currency users. As of 2018, there are more than 1,800 types of cryptocurrency in circulation, and the most popular ones are BTC, ETH, Monero (XMR), XRP, LTC, DASH, IOTA/MIOTA, NEM/XEM, and ZEC.⁹

BTC's success as a pioneer in cryptocurrency has created opportunities for criminals to operate anonymously. The first large-scale criminal enterprise to allow transactions using only BTC was Silk Road, an online illicit marketplace that operates on the network of The Onion Router (TOR), an encrypted web service that provides anonymity to its users. These dark web markets or cryptomarkets are like eBay, they match users and suppliers of illegal goods without the threat of dealing with drug dealers or government authorities. A report indicates that around 70% of the products sold on the website are drugs, although weapons, hacking services and other services are also available on the site. It is estimated that between February 2011 and October 2013 when the FBI closed Silk Road, there were transactions involving the sale of illegal goods and services worth around US\$1 billion. After Silk Road was closed, Silk Road 2.0 appeared and operated until later in 2017, the two largest Darkweb markets, AlphaBay and Hansa, were also closed by the FBI. Both websites allow transactions involving a wide variety of goods and services such as drugs, hacking tools, stolen identities, human trafficking, sex trafficking, firearms, and various fraudulent services and accept payments via the cryptocurrencies BTC, XMR, and ETH.¹⁰

The rapid growth in cryptocurrencies and the anonymity they provide to their users have created complex regulatory challenges. A \$100 million cryptocurrency exchange-traded fund (ETF) application was rejected by the U.S. Securities and Exchange Commission (SEC) in March 2017 and several others rejected in 2018, amid concerns including a lack of regulation. The Chinese

³ Werbach, Kevin. "Trust, but Verify : Why the Blockchain Needs the Law". *Berkeley Technology Law Journal*, Vol.33, Issue 2,(2018):489.

⁴ *Ibid.*p.491.

⁵ Olson, Eric dan Tomek, Jonathan. "Cryptocurrency and the Blockchain : Technical Overview and Potential Impact on Commercial Child Sexual Exploitation". *International Centre for Missing & Exploited Children*, (Mei 2017) :1.

⁶ Whyte, Christopher. "Cryptoterrorism : Assessing the utility of blockchain technologies fo terrorist enterprise". *Journal Studies in Conflict & Terrorism*, (Januari 2019):1-2.

⁷ Sajidin, Syahrul. "Legalitas penggunaan cryptocurrency sebagai alat pembayaran di Indonesia". *Jurnal Arena Hukum*, Vol. 14, No. 2, (Agustus 2021):246.

⁸ Bob, Bartsch. " The Relationship of Drug and Human Trafficking and their Facilitation Via Cryptomarkets and The Dark Web : A Recommendation for Cryptocurrency Regulation". *University of Wisconsin Working Papers*, (April 2020):2.

⁹ Kethineni, Sesha dan Cao, Ying. "The Rise in Popularity of Cryptocurrency and Associated Criminal Activity". *International Criminal Justice Review*, Vol. 30, Issue 3, (September 2020):325-326.

¹⁰ *Ibid.*p.330.

government banned residents from trading cryptocurrencies and made initial coin offerings (ICOs) illegal in September 2017. Central bankers, such as the Bank of England's Mark Carney, have publicly expressed concern about cryptocurrencies.¹¹

One of the other innovations from blockchain is blockchain-based tokens, or more popularly known as "tokens". Tokens are defined as units that can be transferred and generated in a distributed network traceable to the ownership of the units through the application of blockchain technology. Tokens can represent rights to assets, payments, benefits, or can be exchanged for goods and services. Currently tokens are described as "signs" on something digitally such as banknotes, coupons or smart properties which are intended to create scarcity of digital assets on the blockchain by breaking ownership of assets into tokens. The development of open-source blockchain technology continues to drive the birth of new tokens with more diverse attributions. Evidenced by the number of tokens which have recently increased, not only in terms of the number but also the complexity of how to make them.¹²

In Indonesia itself, the matter of tokens has been regulated through Regulation of the Futures and Commodity Trading Regulatory Agency (Bappeti) of the Republic of Indonesia Number 3 of 2020 concerning the Third Amendment to Futures and Commodity Trading Regulatory Agency Regulation Number 5 of 2019 concerning Technical Provisions for Organizing the Physical Market for Crypto Assets (Crypto Asset) on the Futures Exchange, which has now released a list through the Futures and Commodity Trading Regulatory Agency Regulation Number 7 of 2020 concerning Establishment of Lists of Crypto Assets that Can be Traded on the Physical Market of Crypto Assets. One of them is ASIX, Anang Hermasyah's crypto tokeep which was once questioned because it is not traded on a digital asset buying and selling platform in Indonesia but on a global platform, namely Pancake Swap.

Meanwhile cryptocurrencies and tokens have many benefits, including faster and more efficient settlement of payments. However, other problems surrounding its use in illegal trade, such as drugs, hacking, theft, pornography, and even trafficking in persons for sexual purposes have the potential to be difficult for law enforcement to address at this time, so this paper seeks to describe the impact of blockchain, pornography, prostitution on the increase online crime of trafficking in persons for sexual purposes.

II. RESULTS

A. *Blockchain and Pornography*

The use of material containing nudity for economic gain is now increasingly facilitated by technological advances, one of which is by utilizing the internet. The sheer possibility of being able to consume sexually arousing material online was the internet's initial appeal and the move toward more interactive uses has also opened up new avenues of sexual exploration and gratification. Online sexual activity (OSA) has been defined as any activity on the internet that involves sexuality and is intended for recreation, entertainment, education, or the search for a partner. The internet provides a means to get new sexual experiences in a way that is fun, safe, and generally "accessible, affordable, and anonymous", which is often termed the Triple-A-Engine.¹³ The ability of the internet is considered to be one of the triggers for the development of pornography in cyberspace from year to year, both in terms of quantity and variety of forms.

As an industry worth US \$ 97 billion, pornography companies are growing in line with the evolution of today's technology. As the main platform for insiders to interact with pornography today, online pornography companies are visited daily by tens of millions of people. Pornhub, xHamster, and Xvideos, are the top three online pornography sites.¹⁴ The close relationship between the internet and pornography is often termed online commercial sex or techno-sexuality. Online commercial sex is a socio-cultural and technological transformation of paid sexual relations which are mediated by the internet and can be in the form of webcams, instant messages, telephone sex chats and others.¹⁵, while techno-sexuality describes the relationship between sexuality and digital space by emphasizing the increasingly widespread use of technology to collect sexual information, express sexual desires, view or expose sexual bodies, experience

¹¹Foley, Sean. "Sex, Drugs, and Bitcoin : How Much Illegal Activity is Financed Trough Cryptocurrencies ?". *Review of Financial Studies*, Vol.32, Issue 5, (May 2019):1799.

¹²Santoso, Wahyu Yun. et al. "Governing Blockchain-Based Token in Indonesia : Legal and Technical Perspective". *Brawijaya Law Journal : Journal of Legal Studies*, Vol.7 No.1 (April 2020):109-111.

¹³Koops, Thula. et al. "Online Sexual Activity Involving Webcams- An Overview of Existing Literature and Implications for Sexual Boundary Violations of Children and Adolescent". *Behavioral Science & the Law*, Vol.36, Issue 2, (Maret 2018) : 182-183.

¹⁴Keilty, Patrick. "Desire by Design : Pornography as Technology Industry". *Porn Studies*, Vol. 5, Issue. 3, (Juli 2018):1.

¹⁵Vlase, Ionela dan Preoteasa, Ana Maria. "Flexi(nse)curity in Adult Webcamming : Romanian Women's Experiences Selling Digital Sex Services Under Platfoem Capitalism". *Gender, Place & Culture*, (2021):4.

sexual pleasure, and explore sexual fantasies.¹⁶ Techno-sexuality practices may involve any of the following technologies: webcams, instant messaging (sexting), mobile applications, social networks, multiplayer role-playing games, virtual world, sex-oriented blogs, online pornography, online dating, and Google-enabled sexual interactions Maps API, eg, ijustmadelove.com.¹⁷

One example of today's form of techno-sexuality is the use of webcam technology, which has led to the emergence of 'cam girl' or "camming" websites that allow individuals to engage in sexual activity in front of the camera. The action is broadcast live to one to millions of subscribers. The site allows viewers to join chat rooms to communicate with the viewer via text message. Viewers may pay (tips) to request certain sexual acts from the viewer,¹⁸ and currently camming has been described as porn 2.0, referring to web 2.0 which introduces advantages in terms of user interaction.¹⁹

A study shows that there are 4 million online users and more than 3000 live rooms during active hours every day on live streaming platforms, an example is Twitch, one of the online streaming services that users often use to upload or stream games online. However, in its development, it is known that there are several users who take advantage of this service to benefit by live streaming game play. "Titty Streamer" is a term reserved for female game players who use their bodies to attract the attention of the audience by doing live streaming. Strong criticism came from other game players, because they judged that female players get the audience's attention not because of their ability to play, but are often based on the use of minimal clothing or containing elements of nudity. The high number of viewers, subscribers and donations received are the economic benefits of titty streamers.²⁰ Gift giving or donations on Twitch known as bits in 2017, reached up to \$826 million, while in China with 143 million users, the total amount of virtual gifts reached up to 54.8 billion yuan.²¹

In Korea, this camming activity is known as Yeokaem or Beotbang. Yeokaem refers to female online streamers who rely on their beauty to draw viewers to their live streaming events featuring seductive dances and close-ups of their bodies. Meanwhile, Beotbang refers to strip shows or live streaming of individuals wearing open clothes. In 2016, the Korean news was shocked by the news of the arrest of fifteen women who had committed lewd acts on the internet. These women are known to wear costumes and dance erotically in front of the camera, even live broadcasting their activities while bathing.²²

Meanwhile in China, this practice of camming has a special term by referring to a cam girl as nüzhubo. The state's strict policy against camming has created a new industry, resulting in the birth of various internet celebrity companies (wanghong) that manage women to become performers, such as the live streaming platform Momo with 103 million active users. This USD 4.4 billion industry encourages Chinese women to register and earn revenue from audience gifts which are then converted into currency. Even though it is strictly prohibited to offer sexual performances, the company's agents cleverly ensure that the activities of each performer are subtle so that it is difficult to recognize as an exploitation. As such, cam girls are encouraged to provide 'soft-pornographic' shows packaged as entertainment, using learned skills to develop secure yet seductive relationships with their subscribers. The women carry out various activities such as singing, dancing to a special game called PK (player killing). The game obliges whoever loses to comply with the winner's requests, such as shaking breasts, rubbing chairs against the body, kissing the screen, and twisting the waist.²³

Another platform that utilizes tokens and gifts in the camming industry is Chaturbate which was founded in 2011 and is ranked 3rd based on web ranking data released by the Alexa company. There is no prohibition against showing sexual activity for performers towards their customers in

¹⁶ Santos, Dominique Adams. "Sexuality and Digital Space". *Sociology Compass*, Vol 14, Issue 8, (July 2020):1.

¹⁷ Shaowen Bardzell dan Jeffrey Bardzell, *Technosexuality dalam The Wiley Blackwell Encyclopedia of Gender and Sexuality Studies*, (London : John Wiley & Son Ltd, 2016),p.1.

¹⁸ Ashton, Sarah. et al. "What does 'pornography' mean in digital age ? Revisiting a definition for social science researcher". *Porn Studies*, Vol. 6, Issue 2, (2019):16.

¹⁹ Rey, PJ Patella. "Sex Cam Modeling : Labor, Intimacy, and Prosumer Porn". *Dissertation, University of Maryland*, (2021):3.

²⁰ Ruberg, Bonnie. "Nothing but a "titty steamer" : legitimacy, labor, and the debate over women's breasts in video game live streaming". *Critical studies in media communication*, (September 2019):1-12.

²¹ li, Ye dan Peng, Yi. "What Drives Gift-Giving Intention in Live Streaming ? The Perspectives Attachment and Flow Experience". *International Journal of Human-Computer Interaction*, Vol.37, Issue 14, (2021): 1-2.

²² Lee, Min Joo. "Webcam Modelling in Korea : Censorship, Pornography, and Eroticism". *Porn Studies*, Vol.8, Issue 4, (2021): 1-2.

²³ Wan, Yilin. "Playing Live-Streaming 'Love Games' : Mediated Intimacy and Desperational Labour in Digital China". *Journal of Gender Studies*, Vol.30, Issue 5, (2021): 621-627.

Charturbate, so it is not uncommon to find activities to tease customers by undressing, using sex toys, showing breasts and genitals, there are even several requests from customers offering gifts for armpit licking, eating peanut butter from toes, reading books in open clothes, to cum shows²⁴.

In the camming industry, any performer can decide to work in front of the camera regardless of nationality, race, gender, sexual orientation, or body size. Cam sites can host multiple viewers, and viewers have control over how and what they record and control the content of their shows. In other words, in camming, the viewer is the content creator, actor, producer and director.²⁵ This is one of the debates when the pornography industry has ended, and replaced with independently produced pornography. However, this view is clearly wrong, because in fact the pornography industry is developing and modifying, resulting in the addition of new options, in the form of pornography that emphasizes the appearance of "amateurs" who take advantage of technological developments, especially the internet and digital payments such as tokens and other trading tools.²⁶

Another platform utilized in the production and distribution of pornography today is OnlyFans. Basically OnlyFans is a content-based subscription platform, although the creators of OnlyFans provide the option for their subscribers to be able to access for free or subscribe monthly, to view photos, videos, private chats, and live streams from content creators. Creators keep 80% of their earnings, while OnlyFans keeps the rest.²⁷ In Indonesia alone, the use of OnlyFans for sexual purposes has been widespread, as in the Siskae case which was decided by the Wates District Court with case number 23/Pid.B/2022/PN Wat. Siskae was found guilty of producing pornographic content to be published on the OnlyFans platform and was sentenced to 10 months in prison and a fine of Rp. 250 million by the Panel of Judges at the Wates District Court at the end of April 2022. Not only that, in March 2022, the Indonesian Police established a dea as a suspect for producing pornographic content and being published on the OnlyFans platform for almost 1 year, and currently the legal process for this case is ongoing. In August 2021, OnlyFans revealed plans to ban most sexually explicit content from its platform, despite that being the main reason for its popularity. However, just six days later OnlyFans reversed its decision. One of them, because of the presence of complaints from workers and their desire to find other platforms such as JustForFans, LoyalFans, Pocketstars, AVN Stars, and Fansly.²⁸

This camming activity is often associated with prostitution, which on many occasions gives birth to various views. Regarding area, culture, and jurisdiction, this is one of the reasons for the complexity of this issue. Prostitution itself is legal work in some jurisdictions and illegal in others, including the age difference between them²⁹. This makes it difficult to issue general regulations regarding pornography and prostitution globally.

It is known that pornographic material on the internet itself can be spread with or without consent. Material that is spread without consent is often referred to as non-consensual, one of which is caused by society's sexting culture, or because of sexual violence. A 2018 study showed that 14.8% of youth aged 11.9-17.0 years had sexted and 27.4% had received sexting.³⁰ In 2020, the Netherlands has only explicitly regulated the dissemination of non-consensual sexual images as a crime, after previously these actions were prosecuted on the basis of defamation, slander, libel or child pornography.³¹ Not only that, there has even emerged a phenomenon called predatory porn, referring to the digital industry that takes advantage of amateur non-consensual recordings of migrants or sex workers to publish them on online pornography sharing platforms, as experienced

²⁴ Doorn, Niels Van. "A Good Hustle : The Moral Economy of Marke Competition in Adult Webcam Modeling". *Journal of Cultural Economy*, Vol.11, Issue 3, (2018): 1-11.

²⁵ Jones, Angela. "The Pleasures of Fetishizations : BBW Erotic Webcam Performers, Empowerment, and Pleasure". *Fat Studies*, Vol. 8, No.3, (2018):6-7.

²⁶ Arnaud Anciaux, *A Digital Redefinition of the Pornography Industries* dalam Eric George (eds), *Digitalization of Society and Socio-political Issues 1: Digital, Communication and Culture*, (London : ISTE Ltd dan Hoboken : John Wiley & Son Inc, 2019), pp.133-134.

²⁷ Martin Trans, "Sex Work Re-loaded : How Digital Platforms are Redefining Sex Work", Masters of Media, University of Amsterdam, <https://mastersofmedia.hum.uva.nl/blog/2021/10/27/sex-work-re-loaded-how-digital-platforms-are-re-defining-sex-work/>. Diakses 18 April 2022.

²⁸ *Ibid.*

²⁹ Koops, Thula. *Op.Cit.* p.188.

³⁰ Mandau, Morten Birk Hansen. "'Snaps', 'screenshots', and self-blame : A qualitative study of image-based sexual abuse victimization among adolescent Danish girls". *Journal of Children and Media*, Vol.15, Issue 3, (2021):2.

³¹ Naezer, Marijke dan Oosterhout, Lotte Van. "Only slut love sexting : Youth, sexual norms and non-consensual sharing of digital sexual images". *Journal of Gender Studies*, (Agustus 2020):2.

by refugees in Greece.³²

In a study described image-based abuse can occur in various forms. Images can be produced without consent, by forcing someone or soliciting them to create and/or post sexual images of themselves. Sexual images can be made without the person's knowledge, for example upskirting, downblousing and/or approval, for example child pornography or images can be engineered through the Photoshop application or falsified with deepfake techniques. In addition, images created under consent can be stolen, for example through hacking. Then, both consensual and non-consensual generated images can be shared without someone's consent, and/or used to blackmail that person (sextortion).³³ In 2018, sextortion started utilizing cryptocurrencies in its payments. This mode is carried out via spam to the point where it is termed sextortion spam. In the 11 months that this mode has been running, it is known that the minimum profit for the perpetrators has reached \$ 1,352,620. A report indicates that this spam has been distributed since September 11, 2018, by the Necurs botnet. The amounts demanded varied between \$250 and \$550, and the threats were known to be distributed in seven languages: English, German, French, Italian, Japanese, Korean and Arabic.³⁴

One of the potential consequences of sexting and coercive sexting is the distribution of intimate images that are often carried out by ex-lovers, after the end of a relationship without permission, which is referred to as revenge porn or cyber rape.³⁵ It can even be in the form of coercion to a partner to do something by threatening to disseminate intimate images or videos that have previously been immortalized, as was done by a young man in Indonesia against a 14-year-old woman who threatened to share her second intimate video if she did not serve her request to have intercourse.³⁶ Unfortunately, in this incident, most people often blamed the victim for taking pictures of themselves naked, in line with the just world theory which states that people tend to believe that the world is a fair and orderly place, so that everyone gets what they deserve. . This theory forms an understanding that society tends to blame the victim for the suffering they experience, exaggerates personal factors that influence their behavior, and then encourages society to judge negatively by evaluating the morals of those who have sent intimate images, and finally blame them for the immorality they experience. they feel.³⁷

The high increase in pornographic material today is increasingly facilitated by new technological developments that are constantly being born, one of which is the blockchain. If legal literature often explains the negative effects of using blockchain, some studies also try to show another side of blockchain that needs to be appreciated. Kevin and Mik describe at least there are reasons for the advantages of blockchain, namely: (1) It can radically change the existing distribution of social and economic power through the disintermediation of powerful intermediaries such as banks; (2) for advanced industrial economies, blockchain can improve operational efficiency in commerce going forward; (3) Can provide significant transformational change to developing countries that lack credible legal institutions³⁸. However, these advantages still do not cover the impact caused by the use of blockchain by criminals, especially in the pornography industry.

One of the pornographic material that utilizes blockchain technology is child pornography. The increase in child pornography has shown a significant increase. In 2017 it was reported that there were more than 9.6 million compared to the range of 1998 to 2008 which amounted to 565,000.³⁹ As these child pornography marketplaces often operate exclusively accepting cryptocurrencies for payment over traditional payment methods, the last few years have seen a dramatic increase in the use of crypto-currencies to buy Child Sexual Exploitation Material (CSEM), including a very prominent and widely distributed cryptocurrency. traded in the world, Bitcoin. In 2019, Chainalysis tracked payments worth less than \$930,000 to addresses associated with CSEM providers via Bitcoin and another cryptocurrency, Ethereum (ETH). This represents a 32% increase

³² Rexhepi, Piro. "Predatory Porn, Sex Work and Solidarity at Borders". *Ethnic and Racial Studies*, Vol.44, Issue 9, (2021) : 1629-1630.

³³ Naezer, Marijke dan Oosterhout, Lotte Van, *Loc.Cit.*

³⁴ Clouston, Masarah Paquet. et al. " Spam meet Cryptocurrencies : Sextortion in the Bitcoin Ecosystem". *Proccedings of the 1st ACM Conference on Advance in Financial Technologies* (October 2019) : 76-79.

³⁵ Mckinlay, Tahlee dan Lavis, Tiffany. "Why did she it in the first place ? Victim blame in the context of 'revenge porn'". *Journal of Psychiatry, Psychology and Law*, (Juni 2020):1.

³⁶ Putusan Pengadilan Negeri Tanjung Pati Nomor 58/Pid.B/2011/PN.TJP tanggal 3 Oktober 2011.

³⁷ *Ibid.*p.3.

³⁸ Low, Kelvin F.K dan Mik, Eliza. "Pause the Blockchain Legal Revolution". *The British Institute of International Comparative Law*, Volume 69, Issue 1, (2019):1-2.

³⁹ Knack, Natasha. et al. "Motivational pathways underlying the onset and maintenance of viewing child pornography on the internet". *Journal Behavioral Sciences & The Law*, Vol.38, Issue 2, (Februari 2020):1.

from 2018, which in turn represents a 212% increase from 2017.⁴⁰

The study conducted by Greenemeier shows evidence that child abuse and pornography became available due to the peer-to-peer BitTorrent network which uses a similar mechanism as cryptocurrency, but to share files. This network is able to remain operational, due to the high number of advertisements containing prohibited material, which are paid for using cryptocurrencies.⁴¹ Traffickers are now able to exchange money through digital currency transfer services while commercially exploiting domestic minor sex trafficking (DMST) victims, thereby covering up their illicit activities. Encryption technologies such as the dark web and cryptocurrencies allow individuals who engage in illicit activities, including merchants, to be paid in a way that is difficult to trace, thereby reducing the risk of perpetrators being discovered by law enforcement,⁴² it even becomes a new problem when the immutable ability of data on cryptocurrencies has been misused, especially the exploitation of children. A study has revealed that there are at least 8 files related to sexual content stored on the Bitcoin blockchain, two of which contain 274 links to child pornography, 142 of which refer to darknet services.⁴³

One of the materials found on the dark web is child pornography. In Germany, the "Elysium" platform, with 87,000 members, was delisted in July 2017. It was originally built as a forum in 2016 accessible only via the dark web and was used to exchange child abuse material and make promises on child sexual abuse. The platform includes group chats in German, French, Spanish and Italian.⁴⁴ Another example is Playpen, a child pornography site that is only available on the dark web and has more than 100,000 user accounts. Even though in its development, the NIT (network investigative technique) installed by the United States eventually searched more than a thousand computers in various countries, and led to further investigations that led to hundreds of arrests worldwide,⁴⁵ however, it still cannot completely stop the production and distribution of child pornographic content.

The anonymity afforded by Bitcoin even paved the way for the distribution of violent or illegal images of women and children, or even online auctions of victims. It even found a feature that can be selected by paying to witness firsthand the torture of women in Southeast Asia which is known to be operated from the United States.⁴⁶

Steps for visa and mastercard which stopped their services on backpage sites in 2015 because they were found to contain sex trafficking practices⁴⁷ does not immediately stop its activities. Because it didn't take long, the site immediately found another alternative technology, namely the use of blockchain by providing transaction features using Bitcoin⁴⁸. Even in 2014, Pornhub developed its own electronic currency, namely Titcoin. Titcoin is a cryptocurrency that is produced like no other by taking pictures of women's breasts with mobile phones and sending these photos to the site via a special application and then converting them into a monetary value. As of June 2020, it is known that the Titcoin market has reached 12,000 USD, which is far from the popularity of other cryptocurrencies such as Bitcoin which has a market of 170 billion USD.⁴⁹ Pornhub, at the start of the Covid-19 Pandemic made a surprising move by announcing a 15 day waiver of fees to access the content it provides. Pornhub even released its program slogan with "let's help flatten the curve", "touch yourself not others" and "thank you for flattening the curve". Data released throughout 2019 shows that there are 42 billion visits to the site and 115 million

⁴⁰ International Centre for Missing & Exploited Children and Standard Chartered. "Cryptocurrency and the trade of Online Child Sexual Abuse Material", (Februrari 2021):4.

⁴¹ Naheem, Mohammed Ahmad. "Do Cryptocurrencies Enable and Facilitate Modern Slavery ?". *Journal of Money Laundering Control*, Vol.42, No.3, (2021):454.

⁴² O'Brien, Jennifer E dan Li, Wen. "The Role of the Internet in the grooming, exploitation, and exit of United States domestic minor sex trafficking victims". *Journal of Children and Media*, Vol.14, Issue 2, (2020):4.

⁴³ Zhang, Di. et al. "Exploring the Redaction Mechanisms of Mutable Blockchains : A Comprehensive Survey". *International Journal of Intelligent System*, Vol.36, Issue 9, (June 2021):2.

⁴⁴ Justice Studio, "Blockchain and Child Protection Opportunities and Dangers". *Briefing Report*, (September 2017): 4.

⁴⁵ Kerr, Orin S dan Murphy, Sean D. "Government Hacking to Light the Dark Web : Risks to International Relations and International Law ?". *Stanford Law Review*, Vol.70, (July 2017):63.

⁴⁶ Koops, Thula. *Loc.Cit.*

⁴⁷ The Guardian, "MasterCard and Visa sever ties with Backpage.com 'adult' section", <https://www.theguardian.com/us-news/2015/jul/01/mastercard-visa-boycott-backpagecom-adult-section>. Diakses 26 Maret 2022.

⁴⁸ Lee, Seunghyeon. et al. "Cybercriminal Minds : An Investigative Study of Cryptocurrency Abuses in the Dark Web". *Network and Distributed System Security (NDSS) Symposium*, 24-27 February 2019, San Diego, USA, (2019): 14.

⁴⁹ Rodeschini, Silvia. "New standards of respectability in contemporary pornography : Pornhub's corporate communication". *Porn Studies*, Vol.8, Issue 1, (2021):5.

visits every day.⁵⁰

One of the steps recently taken by the United States by passing the Allow States and Victims to Fight Online Sex Trafficking Act and the Stop Enabling Sex Traffickers Act (FOSTA/SESTA) in 2018 has forced platforms to be responsible for the content posted on them. This has succeeded in reducing the publication of pornographic content and even images that are considered sexy, one of which is with the presence of shadow banning, a light censorship technique used by social media platforms to limit the reach of potentially "unpleasant" content without removing it altogether. Social media platforms are finally making aggressive efforts to censor content in order to avoid judgment in facilitating sex workers, and as proof when complying with the prohibition of sexual communication, depiction of nudity and sexual activity. As a result, online space for nudity and sexuality began to decrease, such as the 2018 Tumblr 'porn ban' which removed sexual communities, to Reddit's removal of escorts and sugar daddies, and the Backpage site which then banned sex advertisements.⁵¹

B. Child Pornography and Sexual Trafficking.

When Time magazine raised the issue of cyberporn in 1995, mass disquiet arose about the impact pornography had caused, which prompted several countries to immediately decide to ban access to pornographic content, as was done by China and Vietnam. Even though several countries are faced with the existence of the right to freedom of speech which seems to oppose its implementation, as well as the complexity of overcoming the ingenuity of service providers who are outside their jurisdiction, the spirit of eradicating pornography remains challenging to pursue.⁵² It needs to be realized that the impact of cyberporn does not only threaten to increase children's addiction to access pornographic content but also opens up opportunities to victimize children, one of which is the crime of trafficking in persons. The discussion that follows in this paper will focus on the influence of pornography in triggering the current sexual trafficking of children.

Pornography and human trafficking have been a global problem for a long time. Various legal measures have been introduced to combat it, such as the 1999 International Conference on the Combating of Child Pornography on the Internet held in Vienna, which called for the worldwide criminalization of child pornography and emphasized the importance of closer cooperation and partnership between governments and the Internet industry. In the same year, the International Labor Organizations Convention Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labor was born which called for the criminalization of child pornography. In 2001, the Council of Europe released the convention on cybercrime, which in Article 9 stipulates violations related to online child pornography. Furthermore, in 2007 the Council of Europe approved the Lanzarote Convention in response to the increased use by children and actors of information and communication technology, and advocated for the presence of international cooperation. The purpose of this Convention is to prevent and combat sexual exploitation and sexual abuse of children, protect the rights of victims and promote international cooperation on the matter.

In Indonesia child protection provisions have been regulated in the Constitution⁵³. The Criminal Code⁵⁴, Law Number 39 of 1999 concerning Human Rights, Law Number 44 of 2008 concerning Pornography, Law Number 21 of 2007 concerning Eradication of the Crime of Trafficking in Persons, Law Number 34 of 2014 concerning Child Protection, Law Number 13 of 2006 concerning Protection of Witnesses and Victims, Law Number 19 of 2016 concerning Amendments to the Law Number 11 of 2008 concerning Information and Electronic Transactions (UU ITE) and other provisions.

The Pornography Law in Indonesia defines pornography as pictures, sketches, illustrations, photos, writing, voices, sounds, moving images, animations, cartoons, conversations, gestures, or other forms of messages through various forms of communication media and/or public displays. public, which contains obscenity or sexual exploitation that violates the norms of decency in

⁵⁰ Martinez, Victor Cerdan. et al. "Pornhub searches during the Covid-19 pandemic". *Porn Studies*, Vol. 8, Issue 3, (2021): 2.

⁵¹ Are, Carolina dan Paasonen, Susanna. "Sex in the Shadow of Celebrity". *Porn Studies*, Vol 8, Issue 4, (2021):414-415.

⁵² Thurman, Neil dan Obster, Fabian. "The Regulation of Internet Pornography : What a Survey of under-18s tells us about the necessity for and potential efficacy of emerging legislative approaches". *Policy and Internet*, Vol.13, Issue 3, (2021):415-416.

⁵³ Pasal 28 B ayat (2) UUD 1945 menyatakan bahwa setiap anak berhak atas kelangsungan hidup, tumbuh kembang, serta berhak atas perlindungan dari kekerasan dan diskriminasi.

⁵⁴ Pasal 287, 290, 297 KUHP tentang larangan untuk melakukan perbuatan yang menjurus pada aktivitas seksual terhadap anak dan perdagangan anak.

society.⁵⁵ Currently, the proliferation of pornographic content is increasing due to the use of the internet, one of which is through social media or special websites.

Pornographic sites are one of the most visited and profitable online services since the beginning of the World Wide Web, one of which is Pornhub.⁵⁶ Pada akhir tahun 2020, New York Times merilis laporan perihal Pornhub, situs pornographic web visited tens of billions of times each year, and placing it as the most visited website in the US for adult entertainment. In its report, it was revealed that Pornhub is home to countless rape videos. From victims of child abuse to ex-partners who are victims of "revenge porn", to young girls forced to become porn stars.⁵⁷

The report further revealed that search results for "girls under 18" or "14" yielded more than 100,000 videos. It is even known that a 15-year-old girl who went missing in Florida, was found by her mother on Pornhub in 58 sex videos. The sexual assault of a 14-year-old Californian girl went viral on Pornhub and was reported to the authorities, but not by the company, but by a classmate who saw the video. In that case, the criminal was arrested on assault charges, but Pornhub was able to escape the responsibility of sharing the video and profiting from it.⁵⁸

A study reveals that watching pornographic content online or sexually explicit Internet material (SEIM) can encourage someone to see women as sex objects,⁵⁹ which often leads to prostitution. When pornography triggers the presence of prostitution, it becomes common knowledge that prostitution on the internet has become the entrance to the sex trafficking industry for women. Another study concluded that all sex workers are helpless victims of human trafficking and are forced to perform emotional labor to satisfy clients,⁶⁰ one case was even found, a Japanese woman had been smuggled to Hawaii to perform a nude show in front of a webcam for audiences in Japan, in order to avoid Japan's strict laws on pornography.⁶¹

Currently, it is common for trafficking victims to be recruited by traffickers or pimps using grooming tactics by utilizing the internet as their communication medium. In general, pimps can be divided into three categories: (1) "gorilla pimps" who rely heavily on coercion and violence to gain control over their victims; (2) "the finesse/romeo pimp" which uses affection, charm and romantic attention as a means to manipulate the victim into obedience; and (3) "business/CEO pimp" that promises prosperous careers and legal income to victims.⁶²

The internet through its various platforms currently facilitates four types of sex work that can be used, namely: (1) involving direct sexual experiences, such as paid sessions for sex, fetish, or BDSM, where the provider and the customer are physically present together to exchange after arranging a meeting online; (2) involves indirect, remote direct experiences, such as webcamming, phone sex, instant messaging or teledildonics; (3) indirect purchase or consumption of material, which involves using a platform to purchase or consume sexual material without the direct presence or involvement of a sex worker, such as viewing pornography or viewing sexually explicit images; and (4) asynchronous consumption and interaction, which involves repeated interactions with sex workers and/or material produced by sex workers through services such as OnlyFans, Patreon,⁶³ or adultwork.com.

An online platform headquartered in the UK since 2003, adultwork facilitates an individual paying to create an online profile for the purpose of offering sexual services. These services can take the form of camera services, including sexual services via live video, erotic, to face-to-face sexual services. Each seller has a profile which provides information about the services they provide, details about themselves, rates for various services and the number of views on their profile,⁶⁴ to facilitate sex trafficking. This activity is often categorized as modern slavery, because one of the factors that differentiates it from conventional slavery is seen in the victims who can

⁵⁵ Pasal 1 angka 1 Undang-Undang Republik Indonesia Nomor 4 Tahun 2008 tentang Pornografi.

⁵⁶ Vallina, Pelayo. et al. "Tales from the Porn : A Comprehensive Privacy Analysis of the Web Porn Ecosystem". *Proceedings of the Internet Measurement Conference*, (October 2019):245.

⁵⁷ Lord, Phil. "Pornhub : Opening the Floodgates ?". *Houston Law Review Online*, Vol.11, No.2 (Spring 2021):54-55.

⁵⁸ Desanctis, Alexandra. "The Children of Pornhub", <https://www.nationalreview.com/corner/the-children-of-pornhub/>. Diakses 8 April 2022.

⁵⁹ Vandenbosch, Laura dan Oosten, Johanna M.F. van. "The Relationship Between Online Pornography and the Sexual Objectification of Women : The Attenuating Role of Porn Literacy Education". *Journal of Communication*, Vol.67, Issue 6, (2017):2.

⁶⁰ Lee, Min Joo. *Op.Cit.*p.3

⁶¹ Koops, Thula. *Loc.Cit.*

⁶² Winters, Georgia M. et al."The Sexual Grooming Model of Child Sex Trafficking". *Victim & Offenders*, Vol.17, Issue 1, (2021) : 62.

⁶³ Swords, Jon. et al. "Platforms, Sex Work and their Interconnectedness". *Sexualities*, (September 2021):2.

⁶⁴ Mergenthaler, Alicia dan Yasseri, Taha. "Selling Sex: What Determines Rates and Popularity ? An Analysis of 11,500 Online Profiles". *Culture, Health and Sexuality*, (April 2021):1.

receive a form of payment and are not under the full control of another person.⁶⁵

The United States Department of State states that human trafficking can include forced labor and services as well as sexual trafficking, even emphasizing that sex trafficking involving minors is a form of commercial sexual exploitation of children (CSEC) which can be in the form of prostitution, pornography, and child sex tourism, it is even further stated that specific forms of child sex trafficking are in the form of production of child pornography, child prostitution, child sex tourism, child marriage, and child sexual entertainment⁶⁶. In line with Prylinski's statement that globally, the most common form of human trafficking is sex trafficking and sex trafficking includes activities related to prostitution, commercial sexual activities, sex tourism, and pornography.⁶⁷ Sex trafficking is one of the most common forms of human trafficking, consisting of the recruitment and exploitation of individuals through the use of threats, violence, coercion, deception or the abuse of power for the purpose of commercial sex acts. Commercial sex acts are any sexual acts that give or receive something of value, including prostitution, pornography, sexual massage parlors, and strip clubs. Commercial sex acts themselves can be exchanged for money, drugs, shelter, clothing, and food.⁶⁸

It should be noted that sexual trafficking does not only occur through consent (prostitution) but in many cases, victims fall for it and do it under compulsion, so that it is a necessity to be able to combat sexual trafficking without eliminating the practice of prostitution.⁶⁹ Belief in the inherent link between prostitution and human trafficking directly to prostitution, in particular legalized, decriminalized or tolerated prostitution. Proponents of this "abolitionist" perspective typically characterize the relationship between prostitution and the sex trade as one of the causes and effects of legalized prostitution creating the conditions for the sex trade to develop. When prostitution is accepted by society, sexual trafficking and sexual tourism follow. According to this perspective, to combat sex trafficking effectively, the sex industry must be abolished.⁷⁰ In line with France's move in 2016, which declared paying for the purpose of sex is illegal and imposes fines on users of up to 4000 Euros. With the regulation, France joins a group of European countries adopting a "Swedish approach" regarding paid sex policies, along with Norway, Iceland and Northern Ireland. The ultimate goal of the Swedish-style Regulation is to eradicate paid sex, commonly referred to as "prostitution". Proponents of the Swedish model believe that if the practice of prostitution decreases, it will have an impact on reducing the number of crimes of trafficking in persons.⁷¹

As previously explained, one type of trafficker is the gorilla pimp who relies heavily on coercion and violence to gain control over their victims, and usually begins by sexually assaulting their target, to then consider whether or not they can become victims of trafficking in persons. For women today, sexual harassment is becoming an increasingly serious problem. In one study, it was found that 8 out of 10 women have been sexually harassed or assaulted in their lifetime, and 4 out of 10 women have experienced this sexual harassment online.⁷² Sexual harassment refers to various forms of behavior that can be classified into three main categories: gender harassment, unwanted sexual attention, and sexual coercion.⁷³, which when utilizing the use of communication technology is termed technology-facilitated sexual violence (TFSV)⁷⁴, which has four dimensions, namely: (1) digital sexual harassment; (2) Image-based sexual abuse; (3) sexual aggression and/or

⁶⁵ Naheem, Mohammed Ahmad. *Op.Cit.* p.450.

⁶⁶ Perrin, Cindy Miller dan Wurtele, Sandy K. "Sex Trafficking and The Commercial Sexual Exploitation of Children". *Women & Therapy*, Vol. 40, No.1-2, (2017):123-126.

⁶⁷ Prylinski, Kirsten M. "Tech Trafficking : How the Internet has Transformed Sex Trafficking". *The Journal of High Technology*, Vol.20, Nbr.2 (July 2020):339-340.

⁶⁸ Baird, Kyla dan Connolly, Jennifer. "Recruitment and Entrapment Pathways of Minors into Sex Trafficking in Canada and the United States : A Systematic Review". *Trauma, Violence & Abuse*, June 2021):1.

⁶⁹ O'Brien, Erin. "Prostitution ideology and trafficking policy : The impact of political approaches to domestic sex work on human trafficking policy in Australia and the United States". *Journal of Women, Politics & Policy*, Vol.36, (2015):191.

⁷⁰ *Ibid.* p.193.

⁷¹ Bettio, Fransesca. et al. "Sex Work and Trafficking : Moving Beyond Dichotomies". *Feminist Economics*, Vol. 23, No. 3, (2017) : 1-2.

⁷² Burnay, Jonathan. et al. "Effect of sexualized video games on online sexual harassment". *Journal Aggressive Behavior*, Vol. 45, Issue 2, (Januari 2019):1.

⁷³ *Ibid.* p.2.

⁷⁴ Zvi, Liza dan Bitton, Mally Shechory. "Perception of victim and offender culpability in non-consensual distribution of intimate image". *Journal Psychology, Crime & Law*, Vol. 27, Issue 5, (2021):1.

coercion; and (4) Gender and/or sexuality based harassment.⁷⁵

The United Nations Office on Drugs and Crime revealed that globally, 80% of victims of human trafficking are girls and women who are exploited in the sex trade. Other reports even reveal that most victims of human trafficking are women and 50% of them are children, 70% are mainly trafficked for sexual exploitation.⁷⁶ And it should be noted that 38% of perpetrators of sex trafficking are women, even women from Central Europe and East Asia are twice as likely to become suspects in human trafficking compared to men with a percentage of 68% to 32%.⁷⁷ Even in Indonesia, husbands are sold by wives and offered online through the Facebook application in 2018.⁷⁸

It needs to be a special concern when the victim of human trafficking is a child, because children are treated not only as sexual objects but also as commercial objects. The commercial element of sexual exploitation was defined in the First World Congress Against the Commercial Sexual Exploitation of Children in 1996 as sexual harassment by an adult in exchange for money or goods to a child or a third person or persons. The commercial aspect of sexual exploitation distinguishes sex trafficking from other sexual crimes such as molestation, sexual assault and rape. The commercial element can include any form of compensation, financial or otherwise, where the child or youth is treated as a commercial object. Child pornography, for example, often involves exchanges for money, but can also be based on non-monetary exchanges via the Internet where images are traded or exchanged between pornographic owners and treated as their own form of currency. Likewise, child prostitution can involve monetary compensation, but also includes situations where sexual acts are exchanged for basic needs such as shelter, food, or desirable items such as drugs, which is often referred to as survival sex.⁷⁹

When compared with the regulations in Indonesia which regulate prostitution and trafficking in persons, it is necessary to know if the term prostitution is not recognized in the laws and regulations in Indonesia, it's just that you can see the provisions in the Criminal Code Article 296⁸⁰ and Article 506⁸¹ which criminalizes obscenity service providers, brothel owners and their pimps, as also regulated in Article 4 paragraph (2) of the Pornography Law⁸², as well as the term sexual exploitation as contained in the Child Protection Act. In fact, it should be noted, that there are no regulations that ensnare commercial sex workers, even their customers, because these actions are considered to be included in the category of victimless crime. The regulations contained in the ITE Law only regulate prohibitions in distributing, transmitting, or making accessible electronic information that violates decency, except if the victim is a child, then he can be charged with Article 290 paragraph (2) of the Criminal Code.⁸³, Articles 295, 297 of the Criminal Code⁸⁴, Article 761 jo Article 88⁸⁵ Child protection laws. If the exploitation is carried out with threats of violence, fraud, abuse of power or a vulnerable position, they can be punished under Article 2 paragraph (1) of the Law on the Restriction of Trafficking in Persons with a minimum prison sentence of 3 (three) years and a maximum of 15 (fifteen)) years and a fine.

In a study it was found that perpetrators of human trafficking for sexual purposes have the

⁷⁵ Araujo, Ana Valentina Medeiros de. et al. "Technology-facilitated sexual violence : A review of virtual violence against women". *Research, Society and Development*, Vol. 11, No.2, (2022):5.

⁷⁶ Asongu, Simplice A dan Usman, M. "The Covid-19 Pandemic : Theoretical and Practical Perspective on Children, Women and Sex Trafficking". *Health Care for Women International*, Vol. 41, Issue 11-12, (December 2020):1392.

⁷⁷ Wijkman, Miriam dan Kleemans, Edward. "Female Offenders of Human Trafficking and Sexual Exploitation". *Crime, Law and Sosial Change*, Vol.72, Issue 1, (2019):53-54.

⁷⁸ Tribun Jabar, "5 Fakta Mencengangkan, Istri Jual Suami untuk Layani Threesome dengan Pria Hidung Belang", <https://jabar.tribunnews.com/2018/01/25/fakta-mencengangkan-istri-jual-suami-untuk-layani-threesome-dengan-pria-hidung-belang?page=all>. Diakses 4 Mei 2022.

⁷⁹ Perrin, Cindy Miller dan Wurtele, Sandy K, *Op.Cit.* p.125.

⁸⁰ Pasal 296 KUHP menyatakan : "barang siapa yang mata pencahariannya atau kebiasaannya yaitu dengan sengaja mengadakan atau memudahkan perbuatan cabul dengan orang lain diancam dengan pidana penjara laing lama satu tahun empat bulan atau pidana denda paling banyak lima belas ribu rupiah".

⁸¹ Pasal 506 KUHP menyatakan: "Barang siapa sebagai mucikari (*souteneur*) mengambil keuntungan dari pelacuran perempuan, diancam dengan pidana kurungan paling lama satu tahun".

⁸² Pasal 4 ayat (2) UU Pornografi menyatakan : "setiap orang dilarang menyediakan jasa pornografi yang menawarkan atau mengiklankan baik secara langsung maupun tidak langsung layanan seksual".

⁸³ Pasal 290 ayat (2) KUHP menyatakan "Diancam dengan pidana penjara paling lama 7 (tujuh) tahun barang siapa melakukan perbuatan cabul dengan seorang padahal diketahuinya atau sepatutnya harus diduga bahwa umurnya belum lima belas tahun atau kalau umurnya tidak jelas yang bersangkutan belum waktunya untuk dikawin".

⁸⁴ Pasal 297 KUHP menyatakan: "Perdagangan wanita dan perdagangan anak laki-laki yang belum dewasa diancam dengan pidana penjara paling lama enam tahun".

⁸⁵

potential to face legal problems when the victims are minors, because society and law enforcement are more focused than when the victims are adults. One of the reasons perpetrators use minors is due to the ease with which children can be manipulated and controlled due to their emotional immaturity and lack of social support from their immediate environment.⁸⁶

One mode of online child trafficking is carried out through live streaming which involves broadcasting child sexual abuse in real-time to viewers in remote locations. Live streaming of child sexual abuse can occur in online chat rooms, social media platforms and other communication applications. Viewers of live streaming child sexual abuse can be passive, paying to watch or active by communicating with the child, the perpetrator of sexual abuse, or the facilitator of child sexual abuse and then asking for certain physical actions or sexual acts to be carried out by the child. Active participation from the audience is known as child sexual abuse to order and can occur before or during the live stream.⁸⁷ One of them is the case involving Lostprophets band vocalist, Ian Watkins, who was sentenced to 35 prisons in 2013 for sexual abuse of children. Ian was charged with 13 attempts to rape a baby, performing sexual acts on a baby and asking fans to torture their baby which was broadcast live streaming.⁸⁸

Live Streaming can be done by utilizing various types of applications available today. In October 2014, Kendra Sunderland attended Oregon State University (OSU) and was struggling to find a well-paying part-time job. Kendra soon started earning more money than she had anticipated after signing up as an adult webcam model (AWM), an amateur performer on the popular website MyFreeCams (MFC), a live "ordinary woman" webcast that performs interactive sex shows for a wide-ranging internet audience. would pay him to watch and chat with them. In just a few months, the videos Kendra featured on MFC appeared on third-party adult content providers such as Pornhub, and later video streaming sites YouTube and Vimeo.⁸⁹

In its current development, other platforms that facilitate this action can be done via zoom. A report reveals the consequences of banning child pornography content in most countries, causing perpetrators to use the zoom application to share prohibited material in real-time. A person can play child pornography on his computer and share his screen with a select few. This can be done anonymously or by impersonating his real identity. Sharing like this can even be done using a new Zoom account, given the convenience of creating a Zoom account via an email account.⁹⁰

Even Zoom's plan to provide end-to-end encryption to ensure data confidentiality and user privacy is a new challenge for law enforcement. Zoom Meet content, such as audio, video, chat messages, and so on is encrypted using AES encryption with Galois Mode. AES is a symmetric encryption scheme, meaning that content must be encrypted by the content sender within the Zoom session and decrypted by the content recipient using the same key. The key must be kept secret and made available to the sender and recipient in a secure manner. Zoom uses public key cryptography for this purpose. AES keys for Zoom meetings are generated by the meeting organizer's machine, and distributed securely among Zoom meeting participants using public key cryptography. Because the keys for each Zoom meeting are generated by the participants' machines, not by Zoom's servers, encrypted data passed through Zoom's servers cannot be deciphered by Zoom. Because of this, it is difficult to intercept by law enforcement agencies if they do not have the decryption key⁹¹. So that the practice of distributing child pornography to live streaming is difficult to identify.

As mentioned in the previous discussion, regarding the implementation of FOSTA/SESTA in America in 2018 which turned out to have an impact on the practice of sexual trafficking in people in cyberspace in addition to banning sexual advertisements. These regulations have forced internet service providers such as the site Craigslist to be legally responsible for the online sex trade, after all this time Article 230 of the Communications Decency Act of 1996 protected site owners from lawsuits or lawsuits. As a platform, Craigslist is described as a non-criminal

⁸⁶ Roe-Sepowitz, Dominique. "A six-year analysis of sex traffickers of minor : exploring characteristics and sex trafficking patterns". *Journal of human behaviour in the social environment*, (April 2019):2.

⁸⁷ United Nations Office on Drug and Crime, "Online child sexual exploitation and abuse : Module Series", <https://www.unodc.org/e4j/zh/cybercrime/module-12/key-issues/online-child-sexual-exploitation-and-abuse.html>. Diakses 9 April 2022.

⁸⁸ Liputan 6, "Mantan Vokalis Lostprophets dijatuhi Hukuman 35 tahun Penjara !", <https://www.liputan6.com/showbiz/read/779398/mantan-vokalis-lostprophets-dijatuhi-hukuman-35-tahun-penjara>. Diakses 9 April 2022.

⁸⁹ Nayar, Kavita Ilona. "Working it : The Professionalization of Amateurism in Digital Adult Entertainment". *Feminist Media Studies*, Vol.17, Issue. 3, (2017):473-474.

⁹⁰ Mohanty, Manoranjang. et al. "Can Zoom Video Conferencing tool be Miusused for Real-Time Cybercrime ?". *WIREs Forensic Science*, Vol.4, Issue 1, (April 2021):4.

⁹¹ *Ibid*.p.5

epicentrum that is more exploitative than prostitution or pimps, and some advocacy groups even call it "the Wal-Mart of sex trafficking". Craigslist has accommodated someone to become a pimp, it can even be done by teenagers to sell their friends or someone who is found on the street because they are considered vulnerable, as experienced by an 11-year-old child who has been sold by a 28-year-old person through Craigslist. Not only that, it is also known that other impacts that can occur in the form of death, such as that experienced by a female student after she met a man through Craigslist and sparked investigations and news with the headline "Craigslist Killers".⁹² Prior to 2010, it was not difficult for users to find victims, as there were subcategories on Craigslist such as "w4m" meaning women for men, so users could find them in the word search feature.⁹³ This is the main focus of the implementation of FOSTA/SESTA, even though this step has received strong opposition from sex workers who feel their sources of income are being hindered, FOSTA/SESTA is considered successful in minimizing trafficking in persons which is carried out by force, rape, and even involving children.

Anonymous is one of the reasons why Craigslist used to be a popular destination for sex trafficking crimes. This is not only because Craigslist has alternative payment methods using cryptocurrencies, such as Bitcoin⁹⁴, but also because Craigslist does not provide a system for seller public usernames, there is only the posting date, city, post identification number, anonymous Craigslist email address, and direct link to the posted post.⁹⁵ Public outcry and the legal instruments in force eventually forced Craigslist to close the space trading in persons for sexual purposes, although customers eventually sought other alternatives, such as the site backpage.com which was shut down by the FBI in 2018 over allegations of trafficking, prostitution and laundering. Money using Bitcoin, and the trial against him is still ongoing.

Not only Craigslist or Backpage, in mid-2020, the world community, especially Indonesia, was shocked by the arrest of Indonesian citizen Wilham Martono in California for being charged with online prostitution. Martono carried out his crimes through the adult site CityXGuide to offer women to his users, including a 13 and 16 year old girl who was rescued. Martono is known to have made profits of up to USD 21 million, and is currently undergoing trial on 28 counts and is punishable by 25 years in prison.⁹⁶

Regulations that are similar to FOSTA/SESTA in Indonesia can be found in the Regulation of the Minister of Communication and Informatics Number 5 of 2020 concerning Implementation of Private Electronic Systems which requires all private digital services and platforms to register with the Ministry of Communication and Informatics and provide access to systems and data. With this regulation in place, electronic system operators are required to ensure that their platforms do not contain or facilitate prohibited content. Failure to monitor such content may result in the banning of the entire platform. However, opposition to these regulations exists because there are fears that they will injure the right to freedom of expression, violate privacy and access to information, given the government's strong authority in supervising and imposing sanctions for those who do not comply.

CONCLUSION

The presence of Blockchain has triggered the pornography industry to transform payment methods through cryptocurrencies and tokens that promote anonymity, so that their activities can still run and develop but are difficult to detect. In its operations, the pornography industry has taken advantage of live streaming which eventually encouraged sex workers to switch to selling themselves online, and in fact opened up opportunities for traffickers to conduct online sexual trafficking of children by exploiting children on adult sites, as well as live streaming shows. The regulations imposed by America in 2018 through FOSTA/SESTA can be considered to be enforced in Indonesia, because they have succeeded in putting pressure on service providers and even making them close the site, even though Indonesia has issued Permenkominfo No. 5 of 2020

ACKNOWLEDGMENTS

⁹² Reynolds, Chelsea. "Craigslist is Nothing More than an Internet Brothel : Sex Work and Sex Trafficking in U.S. Newspaper Coverage of Craigslist Sex Forums". *The Journal of Sex Research*, Vol.58, Issue 6, (2021) : 681-688.

⁹³ Donovan, Elizabeth M. "Fight Online Sex Trafficking Act and Stop Enabling Sex Traffickers Act : A Shield for Jane Doe". *Connecticut Law Review*, Vol.52, No.1, (2020) : 92.

⁹⁴ Ertz, Myriam dan Boily Emilie. "The Rise of the Digital Economy : Thoughts on Blockchain Technology and Cryptocurrencies for the Collaborative Economy". *International Journal of Innovation Studies*, Vol 3, Issue 4, (2019):90.

⁹⁵ Robberson, Stephanie Joy. "A Bit Like Cash : Understanding Cash-for-Bitcoin Transactions Through Individual Vendors". *Thesis, University of Central Oklahoma*, (2017) : 26.

⁹⁶ U.S Attorney's Office, "U.S. Attorney Seeking Victims Advertised on CityXGuide.com", <https://www.secretservice.gov/newsroom/releases/2021/09/us-attorney-seeking-victims-advertised-cityxguide.com>.

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REFERENCES

Book

- [1] Arnaud Anciaux, *A Digital Redefinition of the Pornography Industries* dalam George, Eric (eds). *Digitalization of Society and Socio-political Issues 1: Digital, Communication and Culture*. London : ISTE Ltd dan Hoboken : John Wiley & Son Inc, 2019, <https://doi.org/10.1002/9781119687177.ch12>.
- [2] Shaowen Bardzell dan Jeffrey Bardzell, *Technosexuality* dalam *The Wiley Blackwell Encyclopedia of Gender and Sexuality Studies*. London : John Wiley & Son Ltd, 2016, <https://doi.org/10.1002/9781118663219.wbegss469>.

Journal

- [3] Araujo, Ana Valentina Medeiros de. et al. "Technology-facilitated sexual violence : A review of virtual violence against women". *Research, Society and Development*, Vol. 11, No.2, (2022), <http://dx.doi.org/10.33448/rsd-v11i2.25757>.
- [4] Are, Carolina dan Paasonen, Susanna. "Sex in the Shadow of Celebrity". *Porn Studies*, Vol 8, Issue 4, (2021), <https://doi.org/10.1080/23268743.2021.1974311>.
- [5] Armstrong, Jenelle dan Mellor, David. "Internet Child Pornography Offenders : An Examination of Attachment and Intimacy Deficits", *Legal and Criminological Psychology*, Vol. 21, Issue 1 (2016), <https://doi.org/10.1111/lcrp.12028>.
- [6] Ashton, Sarah. et al. "What does 'pornography' mean in digital age ? Revisiting a definition for social science researcher". *Porn Studies*, Vol. 6, Issue 2, (2019), <https://doi.org/10.1080/23268743.2018.1544096>.
- [7] Asongu, Simplice A dan Usman, M. "The Covid-19 Pandemic : Theoretical and Practical Perspective on Children, Women and Sex Trafficking". *Health Care for Women International*, Vol. 41, Issue 11-12, (December 2020), <https://doi.org/10.1080/07399332.2020.1849219>.
- [8] Baird, Kyla dan Connolly, Jennifer. "Recruitment and Entrapment Pathways of Minors into Sex Trafficking in Canada and the United States : A Systematic Review". *Trauma, Violence & Abuse*, (June 2021), <https://doi.org/10.1177/15248380211025241>.
- [9] Bettio, Francesca. et al. "Sex Work and Trafficking : Moving Beyond Dichotomies", *Feminist Economics*, Vol. 23, No. 3, (2017), <https://doi.org/10.1080/13545701.2017.1330547>.
- [10] Burnay, Jonathan. et al. "Effect of sexualized video games on online sexual harassment". *Journal Aggressive Behavior*, Vol. 45, Issue 2, (Januari 2019), <https://doi.org/10.1002/ab.21811>.
- [11] Doorn, Niels Van. "A Good Hustle : The Moral Economy of Market Competition in Adult Webcam Modeling". *Journal of Cultural Economy*, Vol.11, Issue 3, (2018), <https://doi.org/10.1080/17530350.2018.1446183>.
- [12] Donovan, Elizabeth M. "Fight Online Sex Trafficking Act and Stop Enabling Sex Traffickers Act : A Shield for Jane Doe". *Connecticut Law Review*, Vol.52, No.1, (2020), https://opencommons.uconn.edu/law_review/443.

- 
- [13] Ertz, Myriam dan Boily Emilie. "The Rise of the Digital Economy : Thoughts on Blockchain Technology and Cryptocurrencies for the Collaborative Economy". *International Journal of Innovation Studies*, Vol 3, Issue 4, (2019), <https://doi.org/10.1016/j.ijis.2019.12.002>
- [14] Foley, Sean. "Sex, Drugs, and Bitcoin : How Much Illegal Activity is Financed Trough Cryptocurrencies ?". *Review of Financial Studies*, Vol.32, Issue 5, (May 2019), <https://doi.org/10.1093/rfs/hhz015>.
- [15] Jones, Angela. "The Pleasures of Fetishizations : BBW Erotic Webcam Performers, Empowerment, and Pleasure", *Fat Studies*, Vol. 8, No.3, (2018), <https://doi.org/10.1080/21604851.2019.1551697>.
- [16] Keilty, Patrick. "Desire by Design : Pornography as Technology Industry", *Porn Studies*, Vol. 5, Issue. 3, (Juli 2018), <https://doi.org/10.1080/23268743.2018.1483208>.
- [17] Kerr, Orin S dan Murphy, Sean D. "Government Hacking to Light the Dark Web : Risks to International Relationsand International Law ?". *Stanford Law Review*, Vol.70, (July 2017).
- [18] Kethineni, Sesha dan Cao, Ying. "The Rise in Popularity of Cryptocurrency and Associated Criminal Activity". *International Criminal Justice Review*, Vol. 30, Issue 3, (September 2020), <https://doi.org/10.1177/1057567719827051>.
- [19] Knack, Natasha. et al. "Motivational pathways underlying the onset and maintenance of viewing child pornography on the internet". *Journal Behavioral Sciences & The Law*, Vol.38, Issue 2, (Februrari 2020), <https://doi.org/10.1002/bsl.2450>.
- [20] Koops, Thula. et al. "Online Sexual Activity Involving Webcams- An Overview of Existing Literature and Implications for Sexual Boundary Violations of Children and Adolescent", *Behavioral Science & the Law*, Vol.36, Issue 2, (Maret 2018), <https://doi.org/10.1002/bsl.2333>.
- [21] Lee, Min Joo. "Webcam Modelling in Korea : Censorship, Pornography, and Eroticism". *Porn Studies*, Vol.8, Issue 4, (2021), <https://doi.org/10.1080/23268743.2021.1901602>.
- [22] li, Ye dan Peng, Yi. "What Drives Gift-Giving Intention in Live Streaming ? The Perspectives Attachment and Flow Experience". *International Journal of Human-Computer Interaction*, Vol.37, Issue 14, (2021), <https://doi.org/10.1080/10447318.2021.1885224>.
- [23] Liyuan, Wang. et al. "Porn Streamer Recognition in Live Video Base on Multimodal Knowledge Distillation", *Chinese Journal of Electronics*, Vol.30, No.6, (November 2021), <https://doi.org/10.1049/cje.2021.07.027>.
- [24] Low, Kelvin F.K dan Mik, Eliza. "Pause the Blockchain Legal Revolution", *The British Institute of International Comparative Law*, Volume 69, Issue 1, (2019), <https://doi.org/10.1017/S0020589319000502>.
- [25] Mandau, Morten Birk Hansen. ""Snaps", "screenshots", and self-blame : A qualitative study of image-based sexual abuse victimization among adolescent Danish girls", *Journal of Children and Media*, Vol. 15, Issue 3, (2021), <https://doi.org/10.1080/17482798.2020.1848892>.
- [26] Martinez, Victor Cerdan. et al. "Pornhub searches during the Covid-19 pandemic", *Porn Studies*, Vol. 8, Issue 3, (2021), <https://doi.org/10.1080/23268743.2021.1882880>.
- [27] Mckinlay, Tahlee dan Lavis, Tiffany. "Why did she it in the first place ? Victim blame in the context of 'revenge porn". *Journal of Psychiatry, Psychology and Law*, (Juni 2020), <https://dx.doi.org/10.1080/13218719.2020.1734977>.
- [28] Mergenthaler, Alicia dan Yasseri, Taha. "Selling Sex: What Determines Rates and Popularity ? An Analysis of 11,500 Online Profiles", *Culture, Healt and Sexuality*, (April 2021), <https://doi.org/10.1080/13691058.2021.1901145>.
- [29] Mohanty, Manoranjang. et al. "Can Zoom Video Conferencing tool be Miusused for Real-Time Cybercrime ?". *WIREs Forensic Science*, Vol.4, Issue 1, (April 2021), <https://doi.org/10.1002/wfs2.1419>.
- [30] Naezer, Marijke dan Oosterhout, Lotte Van. "Only slut love sexting : Youth, sexual norms and non-consensual sharing of digital sexual images". *Journal of Gender Studies*, (Agustus 2020), <https://doi.org/10.1080/09589236.2020.1799767>.
- [31] Naheem, Mohammed Ahmad. "Do Cryptocurrencies Enable and Facilitate Modern Slavery ?", *Journal of Money Laundering Control*, Vol.42, No.3, (2021), <https://doi.org/10.1108/JMLC-07-2020-0073>.
- [32] Nayar, Kavita Ilona. "Working it : The Professionalization of Amateurism in Digital Adult Entertainment", *Feminist Media Studies*, Vol. 17, Issue. 3, (2017), <https://doi.org/10.1080/14680777.2017.1303622>.
- [33] Noval, Sayid Muhammad Rifqi. "Oversharing and its Impact for Children: A Comparative Legal Protection". *Varia Justicia*, Vol. 17, No.2, (2021), <https://doi.org/10.31603/variajusticia.v17i2.5257>.
- [34] O'Brien, Erin. "Prostitution ideology and trafficking policy : The impact of political approaches to domestic sex work on human trafficking policy in Australia and the United States". *Journal of Women, Politics & Policy*, Vol.36, (2015), DOI: 10.1080/1554477X.2015.1019277.

- [35] O'Brien, Jennifer E dan Li, Wen. "The Role of the Internet in the grooming, exploitation, and exit of United States domestic minor sex trafficking victims", *Journal of Children and Media*, Vol.14, Issue 2, (2020), <https://doi.org/10.1080/17482798.2019.1688668>.
- [36] Perrin, Cindy Miller dan Wurtele, Sandy K, "Sex Trafficking and The Commercial Sexual Exploitation of Children". *Women & Therapy*, Vol. 40, No. 1-2, (2017), <http://dx.doi.org/10.1080/02703149.2016.1210963>.
- [37] Prylinski, Kirsten M. "Tech Trafficking : How the Internet has Transformed Sex Trafficking". *The Journal of HighTechnology*, Vol.20, Nbr.2 (July 2020).
- [38] Reynolds, Chelsea. "Craigslis is Nothing More than an Internet Brothel : Sex Work and Sex Trafficking in U.S. Newspaper Coverage of Craigslis Sex Forums". *The Journal of Sex Research*, Vol.58, Issue 6, (2021), <https://doi.org/10.1080/00224499.2020.1786662>.
- [39] Rexhepi, Piro. "Predatory Porn, Sex Work and Solidarity at Borders". *Ethnic and Racial Studies*, Vol.44, Issue 9, (2021), <https://doi.org/10.1080/01419870.2021.1890180>.



- [40] Rodeschini, Silvia. "New standards of respectability in contemporary pornography : Pornhub's corporate communication", *Porn Studies*, Vol.8, Issue 1, (2021), <https://doi.org/10.1080/23268743.2020.1788976>.
- [41] Roe-Sepowitz, Dominique. "A six-year analysis of sex traffickers of minor : exploring characteristics and sex trafficking patterns". *Journal of human behaviour in the social environment*, (April 2019), <https://doi.org/10.1080/10911359.2019.1575315>.
- [42] Ruberg, Bonnie. "Nothing but a "titty steamer" : legitimacy, labor, and the debate over women's breasts in video game live streaming", *Critical studies in media communication*, (September 2019), <https://doi.org/10.1080/15295036.2019.1658886>.
- [43] Sajidin, Syahrul. "Legalitas penggunaan cryptocurrency sebagai alat pembayaran di Indonesia". *Jurnal Arena Hukum*, Vol. 14, No. 2, (Agustus 2021), DOI: <https://doi.org/10.21776/ub.arenahukum.2021.01402.3>.
- [44] Santos, Dominique Adams. "Sexuality and Digital Space". *Sociology Compass*, Vol 14, Issue 8, (July 2020), <https://doi.org/10.1111/soc4.12818>.
- [45] Santoso, Wahyu Yun. et al. "Governing Blockchain-Based Token in Indonesia : Legal and Technical Perspective". *Brawijaya Law Journal : Journal of Legal Studies*, Vol.7 No.1 (April 2020), <https://doi.org/10.21776/ub.blj.2020.007.01.08>.
- [46] Swords, Jon. et al. "Platforms, Sex Work and their Interconnectedness", *Sexualities*, (September 2021), <https://doi.org/10.1177/13634607211023013>.
- [47] Thurman, Neil dan Obster, Fabian. " The Regulation of Internet Pornography : What a Survey of under-18s tells us about the necessity for and potential efficacy of emerging legislative approaches". *Policy and Internet*, Vol.13, Issue 3, (2021), <https://doi.org/10.1002/poi3.250>.
- [48] Vandenbosch, Laura dan Oosten, Johanna M.F. van. "The Relationship Between Online Pornography and the Sexual Objectification of Women : The Attenuating Role of Porn Literacy Education". *Journal of Communication*, Vol.67, Issue 6, (2017), <https://doi.org/10.1111/jcom.12341>.
- [49] Vlase, Ionela dan Preoteasa, Ana Maria. "Flexi(nse)curity in Adult Webcamming : Romanian Women's Experiences Selling Digital Sex Services Under Platfoem Capitalism", *Gender, Place & Culture*, (2021), <https://doi.org/10.1080/0966369X.2021.1878114>.
- [50] Wan, Yilin. "Playing Live-Streaming 'Love Games' : Mediated Intimacy and Desperational Labour in Digital China". *Journal of Gender Studies*, Vol.30, Issue 5, (2021), <https://doi.org/10.1080/09589236.2021.1929100>.
- [51] Werbach, Kevin. "Trust, but Verify : Why the Blockchain Needs the Law", *Berkeley Technology Law Journal*, Vol.33, Issue 2,(2018), <https://doi.org/10.15779/Z38H41JM9N>.
- [52] Whyte, Christopher. "Cryptoterrorism : Assessing the utility of blockchain technologies fo terrorist enterprise". *Journal Studies in Conflict & Terrorism*, (Januari 2019), <https://doi.org/10.1080/1057610X.2018.1531565>.
- [53] Wijkman, Miriam dan Kleemans, Edward. "Female Offenders of Human Trafficking and Sexual Exploitation". *Crime, Law and Sosial Change*, Vol.72, Issue 1, (2019), <https://doi.org/10.1007/S10611-019-09840-X>.
- [54] Winters, Georgia M. et al."The Sexual Grooming Model of Child Sex Trafficking". *Victim & Offenders*, Vol.17, Issue 1, (2021), <https://doi.org/10.1080/15564886.2021.1926031>.
- [55] Zhang, Di. et al. "Exploring the Redaction Mechanisms of Mutable Blockchains : A Comprehensive Survey". *International Journal of Intelligent System*, Vol.36, Issue 9, (June 2021), <https://doi.org/10.1002/int.22502>.
- [56] Zvi, Liza dan Bitton, Mally Shechory. "Perception of victim and offender culpability in non-consensual distribution of intimate image". *Journal Psychology, Crime & Law*, Vol. 27, Issue 5, (2021), <https://doi.org/10.1080/1068316X.2020.1818236>.

Paper

- [57] Bob, Bartsch. " The Relationship of Drug and Human Trafficking and their Facilitation Via Cryptomarkets and The Dark Web : A Recommendation for Cryptocurrency Regulation", *University of Wisconsin Working Papers*, (April 2020), <https://minds.wisconsin.edu/bitstream/handle/1793/80014/Bartsch,%20Robert.pdf?isAllowed=y&sequence=1>.
- [58] Clouston, Masarah Paquet. et al. " Spam meet Cryptocurrencies : Sextortion in the Bitcoin Ecosystem". *Proccedings of the 1st ACM Conference on Advance in Financial Technologies*

- (October 2019), <https://doi.org/10.1145/3318041.3355466>.
- [59] International Centre for Missing & Exploited Children and Standard Chartered. "Cryptocurrency and the trade of Online Child Sexual Abuse Material", (Februrari 2021).
- [60] Justice Studio, "Blockchain and Child Protection Opportunities and Dangers", *Briefing Report*, (September 2017).
- [61] Landron, Gabriela. "Human Trafficking and its Evolution into Cyberspace : How has Technology Transformed Human Trafficking Over Time", *Theses, University of Central Florida, Departmen of Criminal Justice*, (2021).
- [62] Lee, Seunghyeon. et al. "Cybercriminal Minds : An Investigative Study of Cryptocurrency Abuses in the Dark Web", *Network and Distributed System Security (NDSS) Symposium, 24-27 February 2019, San Diego, USA*, (2019), <https://dx.doi.org/10.14722/ndss.2019.23055>.
- [63] Olson, Eric dan Tomek, Jonathan. "Cryptocurrency and the Blockchain : Technical Overview and Potential Impact on Commercial Child Sexual Exploitation", *International Centre for Missing & Exploited Children*, (Mei 2017).
- [64] Rey, PJ Patella. "Sex Cam Modeling : Labor, Intimacy, and Prosumer Porn", *Dissertation, University of Maryland*, (2021).
- [65] Robberson, Stephanie Joy. "A Bit Like Cash : Understanding Cash-for-Bitcoin Transactions Through Individual Vendors". Thesis, University of Central Oklahoma, (2017).



- [66] Vallina, Pelayo. et al. "Tales from the Porn : A Comprehensive Privacy Analysis of the Web Porn Ecosystem". *Proceedings of the Internet Measurement Conference*, (October 2019), <https://doi.org/10.1145/3355369.3355583>.

Document Others

- [67] Undang-Undang Dasar Republik Indonesia Tahun 1945
 [68] Kitab Undang-Undang Hukum Pidana Republik Indonesia
 [69] Undang-Undang Republik Indonesia Nomor 39 Tahun 1999 tentang Hak Asasi Manusia.
 [70] Undang-Undang Republik Indonesia Nomor 23 Tahun 2004 tentang Penghapusan Kekerasan dalam Rumah Tangga.
 [71] Undang-Undang Republik Indonesia Nomor 13 Tahun 2006 tentang Perlindungan Saksi dan Korban.
 [72] Undang-Undang Republik Indonesia Nomor 21 Tahun 2007 tentang Pemberantasan Tindak Pidana Perdagangan Orang.
 [73] Undang-Undang Republik Indonesia Nomor 44 Tahun 2008 tentang Pornografi.
 [74] Undang-Undang Republik Indonesia Nomor 35 Tahun 2014 tentang Perubahan atas Undang-Undang Republik Indonesia Nomor 23 Tahun 2002 Tentang Perlindungan Anak.
 [75] Undang-Undang Republik Indonesia Nomor 19 Tahun 2016 tentang Perubahan Atas Undang-Undang Republik Indonesia Nomor 11 Tahun 2008 tentang Informasi dan Transaksi Elektronik.
 [76] Peraturan Menteri Komunikasi dan Informatika Nomor 5 Tahun 2020 tentang Penyelenggaraan Sistem Elektronik Lingkup Privat.
 [77] Peraturan Badan Pengawas Perdagangan Berjangka dan Komoditi (Bappeti) Republik Indonesia Nomor 3 Tahun 2020 tentang Perubahan Ketiga atas Peraturan Badan Pengawas Perdagangan Berjangka dan Komoditi Nomor 5 Tahun 2019 tentang Ketentuan Teknis Penyelenggaraan Pasar Fisik Aset Kripto (*Crypto Asset*) di Bursa Berjangka.
 [78] Peraturan Badan Pengawas Perdagangan Berjangka dan Komoditi Nomor 7 Tahun 2020 tentang Penetapan Daftar Aset Kripto yang Dapat Diperdagangkan di Pasar Fisik Aset Kripto.

Regulation

- [79] Putusan Pengadilan Negeri Tanjung Pati Nomor 58/Pid.B/2011/PN.TJP tanggal 3 Oktober 2011.

Artikel Internet

- [80] Desanctis, Alexandra. "The Children of Pornhub", <https://www.nationalreview.com/corner/the-children-of-pornhub/>. Diakses 8 April 2022.
 [81] Liputan 6, "Mantan Vokalis Lostprophets dijatuhi Hukuman 35 tahun Penjara!", <https://www.liputan6.com/showbiz/read/779398/mantan-vokalis-lostprophets-dijatuhi-hukuman-35-tahun-penjara>. Diakses 9 April 2022.
 [82] Martin Trans, "Sex Work Re-loaded : How Digital Platforms are Redefining Sex Work", Masters of Media, University of Amsterdam, <https://mastersofmedia.hum.uva.nl/blog/2021/10/27/sex-work-re-loaded-how-digital-platforms-are-re-defining-sex-work/>. Diakses 18 April 2022.
 [83] The Guardian, "MasterCard and Visa sever ties with Backpage.com 'adult' section", <https://www.theguardian.com/us-news/2015/jul/01/mastercard-visa-boycott-backpagecom-adult-section>. Diakses 26 Maret 2022.
 [84] Tribun Jabar, "5 Fakta Mencengangkan, Istri Jual Suami untuk Layani Threesome dengan Pria Hidung Belang", <https://jabar.tribunnews.com/2018/01/25/fakta-mencengangkan-istri-jual-suami-untuk-layani-threesome-dengan-pria-hidung-belang?page=all>. Diakses 4 Mei 2022.
 [85] United Nations Office on Drug and Crime, "Online child sexual exploitation and abuse : Module Series", <https://www.unodc.org/e4j/zh/cybercrime/module-12/key-issues/online-child-sexual-exploitation-and-abuse.html>. Diakses 9 April 2022.
 [86] U.S Attorney's Office, "U.S. Attorney Seeking Victims Advertised on CityXGuide.com", <https://www.secretservice.gov/newsroom/releases/2021/09/us-attorney-seeking-victims-advertised-cityxguidecom>. Diakses 5 Mei 2022.