Illegal Gambling and Its Operation via the Darknet and Bitcoin: An Application of Routine Activity Theory

Sinyong Choi

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Illegal Gambling and Its Operation via the Darknet and Bitcoin: An Application of Routine Activity Theory

A THESIS

Presented to the Department of Criminal Justice
Bridgewater State University

In Partial Fulfillment of the Requirements for the Degree Master of Criminal Justice

Sinyong Choi
Bridgewater State University
April 2018
Illegal Gambling and Its Operation via the Darknet and Bitcoin: An Application of Routine Activity Theory

Thesis Presented

By

Sinyong Choi

Content and style approved by:

Dr. Kyung-shick Choi
(Chairperson of Thesis Committee)

Dr. Khadija Monk
(Member)

Dr. Robert Grantham
(Member)
Abstract

For many years the Darknet and Bitcoins have been widely utilized by people who wish to anonymously perform illegal activities in cyberspace. Having already been restricted in many countries, the gambling websites utilizing Bitcoin payments and the Darknet allow online users to freely engage in illegal gambling activities with the absence of a formal capable guardian. Although it is an urgent priority that law enforcement find a solution to the pressing issue, there are a few empirical studies focusing on such illegal gambling website. Due to the scarcity of studies in this area, the current study attempts to examine the characteristics and the operations of the online gambling websites on both the Darknet and surface web which allow Bitcoin payments. The findings suggest that both websites on the Surface Web and Darknet have similar and distinctive features that attract and encourage online users to engage in extensive illegal gambling activities and potentially other illegal activities as well. The study concludes with policy recommendations to remedy the contemporary issues of online gambling.

*Keywords:* Bitcoin, Darknet, Cybercrime, Online gambling, Illegal gambling, and Tor.
Acknowledgements

This thesis would not have been possible without the inspiration and support of a number of wonderful people. I owe my deepest gratitude to my mentor Dr. Kyung-shick Choi. He is the man who encouraged me in my choice of career, empowered me to chase my scholarly ambitions, and influenced me and shaped me into a better person. Although any kind words would not do justice to the magnitude of gratitude that I have for him, I sincerely thank him from the bottom of my heart. His inspiration and advises will always help me to move forward and strive for excellence in my life’s journey.

I would like to thank Dr. Khadija Monk and Dr. Robert Grantham for their precious advice. Without their encouragement and support, this thesis would hardly have been completed.

I would also like to thank Dr. Carolyn Petrosino, Dr. Jennifer Hartsfield, Dr. Jamie Huff, and Dr. Feodor Gostjev for their valuable lessons during my time as a graduate student at Bridgewater State University.

I also want to express my gratitude to Rev. Chang-Hee Son. He is my spiritual father and has made available his support in a number of ways, especially towards my spiritual and personal growth. I am also indebted to Rev. Jin-Jong Lee and Lim-Sook Lee for their constant pray and support.

I am thankful to Mi-Sun Park, my mentor’s wife, and Sinchul Back, who were always helpful and provided me with invaluable advice. They have been truly a big support for me.

It is a pleasure to thank all my friends at Bridgewater State University for the wonderful times we shared. Special thanks to my housemates (Mike Gearhart, Jay Song,
Chi-ho Han, Chan-young Koh, Anna Fateiger, Ye-dam Lee, and Christopher Son),
grgradient friends (Seung-uk Han, Hwi-geum Jeong, Hyeon-wook Lee, Gang-nam Gil, and
Nate Mros), sisters (Min-Ji Lee, Patricia Bowen, Rose Huzzormah, Kusuma Lungkee,
and Melissa Zeng), Korean friends (Jun-seok Huh, Tae-hyeon Jeon, Hye-jin Hong, Eun-
young Son, Ha-rin Min, Eso Kim, Seul-chan Park and Jung-hwan Lee), and Wulan’s
family (Wulan Mizo, Khan Tran, Rachael Emery, Lillianne Condez, Yuriko Saito, and
Fumie Ryu).

Finally, my deep and sincere gratitude to my family (Mom, Dad, brother, and
grandparents) for their continuous and unparalleled love, support, and pray for me to
follow my dream. Also, I am forever indebted to Suk-Lyun Lee, a director of Daegu
cooking school, for giving me the opportunities that have made me who I am. This
journey would not have been possible if not for them, and I dedicate this milestone to
them.
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Introduction

Over the past five years, the online gambling industry has been growing at a substantial rate due to the advancement of technology including the rapid spread of smartphone devices and wireless internet devices. This allows for the online gambling industry to be highly accessible while giving gamblers the privacy and convenience they want.

The global online gambling market was valued at approximately 28.32 billion USD in 2012 and estimated to reach 49.64 billion USD by 2017 (GBGC, 2013). With the rapid growth of the online gambling market, many small countries, including Liechtenstein, New Zealand, Curacao, and Antigua where some forms of online gambling are legal, have contributed to the growth of the online gambling industry (GBGC, 2013).

However, unlike these countries, many developed nations have not benefitted from the enlarged online gambling market due to the strict regulation of online gambling. For example, China strictly prohibit all forms of online gambling, and online gambling is treated differently throughout the U.S. Although forty-eight states have legalized at least some forms of gambling, online gambling is illegal in most of the states (Homeyer, 2011). A few states, including Nevada, New Jersey, and Delaware, currently offer some types of regulated online gambling games such as casino and poker (Murray, 2017). Online gambling operators who are licensed by their jurisdiction must locate their servers within the territory of the jurisdiction and online gamblers who wish to play in those licensed gambling websites should also be physically located within the state borders (Trimble, 2012). In addition, the U.S. created the Unlawful Internet Gambling Enforcement Act (UIGEA) in 2006 to eliminate the possibilities for online gambling companies to lawfully
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utilize financial transactions and payment systems, which has restricted online gambling by limiting the transaction of national currencies to organizations hosting gambling websites (Homeyer, 2011; Wang, & Antonopoulos, 2016). Under this condition, Bitcoin online gaming websites have emerged for expanding illegal online activities.

Digital currency can be used to pay for things electronically, which is like a conventional euro or dollar that now can also be used in various online markets. What makes digital currency different is its decentralized characteristics; virtual currency network is not fettered by any sole authority (Choi, 2015). Bitcoin is one of the most popular digital currencies or cryptocurrencies, which was first introduced in an article titled "Bitcoin: A Peer-to-Peer Electronic Cash System" by an author who did not use his real name but used the pseudonym of Satoshi Nakamoto. Bitcoin was designed to initiate a peer-to-peer electronic transaction directly without the need for any financial institution which enables the process to be anonymous and transparent (Nakamoto, 2008).

As this new type of transaction in digital currency is basically unregulated, Bitcoin has been widely used in an attempt to circumvent restrictive regulations in numerous countries and gives many advantages to online gambling. Since Bitcoin has its own payment processor, there is no waiting time for the bank transaction, exceedingly low transaction fees, and no currency exchanges (Pathe, 2014). In addition, Bitcoin casinos tend to not require age verification, address check, or other personal information but minimal user information such as an email address. Furthermore, purely digital and encrypted transactions disable financial tracking and conceal the identity of gamblers, as well as gambling operators. Although online gambling is forbidden in many countries, the rapid growth and use of Bitcoin make the law enforcement investigation more complex.
due to the jurisdiction issues and variance in regulations at the international level (Pathé, 2014; Seth, 2014)

The anonymity of Bitcoin transactions easily allow criminals to engage in their unlawful activities without being tracked in cyberspace. Bitcoin has been used for illicit business transactions that are carried out in the cyber realm where everyone can be anonymous via Darknet (Rudesill, Caverlee, & Sui, 2015). Prior to explaining the Darknet, the conception of Surface Web and Deep Web must be discussed. Some people may believe that almost all information on the Internet can be identified by a Google search. Yet, there is a whole another online realm out of the reach of any standard search engine. Surface web, also known as the Indexed web, Visible web, Indexable web, or Clearnet, is the part of the World Wide Web that can be discovered by conventional search engines such as Google, Bing, or Yahoo through standard Web browsers such as Firefox, Chrome, or Safari. However, the other parts of the Web which have not been indexed and cannot be searched by conventional search engines are called ‘Deep web’, also called the Invisible web or Hidden web (Bergman, 2001). While it is almost impossible to estimate the size of the Deep Web, earlier research suggested that the size of the Deep Web is nearly 4000 to 5000 times larger than the Surface Web (Finklea, 2017).

Darknet is defined as a small part of the Deep web which has been veiled and is unapproachable via Standard web browsers. Most of the contents stored on the Darknet can be discovered in the Tor (The Onion Relay) network which is an anonymous network that can be accessed via downloading the browser (“Clearing Up Confusion”, 2014). As Tor network allows users to browse and host the site anonymously, this is well known as the bases of the criminal operators who conduct illegal activities such as drug dealings,
hacking, hiring of hitmen, child pornography, identity theft, money laundering, terrorist activities, etc (Rudesill, Caverlee, & Sui, 2015). Silk Road, a major online market used for the sale of illicit goods and service in Bitcoin, was the embodiment of the illegal activity on the Darknet (“Schumer Pushes to Shut Down”, 2011). The Dark web has become a shelter that harbors illegal activity both in the cyber and physical realms.

Considering the rapid expansion of Bitcoin gambling sites and the nature of the Darknet, the anonymous network can significantly facilitate for illegal gambling operations. While there are many studies addressing online gambling addiction issues, few studies address the issues of Bitcoin gambling sites and the Darknet.

Numerous studies have also shown that online gambling raises public concerns including illegal operation, fraud, money laundering, or problem gambling (Banks, 2012; Fiedler, 2013; Griffiths, 2010; Trimble, 2012). It is known that most of the online gambling markets are captured by illegal operators, and they play a vital role even in regulated markets (Fiedler, 2013; Trimble, 2012). Although the regulator legally obliges online gambling operators to locate their servers within the particular jurisdiction, it still faces problems with those operators who do not have a license (Trimble, 2012).

The aim of this study is to contribute to the criminology literature and to uncover 1) how the online gambling sites operate, 2) what main features encourage online users to engage in illegal gambling activities, 3) how illegal online gambling activities are potentially linked to engaging in other online criminal activities, and 4) how the owners of establishments promote and advertise their illegal website while evading law enforcement detections. In addition, this study uses Routine Activities Theory (Cohen & Felson, 1979) in attempts to accurately understand illegal online gambling activities. Prior to looking into
the details on theoretical application on this study, it is necessary to review the main
constructs of online gambling website in next section.

The Main Constructs of Online Gambling Websites

Unlike offline casinos which need massive investments before operation, online
gambling requires relatively simple things to establish a site: a domain name, server, and
software (Homeyer, 2011). First, the website has to register a certain domain name from
a domain registrar which is an authorized company who registers domain names on
behalf of the registrant (“Domain Name Registration Process”, 2017). A domain name, a
unique address to identify a particular webpage on the Internet, represents one or more
Internet Protocol (IP) addresses, which are a set of rules for exchanging the format of
data across the Internet or a series of other networks (Gil, 2017). Once a domain name is
registered, the registrant owns the website and has the authority (“Domain Name
Registration Process”, 2017). In addition, contact information pertaining to registered
domain names, such as name, address, email, and phone number, should be stored and
publicly displayed in the WHOIS database, regulated by the Internet Corporation for
Assigned Names and Numbers (ICANN) (“About WHOIS”, n.d.). Many domain
registrars provide anonymous domain registration services that will hide the owner's
confidential information from spam, marketing firms, and online fraudsters (Mercer,
n.d.).

Secondly, an online gambling site needs servers which are computers storing all
forms of data and files necessary to operate the website (Mitchell, 2017). The more space
a server has, the more games an online gambling site can host (Homeyer, 2011). A server
is provided by the Web hosting company that provides a service allowing customers to
post a website on the Internet ("How to choose", 2017). Having its own IP address, the host computer assigns an IP address for the data and files to the domain name through the Domain Name System, whereby the webpages can be delivered through the browser to the computer of Internet users who type its domain name into their browser ("What is Web Hosting?", n.d.).

Finally, online gambling software is required to operate the site. A gambling site can either get software from the gambling software developer or develop the code by themselves. The software is in charge of games, interface, layout, and graphic designs and runs the site by interacting with online gamblers (Homeyer, 2011). To place a bet, generally, the gambler creates an account and deposits money by a required method, such as a credit card, wire transfer, or online payment service provider. For withdrawing the winnings, a gambling user has to request to the operator and choose the payment method (Homeyer, 2011).

The sections that follow will present a brief overview of Routine Activities theory and its application to online gambling issues. A review of the relevant literature is followed by a discussion of research methodology, and presentation of the data analysis. Finally, the study provides with a discussion of policy implications.

**Literature Review**

**Theoretical Framework: Routine Activities Theory**

Cohen and Felson (1979) argued that Routine Activities Theory could account for the incident of crime. They suggested that a crime can occur when a suitable target, the absence of the capable guardian and a motivated offender come together at any place at any time. In other words, a lack of any one of the three elements is apt to decrease the
likelihood of crime (Choi, 2008). The central premise of the theory is that crime is not an accidental act of a criminal manifestation, but a sophisticated and/or calculated occurrence (Choi, 2015).

Yar (2005) used the concepts of the theory to delineate crimes in cyberspace. Cohen and Felson (1979) assume that there will always be plenty of crime motivations, it was also suggested that the existence of motivated offenders who have suitable targets is a given situational factor in cyberspace (Yar, 2005).

Griffiths (2010)’s study briefly gives an overview of various scams that take place in and around internet gambling sites and draws a conclusion that gambling fraud in online is growing because most gamblers want to win a huge reward by betting a small amount of outlay. If there are people who are willing to take a risk to bet money on chance events, there will be people who will try to con their money out of them.

A more recent study of this topic, conducted by Banks (2012), addresses the types and features of crimes that occur at the portals of Internet gambling sites. It found that numerous criminal organizations see online gambling as an opportunity to engage in criminal activities such as fraud, theft, or extortion.

In terms of money laundering, Fiedler (2013) identifies that online gambling can be used for money laundering easily due to particular advantages such as virtuality of products and cash flows; huge and complicated payment processing; the massive volume of gambling users on the market; or tax-free winnings in multiple involved jurisdictions. In sum, the suggested studies indicate that cybercriminals with various motivations exist in cyberspace.
The concept of a target suitability in the theory is itself a composite made up of four criteria: (1) The value of the target; (2) the inertia of the target; (3) the visibility of the target; and (4) the accessibility of the target (VIVA) (Felson, & Boba, 2010). In cases of illegal gambling operation, the borderless nature of the Internet and a global business environment enable operators to reach their clients globally at a minimal cost while locating their assets and server outside the territorial jurisdiction of law enforcement agencies (Trimble, 2012). The time and space in which these components converge to create criminal opportunity are considered hot spots. For gambling activities, the online gambling sites could be considered as hot spots.

Furthermore, many studies have reported that problem gambling is more related with online gambling than offline gambling (Canale et al., 2016; Gainsbury et al., 2015; Harris, Mazmanian, & Jamieson, 2013; McCormack & Griffiths, 2013; Wood, & Williams, 2007). According to Gainsbury et al. (2015), this tendency could be due to particular characteristics of online gambling such as electronic payment, constant availability and the anonymity of play.

McCormack and Griffiths (2013), who explored the situational and structural characteristics of online and offline gambling, reported that online gambling has unique structural and situational features, some of which may facilitate problematic gambling behavior of online gamblers such as accessibility, affordability, convenience, and immersion. One study conducted by Brosowski, Meyer, and Hayer (2012) examined the behavior of gamblers who use multiple types of online gambling within one provider. It reported that online gambling sites provide multiple gambling products which entice online gamblers to use multiple types of games with ease and also found the link between
multiple gambling engagements and problem gambling. In addition, Hing et al. (2014) found that the advertising and promotion of online gambling have an impact on increasing gambling among the subgroup of gamblers.

Regarding capable guardianship, it can fall into two main categories: formal social control and informal social control (Cohen, Kluegel, and Land, 1981). In cyberspace, while working as a formal social control to prevent cybercrime from occurring, most law enforcement agencies still lack the ability to effectively investigate cybercrimes (Choi, 2015) and are struggling to keep pace with criminal’s evolving technologies (Banks, 2012). In addition, the sophistication of cyber-criminal acts, such as using anonymous Bitcoin and Darknet makes it difficult for law enforcement agencies to apprehend and prosecute offenders (Choi, 2015).

Bitcoin has made an impact on financial transaction systems since it first appearance in 2009. The Bitcoin system is characterized as a digital, peer to peer, open source, anonymous, and private currency with no existing financial institution engaged in the transaction (Bhattacharjee, 2016; Murphy et al., 2013; Nakamoto, 2008). While this new digital currency has many benefits such as extremely low transaction cost, fast payment, raising accessibility and quality of life in developing country with heavy capital regulation, or better privacy, Bitcoin has a dark side as well, including financing illegal activities or the trafficking of goods (Bhattacharjee, 2016; Brito, & Castillo, 2013; Sablik, 2013). In fact, the most popular currency embraced in all Tor hidden-service transaction is Bitcoin (Moore, & Rid, 2016). Silk Road, which offered the platform to cyber vendors and buyers to carry out the cyber transaction of over 24,400 illegal goods for sale, employed Bitcoin to conduct all transactions (Christin, 2013).
In fact, many illegal activities have been associated with the Darknet. Moore and Rid (2016) examined over 5000 onion domains and found that the most common usages for websites on the Tor Hidden Service are criminal and illegal activities, such as drugs, illegal finance and all sort of pornography. One of the reasons is that Tor architecture allows anybody to browse anonymously and create an untraceable web server hosted in the Tor network with ease (Moore, & Rid, 2016). In addition, while Tor recognizes the prevalence of criminal websites on their network, it keeps allowing them to use their services by arguing that restricting Tor won’t stop criminals from doing their illicit activities because they already have many options available that offer privacy other than what Tor provides (“Doesn't Tor enable criminals”, n.d.).

The Darknet has become a safe haven that conceals illegal activity both in virtual and physical spaces. Yet, in spite of the stunning volume of criminal activities on the Darknet, it has received only superficial attention from researchers interested in studying Internet gambling. To the best of our knowledge, there are few datasets that encompass the gambling activities on the Darknet web pages.

In addition, similar to formal social control, informal social control guardians ranging from private network administrators to ordinary online citizens are not actively operative in cyberspace (Choi, 2015). In fact, according to Gainsbury et al. (2015), although social media platforms have been a popular venue for people to access online gambling sites through hyperlinks embedded in advertisements, there were few regulations restricting online gambling organizations from promoting their sites on social media.
The study conducted by Deans, Thomas, Daube, and Derevensky (2016) suggested that young men aged from 18 to 35 are the main target market for the gambling industry, and the majority of young gamblers gamble via mobile gambling apps or online platforms, amplifying the risks associated with the compulsive gambling. Although Dean et al.’s (2016) study implies the importance of the role of informal social control agents, such as parents, teachers, or friends, in surveilling young gambler’s online activities, “the ease of offender mobility and the temporal irregularity of cyber-spatial activities” (Yar, 2005, p. 423) hinder informal guardians from maintaining effective guardianship (Choi, 2015). To date, few public awareness strategies and effective social policies have been initiated to prevent compulsive online gambling.

According to Cohen and Felson (1979), an absence of any one of the three components would lead to deterring a crime from occurring. However, the component of capable guardianship plays a pivotal role because it is the only component that would increase the possibility of a crime occurring in a given space (Cohen and Felson, 1979). This assertion suggests that an approach to developing effective preventive measures against illegal online gambling activities should focus on the diagnosis of intervention from a capable guardianship perspective.

Therefore, the current study seeks to understand the following points: (1) What factors of gambling sites on the Darknet are different from Bitcoin Gambling sites on the Surface web, (2) what are the main factors for online gamblers to bet on online gambling sites, (3) how Bitcoin gambling sites on both Webs employed alternative strategies to promote their site while evading law enforcement, and (4) what factors of gambling sites potentially lead to other illegal activities.
Methodology

Since a few literatures have focused on empirical reviews of Bitcoin and the Darknet regarding online gambling, the study employed a mixed methodological approach via analytic and content analysis. Content analysis is known as a research tool for social science researchers, and it has been broadly utilized to make systematic, objective, quantitative and valid inference by interpreting and coding content that researchers focus on (Holsti, 1969; Kim, & Kuljis, 2010). This technique is especially appropriate for this study due to its unobtrusive and context-sensitive features and enables for investigation of artifacts or texts without being affected by interests (Kim, & Kuljis, 2010).

The followings are composed of two phases: (1) an initial quantitative data collection phase, followed by (2) a qualitative data collection phase, in which the qualitative phase builds directly on the results from the quantitative phase. In this manner, the quantitative outcomes are accounted for in more detail via the qualitative data.

Data was collected from May to August 2017. This study scrutinizes different types of gambling sites and compares each site according to variables we set to identify the different features of those sites between the Darknet and Surface Web. Multiple regression analysis was employed to delineate the pattern of online gambling operations. Furthermore, to trace the opinions of online gamblers in regards to Bitcoin and Darknet gambling, qualitative data was constructed based on the posts and comments from the forums on both Surface Web and Darknet.
**Sample and Procedure**

One of the biggest challenges to a successful empirical analysis of Internet sites is determining the true size of the population from which to obtain a representative sample. The Internet is in constant flux; its size, dimensions, and composition are changing constantly as websites appear, disappear, move and change. Although search engines such as Google index the contents of a part of the Internet, there exists no comprehensive directory of websites. Therefore, it will be agonizingly difficult to establish the true size of the population of websites. Without the true population, it is impossible to use a representative sampling technique in social science research. Thus, research using websites as the unit of analysis cannot help but often rely on a less accurate purposive sampling technique (Schafer, 2002).

For this study, a purposive sample of 69 Bitcoin gambling sites on Surface Web was compiled from GamblingBitcoin.com (https://gamblingbitcoin.com). It provides “reviews and comparisons of Bitcoin poker sites, Bitcoin blackjack, roulette and other games, using our knowledge to guide you to the right sites.” ("Welcome to GamblingBitcoin.com!", n.d., para. 5). Of the 69 sites, 26 were no longer operational or not available and 13 sites did not provide a service to a customer whose IP location is within the US jurisdiction. Conducting research in the USA, we were unable to browse sites so that we excluded those sites, so 30 sites were chosen as the sample of Bitcoin gambling sites on Surface Web.

Tor browser, the most well-known Darknet browser, was chosen as a platform to collect gambling sites from the Darknet. A purposive sample of 216 sites containing only Tor hidden services (HS) was listed on The Undernet Directory
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(https://underdj5ziov3ic7.onion.link/). This website is “a link list designed for the Tor network, that means it lists .onion sites… We are totally unrelated to any site listed here, other than those belonging to our "Under" network.” (“About this site”, n.d., para. 1). Of the 216 HS addresses, only 54 were active, and the others were down or not working. After repetitive sites were excluded, 24 sites, in the end, were narrowed down for the sample of gambling sites on Darknet.

After retrieving samples from both Darknet and Surface Web, each name of Darknet gambling sites were searched on Google in attempt to find gambling sites which have domain names on both Webs. As a result, 18 gambling websites were revealed having sites on both Webs. Of those, one site was overlapped with a sample from Surface Web. Consequently, the eventual sample consisted of 53 sites, including 29 sites from only Surface Web, 18 from both Surface and Dark Web, and 6 from only Dark Web. Considering the amorphous character of the Internet, this purposive sample, although limited in the sense of generalizability, provides perhaps the best representation of the phenomenon in question.

Each site was examined to identify the information and variables that reveal its characteristics such as the type of games, registration, promotion, payment, etc. In addition, a Myip.ms (https://myip.ms) was selected to access WHOIS records which contain hosting information and websites, and IP databases beyond domain names. Yet, none of the information for Darknet sites were found from WHOIS records. The scope and depth of the information offered by websites vary widely; some provide a limited amount of information, whereas others are fairly large. Accordingly, this analytic
approach might underestimate the prevalence of some elements within this sample of gambling websites.

Table 1. Descriptive statistics

<table>
<thead>
<tr>
<th>Measures</th>
<th>SW and/or DW (N=53)</th>
<th>SW (N=29)</th>
<th>SW and DW (N=18)</th>
<th>DW (N=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visitors per Day</td>
<td>2,355.64 (3,788.71)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Independent Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IP Owner</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Web Hosting</td>
<td>23 (43.4)</td>
<td>6 (20.7)</td>
<td>17 (94.4)</td>
<td></td>
</tr>
<tr>
<td>CDN</td>
<td>24 (45.3)</td>
<td>23</td>
<td>1 (5.6)</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td>6 (11.3)</td>
<td></td>
<td>6 (100)</td>
<td></td>
</tr>
<tr>
<td><strong>WHOIS Privacy Service</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>7 (13.2)</td>
<td>7 (23.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>36 (67.9)</td>
<td>18 (60)</td>
<td>18 (100)</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td>10 (18.9)</td>
<td>4 (16.7)</td>
<td>6 (100)</td>
<td></td>
</tr>
<tr>
<td><strong>Registration Required</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>39 (73.6)</td>
<td>21</td>
<td>17 (94.4)</td>
<td>1 (16.7)</td>
</tr>
<tr>
<td><strong>Required Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFNOT_Username</td>
<td>6 (11.3)</td>
<td>5 (17.2)</td>
<td>1 (5.6)</td>
<td></td>
</tr>
<tr>
<td>IFNOT_GoogleAuthenticator</td>
<td>6 (11.3)</td>
<td>5 (17.2)</td>
<td>1 (5.6)</td>
<td></td>
</tr>
<tr>
<td>IFNOT_PrivateURL</td>
<td>5 (9.4)</td>
<td>3 (10.3)</td>
<td>1 (5.6)</td>
<td>1 (16.7)</td>
</tr>
<tr>
<td>IFNOT_BitcoinAddress</td>
<td>4 (7.5)</td>
<td>3 (10.3)</td>
<td>1 (5.6)</td>
<td></td>
</tr>
<tr>
<td>IFYES_Email</td>
<td>37 (69.8)</td>
<td>19</td>
<td>17 (94.4)</td>
<td>1 (16.7)</td>
</tr>
<tr>
<td></td>
<td>(65.6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFYES_Password</td>
<td>38 (71.7)</td>
<td>20</td>
<td>17 (94.4)</td>
<td>1 (16.7)</td>
</tr>
<tr>
<td></td>
<td>(69.0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFYES_DateofBirth</td>
<td>11 (20.8)</td>
<td>11 (37.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFYES_Address</td>
<td>9 (17.0)</td>
<td>9 (31.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFYES_Proof_deposit</td>
<td>11 (20.8)</td>
<td>11 (37.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Type of Game</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dice</td>
<td>9 (17.0)</td>
<td>8 (27.6)</td>
<td>1 (5.6)</td>
<td></td>
</tr>
<tr>
<td><strong>Deposit Method</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bitcoin</td>
<td>53 (100)</td>
<td>29 (100)</td>
<td>18 (100)</td>
<td>6 (100)</td>
</tr>
<tr>
<td>Ethereum</td>
<td>4 (7.5)</td>
<td>4 (13.8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Litecoin</td>
<td>23 (43.4)</td>
<td>5 (17.2)</td>
<td>17 (94.4)</td>
<td>1 (16.7)</td>
</tr>
<tr>
<td>OtherCryptocurrency</td>
<td>2 (3.8)</td>
<td>2 (6.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Withdrawal Method</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bitcoin</td>
<td>53 (100)</td>
<td>29 (100)</td>
<td>18 (100)</td>
<td>6 (100)</td>
</tr>
<tr>
<td>Ethereum</td>
<td>2 (3.8)</td>
<td>2 (6.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Litecoin</td>
<td>20 (37.7)</td>
<td>2 (6.9)</td>
<td>17 (94.4)</td>
<td>1 (16.7)</td>
</tr>
<tr>
<td><strong>Promotion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blog</td>
<td>8 (15.1)</td>
<td>8 (27.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Googleplus</td>
<td>6 (11.3)</td>
<td>6 (20.7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reddit</td>
<td>6 (11.3)</td>
<td>6 (20.7)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As a result, based on the information provided by the gambling website and its WHOIS data, a codebook was created and coding of the sample was handled independently according to the codebook. Of observed variables, only statistically significant variables were addressed in this study. The visitors per day was measured at the ratio level and the other variables were dichotomized as “0=No” and “1=Yes”.

Table 1 shows overall sample characteristics and their measurements in the current study. According to WHOIS records, the average number of visitors per day for gambling sites was 2,355.64 (SD=3,788.71). Specifically, daily visitors only on Surface Web ranged from 200 to 14,100 (N=29, M=3,621.90, SD=4,370.35) and those on both Surface and Dark Web ranged from 200 to 2,280 (N=18, M=315.56, SD=490.261), showing that online gamblers are highly likely using Bitcoin gambling sites only on Surface Web rather than those on both Surface and Dark Web.

The IP owner stated in WHOIS database was classified either the Web hosting company or CDN provider. The Web hosting company provides space on a server owned or leased for use by customers hosting their website (“What is Web Hosting?”, n.d.). A content delivery network (CDN) is a system of geographically distributed servers that
allow for the fast delivery of website contents to end-users. While a CDN does not host a website, it helps improve website performance and protect websites from malicious cyberattacks by hiding the origin server IP (Beal, n.d.). It was revealed that 79.3% (n=23) sites on SW employed CDN providers and 94.4% (n=17) sites on both SW and DW used Web hosting providers.

The WHOIS privacy service, also known as the domain proxy service, that protects the personal information of the gambling site from the WHOIS searches was coded dichotomously. 43 addresses were identified and composed of those provided not only by real registrants (n=7) but also by companies providing WHOIS privacy service that was used more than half of the study sites (67.9%, n=36), consisting of 60% (n=18) sites on SW and 100% (n=18) sites on both SW and DW. All seven online sites that do not use the domain proxy service are located in Curacao (n=5), Ireland (n=1), and Costa Rica (n=1), which permit licensed Bitcoin gambling websites to operate. Although those operating in Curacao and Ireland accept local players, Bitcoin casinos licensed in Costa Rica are only allowed for foreign players.

In terms of the registration required, 72.4% (n=21) sites on SW, 94.4% (n=17) sites on both SW and DW, and 16.7% (n=1) sites on DW required registration for gambling. The sites that did not require registration (n=14) asked information for extra security. The information asked by those sites were measured according to the following variables: username (11.3%, n=6); Google authenticator (11.3%, n=6); private URL (9.4%, n=5); and user’s Bitcoin address (7.5%, n=4). Google authenticator is a mobile application that generates two-step verification codes which have to be typed whenever a
user wants to log into their account. The private URL that is automatically given by the sites can be used as an account, and users can return to their account by typing the given URL. In addition, the information asked by the sites (n=39) requiring registration were coded dichotomously as follows: email (69.8%, n=37); password (71.7%, n=38); date of birth (20.8%, n=11); address (17.0%, n=9); and the proof of deposit (20.8%, n=11).

The type of game was measured by the Dice (17.0%, n=9) variable. To play this game, users simply place their bet on one of the two chances, click the dice, and wait for the result. It is notable that 8 out of 9 sites offering the dice game were on SW. While the dice was the most of common, most sites offered several types of games. The number of types ranged from 1 to 12 different types.

To measure deposit methods, Bitcoin (100%, n=53), Ethereum (7.5%, n=4), Litecoin (43.4%, n=23), and other cryptocurrencies (3.8%, n=2) were coded. For the purpose of efficient analysis, the other cryptocurrencies variable was created by grouping 27 different currencies that were found on the specific sites. The sites using Litecoin as a deposit method were on SW and/or DW, all sites using Ethereum or other cryptocurrencies were on SW. Likewise, the withdrawal method measured by Bitcoin (100%, n=53), Ethereum (3.8%, n=2) and Litecoin (37.7%, n=20) variables. Most of sites (94.4%, n=17) on SW and DW employed Litecoin as a deposit and withdrawal method.

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1 Google authenticator are used to enhance user account security in addition to password. When logging in, user has to enter unique codes created by Google authenticator on user’s phone. Used codes will not be used again. For more information on Google authenticator refer to https://www.google.com/landing/2step/#tab=how-it-protects
2 A screenshot or photo of bank statements to prove that deposits were made
3 Ethereum, also called as Ether, is a cryptocurrency generated by a decentralized platform developed by the Ethereum Foundation. For more information on Ethereum refer to https://www.ethereum.org
4 Litecoin is an open source peer-to-peer cryptocurrency developed by Charlie Lee. For more information on Litecoin refer to https://litecoin.com
Bitcoin was not used for analysis because all observed sites used it, which means Bitcoin cannot play a role as a variable.

The measures of the promotion consisted of 7 variables; Blog (15.1%, n=8), Google plus (11.3%, n=6), Reddit (11.3%, n=6), Facebook (30.2%, n=16), and Bitcoin forum (13.2%, n=7) were used as a platform for promotion. In addition, Faucet (9.4%, n=5), a bonus system giving free credits for free bet on a regular basis regardless of betting, and other events (22.6%, n=12) including free bet and Jackpot were observed for promotion options. All sites containing the promotion variables were on SW.

In terms of language, Chinese (47.2%, n=25) and Danish (35.8%, n=19) were coded. While all sites supported English, most of the sites on SW and DW had Chinese (100%, n=18) and Danish (94.4%, n=17) as a language option. In addition, the feature was measured according to following variables: User chat (9.4%, n=5), Live betting (15.1%, n=8), and License verification 5(26.4%, n=14), showing legitimacy for operation. All sites having features variables were on SW.

To retrieve qualitative data, posts and comments regarding Bitcoin and Darknet gambling from two user forums that are anonymized as ‘Forum-A’ on Surface Web and ‘Forum-B’ on Darknet. Forum-A is, at the time of this writing, August 2017, considered one of the largest social media platforms and discussion websites. It was established in 2005 and is well known for extensive posts and discussions on a variety of topics. The forum also contains posts regarding Bitcoin and Darknet gambling. As this forum is one of the main venues for online gamblers using a wide range of gambling sites, related

5 License verification is a certificate of gambling license conferred by authorities of the country in which a gambling website based.
posts found in this site can be used for the purpose of collecting online gambler’s opinions on Bitcoin and Darknet gambling.

Forum-B is one of the major forums where users share a variety of opinions on topics in the Tor network. Discussions pertaining to Darknet products, websites, and sellers form a large part of the forum, and also posts regarding Darknet gambling can be found in this forum.

This study failed to have permission for collecting data from administrators of the forums, but data collection proceeded because the forum is publicly accessible and its rules does not constraint research. Although the forum is open to the public, however, multiple anonymized practices were employed, abiding by the ethical norms associated with Internet user privacy (Association of Internet Researchers, 2012). Pseudonyms were used for names of forums and forum users. In addition, to preclude users from being identified by searching, quotes from forums were paraphrased, preserving tone and meaning of the words used in their original contexts.

Data was retrieved from those two forums by searching 28 combinations of keywords, such as “bitcoin and gambling,” “darknet and betting site,” “cryptocurrency and casino,” and so on. As a result, the database consisted of 192 posts and comments, which are within 3 years from its creation. Coding was conducted by hand until no new material needed to be coded and sorted into three categories according to research questions: features and promotions, operations counteracting restrictions, and other illegal activities. Consequently, 925 text elements were coded for this paper.
As coding went on, it was identified that findings from quantitative analysis were supported by and explored further with forum discussions to better understand how online gambler’s experiences and insights match up to the quantitative results.

**Results**

**Phase 1**

![Bar chart of daily visitors per day](image)

**Fig. 1** Bar chart of the average visitors per day

The study sample consisted of 53 sites on one or both of the Surface Web (SW) or Dark Web (DW) and was examined according to 12 categories. Fig. 1 is Bar chart of site’s daily visitors. The number of visitors per day for gambling sites only on SW ranged from 200 to 14,100 (N=29, M=3,621.90, SD=4,370.35) and those on both SW and DW
ranged from 200 to 2,280 (N=18, M=315.56, SD=490.261), showing that online gamblers are highly likely using Bitcoin gambling sites only on SW rather than those on both SW and DW.

In Table 2, multiple regression analysis displays the list of factors that predicted daily visitors of Bitcoin gambling websites. All variables had a significant effect on Table 2.

### Table 2.

Multiple regression analysis for factors predicting visitors per day.

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>p</th>
<th>R²</th>
<th>Adjusted R²</th>
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<tbody>
<tr>
<td><strong>Type of game</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Dice</td>
<td>3,916.43</td>
<td>1,294.47</td>
<td>.41</td>
<td>.00***</td>
<td>.17</td>
<td>.15</td>
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<tr>
<td><strong>Registration required</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Yes</td>
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<td>1,360.56</td>
<td>-.29</td>
<td>.05*</td>
<td>.08</td>
<td>.06</td>
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<td></td>
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<td></td>
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<td>2,738.22</td>
<td>.79</td>
<td>.01**</td>
<td>.27</td>
<td>.20</td>
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<td>2,320.32</td>
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<td>2,455.51</td>
<td>-.53</td>
<td>.01**</td>
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<td>IfNOT_BitcoinAddress</td>
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<td>3,652.39</td>
<td>-.57</td>
<td>.04*</td>
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<td>IfYES_Email</td>
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<td>2,994.79</td>
<td>-1.30</td>
<td>.00***</td>
<td>.47</td>
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<td>IfYES_Password</td>
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<td>3,073.94</td>
<td>.80</td>
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<td>IfYES_DateofBirth</td>
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<td>2,161.88</td>
<td>.81</td>
<td>.00***</td>
<td></td>
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<tr>
<td>IfYES_Address</td>
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<td>2,678.22</td>
<td>-.95</td>
<td>.00***</td>
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<tr>
<td>IfYES_Proof_deposit</td>
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<td>1,560.20</td>
<td>.47</td>
<td>.01**</td>
<td></td>
<td></td>
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<tr>
<td><strong>Deposit method</strong></td>
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<td></td>
<td></td>
<td></td>
<td>.28 .23</td>
</tr>
<tr>
<td>Deposit_Ethereum</td>
<td>7,360.00</td>
<td>2,472.92</td>
<td>.55</td>
<td>.01**</td>
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<tr>
<td>Deposit_Litecoin</td>
<td>-3,446.36</td>
<td>1,025.59</td>
<td>-.46</td>
<td>.00***</td>
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<td>Deposit_OtherCryptocurrency</td>
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<td>3,317.77</td>
<td>-.39</td>
<td>.04*</td>
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<tr>
<td><strong>Withdrawal method</strong></td>
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<td></td>
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<td></td>
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<td>.24 .20</td>
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<tr>
<td>Withdrawal_Ethereum</td>
<td>7,360.00</td>
<td>2,526.38</td>
<td>.40</td>
<td>.01**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withdrawal_Litecoin</td>
<td>-3,092.68</td>
<td>1,039.12</td>
<td>-.41</td>
<td>.01**</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Promotion</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>.66 .58</td>
</tr>
<tr>
<td>Promotion_Blog</td>
<td>3,829.61</td>
<td>1,191.47</td>
<td>.38</td>
<td>.00**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion_Googleplus</td>
<td>-3,279.17</td>
<td>1,213.62</td>
<td>-.30</td>
<td>.01**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion_Reddit</td>
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<td>1,324.76</td>
<td>-.26</td>
<td>.03*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion_Facebook</td>
<td>2,453.18</td>
<td>963.08</td>
<td>.31</td>
<td>.02*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion_BitcoinForum</td>
<td>-4,039.08</td>
<td>1,319.08</td>
<td>-.38</td>
<td>.00***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion_Faucet</td>
<td>5,397.73</td>
<td>1,332.82</td>
<td>.44</td>
<td>.00***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion_OtherEvents</td>
<td>2,756.80</td>
<td>1,099.76</td>
<td>.32</td>
<td>.02**</td>
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<td></td>
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<td>.43 .39</td>
</tr>
<tr>
<td>Chinese</td>
<td>2,997.37</td>
<td>1,381.66</td>
<td>.40</td>
<td>.04*</td>
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</tr>
<tr>
<td>Danish</td>
<td>-5,410.26</td>
<td>1,440.81</td>
<td>-.70</td>
<td>.00***</td>
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<td></td>
</tr>
<tr>
<td><strong>Feature</strong></td>
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<td></td>
<td></td>
<td></td>
<td>.57 .54</td>
</tr>
<tr>
<td>Feat_UserChat</td>
<td>8,261.63</td>
<td>1,250.81</td>
<td>.68</td>
<td>.00***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feat_LiveBetting</td>
<td>2,448.26</td>
<td>1,020.59</td>
<td>.25</td>
<td>.02*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feat_LicenseVerification</td>
<td>2,676.63</td>
<td>860.40</td>
<td>.33</td>
<td>.00***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05, **p<.01, ***p<.001
visitors per day (p<.05). Unstandardized coefficients (B), standard errors (SE) standardized coefficients (β), p-values, R² and adjusted R² are displayed in Table 2.

The findings indicated that the Dice game is positively correlated with the number of daily visitors (p<.001), and individuals are less likely to play games in gambling sites that require registration (p=.05). The results suggest that the gambling websites that did not require registration and had the Username (p=.01) and Google authenticator (p=.04) options for extra security had a relatively high number of daily visitors, whereas those which had the Private URL (p=.01) and Bitcoin Address (p=.04) options for extra security had a relatively small number of daily visitors. Likewise, the gambling websites that required the Password (p=.02), Date of Birth (p<.001), and Proof of deposit (p=.01) to play game had a relatively high number of daily visitors, whereas those which required the Email (p<.001) and Address (p<.001) had a relatively small number of visitors per day.

It was also found that the Ethereum is positively correlated with the number of daily visitors in regards to both Deposit (p=.01) and Withdrawal methods (p=.01), whereas the Litecoin is negatively correlated with the number of daily visitors in regards to both Deposit (p<.001) and Withdrawal methods (p=.01). Regarding the Language, the Chinese (p=.04) was positively related with the number of daily visitors, whereas the Danish (p<.001) was negatively associated with the number of daily visitors.

Table 2 showed that the Blog (p<.001), Facebook (p=.02), Faucet (p<.001), Other events (p=.02) elements that are used for promotion have a positive relationship with the number of daily visitors, whereas the Google plus (p=.01), Reddit (p=.03), Bitcoin forum (p<.001) that are used for promotion were negatively related to the number
of daily visitors. In terms of the Feature, the User chat \( (p<.001) \), Live betting \( (p=.02) \), and License verification \( (p<.001) \) had a positive correlation with the number of daily visitors.

The following is the results of content analysis to explain the findings of the quantitative phase in more detail in terms of 1) features and promotions, 2) operations counteracting restrictions, and 3) other illegal activities.

**Phase 2**

**Features and promotions.** Bitcoin gambling has been popular due to its own advantages that were rare in regular online gambling. Those advantages generated by unique features and promotions play a vital role in attracting online gamblers and, therefore, make users suitable targets. As this forum quote illustrates, one of the distinctive features of cryptocurrency gambling site is that gamblers do not even have to set up an account to play game. The alternative ways of engaging in online gambling prevent users from uncovering their private information and, therefore, enhance the anonymity:

> It is easy to make a deposit to play a game: a unique URL and deposit address is provided to you when visiting the site. From that time on, you type in the same URL to play with whatever funds you have deposited. (doo, forum_A user)

It was found that many users prefer sites having user chat, and this is in line with the finding that a gambling website equipped with user chat is positively correlated with the number of daily visitors. Some Bitcoin gambling sites provide user chat that allows users to communicate with other gamblers, share their knowledge and experience, and find their judgment of an online gambling site’s credibility with other users:

> It’s pretty fun, active, and people discuss stuff in chat. (kbin, forum_A user)
Also, numerous promotions in regards with cryptocurrency gambling sites were found in the forum discussions. Promotions are mainly highlighted by features that arouse desire on betting and lull the user’s suspicions. For example, this forum quote highlights features for promotion, including relatively fast payout, low house edge, daily bonus, user chat, and credibility. Those features may act as the catalyst for problem gambling:

*Play with us at BETWITHBITCOINS.EU! Biggest online bitcoin poker site, reliable admins, payouts every 12 hours, very low house edge (4%), lobby chat, daily events, staking system… Poker without the filthy banks!.* (Divine, forum_A user)

In addition, some promotions entice users to encourage betting on their sites by throwing event or tournament:

*Check this out: “5 BTC January Giveaway! We just launched our January 5 BTC giveaways. We are giving away 0.1 BTC daily to the player who bets the most. 0.25 BTC goes to the player who bets the most each week, and a full 1.0 BTC goes to the player who bets the most in January. Get in on the action!”* (man, forum_A user)

It is notable that those events hosted by Bitcoin gambling sites are normally more generous than regular counterparts in terms of prize. In fact, what makes it possible is that they are free from the government regulations, reducing operational costs associated with abiding by laws. Without having to pay the taxes, illegal gambling websites afford better services or promotions in favor of customers compared to legal counterparts:
Unlicensed and illegal online gambling sites can provide better service for players because they don’t have to pay taxes or any bureaucratic costs, such as fees for registration, accountants, and legal advisers, etc. (ted, forum_A user)

Not only do Bitcoin gambling sites promote themselves in the forum, but many Bitcoin gambling review sites promote their sites. In fact, those review sites are mostly paid or even run by Bitcoin gambling sites:

Are you looking for bitcoin gambling sites? You can find a list of various types of bitcoin gambling sites, such as casino, poker, and sportsbooks at the http://www.bitcoincasinolist.co (Bit, forum_A user)

Sadly, most bitcoin gambling review sites or blogs are unreliable. They only promote bitcoin gambling sites that pay them for the promotion, and there are no negative reviews about those gambling sites... Or the bitcoin gambling review site is actually operated by one of the bitcoin gambling sites! (Sim, forum_A user)

As identified in phase 1, online gamblers seem to be more likely to use Bitcoin gambling sites on Surface Web rather than Darknet gambling sites. The main reasons for this is that Tor networks are by no means perfect in terms of anonymity but a virtual private network\(^6\), in which user’s activity is encrypted on the Surface Web, take away the need for online gamblers to install Tor browser to use Darknet gambling sites. In addition, Darknet gambling sites tend to be considered untrustworthy:

Although there is no solid evidence, it is said that the National Security Agency (NSA) is operating as many tor nodes as possible to capture traffic... Tor does not guarantee that your endpoint will be out of a non U.S. node. To ensure security

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\(^6\) Virtual private network is a secure private network that enables users to surf the web anonymously. For more information on virtual private network refer to https://www.expressvpn.com/what-is-vpn
and anonymity, it is best to use an Egyptian VPN to secure your connection because they have no extradition treaty with the U.S. (nora, forum_A user)

There are a wealth of gambling sites on the surface web. There is no point of using a trustless gambling sites in the Darknet. (Dep, forum_B user)

**Operations counteracting restrictions.** Illegal gambling websites employ a variety of schemes to cope with the challenges caused by illegality. This forum quote accounts for one of the strategies employed by the regular online gambling sites to circumvent regulations:

_Normally, the big online gambling sites accepting U.S. clients are using a complex money funneling system in order to evade banks blocking their accounts in line with UIGEA. The purpose of this complex system is to deter governments from attempting to enforce the law._ (jee, forum_A user)

It is also suggested that gambling websites accepting cryptocurrencies, unlike the ordinal gambling website employing complicated schemes to deter investigation, places themselves in a blind spot in terms of legality. Similarly, these forum discussions also argue that Bitcoin gambling is in legal grey areas. Although it is illegal to take a bet using real money from the U.S. ambiguity of Bitcoin, whether we consider Bitcoin as money or a fiat currency, arouses controversy over the legality of cryptocurrency gambling. Amid the growing controversy, many Bitcoin gambling sites still reach to U.S. customers in places where there are no specific laws regarding cryptocurrency gambling:

_Since Bitcoin is not officially deemed currency under current U.S. laws, bitcoin gambling is not illegal under the Wire Act or Unlawful Internet Gambling Enforcement Act._ (alex, forum_A user)
There are no specific laws regarding Bitcoin gambling. The commonsense approach is to assume if gambling with fiat is illegal, Bitcoin gambling is illegal and if gambling with fiat is legal, Bitcoin gambling is legal. Even if gambling with fiat is illegal, the user does not need to worry because the government only investigates the operators, not the players. (yeh, forum_A user)

Therefore, online gambling ring’s evolving schemes meant to evade gambling laws and the absence of laws regarding gambling with virtual currency hinder formal capable guardianship from functioning properly.

**Other illegal activities.** Bitcoin gambling sites have been gambling venues for many underage users. Although some sites have a means of prohibiting individuals who are not qualified for gambling, it does not seem to function properly, which makes it vulnerable to under-age gambling:

*Although I just turned 18, I have been doing bitcoin gambling for years. With Bit-casino, I can play with bitcoin without violating any rules or stepping into grey areas. At first, it seemed like a long and complicated process to get onto the website, but it took less than 30 minutes to create an account, complete the ID verification process, and deposit funds. I was surprised by how simple it was, and highly recommend any bitcoin gambling users to give it a shot. (jeff, forum_A user)*

It is notable that adolescent gamblers are aware of legality in terms of online gambling and exploit a legal loophole. In addition, it is identified that adolescent gambling is occurring not only in Bitcoin gambling sites, but also in Darknet gambling sites:
Are there any gambling site on the darknet? I want to play games such as poker while being anonymous... I was born in 2002, but I am able to gamble without my parents knowing! (grizz, forum_B user)

Many users experiencing gambling addiction, and looking for a relief from it, emphasize the dangers of playing in Bitcoin gambling sites by pointing out that fast deposit and withdraw make Bitcoin gambling addictive:

I have played poker regularly and never had any problems with gambling. However, bitcoin makes it so simple and easy to cash in and out, the addiction becomes immediate. What I am telling you guys is that you need to be very very careful when you are on these websites. I’m posting this mainly to get it off my chest, but also just to say that if you are going to gamble, you should do it responsibly! Don’t make the same mistake that I made. (min, forum_A user)

Moreover, this forum discussion highlights the nature of Bitcoin which makes online gambling highly addictive. In addition, those distinctive features of Bitcoin gambling, which cannot be found in gambling sites with real money, are apt to cloud user’s judgment and encourage users to bet more:

BitcoinDice is like the synthesis of heroin, crack, and cocaine in the gambling area! It is literally equipped with everything required for addictive gambling games: 1. Instant payout: Upon placing a bet you get your result almost instantly and this instant fix makes you keep betting again and again endlessly. 2. Insensitive to currency value: By playing games with bitcoin instead of real currencies, it is easier to bet more because people usually become insensitive to real currency values associated with bitcoin. 3. Simple: You can play from
anywhere at any time, indicating that there is nothing to stop people from betting late at night when they tend to bet more. 4. Good odds: BitcoinDice offers very good odds, which encourage you to bet more. (del, forum_A user)

The consequence of compulsive gambling is somewhat devastating. Some forum users show symptoms of gambling addiction including depression, schizophrenia, and suicidal behavior. In addition, given that youth tend not to have effective stress management, youth problem gambling may be prone to bringing about other high-risk behaviors:

"Hi, I am 18 and have found BitcoinDice a few days ago. Since then I have deposited 500 dollars and lost it all. I have no idea what to do. I lost all the money I had today... Although I made some winnings at first, I have ended up losing everything again! I am suffering from gambling addiction and I am only 18! I also feel so miserable right now... I am borderline suicidal... I really hate my life!!!! Please someone gives me any hope on what I should do! I feel so lost right now... (Iwan, forum_A user)

Not only do Bitcoin gambling sites act as lawbreakers, they also become targets by other cybercriminals due to the anonymous nature of cryptocurrency that places gambling sites in a lawless place:

"When you combine the anonymity, computer skills, and lack of regulations, there will be hackers and cyber criminals who can destroy lives and businesses. The bitcoin world is full of these types of people. When a bitcoin casino is robbed there is no repercussion and law enforcement won't care, because bitcoin is not deemed a regular currency and bitcoin casinos are not seen lawful. That is why
bitcoin casinos have become popular targets of hacker attacks. (Sim, forum_A user)

Cryptocurrency gambling sites provide a host of crime motivation for cybercriminals. Like other regular online gambling sites, some Bitcoin gambling sites also have been a venue for scams:

When I tried to withdraw my winnings they took away 0.5 bitcoin from my account and did not allow me to cash out because, I think, I made 0.5 bitcoin from a 0.015 bitcoin deposit. When you win huge rewards, they won’t let you cash out and instead wind up taking away your winnings. (lost, forum_A user)

Anonymity is a double edge sword. Although it protects gamblers from exposing their identity, anonymous gambling makes them vulnerable to fraud, theft, or scam because of the lack of legal repercussion caused by anonymity:

Although ill intentions are not always behind this anonymity, this is more often the case than not. It is absolutely true that the more anonymous a bitcoin gambling site is, the less you can trust it. (Gele, forum_A user)

Bitcoin gambling sites are also apt to be used for money laundering by people involved with the Darknet. They pay out winnings in actual currency and their location is out of U.S. jurisdiction:

Bitcoin gambling is used for money laundering! Bitcoin gambling, as well as the bitcoin ecosystem, is mostly driven by the darknet and its users! Bitcoin gambling sites that pay out winnings in normal currencies are not registered in the U.S. in order to evade strict U.S. anti-money laundering regulations. Many darknet vendors use the bitcoin casino to launder their revenues, and bitcoin casinos also
Discussion

Reviewing the website contents of gambling and forums on Surface Web and/or Dark Web allows for several key observations to be made about how these sites manage to operate while evading law enforcement detections, the role of the Internet in their operations, and what other illegal activities are possibly engendered by illegal online gambling activities. The findings of the study indicate that Bitcoin gambling sites on the Surface Web are more popular among online gamblers than sites on both Dark and Surface Web. Although the number of visitors to Dark Web sites cannot be observed, it would be fair to argue that Darknet gambling sites are not yet invigorated compared to those on Surface Web. In fact, Darknet gambling sites are considered as untrustworthy.

In addition, online gamblers may not need to play on the Darknet gambling site for the anonymity because gambling websites employing Bitcoin share similar characteristics with those on Darknet (Clemmitt, 2016) and there is an alternative way to enhance anonymity, implying that they still can play betting without a trace at the sites on the Surface Web. Moreover, Surface Web Bitcoin gambling sites have more promotion options, games and diverse features than Darknet gambling sites.

The results of the study show that the borderless nature of the Internet is attractive for gambling operators. The gambling sites are able to access to their targets globally while locating their properties and server wherever they want. Besides, another feature that makes transnational operation safe is anonymous operation. The findings reveal that not only Darknet sites are operated anonymously with Darknet technology, but sites on
the Surface Web are operated while protected from revealing confidential information of their server and assets by employing a WHOIS privacy service and CDN, which impede effective investigation for tracking down gambling rings by law enforcement. In addition, it is notable that those personal information protection techniques, which were developed as a means of protecting websites from cyberattacks, have been exploited by illegal gambling operators to hide their identity (Banks, 2012). In addition, the result that the locations of registrant which did not use the WHOIS privacy service were in areas where Bitcoin gambling is legal implies that even people in places where online gambling is banned can run the gambling sites anonymously if using confidential information protection means.

From the user aspects, it was found that some features enable anonymous gambling activities. Using encrypted currencies as deposit and withdrawal methods makes it extremely difficult to trace transactions. In addition, the findings show that Bitcoin gambling sites that require registration or ask for private information such as private bitcoin address, email, and address tend to have few daily visitors. This may lead to the conclusion that online gambler users prefer anonymous gambling activities. Therefore, anonymity is one of the key features that preserve illegal gambling sites from the investigation by law enforcement agencies.

The findings also indicate that Bitcoin gambling sites provide venues for criminal opportunities for offenders in cyberspace. As suggested in Fiedler (2013)’s study, Bitcoin gambling sites are apt for money laundering. Various deposit and withdrawal options that allow for more money laundering opportunities might be attractive for offenders.
Likewise, sophisticated payment processes, such as paying in other currencies different from the one in which user deposited, makes it extremely difficult to trace.

The results of the study indicate that the anonymous nature of gambling sites are possibly associated with youth gambling involvement. Gambling sites that do not require registration enable young populations who are prohibited from gambling due to age limit to play the game without restrictions. Therefore, the increased availability of online gambling may lead to some increases in the prevalence of youth gambling and to the development of gambling problems among young people.

Also, the anonymity can be exploited for fraud if operators victimize their customer by refusing to payout gambling winnings and block victim’s access to sites by depriving of membership or shutting down sites (Banks, 2012; Griffiths, 2010). In addition, these cryptocurrency gambling websites, in reverse, can be victimized by other cybercriminals such as hackers due to the anonymous nature of cryptocurrency that places gambling sites in a lawless place.

In addition, the findings of the study support the claims that online gambling is susceptible to problem gambling (Canale et al., 2016; Gainsbury et al., 2015; Harris, Mazmanian, & Jamieson, 2013; McCormack & Griffiths, 2013; Wood, & Williams, 2007). Equipped with the instant payment and no transaction fee, the Dice game, which was positively linked to the number of daily visitors, particularly seems to provoke gambling addiction because of the nature of the game: it is extremely simple (one-click betting), short (less than 3 seconds for one game), convenient (automatic betting), and limitless. Moreover, numerous promotion options including the Faucet, bonus, free bet, and events keep users occupied in games and the real-time nature of sites including user
chat and live betting makes it increasingly addictive. Therefore, a Bitcoin gambling user easily becomes a victim of gambling addiction.

The finding that gambling sites having the License verification tend to have higher numbers of daily visitors seems to be in line with the outcomes suggested by Shelat and Egger (2002) who surveyed 31 online gamblers to identify how they choose online gambling sites to trust and concluded that online gamblers judge the credibility of an online gambling site mostly based on the information about who is the operator, its legality, and the fairness of game. This maybe because the License verification showing legitimacy for operation gives a false sense of the legitimacy to some users, when in reality the legality is determined based on the territorial jurisdiction of the user’s IP (Trimble, 2012). In addition, the license possibly indicates to users that the games in the site are fair and reliable.

In terms of the security, the findings pertaining to the required information for registration reveal the user’s concern on the security behind anonymous and private game play. It can be concluded that users prefer to login to their account by entering a username/password or Google authenticator keys rather than private URL in the aspect of security. In addition, in case of Bitcoin gambling sites employing conventional transaction methods, the proof of deposit may make online gamblers feel secure after making a deposit.

Given the price volatility of the cryptocurrency, the findings in regards with the Ethereum and Litecoin may indicate that gamblers expect to win rewards not only from the betting but also from price volatility. This is because although the price was almost similar on January 1, 2015 (Ethereum= 1$, Litecoin=2$), the price of Ethereum has
reached to approximately 751 dollars, whereas the price of Litecoin has reached to approximately 225 dollars on the same date in 2018 (“Cryptocurrency statistics”, n.d.). Thus, it can be argued that the different change rate in the price of the cryptocurrency may affect the popularity of gambling sites using cryptocurrencies.

In terms of the languages employed by gambling sites, it can be concluded that gambling users from China, where online gambling is heavily restricted use Bitcoin gambling sites as alternative platforms for online gambling. However, the negative correlation between the Danish and the number of daily visitors may be explained by the Denmark’s online gambling legislation; Gambling users from Denmark, where online casino is legal, may not need to gamble in gambling sites using cryptocurrencies (“Denmark Gambling 2018,” 2017).

The findings reinforce the importance of “capable guardianship” to prevent and detect illegal online gambling operation. Besides their own blogs, online gambling rings promote their sites via social network sites. Although advertising on platforms such as Google plus, Reddit, and Bitcoin forum, seems less effective for promotion, Facebook, which is the biggest social network (“Most famous social,” 2017) is mainly used for the larger Bitcoin gambling sites for advertisement. The findings can be very useful for developing effective prevention measures to deter illegal online gambling when combined with target-hardening activities.

Policy Implication

Based on the findings, it can be suggested that anonymous gambling may cause several problems such as illegal operation, adolescent gambling, fraud, or money laundering. In the aspect of the formal social control, while a highly complex structure of
the Darknet and Bitcoin keeps investigators at bay, some organizations have attempted to regulate it. International law enforcement agencies, such as Operation Onymous, have cracked down a number of illegal sites on Darknet (Valcarcel, 2014) and the United States Drug Enforcement Administration has been able to legally seize Bitcoins (Drug Enforcement Administration, 2017) which can imply that the Darknet and Bitcoin can possibly be regulated if backed up by the law enforcement which has the ability to investigate them. Although the investigation techniques used for the crackdown on Darknet were not disclosed, law enforcement agencies should share those techniques, at least, internally, and train their agents to develop skilled human resource in digital forensics (Valcarcel, 2014). In addition, given that users of the Darknet rapidly adapt to police operations and keep developing more advanced security, law enforcement agencies should make constant efforts to cope with criminal’s evolving technologies.

In terms of the informal social control, given that online gambling rings promote their sites on social media platforms, it would be important for the Internet-based company to effectively regulate people from using their sites for illegal or unauthorized purposes. In fact, social media providers themselves should take measures to regulate inappropriate contents on their sites. For example, Facebook, one of the biggest social media group, announced recently that additional people will be employed to enhance the capability of monitoring contents regarding harm and harassment that are posted to the social network (Tsukayama, 2017). Although regulated posts are limited to violent contents, this indicates that major social network sites actually initiate monitoring inappropriate contents. To effectively regulate illegal online gambling in the private sector, the range of restricted contents need to be extended to other unlawful posts, including illegal gambling
advertisements, and rapid reporting and response system for taking down illicit contents should be built based on the simple reporting procedures.

The ICANN, managing the WHOIS database, may be able to play a vital role in effective tracking on illegal gambling websites by providing registration data. In the absence of a WHOIS policy, there has been a controversy over the extent of publicly displaying registration data of domain owners, ranging from the creation and expiration dates for registration to contact information of domain owners (Masnick, 2015 Jun 24). However, the new regulations regarding data privacy and protection are currently under development that will come into effect in 2018 across the European Union countries.

Considering the interests of domain owner’s privacy, cybersecurity, and law enforcement, the ideal rules regarding data privacy and protection may need to display a partial information that does not reveal confidential information in WHOIS database and only give access to these non-public information to third party requestors providing legitimate orders from judicial tribunals for accessing the data, while the ICANN stores all registration data including registrant, administrative, and technical contact information. Without due process, end users would only be able to contact the registrant or domain owners, either through an anonymized contact information or other technical and legal means. Also, this regulation should apply to all registrations on a global basis (“Data Protection and Privacy Update,” n.d.).

In addition, given that anonymous online gambling enables adolescents to place a bet online without restriction, it is required for people who are with them most of time, such as parents, to play an important role as a gatekeeper. A treatment center that specializes in video game and internet addition, Techaddiction, advises parents of
adolescent gamblers, to set rules for healthy web browsing; install software blocking online gambling sites as well as other malicious websites and to place computers in open areas where parents can surveil the online activities of their children (“Teenage Gambling Online,” n.d.).

Furthermore, since the Internet is an uncontrolled and uncensored entity, which makes it hard to control all activities that children may indulge in, it is required for parents to pay particular attention to keeping abreast with the online activities of their children, such as checking the web history to see what sites your child is visiting, enough to ensure they are not engaging with online gambling.

As regards the target-hardening activity, public awareness programs can play an important role to minimize negative outcomes of online gambling activities (Choi, 2015). Based on the existing gambling awareness program, Problem Gambling Awareness Month, operated by National Council on Problem Gambling (“March Is Problem Gambling”, n.d.), it can be modified into the program that focuses on problem gambling provoked by illegal online gambling activities. The program should highlight that the natures of online gambling such as 24/7 availability make it possibly more addictive and difficult to recover from than offline gambling. To prevent citizens from involving in illegal online gambling activities, it also should emphasize law and regulations pertaining to online gambling to facilitate the acquisition of solid ethical standards for online gambling users. In addition, given that anonymous gambling has made it accessible to minors who typically would be identified as under age at a physical betting establishment, the awareness program should be extended to the schools or school campaigns against illegal online gambling should be implemented.
Conclusion

The anonymous nature of crypto currencies and Darknet technology allows the online gambling industry to cope with regulation imposed by the authority and investigation of law enforcement agencies. Not only is the operation itself illegal, it can also lead to other online illegal activities such as fraud, money laundering, adolescent gambling, or problem gambling. To understand further the nature of anonymous gambling, this study examined how the online gambling sites operate; what factors are attractive for online users to participate in illegal gambling activities; how illegal online gambling activities potentially lead to other online criminal activities; and how online gambling operators preserve operation while being away from the investigation of law enforcement agencies.

The study collected 53 sites on the Surface Web and/or Dark Web. The analysis was conducted to compare the characteristics of each site and uncover what factors contribute to gambling activities at the portals of Bitcoin gambling sites on both Dark and Surface Web. In addition, gambling user’s opinions on Bitcoin and Darknet gambling were collected from forums on both Surface Web and Darknet.

The results suggest that Bitcoin gambling sites on Surface Web are more popular among online gamblers and active than Darknet gambling sites. In addition, the findings indicate that not only Darknet sites are operated anonymously, but sites on Surface Web reach to customers globally while protected from exposing their identity. The analysis revealed several factors acting as an indicator of the popular gambling website. Also, it was found that users of Bitcoin gambling sites are susceptible to gambling addiction and other online illegal activities such as money laundering, fraud, and underage gambling.
Moreover, the absence of regulations on cryptocurrency gambling not only deters investigation, also endangers gambling websites from other cybercriminals.

Based on the findings of the study, possible suggestions have been made for effective formal social controls such as constant development of capable investigators in digital forensic. In terms of informal social controls, it was suggested that Internet-based companies such as Facebook should regulate inappropriate contents and people from using their site for illegal purpose. In addition, the data privacy and protection regulations balancing concerns of privacy information protection, IT security, and law enforcement should be developed and activated for efficient tracking on unlawful websites.

The role of parents as a gatekeeper was addressed to prevent their children from online gambling. Regarding the target-hardening activity, public awareness program was suggested to prevent gambling users from negative outcomes of illegal online gambling activities.

Due to the amorphous nature of the Internet, the sample may not represent the true population, which could have a bias issue. The data was derived from only 53 cases, which may not be sufficient for accurate analysis. In addition, further research should be conducted to compare Bitcoin gambling laws that are classified according to game type and region. Together with the need of an evaluation study of crime prevention measures, limitation provides opportunities for future research involving follow-up using sufficient number of cases or comparing legal online gambling sites with illegal counterparts. Such work would enable to determine illegal online gambling trends and patterns and further anticipate future trends of its operations and activities.
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**Major Bibliography**


   The article titled *What Makes People Trust Online Gambling Sites?* provides an in-depth overview as to how online gamblers choose online gambling sites to trust by using the MoTEC model of trust for electronic commerce. Shelat and Egger found that gamblers judgment of an online gambling site's credibility mostly on the information about who is the operator, its legality and the fairness of the games as well as well-designed interface and fine customer service such as prompt reply and payment of winnings.

   This article will assist in the literature review portion of the Paper as it provides further support to identify the factors for online gamblers to bet on the online gambling site.


   McMullan and Rege, authors of the article titled *Online crime and internet gambling* explored the types, schemes, and organization dynamics of cybercrime surrounding online gambling sites. This study revealed various levels of the criminal entrepreneur depends on their level of labor; the association between criminals with their own interests and capacity to avoid or compromise investigation of law enforcement and security system.
This article will assist in the literature review section of the Paper as it provides information relating to cybercrime around online gambling sites.


The article titled Crime and Gambling, a Brief Overview of Gambling Fraud on the Internet briefly give an overview of various frauds that take place in and around internet gambling sites. This study also highlights that online gambling frauds are potentially on a global level as it is carried out on the cyber world, which enables operators to reach their clients globally while locating their assets and server outside the territorial jurisdiction of Law Enforcement Agencies, hindering law enforcements ability to investigate illegal online gambling operators.

This article will assist in the literature review section of the Paper as it provides further support in that online gambling have raised public concerns and common frauds relating to online gambling.


The article titled Online Gambling and Crime: a Sure Bet? addresses the types and features of crimes that occur at the portals of Internet gambling sites. This study highlights that numerous criminal organizations see online gambling as an opportunity to engage in fraud, theft, extortion and money laundering in and around gambling sites.

This article will assist in the literature review portion of the Paper as it will help support how illegal online gambling sites are used for criminal activities.

Kirk D. Homeyer, author of the article titled Can a State Seize an Internet Gambling Website's Domain Name? An Analysis of the Kentucky Case provides an overview as to how to create gambling websites and how it works. It also addresses online gambling history and Internet gambling laws in the US. This article will assist in the literature review portion of the Paper to support how online gambling operator set up their website and how it operates on the Internet and Kentucky case can assist in the recommendation sections of the paper.


The article titled A Scoping Study of the Structural and Situational Characteristics of Internet Gambling provides an overview explores the situational and structural characteristics of online and offline gambling and shows that there are a number of characteristics may have a greater influence on online gamblers than offline
counterparts when it comes to potentially problematic gambling behavior. In addition, this study focuses on how these characteristics might affect the behavior of vulnerable online gambler.

This article will assist in the literature review section of the Paper and the structural and situational characteristics of Internet gambling will assist in the methodology portion of the paper.


The article titled *Analyses of Multiple Types of Online Gambling within One Provider: an Extended Evaluation Framework of Actual Online Gambling Behaviour* provides an in-depth overview as to the behavior of gamblers who use multiple types of online gambling within on provider. This study highlights that online gambling sites provide multiple gambling products which entice online gamblers to use multiple types of games with ease. In addition, it also confirms the link between multiple gambling engagements and problem gambling.

This article will assist in the literature review section of the Paper and types of online gambling within on provider will assist in the methodology section of the paper.

This proposal published by Marketa Trimble offered a variety of recommendations in an effort to achieve uniformity in the national approaches to online gambling and facilitate the effective enforcement of national online gambling regulations. This article addresses difficulties hindering from forming a uniform international law pertaining to online gambling.

This article will assist in the literature review and recommendations section of the Paper. The information provided will help in substantiating the need for collaboration and continued efforts across the world in order to combat against illegal online gambling operations.


This article titled The Deep Web and the Darknet: A Look Inside the Internet's Massive Black Box gives an overview as to the concept of the Deep Web and Darknet, how to access the Deep web and Darknet, and why it became a conduit of illegal activities. In addition, it highlights an urgent need for policymakers and the public to better
understand the Deep Web and develop a more comprehensive law enforcement, regulatory, and national security response.

This article will assist in the literature review section of the Paper as it will allow for further details relating to the Darknet. Legal and policy implications may also assist in coming up with recommendations.

10. Al Nabki, M. W., Fidalgo, E., Alegre, E., & de Paz, I. Classifying Illegal Activities on Tor Network Based on Web Textual Contents. Retrieved from https://pdfs.semanticscholar.org/4ba0/c1fb3a43f5312f76da9e99aa9a4d63a83c6b.pdf

The article titled *Classifying Illegal Activities on Tor Network Based on Web Textual Contents* provides an overview of the content of Tor hidden services and Darknet illegal activities. In addition, this study offers a dataset in which Darknet gambling activity can be identified.

This article will assist in the literature review portion of the Paper as it provided valuable dataset on the Darknet illegal activities.
Appendix I

1. Satoshidice

- Address: https://satoshidice.com/dice
- Type: Gambling games
- Game: Dice
- House edge(%): 0.5
- Deposit method: Bitcoin
- Withdrawal method: Bitcoin, In order to withdraw funds, all of your previous deposits must have gotten at least 2 confirmations.
- Withdrawal speed: Instant
- Min deposit / withdrawal: x / 0.001 btc
- Withdrawal fee: 0.0001 BTC
- Min / Max bet: 1 / 998 credits -> 0.0001 btc / 0.0998 btc
- Promotion: twitter, affiliate, Forum,
- Language: English
- Log in (Registration): No registration necessary, anonymous account given automatically, optional for extra security ( password, 2-Factor authentication, withdrawal bitcoin address)
- Graphic: Simple interspace, no video, one page
- Customer service: via email, twitter, bitcoin.com forum
- Features: Huge jackpots, probably fair, auto, recent bet lists, User lists.
- ETC: no personal data requires,

- IP: 104.24.23.100
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- owner: Queensland, AU
- Number of domains sharing same IP: 5
- Other sites: satoshidice.com (#698,838) easy.md (#5,303,660) simpleit.co.il (#5,252,953) greenparkhealth.com (#1,671,088) gita-jewelry.com (#2,173,539)
- Creation Date: 2012-04-18
- Number of times changing its IP: 13
- popularity: 941/day
2. Nitrogensports

- Address: https://nitrogensports.eu
- Type: Sports based gaming, Casino games
- Game: Sportsbetting, Poker, Three-card-poker, Baccarat, Blackjack, Dice,
- House edge(%): 1 (dice)
- Deposit method: Bitcoin
- Withdrawal method: Bitcoin, needs password to cash out
- Withdrawal speed: instant
- Min deposit / withdrawal: x/x
- Withdrawal fee: x
- Min / Max bet: 0.001 btc / 15btc (sports betting), 0.001 / 10 btc (casino), 0.001 / 5 (Dice)
- Promotion: Social network sites, Blogs, Affiliates, News, Forums
- Language: English
- Log in (Registration): No registration necessary, anonymous account
  given automatically, optional for extra security (Usernames, passwords)
- Graphic: Seamless and convenient Interface, good graphic,
- Customer service: email,
- Features: Chat system, In-Play Live, shops, self-exclusion, wagering
  contest, auto
- ETC: no personal data requires, anonymous secure accounts, tour, bet
  guide, very specific guide lines.

- IP: 104.16.52.9
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: Costa Rica
- Number of domains sharing same IP: 1
- Other sites: nitrogensports.eu (#42,889)
- Creation Date: not disclosed
- Number of times changing its IP: 5
- popularity: 11800/day
3. Cryptogames

- Address: https://www.crypto-games.net
- Type: Casino games, gambling games, online lotteries, spread betting
- Game: Dice, Slot, Blackjack, Roulette, Video poker, Plinko, Lotto, Investment.
- House edge(%): Dice: 0.8%, Slots: 1.97%, Blackjack: 1.253%, Lottery: 1.5%, Roulette: 2.7%, Video Poker: ~2%
- Deposit method: Bitcoin, Dash, DogeCoin, Ethereum, GridCoin, LiteCoin, Monero, PeerCoin
- Withdrawal method: Bitcoin, Dash, DogeCoin, Ethereum, GridCoin, LiteCoin, Monero, PeerCoin
- Withdrawal speed: depends on transaction fee you would like to pay
- Min deposit / withdrawal:
  0.0001 Bitcoin / 0.002 Bitcoin
- Withdrawal fee: 0.00066 btc ~ 0.0033 btc
- Min / Max bet: 0.00000001 btc /x (dice), 0.00001 btc/ 50 btc (blackjack),
  0.00001 / 0.005 btc (Slot), 0.00001 btc / 0.01 btc (roulette), 0.0001 btc / x (pingo),
  0.0001 btc /99.99990 btc ( lotto)
- Promotion: Social network sites, Blogs, Affiliates, News,Forum, Youtube channel, (6)
- Language: English
- Log in (Registration): No registration necessary, anonymous account given automatically, optional for extra security ( Email, passwords)
- Graphic: Seamless and convenient Interface, good graphic,
- Customer service: email, Forum,
- Features: Chat system, Usual recent bet lists, , Faucets (reward system), Ranking (like military ranks), wagering contest, auto
- ETC: no personal data requires, anonymous secure accounts, specific FAQ and guide lines.
- IP: 104.25.123.97
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: Curacao
- Number of domains sharing same IP: 8
- Other sites: brokestraightboys.com (#79,970)  time4learning.net (#3,958,414)
jimfeist.com (#4,107,636)  sharpbettor.com (#4,163,877)  blumedia.com (#6,238,769)  brokestraighthdudes.com (#3,813,072)  crypto-games.net (#88,488)
wedgwood.eu (#3,855,777)
- Creation Date: 2014-08-07
- Number of times changing its IP: 2
- popularity: 5940/day
4. BitcoinVideoCasino

- Address: https://bitcoinvideocasino.com
- Type: Casino games, gambling games,
- Game: Dice, Slot, Blackjack, Roulette, Video poker, Keno,
- House edge(%): Video Poker - 0.25% Blackjack - 0.4% Roulette - 0.5% Craps - 0.2% Keno - 0.5% Slots - 0.5% Dice - 0.5%
- Deposit method: Bitcoin
- Withdrawal method: Bitcoin
- Withdrawal speed: Instant
- Min deposit / withdrawal:
  x / 0.001 Bitcoin
- Withdrawal fee: 0.0001 btc
- Min / Max bet: unknown
- Promotion: Social network sites, Forum, Affiliates (referral), News, jackpot
- Language: English
- Log in (Registration): No registration necessary, anonymous account given automatically, optional for extra security (2 authentication, passwords).
- Graphic: simple Interface, simple graphic, not decent.
- Customer service: email, Forum, twitter
- Features: Usual recent bet lists, User lists, Auto
- ETC: no personal data requires, anonymous secure accounts, specific FAQ and guide lines.
- IP: 104.20.14.165
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: Panama
- Number of domains sharing same IP: 1
- Other sites:
- Creation Date: 2013-01-17
- Number of times changing its IP: 6
- popularity: <200/day
5. Primedice

Address: https://primedice.com/
- Type: gambling games,
- Game: Dice,
- House edge(%): 1%
- Deposit method: Bitcoin
- Withdrawal method: Bitcoin
- Withdrawal speed: Instant
- Min deposit / withdrawal: x / 0.004 btc
- Withdrawal fee: 0.0003 BTC
- Min / Max bet: 0.00000001 btc / 30
- Promotion: Social network sites, affiliate, Forum, Blog, Jackpot
- Language: English, Chinese, Russian
- Log in (Registration): No registration necessary, anonymous account given automatically, optional for extra security (password, 2-Factor authentication, withdrawal bitcoin address)
- Graphic: Simple interspace and Graphic, Day&Night mode, custom theme
- Customer service: via email, Chat
- Features: Huge jackpots, , auto, recent bet lists, Faucets, Chat with users, live stats, Mobile friendly
- ETC: no personal data requires,
6. Lunarbet

- Address: [https://www.lunarbets.eu/](https://www.lunarbets.eu/)
- Type: Sports based betting
- Game: Sports betting, a variety of games
- House edge(%): x
- Deposit method: Bitcoin
- Withdrawal method: Bitcoin
- Withdrawal speed: Instant
- Min deposit / withdrawal: x / 0.001 Bitcoin
- Withdrawal fee: x
- Min / Max bet: 0.003/ subject to change
- Promotion: Social network sites, Forum, Affiliates (referral), You tube
- Language: English
- Log in (Registration): Yes (Email, password)
- Graphic: visually enjoyable and well-designed, user friendly interface.
- Customer service: Email, live chat
- Features: Usual recent bet lists, User lists, Auto, ETC., 2 step verification. Email verification, Sports only. No live bet.

- IP: 104.20.14.192
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: 
- Number of domains sharing same IP: 1
- Other sites:
- Creation Date: Not disclosed
- Number of times changing its IP: 0
- popularity: <200/day
7. Rollin

- Address: https://rollin.io/
- Type: gambling games,
- Game: Dice,
- House edge(%): 0.8~1
- Deposit method: Bitcoin
- Withdrawal method: Bitcoin
- Withdrawal speed: Instant
- Min deposit / withdrawal: x / 0.001 btc
- Withdrawal fee: 0.0005 BTC
- Min / Max bet: 0.00000001 btc / unknown
- Promotion: Affiliate, bonus for high wagered customers.
- Language: English,
- Log in (Registration): No registration necessary, anonymous account given automatically, optional for extra security (password, 2-Factor authentication)
- Graphic: Simple interspace and Graphic,
- Customer service: email
- Features: auto, recent bet lists, Faucets, Chat with users, live stats, Different type of Dice game
- ETC: no personal data requires,

- IP: 104.25.129.109
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country:
- Number of domains sharing same IP: 6
- Other sites: phlearn.com (#34,461) digitalinnovations.com (#1,740,085) config-gamer.fr (#103,752) rollin.io (#190,549) steroid-siparis.com (#897,772) helpretire.com (#4,863,421)
- Creation Date: 2014-05-23
- Number of times changing its IP: 6
- popularity: 4050/day
8. oshicasino

- Address: https://oshi.io/
- Type: Casino games,
- Game: Blackjack, Card games, Casual, Roulette, Slota, Table games, Table poker, Video poker. 286 games!
- House edge(%):
- Deposit method: Bitcoin, CC, online payments (Personal information required depends on method except Bitcoin)
- Withdrawal method: Bitcoin, (Personal information required)
- Withdrawal speed: Fast
- Min deposit / withdrawal: x / 0.00011 btc
- Withdrawal fee: 0
- Min / Max bet: depends on games
- Promotion: Bonuses (Welcome, Daily reload), Affiliate, VIP (Exclusive vip games, Random gifts, Dedicated vip manager), social network site, forum. Blog. Tournaments
- Language: English, Russian, Swedish, Portugues
- Log in (Registration): Registration required (Email, passwords)
- Graphic: Very nice graphic, usual friendly interface
- Customer service: email, live chat
- Features: Gambling limits (Deposit, loss, wager limits / Cooling off period / Self-exclusion period), auto, Top winner lists
- ETC: Some games cannot be played in US, Personal information required depends on deposit/withdrawal method.

- IP: 136.243.111.171
- IP location: Hetzner Online Ag, Stuttgarter Str 1, D-91710 Gunzenhausen, German
- Hosting company: Hetzner Online Ag
- legality based on IP: Illegal
- Owner country:
- Number of domains sharing same IP: 1
- Other sites:
- Creation Date: 2015-06-12
- Number of times changing its IP: 2
- popularity: 1270/day
9. MarsCasino

- Address: https://mars.casino
- Type: Gambling games,
- Game: Slots, Roulette, Jackpot, BTC games etc
- House edge(%): unknown
- Deposit method: Bitcoin,
- Withdrawal method: Bitcoin, (Personal information required)
- Withdrawal speed: Fast
- Min deposit / withdrawal: 0.001btc / x
- Withdrawal fee: 0%
- Min / Max bet: depends on games
- Promotion: Bonuses (Welcome, Daily reload, Every day, loyalty), Affiliates, News,
- Language: English, Russian,
- Log in (Registration): Registration required (Email, passwords)
- Graphic: space-themed graphic, usual friendly interface
- Customer service: email, live chat
- Features: Gambling limits (Cooling off period), auto,
- ETC: a variety of games,
- IP: 104.25.242.27
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- Legality based on IP: Illegal
- Owner country: Curacao (licensed)
- Number of domains sharing same IP: 4
- Other sites: thesportreview.com (#21,933) blockexplorer.com (#73,446) 7bitcasino.com (#702,990) mars.casino (#1,237,625)
- Creation Date: not displayed
- Number of times changing its IP: 0
- Popularity: <200/day
10. 7bit casino

- Address: https://7bitcasino.com
- Type: Casino games
- Game: Slots, Table(dice, Roulette, Blackjack etc), Jackpot games,
- House edge(%): unknown
- Deposit method: Bitcoin, (Personal information required)
- Withdrawal method: Bitcoin (Personal information required)
- Withdrawal speed: instant
- Min deposit / withdrawal: $10 / $10
- Withdrawal fee: 0
- Min / Max bet: depends on games
- Promotion: Bonuses(welcome, daily loaded), Races (who wins most), Affiliates,
- Language: English, Russian, French
- Log in (Registration): Registration required (Email, passwords)
- Graphic: decent graphic, usual friendly interface
- Customer service: email, live chat
- Features: Gambling limits (loss, wager limits / Cooling off period / Self-exclusion period), auto,
- ETC: a variety of games, Personal information required depends on deposit/withdrawal method.

- IP: 104.25.242.27
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: AR, US
- Number of domains sharing same IP: 4
- Other sites: thesportreview.com (#21,933) blockexplorer.com (#73,446) 7bitcasino.com (#702,990) mars.casino (#1,237,625)
- Creation Date: 2014-10-04
- Number of times changing its IP: 1
- popularity: 930/day
11. BitcoinPenguin

- Address: https://www.bitcoinpenguin.com/
- Type: Casino games
- Game: slots-Baccarat, Blackjack, Poker, Roulettes, Jackpot, Video Poker
- House edge(%): unknown
- Deposit method: Bitcoin, litecoin, dodgecoin
- Withdrawal method: Bitcoin, litecoin, dodgecoin
- Withdrawal speed: instant
- Min deposit / withdrawal: x/ 0.001
- Withdrawal fee: 0
- Min / Max bet: depends on games.
- Promotion: Bonuses(welcome), Weekly Slots competition, Affiliates, Social medias, Blog, VIP(reward), Testimonial,
- Language: English
- Log in (Registration): Registration required ( Email, passwords )
- Graphic: decent graphic, usual friendly interface
- Customer service: email, live chat
- Features: Gambling limits (loss,wager limits / Cooling off period / Self-exclusion period), auto,
- ETC: a variety of games but restricted to play in US

- IP: 148.251.88.245
- IP location: Hetzner Online Ag, Stuttgarter Str 1, D-91710 Gunzenhausen, Germany
- Hosting company: Hetzner Online Ag
- legality based on IP: Illegal
- Owner country: PANAMA
- Number of domains sharing same IP: 1
- Other sites:
- Creation Date: 2014-03-20
- Number of times changing its IP: 0
- popularity: <200/day
12. Bitstarz

- Address: https://www.bitstarz.com/
- Type: Gambling games, Casino games
- Game: slots, Jackpots, Table games, Live Casino, BTC Games, Dice
- House edge(%): unknown
- Deposit method: Bitcoin, CC, Online payments (Personal information required depends on method except Bitcoin)
- Withdrawal method: Bitcoin, CC, Online payments (Personal information required depends on method except Bitcoin)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.0000001 / 0.001
- Withdrawal fee: 0
- Min / Max bet: 0.00015btc / 0.025BTC
- Promotion: Bonuses (1st-4th deposit, Reload, Weekly), Tournaments, Affiliates, Social medias, Youtube
- Language: English, Swedish, Russian
- Log in (Registration): Registration required (Email, passwords)
- Graphic: 3D graphic, usual friendly interface
- Customer service: email, social medias, live chat, Requested Call
- Features: Gambling limits (loss, wager limits / Cooling off period / Self-exclusion period), auto,
- ETC: a variety of games, Many events

- IP: 104.20.84.236
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: Austria
- Number of domains sharing same IP: 1
- Other sites:
- Creation Date: 2014-03-20
- Number of times changing its IP: 7
- popularity: 12700/day
<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td><a href="https://www.cloudbet.com/">https://www.cloudbet.com/</a></td>
</tr>
<tr>
<td>Type</td>
<td>Casino games, Sports based betting</td>
</tr>
<tr>
<td>Game</td>
<td>Sports betting, Live sports, Casino(Slots, Jackpot slots, Video poker, Table games, Bingo, Keno), Video casino(Roulette, Blackjack, Baccarat)</td>
</tr>
<tr>
<td>House edge(%)</td>
<td>unknown</td>
</tr>
<tr>
<td>Deposit method</td>
<td>Bitcoin,</td>
</tr>
<tr>
<td>Withdrawal method</td>
<td>Bitcoin,</td>
</tr>
<tr>
<td>Withdrawal speed</td>
<td>instant</td>
</tr>
<tr>
<td>Min deposit / withdrawal</td>
<td>0.001/ 0.001</td>
</tr>
<tr>
<td>Withdrawal fee</td>
<td>0</td>
</tr>
<tr>
<td>Min / Max bet</td>
<td>0.001 (sports), 0.00002 (casino) btc/ Depends on</td>
</tr>
<tr>
<td>Promotion</td>
<td>Bonuses(welcome), Affiliates, Social medias,</td>
</tr>
<tr>
<td>Language</td>
<td>English, Indonesian, Korean, Turkish, Chinese</td>
</tr>
<tr>
<td>Log in (Registration)</td>
<td>Registration required ( Email, passwords, Date of birth )</td>
</tr>
<tr>
<td>Graphic</td>
<td>simple graphic, usual friendly interface</td>
</tr>
<tr>
<td>Customer service</td>
<td>email, social medias, live chat, Requested Call</td>
</tr>
<tr>
<td>Features</td>
<td>Auto, Responsible Gaming(Link to National Gambling Helpline), Easy to find License page ( licensed by Montenegro), Live Sports betting, Live Casino</td>
</tr>
<tr>
<td>ETC</td>
<td>a variety of games, it just requires Date of birth; no ID check</td>
</tr>
<tr>
<td>IP</td>
<td>104.20.0.184</td>
</tr>
<tr>
<td>IP location</td>
<td>SF, CA, US</td>
</tr>
<tr>
<td>Hosting company</td>
<td>Cloudflare, Inc</td>
</tr>
<tr>
<td>legality based on IP</td>
<td>Illegal</td>
</tr>
<tr>
<td>Owner country</td>
<td>AR, US</td>
</tr>
<tr>
<td>Number of domains sharing same IP</td>
<td>1</td>
</tr>
<tr>
<td>Other sites</td>
<td></td>
</tr>
<tr>
<td>Creation Date</td>
<td>2008-10-03</td>
</tr>
<tr>
<td>Number of times changing its IP</td>
<td>6</td>
</tr>
<tr>
<td>popularity</td>
<td>12400/day</td>
</tr>
</tbody>
</table>
14. VegasCasino

- Address: https://vegascasino.io
- Type: Casino games, Sports based betting, Online lotteries
- Game: Sports games, Blackjack, Slots, Roulette, Table games, Video poker, Live dealer, Baccarat, lotteries
- House edge(%): unknown
- Deposit method: Bitcoin,
- Withdrawal method: Bitcoin,
- Withdrawal speed: depends on fee you would like to pay
- Min deposit / withdrawal: 0.001/ x
- Withdrawal fee: optional
- Min / Max bet: 0.001btc/ depends on automatic acceptance level
- Promotion: Bonuses(Welcome, 2nd deposit bonus, reload), Affiliates, many events, VIP( Rewards, bigger bonus, personal care)
- Language: English,
- Log in (Registration): Registration required (Email, Date of birth)
- Graphic: Simple graphic, usual friendly interface, show a lot of games on main page
- Customer service: email, live chat,
- Features: auto, Responsible Gambling page,
- ETC: it just requires Date of birth; no ID check, a variety of games, Sports games currently not working

- IP: 104.28.8.120
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country:
- Number of domains sharing same IP: 35
- Other sites: refer to PDF
- Creation Date: 2015-01-22
- Number of times changing its IP: 0
- popularity: 2520/day
15. Bitcasino

- Address: https://bitcasino.io
- Type:
- Game:
- House edge(%):
- Deposit method:
- Withdrawal method:
- Withdrawal speed:
- Min deposit / withdrawal:
- Withdrawal fee:
- Min / Max bet:
- Promotion:
- Language: English, Spanish, Iranian, Russian, Chinese, Indonesian, German, Italian, Japanese
- Log in (Registration): Registration required
- Graphic: Decent graphic, show a lot of games on main page
- Customer service:
- Features:
- ETC: Due to license problem, the site is automatically moved to VEGASCASINO

- IP: 104.28.8.120
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country:
- Number of domains sharing same IP: 1
- Other sites:
- Creation Date: 2013-11-25
- Number of times changing its IP: 0
- popularity: 23400/day
16. Sportsbet.io

- Address: https://sportsbet.io
- Type: Casino games, Sports based betting,
- Game: Sports games, Live sports betting, Betting on player Blackjack, Slots, Roulette, Table games, Video poker, Live dealer, Baccarat
- House edge(%): unknown
- Deposit method: Bitcoin,
- Withdrawal method: Bitcoin,
- Withdrawal speed: instant
- Min deposit / withdrawal:
- Withdrawal fee:
- Promotion: Social media, Forum, Youtube, News, Bonuses(Welcome), Events,(Enhanced odds, Special offer for specific match), Affiliates,, VIP
- Language: English,
- Log in (Registration): Registration required
- Graphic: Simple graphic, usual friendly interface
- Customer service: Email. Live chat
- Features: Live betting, Can bet on Sports game player,
- ETC: It said licensed by Curacao. US customer is not allowed to register

- IP: 104.20.16.6
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country:
- Number of domains sharing same IP: 1
- Other sites:
- Creation Date: 2013-10-30
- Number of times changing its IP: 0
- popularity: 3820/day
17. Betchan

- Address: https://www.betchan.com/
- Type: Casino games,
- Game: Slots, Roulette, Video Poker, Table Games, Card Games, Poker Games, Causal, Jackpot games, Live
- House edge(%): unknown
- Deposit method: Bitcoin, Nok, CAD, ->CC, E-wallets (Personal information)
- Withdrawal method: Bitcoin, Nok, CAD->CC, E-wallets (Personal information)
- Withdrawal speed: Instant bitcoins
- Min deposit / withdrawal: €20/€20
- Withdrawal fee: 0
- Min / Max bet: depends on games
- Promotion: Bonuses(1st~4th deposit, Reload, Weekly), Tournaments, Affiliates, VIP,
- Language: English, Russian, Swedish
- Log in (Registration): Registration required (email, Mobile Phone)
- Graphic: 3D graphic, usual friendly interface
- Customer service: Email, Live chat
- Features: Auto
- ETC: It said licensed by Curacao. Require Mobile phone number for registration.

- IP: 104.31.86.124
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: Curacao
- Number of domains sharing same IP: 12
- Other sites: refer to PDF
- Creation Date: 2015-04-01
- Number of times changing its IP: 0
- popularity: 2630/day
18. Nascasino

- Address: https://www.nascasino.com/
- Type: Casino games,
- Game: Slots, Roulette, Poker Games, Causal, Jackpot games, Live games.
- House edge(%): unknown
- Deposit method: Bitcoin,
- Withdrawal method: Bitcoin,
- Withdrawal speed: Instant
- Min deposit / withdrawal: x /0.0001btc
- Withdrawal fee: 0
- Min / Max bet: depends on games
- Promotion: Social media, Bonuses(1st-3rd deposit, Reload, Facebook Like, say hi in live chat, Birthday), Affiliates,
- Language: English,
- Log in (Registration): Registration required (email,)
- Graphic: 3D character graphic, usual friendly interface
- Customer service: Email, Live chat
- Features: Auto,
- ETC: Distinguished promotions (Facebook Like, say hi in live chat, Birthday Bonuses)

- IP: 104.27.134.92
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: Utah, US
- Number of domains sharing same IP: 10
- Other sites: worldgolfhalloffame.org (#4,519,828) pokerwelt.info (#4,911,505) ccsplay.ru (#5,206,452) lifestylereviewed.com (#5,701,945) vle-casino.com (#3,663,817) nascasino.com (#4,001,938) dashcatch.xyz (#1,142,183) quizes-ar.com (#729,126) 9apps9.com (#1,772,553) plyr.pro (#1,208,312)
- Creation Date: 2014-07-25
- Number of times changing its IP: 0
- popularity: <200/day
19. Cafecasino

- Address: https://www.cafecasino.lv
- Type: Casino games,
- Game: Slots, Blackjack, Table games, Video poker, Casual games
- House edge(%): unknown
- Deposit method: Bitcoin, cc (Personal information required)
- Withdrawal method: Bitcoin, check by courier (Personal information required)
- Withdrawal speed: within 24hours(bitcoin)
- Min deposit / withdrawal: 20eur /20eur
- Withdrawal fee: 0
- Min / Max bet: depends on games
- Promotion: Social media, Forum, Bonuses(welcome, Signing up, Weekly, Weekly prize draw), Affiliates,
- Language: English,
- Log in (Registration): Registration required (Name, Date of Birth, Mother’s Maiden Name, Phone number, Email, Zipcode)
- Graphic: Simple and mobile friendly graphic, usual friendly interface
- Customer service: Email. Call
- Features: Auto,
- ETC: Personal Information required to register. Specific FAQ
- IP: 208.78.16.72
- IP location: Mexico
- Hosting company: Dover Web Services Ltd
- legality based on IP: Illegal
- Owner country:
- Number of domains sharing same IP: 1
- Other sites:
- Creation Date: not displayed
- Number of times changing its IP: 1
- popularity: 1610/day
20. Ignitocasino

- Address: https://www.ignitioncasino.eu
- Type: Casino games,
- Game: Slots, Blackjack, Table games, Video poker, Casual games, Poker tournament
- House edge(%): unknown
- Deposit method: Bitcoin, cc (Personal information required)
- Withdrawal method: Bitcoin, check by courier (Personal information required)
- Withdrawal speed: within 48hours(bitcoin)
- Min deposit/ withdrawal: 20$ /20$
- Withdrawal fee: 0
- Min / Max bet: depends on games
- Promotion: Social media, Forum, Bonuses(welcome,10% free deposit, Reload, weekly), Rewards program(higher rank, more benefits), Affiliates, Tournament.
- Language: English,
- Log in (Registration): Registration required (Name, Date of Birth, Mother’s Maiden Name, Phone number, Email, Zipcode)
- Graphic: Simple and mobile friendly graphic, usual friendly interface
- Customer service: Email, Call
- Features: Auto, Casino articles
- ETC.: Personal Information required to register., Similar graphic with Cafecasino..

- IP: 208.78.16.72
- IP location: Mexico
- Hosting company: Dover Web Services Ltd
- legality based on IP: Illegal
- Owner country:
- Number of domains sharing same IP: 1
- Other sites:
- Creation Date: Not disclosed
- Number of times changing its IP: 1
- popularity: 6840/day
21. 4grinz

- Address: https://4grinz.com
- Type: Casino games
- Game: slots, Video poker, Roulette, Poker games, Casual, Card games, Jackpot Games.
- House edge(%): unknown
- Deposit method: Bitcoin,
- Withdrawal method: Bitcoin,
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.001 / 0.001
- Withdrawal fee: 0
- Min / Max bet: depends on games.
- Promotion: Social medias, Blog, Forums, Youtube(total 8), News, Bonuses(Coin back, deposit back,), Points system ( The more play, the more benefits), Affiliates, VIP(reward),
- Language: English
- Log in (Registration): Registration required ( Email, passwords ). Can sign up with twitter, facebook, google ID.
- Graphic: Simple graphic, Magazine-looks like banner, usual friendly interface
- Customer service: email, live chat
- Features: Gambling limits (loss,wager limits / Cooling off period / Self-exclusion period), auto,
- ETC: a variety of games, 8 Promotion sites such as social medias. Can sign up with twitter, facebook, google ID.

- IP: 104.28.0.150
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: FL, US
- Number of domains sharing same IP: 12
- Other sites: tientri.net (#1,372,788)  yd4im.ru (#1,740,541)  mattslifbytes.com (#2,432,708)  hestore.net (#2,467,181)  seitaniidishome.gr (#943,899)  harrozlaw.com (#2,810,660)  easyinfographicswizard.com (#2,870,705)  presshearttocontinue.com (#822,288)  4grinz.com (#3,599,696)  truvicto.com (#1,275,084)
- Creation Date: 2015-02-06
- Number of times changing its IP: 2
- popularity: <200/day
22. 777coin

- Address: https://777coin.com
- Type: Casino games
- Game: Slot, Roulette, Blackjack, Poker, Casual,
- House edge(%): Video Poker - 0.25% Blackjack - 0.4% Roulette - 0.5% Craps - 0.2% Keno - 0.5% Slots - 0.5% Dice - 0.5%
- Deposit method: Bitcoin, Altcoin
- Withdrawal method: Bitcoin
- Withdrawal speed: Instant
- Min deposit / withdrawal: x/x
- Withdrawal fee: 0.0005 BTC
- Min / Max bet: unknown
- Promotion: Forum, Affiliates (referral), News, giveaway thread promotion (Free bitcoins by posting to sites),
- Language: English
- Log in (Registration): No registration necessary, anonymous account given automatically, optional for extra security (, passwords, Two factor Authentication, email).
- Graphic: simple Interface, simple graphic, not decent.
- Customer service: email,
- Features: Usual recent bet lists, Biggest winner lists, Auto, No FAQ
- ETC: no personal data requires, anonymous secure accounts,

- IP: 104.27.80.94
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: Panama
- Number of domains sharing same IP: 1
- Other sites: Bahama
- Creation Date: 2013-06-04
- Number of times changing its IP: 4
- popularity: <200/day
Choi 83

23. 999dice

- Address: https://www.999dice.com/
- Type: Gambling games
- Game: Dice
- House edge(%): 0.1
- Deposit method: Bitcoin, Dogecoin, Litecoin, Ethereum, Monero
- Withdrawal method: Bitcoin, Dogecoin, Litecoin, Ethereum, Monero
- Withdrawal speed: Instant
- Min deposit / withdrawal: 0.00000001 btc / x
- Withdrawal fee: 0.00025 BTC
- Min / Max bet:
- Promotion: affiliate, Faucet (free bitcoin)
- Language: English, Lithuanian, Spanish, Croatian, Indonesian, Polish, Turkey, Russian, German, Dutch, Sundanese, Myanmar, Klington
- Log in (Registration): No registration necessary, anon-
mous account given automatically, optional for extra security (password, Google authentication, email, Emergency withdrawal address)
- Graphic: Simple interspace and graphic, Looks like dos program
- Customer service: Chat, email
- Features: auto, recent bet lists, User chat
- ETC: no personal data requires, Multi-language, easy to play, 4 different addresses.

- IP: 46.28.207.57
- IP location: Switzerland
- Hosting company: Solar Communications GmbH
- legality based on IP: Illegal
- owner: Panama
- Number of domains sharing same IP: 4
- Other sites: 999dice.com (#56,867)  999doge.com (#525,846)  999-
dice.com (#597,063) notdicelol.com (#769,602)
- Creation Date: 2013-12-05
- Number of times changing its IP: 12
- popularity: 9180/day
24. Betballer

- Address: http://betballer.com
- Type: Sports based gaming, Casino games
- Game: Sportsbetting, Slots, Live casino,
- House edge(%): unknown
- Deposit method: Bitcoin, CC, online payments (ID check required)
- Withdrawal method: depends on deposit method (ID check required)
- Withdrawal speed: instant
- Min deposit/withdrawal: 15eur/x
- Withdrawal fee: x
- Min/Max bet: 0.0001 btc (sports) / depends on betting status.
- Promotion: Affiliates, Bonus( first deposit, VIP deposit)
- Language: English, French, Russian, Chinese, Spanish, Germany, Turkey,
  Italian, Polish, Danish
- Log in (Registration): Registration required (name, Birthdate, email; if you
  choose Bitcoin currency)(Address, Phone info required if you choose the
  other currencies)
- Graphic: Usual friendly Interface, Flash on main page. A lot of mini side
  tables
- Customer service: email,
- Features: Chat system, In-Play Live, Cannot play games except sports
  betting in US
- ETC: no anonymous registration

- IP: 104.31.74.242
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: illegal
- Owner country: Dublin, Ireland
- Number of domains sharing same IP: 8
- Other sites: sofacleanerslondon.co.uk (#2,710,297) www.caperet.com
  (#2,599,377) wsepronet.ru (#1,772,252) 56ybyb.com (#2,311,910)
  surveyvoicesresearch.com (#38,081) betballer.com (#1,312,571)
  z3nvolution.com.co (#1,345,814) vulkan-house.net (#1,377,296)
- Creation Date: 2016-05-30
- Number of times changing its IP: 0
- popularity: <200/day
25. BetBTC

- Address: https://www.betbtc.co/
- Type: Sports based betting, Casino games
- Game: Sports games, Blackjack, Dice
- House edge(%): 0.3%(Dice, Blackjack)
- Deposit method: Bitcoin,
- Withdrawal method: Bitcoin,
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.000001 / 0.005 btc
- Withdrawal fee: 0.00199
- Min / Max bet: 0.000001 / x
- Promotion: Social media, Forums, Bonuses(welcome,), Faucet, Affiliates,
- Language: English, Russian, French
- Log in (Registration): Registration required (Usualname, passwords)
- Graphic: decent graphic, usual friendly interface, Betslip (side tables)
- Customer service: email,
- Features: auto, Recent bet lists.
- ETC: Display the number of Current users, it says licensed in Costarica.

- IP: 104.27.152.131
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: Costa rica
- Number of domains sharing same IP: 7
- Other sites: streetgangster.nl (#6,259,210)  ua-sport.org (#1,364,530) bispheuet.ac.th (#4,252,430) onlinetradingrebel.com (#4,759,791) betbtc.co (#938,242) cdkeys.game.com (#2,397,450) movietube.live (#1,769,235)
- Creation Date: 17 June 2013
- Number of times changing its IP: 3
- popularity: 308/day
Address: https://www.coinbet24.com
- Type: Sports based betting, Casino games
- Game: Sports games, Slots, Live casino games (Roulette, Blackjack, Baccarat, poker)
- House edge(%): Unknown
- Deposit method: Bitcoin, CC, online payments, other alternate coins (19), Bank transfer (Turkish only) (personal information required except for coins)
- Withdrawal method: Bitcoin, online payments (personal information required except for coins)
- Withdrawal speed: Instant
- Min deposit / withdrawal: x / x btc
- Withdrawal fee: unknown
- Min / Max bet: 0.0005 / depends on games, betting statues
- Promotion: Social media, Youtube, Bonuses (welcome, , Affiliates,
- Language: English, Russian, Spanish, Turkish, German, Portuguese, Vietnamese, Macedonian, Serbian, Croatian.
- Log in (Registration): Registration required (Email, Birthdate, Country; if you choose Bitcoin currency)(Address, Phone SSN info required if you choose the other currencies)
- Graphic: Simple graphic, usual friendly interface
- Customer service: email,
- Features: auto, live betting, A variety of games
- ETC: A lot of deposit methods
- IP: 104.27.158.44
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: AR, US
- Number of domains sharing same IP: 7
- Other sites: wawacity.su (#1,575,113) tea-cafe-shian.com (#1,604,826) wirelesslan.gr (#2,301,055) dreamcube.gr (#3,850,945) coinbet24.com (#814,371) rdxhd.info (#18,752) suzmwudd.top (#2,173,551)
- Creation Date: 2015-02-11
- Number of times changing its IP: 3
- popularity: 636/day
Jetwin

- Address: https://www.jetwin.com
- Type: Sports based betting, Casino games
- Game: Sports games, live betting, Table games, Slots, Poker, Video poker, Dice, Live dealers
- House edge(%): Unknown
- Deposit method: Bitcoin, and others (cannot figure out; one currency is assigned while registering) (personal information required except coins)
- Withdrawal method: Bitcoin, and others (personal information required except coins)
- Withdrawal speed: unknown
- Min deposit / withdrawal: x / x btc
- Withdrawal fee: unknown
- Min / Max bet: unknown
- Promotion: Social media
- Language: English
- Log in (Registration): Registration required (Email)
- Graphic: Simple graphic and interface
- Customer service: email,
- Features:
- ETC: Beta test, All games not available

- IP: 104.27.158.44
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: AR, US
- Number of domains sharing same IP: 14
- Other sites: refer to PDF
- Creation Date: 2006-04-02
- Number of times changing its IP: 8
- popularity: <200/day
- Address: https://www.mbitcasino.com/
- Type: Casino games
- Game: Slots, Video poker, Roulette, Poker games, Live games, Table games, Jackpot Games.
- House edge(%): unknown
- Deposit method: Bitcoin,
- Withdrawal method: Bitcoin,
- Withdrawal speed: instant
- Min deposit / withdrawal: x/ 0.002
- Withdrawal fee: 0
- Min / Max bet: depends on games.
- Promotion: Social media, Blog, VIP program, Bonuses ( Deposit, Weekly, Reload), Tournaments,
- Language: English, Japanese, Chinese, Korean
- Log in (Registration): Registration required ( Email, passwords ).
- Graphic: Simple graphic, usual friendly interface
- Customer service: email, live chat, Social media
- Features: Recent bet lists, auto,
- ETC: a variety of games.

- IP: 104.28.2.241
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: Curacao
- Number of domains sharing same IP: 12
- Other sites: Refer to PDF
- Creation Date: 09 December 2013
- Number of times changing its IP: 2
- popularity: 3800/day
29. Slots.lv

- Address: https://www.slots.lv/
- Type: Casino games,
- Game: Slots, Table games, Video poker, Casual games
- House edge(%): unknown
- Deposit method: Bitcoin, cc (Personal information required)
- Withdrawal method: Bitcoin, check by courier (Personal information required)
- Withdrawal speed: 3days (bitcoin)
- Min deposit/withdrawal: 20/20 EUR
- Withdrawal fee: 0
- Min/Max bet: depends on games
- Promotion: Social media, Forum, Bonuses (welcome, Signing up, Weekly, Weekly prize draw), Affiliates, News & Review, Rewards (the more play, the more benefits unlocked)
- Language: English, Chinese
- Log in (Registration): Registration required (Name, Date of Birth, Mother’s Maiden Name, Phone number, Email, Zipcode)
- Graphic: Simple and mobile friendly graphic, usual friendly interface
- Customer service: Email, Call
- Features: Auto, Recent bet lists,
- ETC.: Personal Information required to register. Specific FAQ
- IP: 208.78.16.102
- IP location: Mexico
- Hosting company: Dover Web Services Ltd
- Legality based on IP: Illegal
- Owner country: not displayed
- Number of domains sharing same IP: 1
- Other sites:
- Creation Date: not displayed
- Number of times changing its IP: 2
- Popularity: 3600/day
YABTCL

- Address: https://yabtcl.com
- Type: Online lottery
- Game: Lotteries
- House edge(%): 0.1 ~ 1
- Deposit method: Bitcoin,
- Withdrawal method: Bitcoin,
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.001 / 0.0000543
- Withdrawal fee: As soon as draw finish (three times in a week)
- Min / Max bet: 0.001 / 8.008 btc
- Promotion: Affiliates, Social media
- Language: English, Chinese, Spanish, Portuguese, Russian, German, Turkish, Thai.
- Log in (Registration): Registration unnecessary. Only Needs Address of tickets you bought.
- Graphic,: usual friendly interface, Simple graphic
- Customer service: email,
- Features:
  - ETC: Can play without registration
- IP: 104.25.9.117
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- Owner country: PANAMA
- Number of domains sharing same IP: 4
- Other sites: proaupair.com (#5,816,788) yabtcl.com (#179,363) proaupair.de (#1,842,102) aniva.lk (#53,043)
- Creation Date: 2013-09-02
- Number of times changing its IP: 2
- popularity: 4160/day
Choi 91

31. 1centcasino

- Darknet Address: http://cxpizstpfzlljfng.onion/
- Surfaceweb address: http://www.1centcasino.com/
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, Qiwi, Tele2, Webmoney)
- Withdrawal method: Online payment (Perfect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, German, Turkey, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email,
- Features:
  - ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.
  - IP: 85.25.252.232
  - IP location: Germany, North Rhine-Westphalia, Hoest
  - Hosting company: Megahoster.net Dedic (Ukraine)
  - legality based on IP: Illegal
  - Owner country: Cyprus (3025)
  - Number of domains sharing same IP: 45
  - Other sites: Refer to PDF
  - Creation Date: 2011-05-09
  - Number of times changing its IP: 13
  - popularity: <200/day
32. 1centRoulette

- Darknet Address: http://ycfgjwbfhnqvctlm.onion/
- Surface web address: 1centroulette.com
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, QiWI, Tele2, Webmoney)
- Withdrawal method: Online payment (PerfectMoney)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, German, Turkish, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email,
- Features:
  - ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.
- IP: 85.25.252.232
- IP location: Germany, North Rhine-Westphalia, Hoest
- Hosting company: Megahoster.net Dedic (Ukraine)
- legality based on IP: Illegal
- Owner country: Cyprus (3025)
- Number of domains sharing same IP: 45
- Other sites: Refer to PDF
- Creation Date: 2011-05-09
- Popularity: <200/day
33. LuckySamurai

- Darknet Address: [http://ypn4b7ye4xx2ier4.onion/](http://ypn4b7ye4xx2ier4.onion/)
- Surface web address: luckysamurai.com
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, QiWI, Tele2, Webmoney)
- Withdrawal method: Online payment (Perfect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, German, Turkish, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Features:
  - ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.
  - IP: 85.25.252.232
  - IP location: Germany, North Rhine-Westphalia, Hoest
  - Hosting company: Megahoster.net Dedic (Ukraine)
  - legality based on IP: Illegal
  - Owner country: Cyprus (3025)
  - Number of domains sharing same IP: 45
  - Other sites: Refer to PDF
  - Creation Date: 2003-12-05
  - Number of times changing its IP: 18
  - popularity: <200/day
34. WinnersGoldCasino

- Darknet Address: http://twfhclvq2u4g7wmd.onion/
- Surface web address: winnersgoldcasino.com
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, QIWI, Tele2, Webmoney)
- Withdrawal method: Online payment (Perfect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, Germany, Turkey, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email,
- Features:
  - ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.
- IP: 85.25.252.232
- IP location: Germany, North Rhine-Westphalia, Hoest
- Hosting company: Megahoster.net Dedic (Ukraine)
- legality based on IP: Illegal
- Owner country: Cyprus (3025)
- Number of domains sharing same IP: 45
- Other sites: Refer to PDF
- Creation Date: 2007-04-28
- Number of times changing its IP: 12
- popularity: <200/day
35. Gambling4you

- Darknet Address: http://iug4yfvnmag6tqzq.onion/
- Surface web address: gambling4you.org
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, QIWI, Tele2, Webmoney)
- Withdrawal method: Online payment (Perfect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, Germany, Turkey, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email,
- Features:
- ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.

- IP: 85.25.252.232
- IP location: Germany, North Rhine-Westphalia, Hoest
- Hosting company: Megahoster.net Dedic (Ukraine)
- legality based on IP: Illegal
- Owner country: Cyprus (3025)
- Number of domains sharing same IP: 45
- Other sites: Refer to PDF
- Creation Date: 2006-10-19
- Number of times changing its IP: 0
- popularity: <200/day
36. FirstGoldCasino

- Darknet Address: http://vxes67oilqrbkwsb.onion/
- Surface web address: firstgoldcasino.com
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games(Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, Qiwi, Tele2, Webmoney)
- Withdrawal method: Online payment (Pefect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, German, Turkey, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email,
- Features:
  - ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.

- IP: 85.25.252.232
- IP location: Germany, North Rhine-Westphalia, Hoest
- Hosting company: Megahoster.net Dedic (Ukraine)
- legality based on IP: Illegal
- Owner country: Cyprus (3025)
- Number of domains sharing same IP: 45
- Other sites: Refer to PDF
- Creation Date: 2006-09-04
- Number of times changing its IP: 0
- popularity: <200/day
37. isengcasino

- Darknet Address: http://xujnrmw3lkpyj57r.onion/
- Surface address: isengcasino.com
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games(Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, QIWI, Tele2, Webmoney)
- Withdrawal method: Online payment (PerfectMoney)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, Germany, Turkey, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email
- Features:
  - ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.
- IP: 85.25.252.232
- IP location: Germany, North Rhine-Westphalia, Hoest
- Hosting company: Megahoster.net Dedic (Ukraine)
- legality based on IP: Illegal
- Owner country: Cyprus (3025)
- Number of domains sharing same IP: 45
- Other sites: Refer to PDF
- Creation Date: 2011-12-10
- Number of times changing its IP: 0
- popularity: <200/day
38. Ninja'sLRCasino

- **Darknet Address**: http://d7shwhjlrs45ouox.onion/
- **Surfaceweb address**: lucky-ninja.com
- **Type**: Casino games
- **Game**: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- **House edge(%):** unknown
- **Deposit method**: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, Qiwi, Tele2, Webmoney)
- **Withdrawal method**: Online payment (Perfect Money)
- **Withdrawal speed**: instant
- **Min deposit / withdrawal**: 0.05 USD/0.05USD
- **Withdrawal fee**: x
- **Min / Max bet**: 0.01 USD / x
- **Promotion**: Affiliates, News
- **Language**: English, French, Russian, Chinese, Spanish, Germany, Turkey, Italian, Polish, Danish
- **Log in (Registration)**: Registration required (email). Can Sign in with social network accounts (24).
- **Graphic**: Simple graphic & Interface
- **Customer service**: email,
- **Features**:
  - ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.
  - **IP**: 85.25.252.232
  - **IP location**: Germany, North Rhine-Westphalia, Hoest
  - **Hosting company**: Megahoster.net Dedic (Ukraine)
  - **legality based on IP**: Illegal
  - **Owner country**: Cyprus (3025)
  - **Number of domains sharing same IP**: 45
  - **Other sites**: Refer to PDF
  - **Creation Date**: 2005-08-10
  - **Number of times changing its IP**: 0
  - **popularity**: <200/day
**Club-Pokera**

- **Darknet Address:** http://uvwovfkwqmyyrtbj.onion/
- **Surfaceweb address:** club-pokera.com
- **Type:** Casino games
- **Game:** Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games(Roulette, Poker, Blackjack, Baccarat)
- **House edge(%):** unknown
- **Deposit method:** Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, Qiwi, Tele2, Webmoney)
- **Withdrawal method:** Online payment (Perfect Money)
- **Withdrawal speed:** instant
- **Min deposit / withdrawal:** 0.05 USD / 0.05USD
- **Min / Max bet:** 0.01 USD / x
- **Promotion:** Affiliates, News
- **Language:** English, French, Russian, Chinese, Spanish, Germany, Turkey, Italian, Polish, Danish
- **Log in (Registration):** Registration required (email). Can Sign in with social network accounts (24).
- **Graphic:** Simple graphic & Interface
- **Customer service:** email,
- **Features:**
  - ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.
- **IP:** 85.25.252.232
- **IP location:** Germany, North Rhine-Westphalia, Hoest
- **Hosting company:** Megahoster.net Dedic (Ukraine)
- **legality based on IP:** Illegal
- **Owner country:** Cyprus (3025)
- **Number of domains sharing same IP:** 45
- **Other sites:** Refer to PDF
- **Creation Date:** 2010-06-29
- **Number of times changing its IP:** 0
- **popularity:** <200/day
40. GrandSlotsCasino

- Darknet Address: http://q2kiyruuyzrvaipn.onion/
- Surfaceweb address: http://www.grandslots-casino.com/
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, QIWI, Tele2, Webmoney)
- Withdrawal method: Online payment (Perfect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, Germany, Turkey, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email,
- Features:
- ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.
- IP: 85.25.252.232
- IP location: Germany, North Rhine-Westphalia, Hoest
- Hosting company: Megahoster.net Dedic (Ukraine)
- legality based on IP: Illegal
- Owner country: Cyprus (3025)
- Number of domains sharing same IP: 45
- Other sites: Refer to PDF
- Creation Date: 2010-11-16
- Number of times changing its IP: 0
- popularity: <200/day
41. OnlineShans

- Darknet Address: http://rswwpapessp3xxpw.onion/
- Surfaceweb address: online-shans.com
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, QIWI, Tele2, Webmoney)
- Withdrawal method: Online payment (Perfect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, Germany, Turkey, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email,
- Features:
- ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.
- IP: 85.25.252.232
- IP location: Germany, North Rhine-Westphalia, Hoest
- Hosting company: Megahoster.net Dedic (Ukraine)
- legality based on IP: Illegal
- Owner country: Cyprus (3025)
- Number of domains sharing same IP: 45
- Other sites: Refer to PDF
- Creation Date: 2009-09-09
- Number of times changing its IP: 20
- popularity: <200/day
42. LiqpayCasino

- Darknet Address: http://5wupyyzf4tcuicun.onion/
- Surfaceweb address: liqpaycasino.com
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, QIWI, Tele2, Webmoney)
- Withdrawal method: Online payment (Perfect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, Germany, Turkey, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email,
- Features:
  - ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.
- IP: 85.25.252.232
- IP location: Germany, North Rhine-Westphalia, Hoest
- Hosting company: Megahoster.net Dedic (Ukraine)
- legality based on IP: Illegal
- Owner country: Cyprus (3025)
- Number of domains sharing same IP: 45
- Other sites: Refer to PDF
- Creation Date: 2 2011-04-11
- Number of times changing its IP: 22
- popularity: <200/day
- Darknet Address: http://wxvi3b47c5ir2gmh.onion/
- Surface web address: diamond777.org
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, QIWI, Tele2, Webmoney)
- Withdrawal method: Online payment (Perfect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, Germany, Turkey, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email,
- Features:
- ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.

- IP: 85.25.252.232
- IP location: Germany, North Rhine-Westphalia, Hoest
- Hosting company: Megahoster.net Dedic (Ukraine)
- legality based on IP: Illegal
- Owner country: Cyprus (3025)
- Number of domains sharing same IP: 45
- Other sites: Refer to PDF
- Creation Date: 2011-04-03
- Number of times changing its IP: 0
- popularity: <200/day
WMRCasino

- Darknet Address: http://lkxwfeqbfxm3zsan.onion/
- Surface web address: www.wmrcasino.com
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games(Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, QIWI, Tele2, Webmoney)
- Withdrawal method: Online payment (Perfect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, Germany, Turkey, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email,
- Features:
- ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.

- IP: 85.25.13.97
- IP location: Germany, North Rhine-Westphalia, Hoest
- Hosting company: Megahoster.net Dedic (Ukraine)
- legality based on IP: Illegal
- Owner country: Cyprus (3025)
- Number of domains sharing same IP: 20
- Other sites: Refer to PDF
- Creation Date: 2009-11-09
- Number of times changing its IP: 0
- popularity: <200/day
45. Crazy-luck

- Darknet Address: http://2dwr24vsifikiv7e.onion/
- Surfaceweb address: Crazy-luck.com
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, Qiwi, Tele2, Webmoney)
- Withdrawal method: Online payment (Perfect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD / 0.05 USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, German, Turkish, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Features:
- ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.

- IP: 85.25.13.97
- IP location: Germany, North Rhine-Westphalia, Hoest
- Hosting company: Megahoster.net Dedic (Ukraine)
- legality based on IP: Illegal
- Owner country: Cyprus (3025)
- Number of domains sharing same IP: 20
- Other sites: Refer to PDF
- Creation Date: 2012-08-21
- Number of times changing its IP: 0
- popularity: <200/day
- Darknet Address: http://fofzj37ck6pto3gi.onion/
- Surfaceweb address: lycasino.com
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, QIWI, Tele2, Webmoney)
- Withdrawal method: Online payment (Perfect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD/0.05USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, German, Turkey, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email,
- Features:
  - ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.
- IP: 85.25.13.97
- IP location: Germany, North Rhine-Westphalia, Hoest
- Hosting company: Megahoster.net Dedic (Ukraine)
- legality based on IP: Illegal
- Owner country: Cyprus (3025)
- Number of domains sharing same IP: 20
- Other sites: Refer to PDF
- Creation Date: 2014-01-08
- Number of times changing its IP: 5
- popularity: <200/day
47. ClockpayGoldGames

- Darknet Address: http://6gua6qlq3scz7jam.onion/
- Surfaceweb address: clockpaygoldgames.com (currently not working)
- Type: Casino games
- Game: Roulette, Poker, Videopoker, Blackjack, Baccarat, HD 5-real slots, Retro slots, Multiplayer games (Roulette, Poker, Blackjack, Baccarat)
- House edge(%): unknown
- Deposit method: Bitcoin, Alternative coins, online payments, CC (Skrill, WebMoney, PerfectMoney, Payeer, BTC-E, AdvCash, Bitcoin, Litecoin, Interkassa, QIWI, Tele2, Webmoney)
- Withdrawal method: Online payment (Perfect Money)
- Withdrawal speed: instant
- Min deposit / withdrawal: 0.05 USD / 0.05 USD
- Withdrawal fee: x
- Min / Max bet: 0.01 USD / x
- Promotion: Affiliates, News
- Language: English, French, Russian, Chinese, Spanish, German, Turkey, Italian, Polish, Danish
- Log in (Registration): Registration required (email). Can Sign in with social network accounts (24).
- Graphic: Simple graphic & Interface
- Customer service: email
- Features:
- ETC: anonymous registration, With one accounts, can sign in all darknet online casino sites.

- IP:
- IP location:
- Hosting company:
- legality based on IP:
- Owner country:
- Number of domains sharing same IP:
- Other sites:
- Creation Date:
- Number of times changing its IP:
- popularity:
48. Safedice

- Darknet Address: http://safedice2ge73n2g.onion/
- Surfaceweb address: https://safedice.com/
- Type: Gambling games, Spread game
- Game: dice, investment
- House edge(%): 0.5%
- Deposit method: BTC, Monero
- Withdrawal method: BTC, Monero, In order to withdraw funds, all of your previous deposits must have gotten at least 2 confirmations.
- Withdrawal speed: Instant
- Min deposit / withdrawal: x / x
- Withdrawal fee: 0
- Min / Max bet: 0.00000001 btc / depends on betting status
- Promotion: Blog, affiliate, Forum,
- Language: English, Chinese, Russian
- Log in (Registration): No registration necessary, anonymous account given automatically, optional for extra security ( password, 2-Factor authentication, withdrawal bitcoin address)
- Graphic: Simple interspace & graphic
- Customer service: via email,
- Features: Leader boards, probably fair, auto, recent bet lists,
- ETC: no personal data requires,
- IP: 104.24.23.100
- IP location: SF, CA, US
- Hosting company: Cloudflare, Inc
- legality based on IP: Illegal
- owner: PANAMA
- Number of domains sharing same IP: 26
- Other sites: Refer to PDF
- Creation Date: 2014-09-01
- Number of times changing its IP: 0
- popularity: 2280/day
49. Torbet777

- Darknet Address: http://torbet777o4era3q.onion
- Surface web address: x
- Type: Gambling games,
- Game: Even/odd
- House edge(%): 1.65%
- Deposit method: BTC,
- Withdrawal method: BTC,
- Withdrawal speed: Instant
- Min deposit / withdrawal: x / 0.00015460 btc
- Withdrawal fee: 0.0001 btc
- Min / Max bet: 0.00001 btc / 0.1 btc
- Promotion: Backed by BetCoin.TM (implying this site is supported by Gambling site on Surface web)
- Language: English
- Log in (Registration): No registration necessary, anonymous account given automatically,
- Graphic: Sexual photo, Barely designed graphic
- Customer service: x,
- Features: recent bet lists,
- ETC: no personal data requires, Latest user bet was 2 month ago

- IP:
- IP location:
- Hosting company:
- legality based on IP:
- owner:
- Number of domains sharing same IP:
- Other sites:
- Creation Date:
- Number of times changing its IP:
- popularity:
50. HiddenBetcoin

- Darknet Address: http://betcoinahk4j27yb.onion/
- Surfaceweb address: x
- Type: Gambling games,
- Game: Same/different color
- House edge(%): unknown
- Deposit method: BTC,
- Withdrawal method: BTC,
- Withdrawal speed: Instant
- Min deposit / withdrawal: x / x
- Withdrawal fee: 0
- Min / Max bet: 0.2 btc / 100 btc
- Promotion: Affiliate
- Language: English
- Log in (Registration): No registration necessary, anonymous account given automatically,
- Graphic: Barely designed graphic, Statistics; Top bettings; Recent games-looking like photos
- Customer service: x,
- Features:
  - ETC: no personal data requires,
  - IP:
  - IP location:
  - Hosting company:
  - legality based on IP:
  - owner:
  - Number of domains sharing same IP:
  - Other sites:
  - Creation Date:
  - Number of times changing its IP:
  - popularity:
51. Bitcoin investing

- Darknet Address: http://si5dd2qazutr2hrl.onion/
- Surfaceweb address: x
- Type: Investment
- Game: Investment
- House edge(%): x
- Deposit method: BTC,
- Withdrawal method: BTC,
- Withdrawal speed: 24–48hrs
- Min deposit / withdrawal: 0.01 / x
- Withdrawal fee: 0
- Min / Max bet: 0.01 btc / 1 btc
- Promotion:
- Language: English
- Log in (Registration): No registration necessary, anonymous account given when you choose investment plan
- Graphic: Barely designed graphic, Numbers are overlapped. A lot of bulletins on the main page
- Customer service: x,
- Features: latest 50 payouts
- ETC: no personal data requires, scam

- IP:
- IP location:
- Hosting company:
- legality based on IP:
- owner:
- Number of domains sharing same IP:
- Other sites:
- Creation Date:
- Number of times changing its IP:
- popularity:
52. Double Your BTC

- Darknet Address: http://4r23alxe7mwyqa4s.onion/
- Surfaceweb address: x
- Type: Investment
- Game: Investment
- House edge(%): x
- Deposit method: BTC,
- Withdrawal method: BTC,
- Withdrawal speed: Instant
- Min deposit / withdrawal: 0.0078 btc / x
- Withdrawal fee: 0
- Min / Max bet: 0.0078 btc / x
- Promotion: Deceiving words
- Language: English
- Log in (Registration): No registration,
- Graphic: Words
- Customer service: email
- Features: one investment address shown on the page.
- ETC:, scam

- IP:
- IP location:
- Hosting company:
- legality based on IP:
- owner:
- Number of domains sharing same IP:
- Other sites:
- Creation Date:
- Number of times changing its IP:
- popularity:
53. Bitcoin Mix

- Darknet Address: http://222222ssvvnnd6fq.onion/index
- Surfaceweb address: x
- Type: Investment
- Game: Investment
- House edge(%): x
- Deposit method: BTC,
- Withdrawal method: BTC,
- Withdrawal speed: Instant
- Min deposit / withdrawal: x / x
- Withdrawal fee: 0
- Min / Max bet: x btc / x btc
- Promotion: Deceiving words
- Language: English
- Log in (Registration): No registration, only investment address is given.
- Graphic: words
- Customer service: x,
- Features: Security check before enter the page, Recent coin scramblers and returns list,
- ETC: no personal data requires, scam
- IP:
- IP location:
- Hosting company:
- legality based on IP:
- owner:
- Number of domains sharing same IP:
- Other sites:
- Creation Date:
- Number of times changing its IP:
- popularity:
54. Instarich Gambling

- Darknet Address: http://instarich696.torpress2sarn7xw.onion/
- Surface web address: x
- Type: Investment
- Game: Investment
- House edge(%): x
- Deposit method: BTC,
- Withdrawal method: BTC,
- Withdrawal speed: Instant
- Min deposit / withdrawal: x / x
- Withdrawal fee: 0
- Min / Max bet: x / x
- Promotion:
- Language: English
- Log in (Registration): No registration,
- Graphic: Words
- Customer service: email
- Features: one investment address shown on the page.
- ETC,: scam

- IP:
- IP location:
- Hosting company:
- Legality based on IP:
- Owner:
- Number of domains sharing same IP:
- Other sites:
- Creation Date:
- Number of times changing its IP:
- Popularity:
Appendix II

Type of game

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.411&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.169</td>
<td>.151</td>
<td>3491.853</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Dice

ANOVA<sup>b</sup>

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>1116E8</td>
<td>1</td>
<td>1.116E8</td>
<td>9.154</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>5.467E9</td>
<td>45</td>
<td>1.219E7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>6.603E8</td>
<td>46</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Dice
b. Dependent Variable: Visitors per day

Coefficients<sup>a</sup>

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1605.684</td>
<td>566.453</td>
<td>2.835</td>
</tr>
<tr>
<td></td>
<td>Dice</td>
<td>3916.427</td>
<td>1294.470</td>
<td>.411</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Visitors per day
Registration required

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.266(^a)</td>
<td>.082</td>
<td>.062</td>
<td>3670.142</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), RequiringRegistration

ANOVA\(^b\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>5.415E7</td>
<td>1</td>
<td>5.415E7</td>
<td>4.020</td>
<td>.051 (^a)</td>
</tr>
<tr>
<td>Residual</td>
<td>6.061E8</td>
<td>45</td>
<td>1.347E7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6.603E8</td>
<td>46</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), RequiringRegistration
b. Dependent Variable: Visitors per day

Coefficients\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
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<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>4561.222</td>
<td>1223.381</td>
<td></td>
<td>3.728</td>
</tr>
<tr>
<td>RequiringRegistration</td>
<td>-2727.959</td>
<td>1360.563</td>
<td>- .266</td>
<td>-2.005</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Visitors per day
**Required information**

### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.521*</td>
<td>.272</td>
<td>.202</td>
<td>3383.763</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), IFNOT_BitcoinAddress, IFNOT_PrivateURL, IFNOT_GoogleAuthenticator, IFNOT_Username

### ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>179404262.9</td>
<td>4</td>
<td>44851065.71</td>
<td>3.917</td>
<td>.009*</td>
</tr>
<tr>
<td>Residual</td>
<td>486893784.0</td>
<td>42</td>
<td>11449652.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>665296046.9</td>
<td>46</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Visitors per day

b. Predictors: (Constant), IFNOT_BitcoinAddress, IFNOT_PrivateURL, IFNOT_GoogleAuthenticator, IFNOT_Username

### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>1862.632</td>
<td>544.785</td>
</tr>
<tr>
<td>IFNOT_Username</td>
<td>6845.825</td>
<td>2738.221</td>
</tr>
<tr>
<td>IFNOT_GoogleAuthenticator</td>
<td>4870.307</td>
<td>2330.318</td>
</tr>
<tr>
<td>IFNOT_PrivateURL</td>
<td>-7116.909</td>
<td>2455.509</td>
</tr>
<tr>
<td>IFNOT_BitcoinAddress</td>
<td>-7664.457</td>
<td>3652.368</td>
</tr>
</tbody>
</table>

### Model Summary

<table>
<thead>
<tr>
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<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.683*</td>
<td>.487</td>
<td>.402</td>
<td>2930.890</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), IFYES_Proof_deposit, IFYES_Password, IFYES_DateofBirth, IFYES_Address, IFYES_Email

### ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>3.08E+08</td>
<td>5</td>
<td>6.162E7</td>
<td>7.173</td>
<td>.000*</td>
</tr>
<tr>
<td>Residual</td>
<td>3.522E8</td>
<td>41</td>
<td>8590117.948</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6.602E8</td>
<td>46</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), IFYES_Proof_deposit, IFYES_Password, IFYES_DateofBirth, IFYES_Address, IFYES_Email

b. Dependent Variable: Visitors per day

### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>4487.100</td>
<td>926.829</td>
</tr>
<tr>
<td>IFYES_Email</td>
<td>-11495.297</td>
<td>2994.791</td>
</tr>
<tr>
<td>IFYES_Password</td>
<td>7312.900</td>
<td>3073.944</td>
</tr>
<tr>
<td>IFYES_DateofBirth</td>
<td>7155.297</td>
<td>2161.878</td>
</tr>
<tr>
<td>IFYES_Address</td>
<td>-9019.461</td>
<td>2678.219</td>
</tr>
<tr>
<td>IFYES_Proof_deposit</td>
<td>4140.144</td>
<td>1560.201</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Visitors per day
Deposit method

**Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.532&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.283</td>
<td>.233</td>
<td>3317.772</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Deposit_Othercryptocurrencies_1, Deposit_LiteCoin, Deposit_Ethereum

**ANOVA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>Regression</td>
<td>186970685.1</td>
<td>3</td>
<td>62323561.70</td>
<td>5.662</td>
<td>.002&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
<td>Residual</td>
<td>473327361.8</td>
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<td>11007613.06</td>
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<tr>
<td>Total</td>
<td>660298046.9</td>
<td>46</td>
<td></td>
<td>5.662</td>
<td>.002&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Visitors per day

b. Predictors: (Constant), Deposit_Othercryptocurrencies_1, Deposit_LiteCoin, Deposit_Ethereum

**Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td></td>
<td>Deposit_LiteCoin</td>
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<tr>
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<td>Deposit_Othercryptocurrencies_1</td>
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Withdrawal method

### Model Summary

<table>
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<tr>
<th>Model</th>
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<th>Std. Error of the Estimate</th>
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<tbody>
<tr>
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</table>

<sup>a</sup> Predictors: (Constant), Withdrawal_LiteCoin, Withdrawal_Ethereum

### ANOVA

<table>
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<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>1 Regression</td>
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</tbody>
</table>

<sup>a</sup> Dependent Variable: Visitors per day

<sup>b</sup> Predictors: (Constant), Withdrawal_LiteCoin, Withdrawal_Ethereum

### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
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<tr>
<td></td>
<td>3292.679</td>
<td>638.679</td>
<td>5.155</td>
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<td>Withdrawal_Ethereum</td>
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</table>
Promotion

Model Summary\(^b\)

<table>
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<th>R</th>
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<th>Std. Error of the Estimate</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<td>.656</td>
<td>.584</td>
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</tbody>
</table>

\(^a\) Predictors: (Constant), Promotion_Blog, Promotion_Googleplus, Promotion_Faucet, Promotion_Reddit, Promotion_BitcoinForum, Promotion_Facebook, Promotion_OtherEvents

ANOVA\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
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<th>Sig.</th>
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<tr>
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<td>54182015.61</td>
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<td>.000(^b)</td>
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<tr>
<td></td>
<td>Residual</td>
<td>38</td>
<td>5969524.263</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
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<td>660298046.9</td>
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<td></td>
</tr>
</tbody>
</table>

\(^b\) Dependent Variable: Visitors per day

\(^c\) Predictors: (Constant), Promotion_Blog, Promotion_Googleplus, Promotion_Faucet, Promotion_Reddit, Promotion_BitcoinForum, Promotion_Facebook, Promotion_OtherEvents

Coefficients\(^a\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
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<tbody>
<tr>
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<tr>
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<td>Promotion_Facebook</td>
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<td>Promotion_Faucet</td>
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<td>Promotion_OtherEvents</td>
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Language

### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
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<tr>
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</tbody>
</table>

<sup>a</sup> Predictors: (Constant), Chinese, Danish

### ANOVA<sup>b</sup>

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
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<th>Sig.</th>
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<tbody>
<tr>
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</tbody>
</table>

<sup>b</sup> Dependent Variable: Visitors per day

<sup>b</sup> Predictors: (Constant), Chinese, Danish

### Coefficients<sup>a</sup>

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>(t)</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<tr>
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<td>Danish</td>
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### Feature

#### Model Summary

<table>
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<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
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a. Predictors: (Constant), Feature, LicenseVerification, Feature, Livebetting, Feature, UserChat

#### ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<td>6599279.150</td>
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</tbody>
</table>

a. Dependent Variable: Visitors per day
b. Predictors: (Constant), Feature, LicenseVerification, Feature, Livebetting, Feature, UserChat

#### Coefficients

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
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<td>Feature, LicenseVerification</td>
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