



Web3 and Tokenization in the Creator Economy. Understanding User Acceptance of Social Tokens.

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Abstract

Title: Web3 and Tokenization in the Creator Economy. Understanding User Acceptance of Social Tokens.

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Web3 is tokenizing industries and shifting data ownership away from the gatekeepers of the internet to its users. One particular Web3 technology that is gaining popularity in the Creator Economy is Social Tokens, a versatile type of cryptocurrency backed by the creator's personal brand and reputation within their community. While Social Tokens provide Creators with innovative ways to directly monetize and connect with their fanbase, their value and success are heavily dependent on the community engaging with the Social Tokens. This study assesses the current state of users' acceptance of Social Tokens, determines the influencing factors and develops a guide for creators on how to prepare their communities for Social Tokens. We conducted a user survey and applied established models in the fields of technology adoption to determine current acceptance and its predictors. Moreover, interviews were used to gain a deeper understanding of barriers and facilitators to users' acceptance of Social Tokens. The analysis revealed low levels of current acceptance, while perceived trust, knowledge, and perceived value, were found to be the most influential factors impacting acceptance. We conclude that Social Tokens are still in an early stage of adoption, however creators can take specific measures to prepare their communities for the use of Social Tokens.

Keywords: Web3, Creator Economy, Tokenization, Social Tokens, Technology Acceptance

Resumo

Título: Web3 e Tokenization na Economia Criadora. Compreender a Aceitação de Social Tokens por parte do Utilizador.

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A Web3 está a tokenizar as indústrias e a transferir a propriedade dos dados dos guardiões da Internet para os seus utilizadores. Uma tecnologia Web3 particular que está a ganhar popularidade na Economia dos Criadores são os Social Tokens, um tipo versátil de moeda criptográfica apoiada pela marca pessoal e reputação do criador dentro da sua comunidade. Enquanto os Social Tokens fornecem aos Criadores formas inovadoras de rentabilizar e ligar directamente com a sua base de fãs, o seu valor e sucesso dependem fortemente do envolvimento da comunidade com os Social Tokens. Este estudo avalia o estado actual de aceitação dos Social Tokens pelos utilizadores, determina os factores de influência e desenvolve um guia para os criadores sobre como preparar as suas comunidades para os Social Tokens. Realizámos um inquérito aos utilizadores e aplicámos modelos estabelecidos nos campos da adopção de tecnologia para determinar a aceitação actual e os seus preditores. Além disso, foram utilizadas entrevistas para obter uma compreensão mais profunda das barreiras e facilitadores da aceitação dos Social Tokens por parte dos utilizadores. A análise revelou baixos níveis de aceitação actual, embora a percepção de confiança, conhecimento e valor percebido tenham sido considerados como os factores mais influentes com impacto na aceitação. Concluimos que os Social Tokens ainda se encontram numa fase inicial de adopção, contudo os criadores podem tomar medidas específicas para preparar as suas comunidades para a utilização dos Social Tokens.

Palavras-chave: Web3, Economia do Criador, Tokenização, Tokens Sociais, Aceitação de Tecnologia

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Table of Contents

List of Figures	VII
List of Tables	VII
List of Abbreviations	VIII
Introduction	1
Literature Review	3
Web3 and how it came to be	3
Web 1.0, the read-only web	3
Web 2.0, the social web	3
Web 3.0, the decentralized web	4
The Creator Economy	5
Challenges for the Creator Economy	7
Market shifts and opportunities for the Creator Economy	8
Tokenization in the Creator Economy	10
Non-Fungible Tokens (NFTs)	11
Social Tokens	12
Management Theory of Technology Adoption	14
Methodology	17
Research Design	17
Data Collection	17
Quantitative Data Collection: Survey	17
Qualitative Data Collection: Interviews	18
Data Analysis	19
Quantitative Data Analysis: Survey	19
Qualitative Data Analysis: Interviews	19
Results	20
Qualitative Data Analysis	20
Descriptive Statistics	20
Kruskal-Wallis Test	20
Multiple Regression Analysis	21
Qualitative Data Analysis	22
Barriers	22
Facilitators	25
Discussion	27
RQ1: What is the current state of acceptance of Social Tokens by users?	28
RQ2: What factors influence users' acceptance of Social Tokens?	29
RQ3: How can Creators prepare their communities to use Social Tokens?	31

Conclusion	32
Limitations	33
Future Research	34
Bibliography	35
Appendix A	43
Appendix B	45
Appendix C	47
Appendix D	51

List of Figures

Figure 1: Number of internet users worldwide from 2005 to 2021 in millions	4
Figure 2: Interest in the search term NFT over time	12
Figure 3: Innovation-Decision Process	15
Figure 4: Technology Acceptance Model (TAM)	15
Figure 5: Unified Theory of Acceptance and Use of Technology Model (UTAUT2)	16
Figure 6: Proposed research model for users' acceptance of Social Tokens	17
Figure 7: Themes and subthemes revealed by the qualitative data analysis	28

List of Tables

Table 1: An overview of the most common types of tokens used	10
Table 2: Descriptive Statistics Behavioral Intention	20
Table 3: Multiple Linear Regression	21

List of Abbreviations

ICO	Initial Coin Offerings
NFT	Non-Fungible Token
IDT	Innovation Diffusion Theory
TAM	Technology Acceptance Model
UTAUT	Unified Theory of Acceptance and Use of Technology

Introduction

Web3 comes with various new technologies and buzzwords that have the potential to transform entire industries. One emerging technology that is gaining particular attention in the Creator Economy, an economy around the monetization of online content, is Social Tokens, a type of cryptocurrency backed by the creator's personal brand and reputation within their community.

Web3 is the next iteration of the internet, which aims to correct its predecessors' undemocratic flaws. While the original "read-only" web limited user participation, the emergence of the social web, or Web 2.0, gave rise to social media (Nath et al., 2014). People from around the world were suddenly able to interact with an ever-expanding web of information and contribute to it via blogs, vlogs, music, how-to tutorials, game streaming, etc. As a result, a class of now 200 million creative individuals, the content creators, emerged, as well as an entire economy revolving around the monetization of content: the Creator Economy (Linktree Creator Report, 2022; Geyser, 2021a).

The creator's career, however, is not all 'rainbows and unicorns' In fact, the majority of creators struggle to make ends meet and are forced to diversify income streams (Jin, 2021). In addition, most data and content, and also associated revenue streams, are largely controlled by a handful of powerful web2-native companies, also known as the gatekeepers, such as Google and Facebook (Dogan, 2022). In fact, YouTube alone contributes 30 billion dollars to the 104.3 billion dollar industry that is the Creator Economy (Murthy, 2021). Consequently, users and creators who depend on these platforms locked into these platforms seek to reclaim control and ownership of data and web contributions. Web3 promises to do so by transferring power and data ownership from the gatekeepers of the internet to its users via decentralization and blockchain technology (Ethereum, 2022).

Numerous blockchain-based technology, including Social Tokens, have surfaced and grown in popularity in the Creator Economy over the past few years. Social Tokens permit creators to convert or tokenize personal brands into a form of currency. Specifically, this new currency is based on the premise that the creators and their communities will be more valuable in the future (Young, 2022). In addition to creating an independent ecosystem and a direct source of revenue, Social Tokens enable creators to interact with audiences in novel ways (Dogan, 2022). While cryptocurrency is primarily used as a monetary exchange medium, Social

Tokens provide a variety of uses, including early access to concert tickets, the ability to vote on the next project, and receiving rewards for community engagement. While creators can decide how much value they are willing to give to their communities through Social Tokens, it is ultimately the community's engagement that generates value for the token (Lee, 2022). Consequently, Social Tokens are a two-way street, and success is heavily dependent on user participation, which, according to Gaur (2022), is an essential ingredient that the user-centric Web3 is currently missing.

Due to the novelty of Web3, little research has been conducted on the adoption of Web3 technologies, particularly concerning Social Tokens. Existing literature on the adoption of cryptocurrencies and non-fungible tokens focuses primarily on adoption by larger institutions as well as financial implications rather than the perspective of the vast internet user community, which is critical to the future success of Web3. Therefore, it is necessary to examine users' views on Social Tokens and the factors that influence adoption.

This dissertation aims to **understand the current context of emergent Web3 technologies, specifically Social Tokens, and their current use in the Creator Economy** by answering the following questions: What is the current state of acceptance of Social Tokens by users? What factors influence users' acceptance of Social Tokens? How can creators prepare their communities to use Social Tokens?

This study will begin with a literature review on Web3, the Creator Economy, Tokenization, Social Tokens, and management theory in the field of technology adoption. Next, the section on methodology will describe the research design, data collection methods, and data analysis technique used. Moreover, section four will present the results, whereas section five will discuss them. This study will close by reaching a conclusion and touch upon the limitations of this study and future research opportunities.

Literature Review

Web3 and how it came to be

It is believed that Web3 is the most democratic version of the internet ever created. To comprehend why Web3 is attracting attention, it is important to review the evolution of the web.

Web 1.0, the read-only web

Tim Berner- Lee's (1989) proposal to address the loss of information within organizations led to the development of the earliest version of the internet: Web 1.0. A technology called "hypertext" enabled easy access and exchange of data in a decentralized manner. Web 1.0 is also known as the 'read-only' internet since web pages were primarily static and allowed for limited user interaction and contribution (Aghaei et al, 2012). Here, the majority of users were content consumers rather than creators (Nath et al., 2014). In fact, only a small number of individuals and organizations possessed the knowledge required to publish content on the internet (Choudhury, 2014).

Web 2.0, the social web

Today, global users interact with Web 2.0, also known as the social web (Nath et al., 2014). The term was first coined by Tim O'Reilly (Brake, 2013), who recognized that network effects were the key to success for Web 2.0 (Choudhury, 2014). In contrast to its static predecessor, Web 2.0 spawned the "social web" and an explosion of user-generated content (Latorre, 2018). With the emergence of major social media platforms, the internet became a digital place for social interaction and collaborative content creation (Choudhury, 2014). As a collaborative encyclopedia, Wikipedia is a powerful example of collaborative content creation in Web 2.0. With more people contributing user-generated content and data, the Web is growing rapidly (Figure 1).

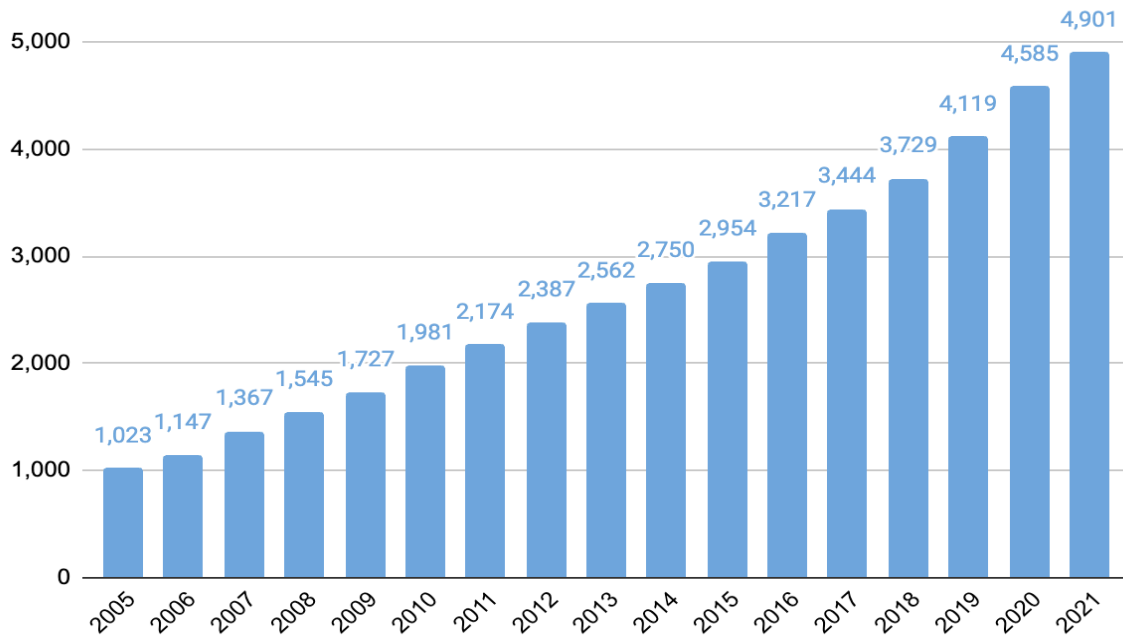


Figure 1: Number of internet users worldwide from 2005 to 2021 in millions (ITU, 2022)

Data has since become one of the most valuable resources of the digital age beating oil (Bhageshpur, 2022). Facebook and Google, two digitally native companies, were among the first to recognize the business potential of targeted advertising through data. Soon these companies began to offer the world free usage of platforms in exchange for users' data. Today, data-driven businesses are among the world's most valuable businesses (Murphy & Contreras, 2022). In fact, only a handful of corporations own and control the vast majority of user-generated data, creating extreme power imbalances between so-called gatekeepers and internet users (Nath et al., 2014). The resulting monopolization and centralization of user data have been heavily criticized, prompting consumers to seek to reclaim control over their data and privacy (Cigmalia, 2022).

Web 3.0, the decentralized web

Web 3.0, or Web3 is the next generation of the World Wide Web that aims to address its predecessor's flaws, such as the gatekeeper problem, via decentralization and user ownership (Petkanics, 2021; Livni, 2022; Chitalkar, 2022). It expands upon Tim Berners Lee's original vision for an open-source Web (Parasol, 2022). In 2000, the inventor himself criticized the increasing influence of online software companies and urged internet users to restore a balance of power (Berners-Lee et. al, 2000).

"Instead of a Web monopolized by large technology companies, Web3 embraces decentralization and is being built, operated, and owned by its users." (Ethereum, 2022). Open-source codes that reside on the blockchain will be accessible to all users and encourage collaboration on developing and shaping the web (Hirschey, 2022). In lieu of closed systems, Web3 enables operability and data portability through blockchain technology, thereby allowing users to easily move from one platform to another with a single profile (Liquiditeam, 2022).

Web3's success is heavily reliant on user participation for building the infrastructure (Gaur, 2022). In this context, participation is coordinated and powered by tokens, the Web3 unit of ownership (Petkanics, 2021). Web3 platforms will be owned and operated by communities, with built-in mechanisms or protocols incentivizing moderation and governance by the community. In Web3, information is shared among web users, shifting not only data ownership but also associated revenue streams (Hirschey, 2022). Subsequently, it is expected that it will become a more democratic form of the internet, redistributing ownership from intermediaries to internet users (Livni, 2022).

Although Gavin Wood, co-founder of Ethereum, coined the term "Web3" in 2014, it gained more significant media attention since the outbreak of COVID-19. With the world transitioning into a new phase of the internet, numerous articles have pondered the implications and longevity of Web3. While opinions differ as to whether Web3 is merely a fad (Foroohar, 2022), many view it as a paradigm shift in ownership for various industries (Bergendorff, 2022). In one of his newsletters, crypto influencer Cobie (2022) summarized the situation succinctly: "(...) nobody really agrees on what Web3 even is. Depending on which tribe you belong to, Web3 is a scam, Web3 is the future, Web3 is tokenizing the world, Web3 is VC exit liquidity, Web3 is just another name for crypto, you get the idea."

The Creator Economy

The Creator Economy is based on commercialization of creator content and the goods and services that facilitate content creation (Geyser, 2021a). In response to business opportunities surrounding content creation, the Creator Economy has emerged as a phenomenon in itself. Examples include brands engaging in sponsored partnerships with creators to reach new

audiences, agencies assisting creators in building their careers, and companies developing tools to facilitate content creation.

The evolution of the Creator Economy has been closely tied to the development of the internet itself. For decades, a few large corporations dominated the creative industries (Kretschmer et al., 2001). Creatives such as musicians, filmmakers, and authors were heavily dependent on large media corporations to bear the substantial costs of producing, marketing and distributing creative work, which often meant full control of intellectual property rights (Cimaglia, 2022). However, with the advent of the internet in the 1990s and more accessible technology, barriers to content creation were lowered allowing individuals to independently produce and distribute content. While Web1 still limited creative possibilities, Web2 and platforms such as YouTube or Instagram provided numerous channels for creative expression through user-generated content, giving rise to a Web2-native and growing creative class of content creators: the Creator Economy (Geyser, 2021a). Within a few years, the number of videos uploaded per minute to YouTube increased from six in 2007 to five hundred in 2020. (Statista, 2020). Today, anyone in the world with a smartphone can take part in this economy.

Creators, or content creators, are the driving force behind this new economy. These are individuals who use their creative abilities to produce content for the internet (Bergendorff, 2022). Whether this is a how-to video on YouTube, a podcast on Spotify, a gaming stream on Twitch, or an article on Medium, creators produce the content that keeps users engaged with the ever-expanding web of information known as "the internet." The creator career has gained considerable popularity as a serious full-time occupation. According to a study conducted by the toy company LEGO in 2019, 29% of surveyed children aspire to become YouTubers. In 2021, more than 50 million individuals worldwide self-identified as creators, of which 46.7 million are amateurs (Yuan & Constine, 2020). Recent estimates place the number of content creators at 200 million, with 60 percent identifying as part-time content creators and the majority having joined the creator space within the past year (Linktree Creator Report, 2022). In the next five years, it is anticipated that over one billion people will identify as content creators (Geyser, 2021b).

In addition to creative talent, this expanding economy has also attracted entrepreneurs and capital. Since 2012, the Creator Economy has grown exponentially from 600k to a market worth 104.2 billion dollars (Influencers Club, 2022), with YouTube alone contributing 30

billion dollars in revenue (Murthy, 2021). This growth significantly accelerated with the COVID-19 pandemic. As billions of people were forced to spend more time indoors, many turned to their screens for entertainment, and others saw business opportunities (Dukurs, 2022). Between October 2020 and June 2021, over \$800 million was invested in the Creator Economy via venture capital (Geyser, 2021a). Every day, a variety of specialized goods and services for creators, so-called "creator-first" businesses that assist creators in capturing value from their audience, are developed. Creators now have access to hundreds of tools that facilitate content creation and monetization (Murthy, 2021).

Challenges for the Creator Economy

The missing creator middle class. Though this creative class is growing, making a living with content remains an unattainable dream for the vast majority of creators (Geyser, 2011). In fact, only 2% of Patreon creators earn minimum wage, while the majority of content earnings are concentrated at the top (Sanchez, 2018). About 1.4% of influencers earn more than \$1 million annually, while 26% earn less than \$1,000, and on Spotify, 1.4% of artists receive 90% of royalties (Geyser, 2021c). Jin (2021) in a Harvard Business Review article refers to imbalances of income distributions among creators as "the missing creator class." In other words, some content creators have achieved great success, while the majority are unable to achieve to make ends meet. The so-called "superstar phenomenon" describes how network effects and algorithmic preferences cause the top class of creators to attract the largest number of users, whereas newcomers struggle to gain sufficient visibility to break out (Rosen, 1981). While winners within the creator class share an ever-expanding pie, there are few structural incentives for newcomers to be able to join the creator middle class and establish an initial fanbase.

Content monetisation. In an era where consumers are accustomed to having access to unlimited free content, direct content monetization has proven challenging. This forces creators to diversify income streams (Geyser, 2021c). To remain relevant, brands are collaborating with creators. This is because more people trust creators' advice (Dukurs, 2022). In fact, brand deals and partnerships are important revenue sources for creators, up to ten times more important than ad share revenue (Geyser, 2022c). However, the majority of brand deals are attributed to a small number of creators with audiences sufficiently large to be commercially valuable to brands. Building audiences or communities requires a substantial

investment of time. In fact, 35% of creators establish their communities over four years prior to reaching \$50,000 in annual income (Geyser, 2022c).

The gatekeeper problem. For creators, large platforms such as Facebook, Instagram, and YouTube also pose a problem. In addition to being a distribution channel that allows creators to reach new audiences (Geyser, 2021a), platforms wield considerable power over creators. Based on the philosophy "When it's free, you're the product," social media platforms rely on free content from creators that generates engagement, as well as free user data which is monetized through targeted advertising. Platforms determine the proportion of ad revenue from content engagement they are willing to share with creators. Youtube is one of the most generous platforms, offering up to 45 percent of ad revenue in the best case scenario (Youtube Partner Program, 2022). In terms of content creation, policies and guidelines of various platforms regarding what can and cannot be published may constrain artistic expression of content creators (Prestamo, 2021). Finally, creators are confined to platforms through which they interact with audiences. Fans become locked into these platforms, making it difficult for creators to carry their fans to other platforms (Dogan, 2022; Hirschey, 2022). New platforms such as Patreon, Substack, and Discord have emerged with alternative forms of content creation and monetization as more content creators seek fairer compensation for high traffic and engagement they are generating (Cimaglia, 2022).

Market shifts and opportunities for the Creator Economy

As the internet evolved, new technologies emerged which shaped the creation, distribution, and monetization of content. The next generation of the internet and blockchain technology have the potential to transform the Creator Economy into one in which creativity is recognized and rewarded, fans are deeply connected, and creators are fairly compensated.

Democratization of content creation. The Creator Economy is associated with the secular trend towards continuous democratization of content creation. With more accessible technology and high-speed internet, barriers to content creation have never been lower. Whether music on Spotify, a course on Teachable, or a book on Amazon, creators can now easily create and distribute content without a third party such as a publisher or a media house (Geyser, 2021). However, with commoditization of data and technology, the content creation space becomes more competitive and creativity an important differentiator for creators

(Tobaccowala, 2021). As the internet enters its next phase, Web3 and blockchain technology will continue to equip the expanding class of creators with more tools, further lowering barriers to entry and enabling independence from third parties such as social media platforms (Bergendorff, 2022).

Direct creator-to-fan relationship. Building long-lasting relationships with audiences has become a top concern for most creators (Linktree Creator Report, 2022). Now that content creation is easier than ever before, creators are turning to finding more authentic ways to connect with fans and take charge (Cigmalia, 2022). For instance, creators increasingly include 'link in bio', such as Linktree, to redirect their most devoted followers away from platforms and to their own websites (Geyser, 2021a). In addition, new platforms have emerged that enable creators not only to interact directly with fans but also to monetize creator-fan interactions. An example is personalized video shoutouts on Cameo (Yuan & Constine, 2020). In addition, new blockchain-based technologies such as non-fungible tokens (NFT) are gaining popularity among creators, enabling them to identify devotees and reward them with a unique badge (Geyser, 2022a). Web3 technologies not only enable creators to give back to their communities, but also supply users with a stake in value creators and communities generated through interactions. Even now, highly engaged communities continue to be one of the most valuable assets for content creators (Bergendorff, 2022). Creators gain influence in digital media since users increasingly demand personal and original material rather than faceless content (Yuan & Constine, 2020). In fact, TikTok has become the search engine of choice for Generation Z (Pogue, 2022). Google acknowledged this trend in late August 2022 by implementing a "helpful content update" to its search engine, which favors people-first content, forcing the world to rethink SEO marketing (Google Search Central Blog August, 2022).

Rise of the Ownership Economy. While more users are demanding control over data and privacy, creators too are seeking full ownership over creative output. As the world enters the next phase of a more decentralized web, content creators can expect greater control (Iguchi, 2022). Bergendorff (2022) refers to this as the emergence of an ownership economy in which "power and economic rewards are distributed between participants as opposed to being concentrated at the top.". Currently, social media sites such as Facebook and Instagram own and control the content that creators publish on their platforms (Iguchi, 2022). However,

Web3 technologies will enable creators not only to own their content, but also the revenue streams that come with more direct and transparent business models that obviate middlemen. Each piece of content will contain a unique blockchain-based code that makes its ownership transparent to the public from when it is first posted to being reposted (Cigmalia, 2022). Power imbalances will be redressed and control redistributed to internet users who will own their data, while creators will be viewed as entrepreneurs and compensated accordingly (Violi, 2022). The Ownership Economy enables billions of individuals to participate in an inclusive, transparent economy and distributes power away from monopolistic power structures (Bergendorff, 2022). Thus, Web3 and blockchain are transferring power from platforms to creators and their communities. In the interim, platforms have also recognized the need to attract, retain, and incentivize talented creators. While TikTok has launched its Creator Fund, Pinterest and Clubhouse have also set up programs that reward creators. In light of Web3 and current platforms failing to sufficiently incentivize and reward content creation, creators are looking for alternative income streams such as tokens and NFTs, both of which are technologies powered by blockchain (Liquiditeam, 2022).

Tokenization in the Creator Economy

Tokenization is the "process of converting any rights or assets into a digital token that can be used, owned and transferred by the holder through a blockchain, without the need for a third-party intermediary." (Frederick, 2022). Technically speaking, tokenization is the process of converting sensitive data into non-sensitive data and securely recording it on the blockchain (TokenEx, 2022). Any individual can mint tokens to represent information. While a token has no intrinsic value, the information it represents lends it value. There are various types of tokens, each with unique functions. Table 1 outlines prevalent token types in use today across industries.

Table 1: An overview of the most common types of tokens used

Type of Token	Description
Transaction	Also known as cryptocurrency. Each token functions as a medium of exchange with a fixed monetary value, comparable to traditional fiat currencies.

Governance	These allow owners to influence a decentralized project's development via a blockchain-based voting system. More governance tokens equals more votes and influence over a project's future.
Security	The Web3 equivalent of traditional financial securities, also called investment or equity tokens. They represent a stake in financial assets such as shares or real estate and are subject to regulation by some governments. The value of the token is linked to the asset it represents.
DeFi	These perform functions mimicking traditional financial institutions (lending, saving, insurance, trading) and can be traded like other cryptocurrencies.
Utility	These are designed to be utilized or serve a specific utility or purpose tied to projects or ecosystems. Holders get exclusive benefits such as access to the issuer's services or products, discounts, or rewards (Crypto.com, 2022). Utility tokens can appreciate and be traded like security tokens. Utility tokens make up the majority of tokens issued in the scope of Initial Coin Offerings (ICO)

NFTs and Social Tokens are two types of tokens that are gaining popularity in the Creator Economy because they address creators' pain points by giving more control and ownership over content, alternative sources of income, and more effective ways to connect with audiences (Geyser, 2022; Henderson, 2021; Violi, 2022).

Non-Fungible Tokens (NFTs)

The purpose of NFTs is to attribute and verify public ownership of a blockchain-recorded asset. NFTs have been widely used to sell unique assets, such as digital artworks and collectibles, because they are non-fungible and non-interchangeable (Ante, 2022). After Beeple's NFT sold for a record-breaking \$ 69 million in 2021, the popularity of NFTs, particularly in the art market, skyrocketed (Kugler, 2021), reaching its Google search peak in early 2022 (Figure 2). Despite the fact that art NFTs account for greater market volumes in terms of value, games and collectibles make up the majority of NFT market transactions (Nadini et al., 2021).

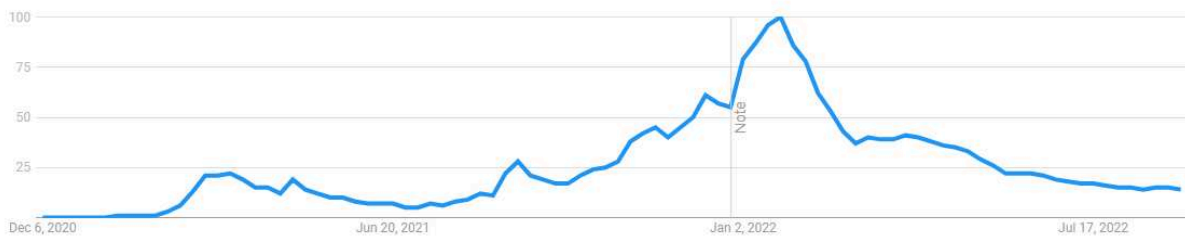


Figure 2: Interest in the search term NFT over time (Google Trends, 2022)

NFTs grant artists and creators greater ownership and control over creative work. Their traceability provides artists and creators with the means to control scarcity, prevent counterfeiting, and enjoy copyright protection while simultaneously generating new revenue streams (Popescu, 2021). In addition, royalty mechanisms can be encoded into NFTs, enabling creators to collect revenue from every transaction (Wang et al., 2021). Although most papers examine NFTs from an investment or intellectual property perspective, NFTs have applications beyond art and gaming. According to Popescu (2021), NFTs will soon begin to have more utility, especially in creative industries, as an infrastructure, as applications, marketplaces, and when networks are built around them. It is anticipated that creators will increasingly adopt NFTs as a means of monetizing work as well as engaging fans. An example, is the band Kings of Leon, who linked an NFT to the release of an album, offering owners VIP tickets to concerts as well as exclusive animated album cover (Wilson et al., 2021). NFTs are frequently paired with Social Tokens and distributed via airdrops, however it is important to understand the distinctions between the two technologies.

Social Tokens

Social tokens (Social Tokens) are a "form of cryptocurrency that represents a brand, individual, or community" (Rally, 2022). In general, Social Tokens represent reputation within the community (Liquiditeam, 2022). Social Tokens can be issued or sold directly to fans, granting exclusive access and benefits while creating "micro-economies built on fandom, rewards, and ownership" (Dogan, 2022). Depending on the issuer, Social Tokens can be categorized into personal/creator tokens and community tokens (Skor, 2021). However, this study will focus on applications of Social Tokens for creators; thus, the terms Social Tokens and creator tokens will be used synonymously.

Although there are points in common between characteristics of Social Tokens and utility and governance tokens, the value of Social Tokens is based on access to a community, belonging, and status (CNBC-TV18, 2022). For content creators, they represent opportunities to independently and directly extract value from communities they have cultivated with content creations (Ceesay, 2022). Despite the fact that Social Tokens function to connect creators and fans directly without the interference of third parties (Pontem Network, 2022), they can have a variety of uses:

Access. Social Tokens can grant access to privileges, including exclusive content, creator-to-fan interactions, and a community (Pontem Network, 2021). An example is the band ‘Portugal. The Man’, an American rock band from Wasilla, Alaska, currently based in Portland, Oregon, who minted a social token called \$PTM (Dogan, 2022). Owners of the token have access to exclusive content, private events, VIP channels on Discord, merchandise, and early access to concert tickets.

Reputation Reward. Holding Social Tokens, almost like trophies, allows fans to demonstrate support and allegiance to creators. The more tokens a fan has, the more exclusive benefits, access and also status within the creator's community the fan receives. Although fans typically purchase tokens, creators may also choose to give them away as a reward for active support.

Community Influence. Social Tokens can provide owners with the ability to influence creator's decisions, projects, and ideas (Liquidteam, 2022). For instance, a fan may use voting power to name a song, select next collaboration with another creator, or to help creators make strategic and meaningful decisions.

Investment. The principle underlying Social Tokens is that creators and their communities will be more valuable tomorrow (Young, 2020). In contrast to NFTs, Social Tokens are branded cryptocurrencies that are fully interchangeable and tradable with other tokens and cryptocurrencies (Mighty Networks, 2022). Social Tokens give holders a stake in the growth of the creator's personal brand and community, whereas NFTs give ownership over items such as digital assets (video, music, etc). (Liquidteam, 2022). If the creator becomes well-known and cultivates an engaged community, the token's value might indeed rise, creating financial value for both creator and token holder (Lee, 2022). In addition, a social

token may entail royalties on the earnings of the creator's work; therefore, Social Tokens can also be viewed as an investment (Dogan, 2022).

Social Tokens will likely become the link between content creators and fans (Young, 2020). As the value of Social Tokens reflects both the creator's reputation and the community's involvement, their relationship is a two-way street (Lee, 2022). Creators can use them to monetize their fanbase and reward fan engagement (Dogan, 2022). Fans can use Social Tokens to put a price tag on commitment to creators. Nevertheless, providing a continuous flow of value and benefits for token holders is a challenge in tokenizing one's personal brand, which also can cause stress and psychological harm (Gritters, 2019). Although the creator ultimately configures the parameters of the social token, determining how much value is given to the community (Lee, 2022), the latter ultimately generates a token's value through engagement. Therefore, it is essential to comprehend factors that drive communities to use Social Tokens in the first place.

Management Theory of Technology Adoption

For innovations like Social Tokens to succeed, there must be user adoption. The topic of technology adoption has been extensively studied across a variety of contexts and settings. Innovation Diffusion Theory (IDT) seeks to describe how innovations spread across populations as well as the various stages leading to adoption (Rogers, 2003). According to the IDT an innovation diffusion process begins with the perception of an innovation being innovative. Depending on characteristics of the innovation and the type of adopter, the process may be accelerated or decelerated (Wani & Wajid, 2015). Moreover, IDT suggests that innovation diffusion is a five-stage process beginning with awareness (Knowledge) and continuing with the individual seeking and evaluating information (Persuasion) by weighing the advantages and disadvantages of adopting an innovation (Wani & Wajid, 2015). Although an adopter may choose to adopt or reject an innovation during the third stage (Decision), this choice can be reversed during the implementation stage, depending on the adopter's attitude or exposure to conflicting messaging (ibid.). Figure 3 illustrates the five stages of the Innovation-Decision Process: knowledge, persuasion, decision, implementation, and confirmation.

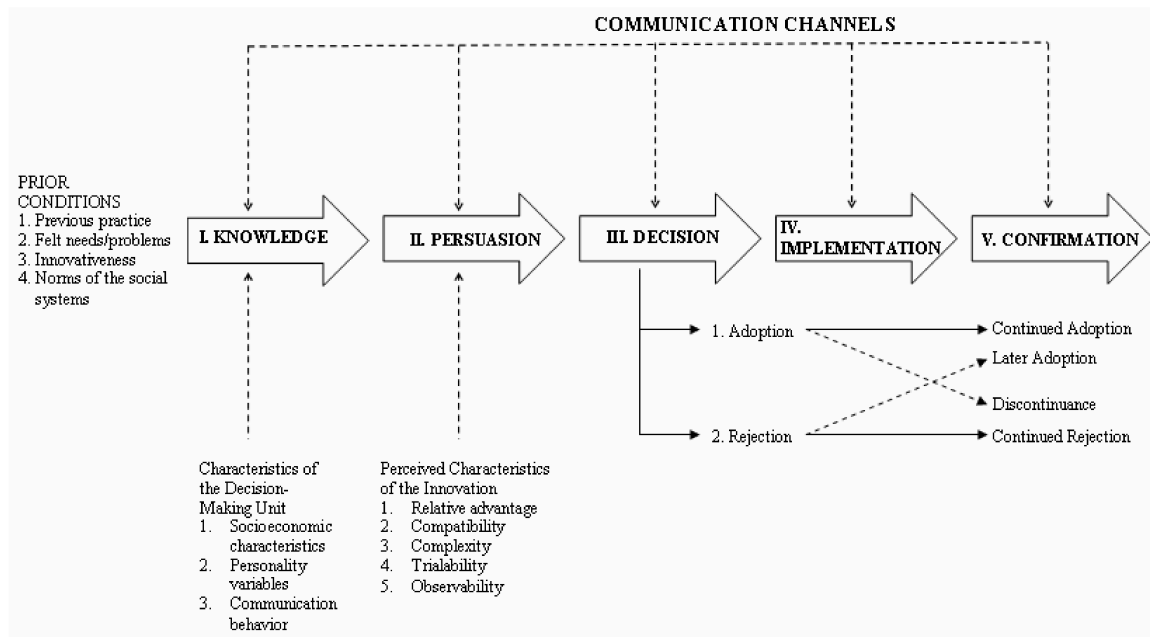


Figure 3: Innovation-Decision Process (Rogers, 2003)

In the field of information systems research, the Technology Acceptance Model (TAM) developed by Davis in 1989 is frequently employed to explain user adoption of technologies. TAM emphasizes factors that lead to acceptance or rejection of technologies by users as well as their relationships (Figure 4).

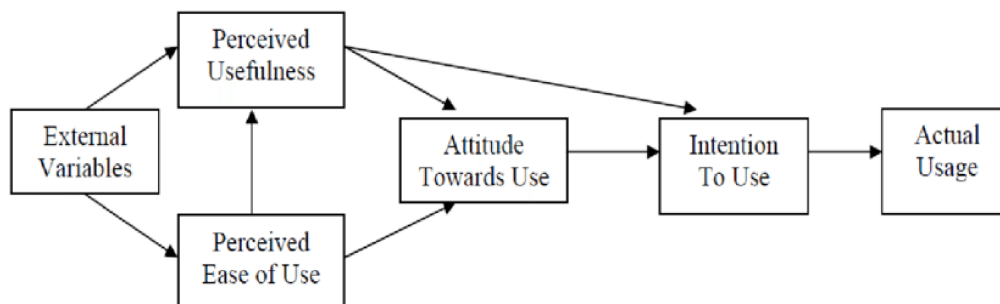


Figure 4: Technology Acceptance Model (Davis, Bagozzi and Warshaw, 1989)

Specifically, the ease of using the new technology and its perceived usefulness shape users' attitude, which in turn affects intention to use and, ultimately, actual usage (Davis, 1989). Thousands of research papers have since cited TAM in an effort to validate, revise, and extend its model to other contexts. Davis (1989) also continued to update his model with the help of other scientists and contributed to its successors, TAM2 (Venkatesh & Davis, 2000) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et. al, 2003). The

latter theory has clear resemblance to its predecessors through the constructs of Performance Expectancy, Effort Expectancy, and Social Influence. Addition of Facilitating Conditions produced a highly explanatory model (Holden & Karsh, 2008). The most recent successor to TAM is the UTAUT2 model, which incorporates more variables such as Hedonic Motivation, Price Value, and Habit to provide a more comprehensive understanding of technology acceptance, increasing its explanatory power to 74% compared to 56% for UTAUT (Venkatesh et al., 2012).

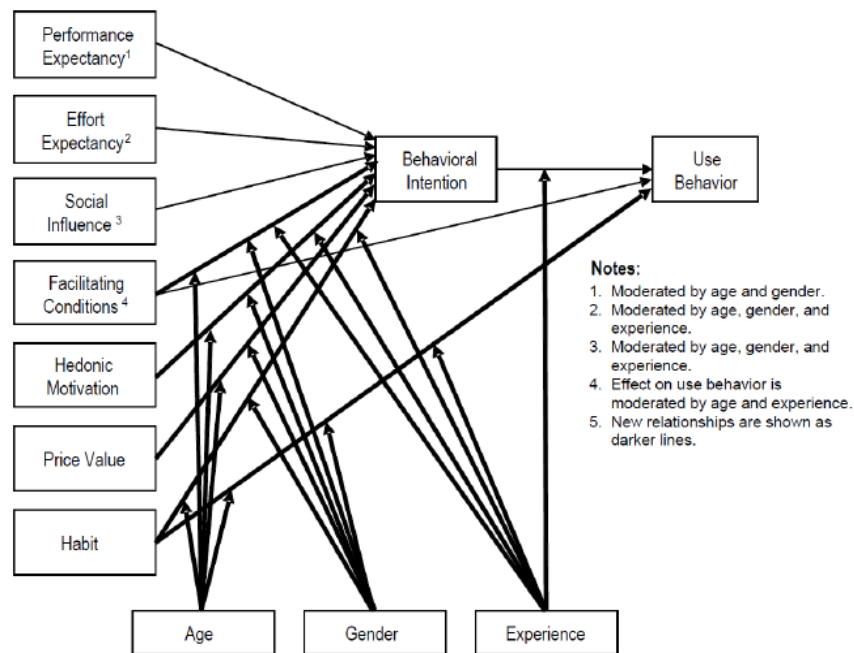


Figure 5: Unified Theory of Acceptance and Use of Technology (UTAUT2) Model (Venkatesh et al., 2012)

Regarding cryptocurrencies, a number of papers seek to explain their popularity and future adoption (Devries, 2016). With blockchain technology at the heart of cryptocurrency, research on cryptocurrency adoption relies on established frameworks in the field of information systems, such as TAM, TAM2, UTAUT, and UTAUT2, to unpack factors influencing users' acceptance of cryptocurrency (Baur et al., 2015; Arias-Oliva et al., 2019; Lou & Li, 2017; Redhwan et al., 2019; Wood & Lensky, 2017; Bharadwaj & Deka, 2021). Despite growing academic interest in Web3 technologies such as Bitcoin cryptocurrency, the majority of the literature primarily focuses on financial and transactional implications of tokens and neglects other usages of tokens.

Methodology

Research Design

This research assesses users' current state of acceptance of Social Tokens, as well as determines factors that influence acceptance of Social Tokens. Variables influencing users' acceptance of Social Tokens, as well as motivators and demotivators of adoption are assessed. We use a mixed methods approach combining both quantitative (confirmatory) methods and qualitative (exploratory) methods to understand elements that influence users' acceptance.

Data Collection

Quantitative Data Collection: Survey

A survey of internet users from all over the world was used to find the most important factors predicting user acceptance. A proposed research model combining the constructs of UTAUT2 and TAM2 was developed to obtain a more holistic understanding of relevant factors influencing Social Token acceptance (Figure 6). However, the UTAUT2 Habit and Price Value constructs were not included because there is currently no habit of using Social Tokens or fixed prices. Lastly, Image from TAM2 was added because Social Tokens can be used as status symbols indicating a certain level of reputation within the community.

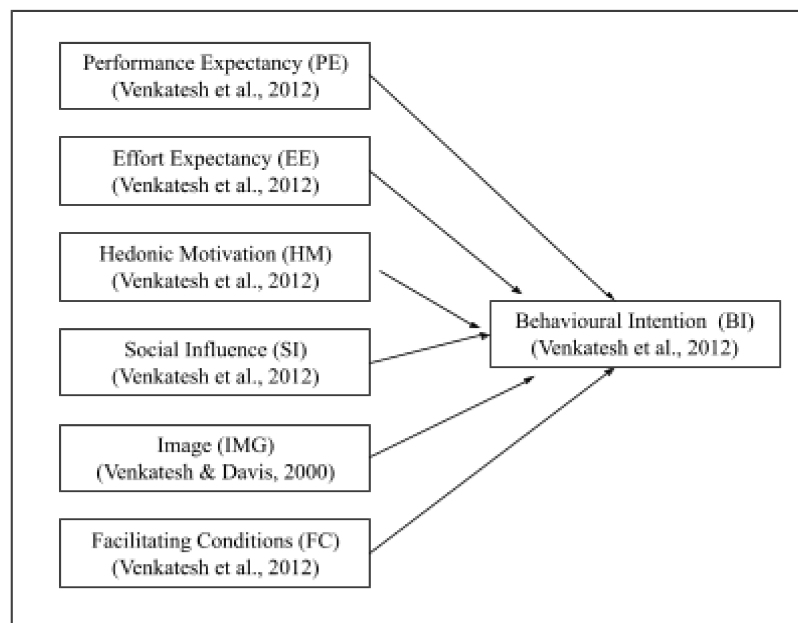


Figure 6: Proposed research model for users' acceptance of Social Tokens

The survey questions drew on previously tested and validated scale items of the underlying constructs and adapted these to match the context of Social Tokens (Appendix A). A 5-point Likert scale was used to rate respondents' agreement or disagreement with a variety of statements. In addition to the constructs, the survey gathered demographic variables, although answers were anonymized to respect respondents' privacy. Survey questions were randomized to mitigate order bias and survey fatigue. The survey was disseminated through various channels to capture users of web2-native (Instagram and Facebook) and web3-aspiring (Reddit and Telegram) platforms. Participants were selected randomly and according to accessibility.

Qualitative Data Collection: Interviews

Interviews were conducted to identify facilitators and barriers to users' acceptance of Social Tokens. This qualitative data sought to capture the complexity and underlying perceptions, feelings, and motivations of internet users concerning acceptance of Social Tokens (Yin, 2011). Interview participants were recruited through one survey question which inquired whether respondents were open to being interviewed. In this case, participants were categorized into three groups (low, medium, and high) based on intentions to use Social Tokens via the construct Behavioural Intention to represent varying levels of acceptance of Social Tokens within the sample.

The interviews were semi-structured and "naturalistic and interactive" (Saunders et al., 2016). Overall, the interviews were two-way interactions with a set of open-ended questions to produce insights about facilitators and barriers to user acceptance. While an interview guideline was established (Appendix B), it was not considered "set in stone" because reformulations can enhance interview flow. On occasion, the interviewer posed spontaneous questions, and, depending on the nature of the interview, participants were also challenged to provide more specific answers to certain topics (Meier Kruker & Rauh, 2016). Interviews were transcribed verbatim with the exception of non-verbal cues such as "um," "er," and "well" for analysis. Finally, participants were given anonymous identifiers according to the order in which they were interviewed.

Data Analysis

Quantitative Data Analysis: Survey

A total of 164 complete survey responses were analysed using SPSS. Scale items were summarized into individual variables by computing the means. Descriptive statistics were used to obtain a general overview of the frequencies and percentages present in the data. Next, Pearson correlations were used to find relationships between user acceptance of Social Tokens, measured via the construct Behavioural Intention, and the constructs of the proposed research model. The reliability of the underlying constructs was tested using Cronbach's alpha for the different constructs (Appendix C, Table C2). The Kruskal Wallis H test was used to determine if there were statistically significant differences in the median Behavioral Intention across age, gender, occupation, level of education and familiarity with cryptocurrencies (Appendix C, Table C5). Finally, regression analysis was conducted to test each construct's predictive capacity.

Qualitative Data Analysis: Interviews

Thematic analysis was applied to the 11 interviews. This was inductive and followed Braun and Clarke's (2012) six-phase process: Familiarization, Initial Coding, Searching Themes, Reviewing Themes, Defining Themes, Report Production. The Familiarization phase aimed at gaining a general understanding of the data by reading the transcripts, listening to the recordings and taking notes. Next, relevant extracts within the transcripts were coded descriptively and line-by-line using the qualitative analysis software MAXQDA. During this iterative stage, extracts were revisited and codes were added, refined, combined or discarded to reflect underlying patterns in the data. After an initial set of codes was established, similar codes were further clustered to actively reveal patterns and themes (Braun & Clarke, 2012). Next, themes were reviewed and compared against existing codes to ensure they reflected the data. In the fifth stage, themes were specifically defined, ensuring that they had a singular focus and were relevant. The last stage involved writing up findings.

Results

Qualitative Data Analysis

Descriptive Statistics

Appendix C Table C1 shows the frequency and demographic characteristics of the demographic variables. The majority of respondents (n = 88, 53.7%) were between 25 and 34 years, while 52 (31.7%) were between 18 and 24 years. More than half of the respondents were female (n = 96, 58.5%) and 56 (34.1%) were male. Moreover, the majority never owned a social token (n = 133, 81.1%).

In terms of Behavioural Intention to use Social Tokens, the majority of respondents presented low levels of agreement with each item (Table 2). Specifically, 77 respondents (47%) strongly and somewhat disagreed that they intended to use Social Tokens in the future, while 34 respondents (20.7%) neither agreed nor disagreed. Moreover, 89 respondents (54.3%) strongly and somewhat disagreed that they would try to use social tokens in their daily lives while 39 (23.8%) neither agreed nor disagreed. Lastly 106 (64.6%) respondents strongly and somewhat disagreed that they planned to use Social Tokens frequently, while 23 participants (14%) neither agreed nor disagreed.

Table 2: Descriptive Statistics Behavioral Intention

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I intend to use Social Tokens in the future.	39(23.8%)	38(23.2%)	34(20.7%)	39(23.8%)	14(8.5%)
I will try to use Social Tokens in my daily life.	50(30.5%)	39(23.8%)	39(23.8%)	26(15.9%)	10(6.1%)
I plan to use Social Tokens frequently.	60(36.6%)	46(28%)	23(14%)	22(13.4%)	13(7.9%)

Kruskal-Wallis Test

Since the normality assumption was not met (Appendix C, Table C4) a Kruskal-Wallis test was conducted to determine if there was a statistically significant difference in the Behavioral Intention scores between age, gender, occupation, the highest level of degree, and familiarity with the topic of cryptocurrencies (Appendix C Table C5). In fact, the median Behavioral Intention score was significantly different across gender, occupation, and familiarity with the topic of cryptocurrency. No statistically significant difference in the Behavioral Intention scores was observed across age and the highest level of education.

Multiple Regression Analysis

A multiple regression analysis was conducted to predict the acceptance of Social Tokens (Behavioral Intention) through the independent variables Social Influence, Hedonic Motivation, Performance Expectancy, Facilitating Conditions, Image, and Effort Expectancy. The Durbin-Watson test showed there was independence of residual (Appendix C, Table C5). Additionally, there was no evidence of multicollinearity (Appendix C, Table C6). The results show that the multiple regression model significantly predicts acceptance of Social Tokens with an R^2 of 0.786. This indicates that all variables explain 78.6% of the variation in the acceptance of Social Tokens. Moreover, Social Influence, Hedonic Motivation, and Performance Expectancy added statistical significance to the prediction as they all had a p-value greater than 0.05. However, Facilitating Conditions, Image, and Effort Expectancy were not significant predictors of the acceptance of Social Tokens as they had a p-value greater than 0.05. For every unit increase in Social Influence an increase of 0.310 in Behavioural Intention is produced. For every unit increase in Hedonic Motivation, Behavioural Intention increases by 0.151. Also, for every unit increase in Performance Expectancy, Behavioural Intention increases by 0.544.

Table 3: Multiple Linear Regression

Behavioral Intention	B	95% CI for B		SE B	β	R^2	Adj R^2
		LL	UL				
Model						0.786	0.778
Constant	-.426* *	-.829	-.023	.204			
Social Influence	.310** *	.175	.446	.069	.285		
Hedonic Motivation	.151**	.037	.265	.058	.139		
Performance Expectancy	.544** *	.387	.700	.079	.503		
Facilitating Conditions	.111	-.053	.276	.083	.078		
Image	.029	-.090	.147	.060	.026		
Effort Expectancy	-.050	-.202	.102	.077	-.037		

B=unstandardized regression coefficient; CI=confidence interval; ll=lower limit; UL=upper limit; SE B = standard error of the coefficient; β = standardized coefficient; R^2 = coefficient of determination; Adj R^2 = adjusted coefficient of determination
 ***. Correlation is significant at the 0.001 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

Overall, the results show that there were no differences in Behavioral Intention across the different age groups and educational levels. However, Behavioural Intention varies depending on gender, occupation, and familiarity with the topic of cryptocurrencies. The constructs

Social Influence, Hedonic Motivation, and Performance Expectancy significantly predicted Behavioural Intention, whereas Facilitating Conditions, Image and Effort Expectancy were not significant.

Qualitative Data Analysis

There were eleven interview participants aged between 26 and 39 (Appendix D, D1). Eight of the participants were male and three female. All had some level of familiarity with cryptocurrency while only six were familiar with Social Tokens. The interview analysis revealed three themes (Risk, Missing Rules and Lack of Knowledge) and subthemes as barriers and three themes (Trust, Value and Education) and subthemes that are facilitators of user acceptance of Social Tokens (Appendix D, D2).

Barriers

Theme 1: Risk. Risks involved in using Social Tokens were mentioned by all participants. In this context participants called special attention to Financial Risk and Missing Rules.

Subtheme 1: Financial Risk. All interviewees referred to cryptocurrency to describe financial risks of using Social Tokens. More specifically, participants reported hype and volatility as characteristics of cryptocurrency. Whether used as an investment or to engage with creators, participants all raised concerns about the possibility of losing money.

“The biggest downside that I see is just losing money, and in Crypto, that always happens. The volatility! I don’t see how it’s going to be any different with Social Tokens.” (P2)

Additionally, participants expressed concern that the speculative nature of crypto investments may drive attention away from the intended purpose of Social Tokens. Rather than attracting fans who are keen to engage with the creator and the community, social tokens might attract speculative investors, which would distort and artificially raise the perceived value attributed to a creator’s brand.

“There’s a big chance that the value of the token is not based on the actual value of the artist. But rather, based on speculation. I understand there are some people that like gambling, but I feel like those things should be separate” (P4)

Subtheme 2: Missing Rules. Participants also mentioned the lack of rules, regulation, and best practices in the crypto space. Participant 11 mentioned the risk of falling prey to scams by saying that *“The NFT, and token space in general is full of scammers. So it’s a dangerous environment.”*. Participant 4 raises attention to the risk of creators not delivering on promises and plans for their Social Tokens: *“I feel like a lot of people that created tokens in the last year just weren’t aware that having a social token really means running a business”* (P11). Participant 4 added: *“And the fact that there’s no way to ensure that whatever the artist promised is actually enforced.”*. Lastly, participant 1 highlighted dangers especially for younger audiences:

“I feel like for some creators, especially when they have a very young following, I could imagine that they’re having a very, very strong influence on their followers pressuring them or making them feel like they have to spend money on this creator which they might not even have, bringing them into trouble.” (P1).

Theme 2: Lack of Usefulness. The second theme identified was the social token’s lack of usefulness to participants. This was due to Social Tokens being considered a solution for a niche target audience, lack of relevance in their everyday lives, as well as a limited differentiation from existing solutions that satisfy the needs of fans and creators to engage with each other.

Subtheme 1: Niche Target Audience. Many participants did not consider themselves as part of the target group that would use Social Tokens. In their view, users of Social Tokens had to be devoted fans who are willing to spend large amounts of money on **their** favourite creators. Moreover, the target audience was considered mostly young and technologically savvy individuals who are open to embracing the technology.

“I think you have to be a fan if you want to use Social Tokens. I think, if you’re going to be spending money on stuff. You better really like it.” (P2)

“I think millennials and Gen Z is very much ready to use the token and very much ready to use Social tokens. I’m not so sure about older generations. I haven’t come across a whole lot of other generations that even believe in Cryptocurrency or tokens or they generally don’t know what it is and what it’s used for. I think our generation is very open to it” (P11)

Subtheme 2: Missing Implementation. According to participant 3, Social Tokens are not sufficiently implemented in people's daily lives: *"And there has to be a lot of education on it and implementations into everyday life to really facilitate the entry into this topic and this matter."*

Subtheme 3: Lack of Differentiation. Half of the participants questioned the differentiation of Social Tokens from existing solutions that already offer exclusive benefits via paid channels.

"I don't see how it is different from other platforms. [...] In the end, it's the same thing. For me, if you're a fan of a creator and you want to see more content [...] it doesn't seem to matter that much, whether you do that by paying with your credit card [...] without converting it first into a cryptocurrency[...] the outcome is the same. I'm paying to see extra content. (P1)

Theme 3: Lack of Knowledge. Participants reported a lack of knowledge due to limited awareness of the existence of Social Tokens as well as the technological complexity that comes with them.

Subtheme 1: Lack of Awareness. The vast majority of participants had never had any previous touchpoints with Social Tokens and lacked general awareness about their existence.

"I think it's not an established concept. At least I've never heard of that before. I've never been offered them. [...] And I never heard of any good experience about that. Neither from friends or media or wherever." (P7)

Subtheme 2: Technological Complexity. Participants also reported not having knowledge about technological complexities of acquiring and using Social Tokens as well as the technology behind them. In this context, participants also referred to cryptocurrency and cybersecurity as topics adding to complexity.

"So there's quite a few steps involved. If you're completely new and you've never had anything to do with tokens or NFTs that's very difficult, there's a big barrier even for us young people." (P11)

Facilitators

Theme 1: Trust. Participants emphasized the requirement of trust in the new technology prior to engaging with it. In this context, trust can be built in various ways.

Subtheme 1: Trusted Entity. Whether it is the creator or a known marketplace which offers the social token, both of these entities may represent a source of trust for some participants. Participant 4 described: *“Maybe with a big name I might trust it a little bit more.” (P4)*

Subtheme 2: Trust Mechanism. Most participants reported that they would need some form of mechanism that ensures or verifies the trustworthiness of the creator and his or her token and gives buyers the confidence of future success. Participant 7 reported that he *“would need that kind of confirmation that it actually works and that you actually get more out of it.”* Participant 3 provided an example of an existing trust mechanism:

“The idea that I have right now is the buyer’s protection from Paypal where there’s just a system behind it. And there is a way, if you’re getting scammed, there’s still this protection that will save you from losing your money, something like that.” (P3)

Subtheme 3: Mass Adoption. While participants acknowledged increasing adoption of cryptocurrencies in general, they emphasized that adoption by social media and creators would give Social Tokens a sense of normality. Participant 11 added: *“And I think as token economics is going to be implemented into social platforms, it’s going to get mass adopted, it’s going to become normal”*.

Theme 2: Value. Social Tokens need to provide value in some form or shape. Participants stated several ways in which Social Tokens could provide value such as utility value, community value, personal value and financial return.

Subtheme 1: Utility Value. Participants acknowledged that Social Tokens can have various uses depending how creators define them and what value they are willing to produce for the community. In this context participants largely cited exclusive benefits and rewards as ways to create value.

“[...] what I’m interested to know is simply what they offer to me. If what the artists via the social token creates is something that is compelling to me, then I’m going to buy it.” (P9)

“Obviously, the utility is a big benefit, whatever the creator decides to add as a utility. I mean, the possibilities are just endless. Now we’ve seen so many cool utilities from dinners with your favorite celebrity to you can get educated and mentored by them from merch to like, tickets.”(P11)

Subtheme 2: Community Value. The potential of Social Tokens to create value for the community was a recurring notion highlighted by the participants. More specifically, participants mentioned the ability to be part of a community and experience a sense of belonging. Participant 3 elaborated: *“I think, my biggest excitement lies in the possibility of being part of something bigger than you, being part of a community, or being part of a movement ”*. Moreover, the ability collectively to influence a creator’s work and success was highlighted as an attractive value-add of Social Tokens:

“[...] being able to have a say in your artist’s project. I just think that is a lot of value, because a lot of people do want to be more involved. Or they do have more means and want to be able to support the artists more. And now there's actually a way to do it.” (P4)

Subtheme 3: Personal Value. Participants also described Social Tokens as creating personal value by bringing fans and creators closer together and allowing fans to gain access to their idols in novel ways. Participant 6 added: *“I think for people that are really fans, and want to be able to speak to the people that they follow religiously, then the benefits can be that they actually get more access to [...] people that they always see so unattainable and far away.”*. Moreover, participant 11 stated that Social Tokens allow fans to demonstrate their passions to the world:

“Social tokens allow you to communicate what you’re passionate about to other people. So the reason why all these wallets are open now and we put them everywhere and we share our wallets is because we want people to see what we’re passionate about” (P11)

Subtheme 4: Financial Return. The prospect of receiving financial returns from investing in Social Tokens was an aspect mentioned by all participants. Whether based on

mere speculation, royalty mechanisms coded into the social token, or the belief that a creator will become more successful, participants believed Social Tokens can produce financial return. In this context participant 4 reported that Social Tokens *“could be some kind of reward for people who kind of try to identify talent early on and invest in them.”*.

Theme 3: Education. Participants mentioned various types of information they would require as well as the need for first-hand experience with regards to Social Tokens.

Subtheme 2: Information. Most participants stated they would like to have more information regarding Social Tokens. Information needed includes details on the technology behind Social Tokens, general guidance on how to acquire and use Social Tokens, as well as clear terms and conditions. Moreover, participants stated that a form of whitepaper or roadmap indicating past and future development of the social token would help making informed decisions about the use of Social Tokens.

“I would definitely need information about how to purchase it. What I need to bring into it to be able to purchase it.”(P6)

“What is the roadmap? What do they plan on doing with the token? What stuff do they already have? And what they’re planning on implementing?” (P2)

Subtheme 4: Experience. According to some participants, first-hand experience with Social Tokens, as well as similar experiences such as in sports or gaming, help draw an educated picture concerning the use of Social Tokens.

“I can only relate to just the gaming example, and the gaming scene that I described before. [...] So, I use my knowledge about these things and communities to describe it. I think, there are a lot of parallels.” (P3)

Discussion

This dissertation aims to answer the following questions: What is the current state of acceptance of Social Tokens by users? What factors influence users’ acceptance of Social Tokens? How can creators prepare their communities to use Social Tokens?

The quantitative data suggests low levels of acceptance of Social Tokens as measured by Behavioural Intention. Moreover, the constructs Social Influence, Hedonic Motivation, and Performance Expectancy were found to significantly predict the construct Behavioural Intention and can be considered important variables for explaining users' acceptance of Social Tokens. Additionally, users' acceptance differs with familiarity with cryptocurrency. The qualitative analysis identified a total of six themes, indicating three main barriers and three main facilitators for adoption of Social Tokens. Figure 7 is a visualization of the themes and subthemes and demonstrates that each has a matching opponent.

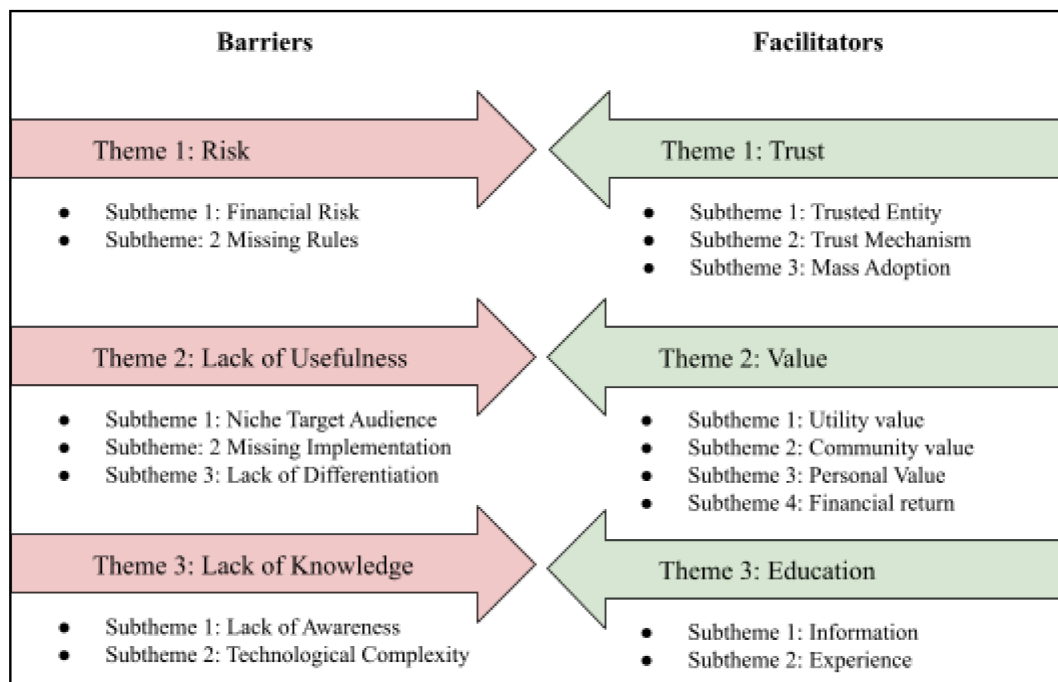


Figure 7: Themes and subthemes revealed by the qualitative data analysis

RQ1: What is the current state of acceptance of Social Tokens by users?

Social Tokens are currently not widely accepted. This is demonstrated by the frequencies in Table 2 where respondents presented low levels of agreement across all items measuring Behavioural Intention: “I intent to use Social Tokens in the future”, “I will try to use Social Tokens in my daily life” and “I plan to use Social Tokens frequently”. Moreover, the vast majority of respondents has never owned Social Tokens, however 18.9% claims to have owned Social Tokens (Appendix C, Table C1). For comparison, the current adoption of cryptocurrency for people aged 25-34 stands at 32% in the US (TripleA Cryptocurrency Ownership Data, 2022). While these numbers could indicate an optimistic outlook for

acceptance of Social Tokens, it is possible that respondents did not fully isolate Social Tokens from other utility tokens due to similarities.

RQ2: What factors influence users' acceptance of Social Tokens?

Users' Characteristics. According to the quantitative findings, Behavioral Intention does not differ with age and educational level (Appendix C, Table C4). However, according to the qualitative insights, participants consider the target group of social tokens to be 'religious' fans, young and technologically savvy (P11). While the understanding of 'young' can be subjective, TripleA Global Crypto Ownership (2022) data indicates that the highest level of adoption occurs with people aged 25-34 followed by 35-44. However, adopters of cryptocurrencies are mostly motivated by investment opportunities (Measure Protocol, 2021), while the perceived value of Social Tokens is more broad (Facilitators - Value). The quantitative findings also suggest that familiarity with cryptocurrencies matters with regard to individuals' adoption of Social Tokens (Appendix C, Table C5). In fact, participants drew on knowledge in the fields of crypto to create understanding of how social tokens function as well as about their implications (P3).

Knowledge Dimension. Overall, participants felt they lacked awareness and knowledge with regards to Social Tokens (Barriers - Lack of Knowledge). With Social Tokens being an emergent technology in the Creator Economy, their current use is still nascent and applications are not visible to most participants (P7). Although users were able to draw upon previous knowledge in the fields of crypto to form an understanding of the functionalities and implications of Social Tokens, the associated technological complexity creates an important knowledge barrier (P3). According to Rogers (2003) Innovation Diffusion Process, knowledge is the first stage of adoption in which users become aware of the innovation and seek to answer questions about usage and functionalities, before they move onto the persuasion stage (Wani & Wajid, 2015). However, the quantitative findings suggest that the UTAUT2 constructs Effort Expectancy and Facilitating Conditions are not statistically significant predictors of users' acceptance of social tokens. These findings may indicate that items measuring the aforementioned variables do not sufficiently capture the requirement for additional education regarding social tokens. Moreover, interviewees cited first-hand experience as an important way of becoming educated (Facilitators - Experience). This is supported by one of Roger's (1983) five characteristics of innovations that are part of the persuasion stage of the Innovation-Decision Process, namely Trialability.

Perceived Value Dimension. In addition to differentiation from existing solutions, users need to see more applications of Social Tokens that are relevant to them and generate value. (Barriers - Lack of usefulness, Facilitators - Value). Ultimately, the perceived value of Social Tokens depends very much on the interests of the user and is deduced by asking “What am I getting?” as well as “Why is this meaningful to me?”. This dimension is also supported by the statistical significance of the variables Performance Expectancy and Hedonic Motivation in predicting users’ acceptance of Social Tokens indicating additional facets to value creation (Table 4). Additionally, research on adoption of cryptocurrency as a payment method found that Performance Expectancy is an important predictor of intention to use (Arias-Oliva et al., 2019). Although Social Tokens can be a new way for fans to demonstrate devotion to their favorite creators, the quantitative analysis showed that Image was not a statistically significant predictor of users' acceptance (Table 4). Whether through royalties on every transaction, exclusive access to content, a sense of belonging in the community, or a strong creator-to-fan relationship, the value of social tokens is a relevant factor for user acceptance (P9).

Perceived Trust Dimension. While qualitative analysis identified trust to be a key facilitator of user acceptance of Social Tokens (Facilitators - Trust), it is a scarce resource in the fields of Web3 technologies and especially cryptocurrencies (P9). With cryptocurrencies being largely used for investment purposes, the speculative nature and volatility of these assets considerably shaped the participants’ perceptions of Social Tokens as being risky investments due to similarities between the technologies (Barrier - Risk). While risk and trust are recurring and important themes in the quantitative analysis, these aspects are not considered by UTAUT2 or TAM2 or the Innovation Decision Process (Venkatesh et al., 2012; Venkatesh & Davis, 2000; Rogers, 2003) which creates rich opportunities for further research. Arias-Oliva et al. (2019) found risk not to be a significant predictor of intention to use cryptocurrency as a payment method, although this study was published prior to the recent crypto crash (Barrett, 2022). Such globally significant events may have a substantial impact on participants' risk perceptions, especially given the similarities between Social Tokens and cryptocurrencies. However, the findings of the qualitative analysis provide reason for optimism, as there are multiple means of establishing trust, the most important of which is mass adoption. While this is largely beyond the creator's control, creator reputation can already serve as an indicator of trust, providing significant advantages over faceless cryptocurrencies (P4). According to Duskurs (2022) people increasingly trust a creator's

advice. This is also reflected in the quantitative findings where social influence was an important predictor of user acceptance of Social Tokens.

RQ3: How can Creators prepare their communities to use Social Tokens?

Social Tokens can create exciting opportunities for both creators and their communities, however, creators must guide their communities through every step of the adoption process. The purpose of this section is to provide content creators and their managers with guidelines for preparing communities for the use of social tokens.

Identifying the Community's Education Need. As a first step, it is essential to identify and understand the educational needs of the creator's community. Whether the creator creates lifestyle content on Instagram, writes articles on Medium, or reviews tech products on YouTube influences the type of information and the depth of information the community requires to fully comprehend what Social Tokens are and what they can do for them.

Building a Team of Experts. Depending on whether the creators intend to mint the social token independently or through platforms like Rally, the creators will need an expert to technically implement the vision of the social token and assist in explaining the underlying mechanisms to the creator and the community. In order to establish trust, it is essential for creators to ensure they can answer all questions from their community.

Creating a Compelling Value Proposition. Social tokens are a two-way street, so in order to capture value from the community, it is necessary to first offer value to the community. At this stage, questions to ask include: What benefits will be provided? How can community engagement be rewarded? How can the creator engage with the community? Can the community influence the work of the creator? Should the token provide monetary incentives such as royalties? The greater the value proposition of the social token to the community, the greater their acceptance and retention of social tokens. It is essential to note that managing a social token is analagous to a business, so creators and managers must be prepared to deliver.

Educating the Community Step-by-Step. Depending on the educational needs of the community, the creators and their managers may begin their communication strategy with seemingly basic information such as "What is a blockchain?" prior to digging into the specifics of the creator's social token. Additionally, it is essential to educate the community on

the potential risks associated with any cryptocurrency, as this will foster trust, which is crucial in the crypto space. Moreover, it is essential to present a roadmap of the social token. Where is the social token heading? What can the community expect in the long term? The good news is that the community respects the creator's guidance, but this guidance must be watertight from beginning to end, which will require time and effort. However, doing things properly from the beginning will pay dividends.

Offering Trial Opportunities. The community may be reluctant to commit before social tokens prove their worth. As a result, it's important to provide the community with a glimpse of the benefits, exclusivity, sense of community, and connection with their idol, that social tokens can offer on a continuous basis. Content creators could, for instance, host virtual or real-world community events. Another possibility would be to give away a number of social tokens to the most dedicated fans or allow the community to vote on the creator's next project. Not only will these trial opportunities make the value of the social token more tangible to the community, but they will also foster trust.

Building Trust. Given the perceived risks of engaging with tokens of any kind, social tokens may constitute a substantial commitment for many community members. Therefore, creators must ensure that the community's concerns are acknowledged and that the community receives constant reassurance and answers to its questions. Additionally, it would be beneficial to provide references that accrue credibility for the creator. Ultimately, it is the community's engagement with the social tokens that generates value for all parties, hence it is vital that creators deliver on their promises to the community.

Conclusion

This study aimed to understand the emergent technologies of Web3, specifically Social Tokens, and their acceptance. Moreover, it aimed to determine factors influencing user acceptance of social tokens as well as to develop guidelines for creators on how to prepare their communities for the use of social tokens.

The findings suggest that despite excitement around Web3 technologies such as Social Tokens and their potential to restore balance of powers in the Creator Economy, the phenomenon is still in its infancy, therefore demanding substantial work to prepare communities for using Social Tokens. User acceptance is largely influenced by the three core dimensions

Knowledge, Perceived Value, and Perceived Trust. Absence of these dimensions can prevent user acceptance of Social Tokens so creators can take specific counter measures to facilitate processes of acceptance. This includes educating their communities about Social Tokens, providing value to communities through the tokens, and establishing trust within their communities to ensure the sustainable success of social tokens.

The success of the user-centric Web3 Creator Economy and related technologies in part relies on users accepting and interacting with Social Tokens. This study contributes to this nascent field of research. Moreover, this study expands the field of technology acceptance by confirming the important role of knowledge and value in predicting user acceptance. This was reflected in the significance of UTAUT2 model constructs Performance Expectancy, Hedonic Motivation. Moreover, this paper suggests expanding technology acceptance models to reflect the role of perceived risk and perceived trust. Finally, this study provides guidance for creators and their managers with regards to preparing communities for use of social tokens.

Limitations

As with the vast majority of research, this study has a number of limitations therefore results may not be generalizable. Due to the novelty of Web3, literature on its technologies is still limited, particularly for the topic of Social Tokens. This presents further opportunities for further research. The broad definition of research aims and questions in this paper may have lacked depth.

Due to non-probability sampling based on convenience and ease of access, the results may not be representative of the population, as the sample recruited may be too demographically homogeneous. Moreover, given time constraints, the number of survey responses and interviews may also not be sufficient for representativeness.

Finally, since interview questions were modified and adjusted to fit the dialogue with each interviewee, statements cannot be directly compared. Also, participant biases and generalizations may have been influenced by the recent crypto market crash and their lack of direct experience with Social Tokens.

Future Research

There are numerous opportunities for future research regarding Social Tokens and technology adoption. For example, future research could further investigate the role of risk and trust to extend and adapt existing technology acceptance models and scales to the subject of social token adoption. In addition, future research could investigate the creator's perspective and dig deeper into motivations and barriers associated with launching Social Tokens. A case study tracking the entire process from planning to execution would be a valuable resource for creator economy researchers and stakeholders. Lastly, an experiment to test the effects of specific educational information on user acceptance of Social Tokens could provide valuable insights for launching Social Tokens and communication strategies.

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Appendix A

Survey Structure

SECTION A: Proposed Research Model of Acceptance of Social Tokens		
Construct	Item	Survey question
Social Influence (UTAUT/ UTAUT2)	SI1	People who are important to me would think that I should use Social Tokens.
	SI2	People who influence my behavior would think that I should use Social Tokens.
	SI3	People whose opinions I value would like me to use Social Tokens.
Hedonic Motivation (UTAUT2)	HM1	Using Social Tokens would be fun.
	HM2	Using Social Tokens would be enjoyable.
	HM3	Using Social Tokens would be very entertaining.
Performance Expectancy (UTAUT/ UTAUT2)	PE1	Social tokens could be useful in my daily life.
	PE2	Using Social Tokens could increase my chances of achieving things that are important to me.
	PE3	Using Social Tokens could help me accomplish things more quickly.
	PE4	Using Social Tokens could increase my standard of living.
Behavioural Intention (UTAUT/ UTAUT2)	BI1	I intend to use Social Tokens in the future.
	BI2	I will try to use Social Tokens in my daily life.
	BI3	I plan to use Social Tokens frequently.
Facilitating Conditions (UTAUT/ UTAUT2)	FC1	I have the necessary resources to use Social Tokens.
	FC2	I have the necessary knowledge to use Social Tokens.
	FC3	Social tokens are compatible with other technologies that I use.
	FC4	I can get help if I have difficulty using Social Tokens.
Image (TAM2)	I1	People who have Social Tokens are more prestigious than those who do not.
	I2	People who have Social Tokens have a high reputation.
	I3	Having Social Tokens is a status symbol.
Effort Expectancy	EE1	Learning how to use Social Tokens would be easy for me.

(UTAUT/ UTAUT2)	EE2	Using Social Tokens would be clear and understandable for me.
	EE3	It would be easy for me to use Social Tokens.
	EE4	It would be easy for me to become an expert at using Social Tokens.
SECTION B: Demographics and other variables		
Gender	What gender do you identify with?	
Age	What is your age?	
Occupation	What is your occupation?	
Education	What is the highest degree or level of education you have completed to date?	
Familiarity	How familiar are you with the topic of cryptocurrencies?	
Experience	Do you own or have you previously owned a social token?	

Appendix B

Interview Structure

INTRODUCTION

*Thank you for accepting this interview on such short notice, that is highly appreciated. I'm Dimana and currently working on my master's thesis. The purpose of this interview is to understand **your** feelings, thoughts, and opinions towards the use of social tokens. So there are no right or wrong answers and any input is very valuable to this research.*

There are a few areas we would like to cover in this interview:

- *Personal attitude toward social tokens*
- *Understanding of the use of social tokens*
- *Motivations and barriers of using social tokens*
- *Ideas and opinions with regards to the future adoption of social tokens by the community*

*Please note that some questions may seem repetitive, but the idea is get your perspective from various angles. The interview should take around 30 mins. I would like to record this interview to make sure that I collect all the details we discussed. Any information you share will be anonymous and after this study is complete, I will make sure to erase the recordings. Please let me know if this is **not** okay for you. Please note there are no right or wrong answers, every input from your side is much appreciated.*

DEFINITIONS

Creators/Content Creators:

These are people who create content and publish it on the internet (video, music, photography, art, blogs, tweets, newsletters etc.). This could be for example your favourite music artist, youtuber or lifestyle blogger. These people are often considered "Influencers" and typically connect with their fanbase via platforms such as Youtube, Instagram, TikTok, Reddit, Spotify, Twitter, Facebook, Onlyfans, etc.

Social Tokens:

This is a type of cryptocurrency issued by Creators that fans can purchase to connect with their favourite creators. The more social tokens you hold, the more exclusive benefits and access within your creator's community you have. Social tokens are meant to have use, but they can also be traded with other tokens (e.g. cryptocurrency) and their value usually increases with the creator's fame as more people demand Social Tokens. Simple economics.

Some examples of benefits are:

- Early access to tickets or releases e.g. concerts, album release
- VIP communication channels with creators e.g. Discord channels
- One-on-one Zoom sessions with creators
- Unlock exclusive content and merchandise
- Vote & influence new projects e.g. an upcoming album or movie
- Access to events organised by the creator
- Book private coaching sessions

- Co-own projects and receive royalties on every purchase
- Access special discounts

PREVIOUS EXPERIENCE

1. Do you have any experience using Social Token or similar technologies? Please elaborate.
2. If experience with social tokens:
 - a. Could you please walk me through the process of how acquired Social Tokens?
 - b. What were the reasons for getting Social Tokens?
 - c. What was your experience with Social Tokens?
 - d. Knowing what you know now, what would you do differently?

PRO & CON

1. What do you think about Social Tokens?
2. What are **benefits** of using/having Social Token?
3. What are the **downsides** of using/having Social Token?
4. What **excites** you most about?
5. What **worries** you most about?

CONSIDERATION

6. Would you use/continue to use Social Tokens? Why?
7. What do you think would **motivate** you to start using/be more involved with Social Tokens?
8. What would **convince** you to consider/be more involved with Social Tokens?
 - a. What information would you need before considering Social Tokens?
9. What do you think keeps you from using them (more)?

UNDERSTANDING

10. How confident would feel explaining social tokens to someone else? Why?

OUTLOOK:

11. Do you think people are ready to use Social Token? Why (not)?

CLOSING:

Now before we hang up, is there anything you would like to add, something I maybe forgot to ask about? Thank you for your time.

Appendix C

Quantitative Analysis

Table C1: Demographics and other variables

		Frequency	Percentage
What is your age?	Under 18	2	1.2
	18 - 24	52	31.7
	25 - 34	88	53.7
	35 - 44	14	8.5
	45 - 54	3	1.8
	55 - 64	4	2.4
	85 or older	1	.6
What gender do you identify with?	Male	56	34.1
	Female	96	58.5
	Non-binary	8	4.9
	Prefer not to answer	4	2.4
What is your occupation?	Student	76	46.3
	Employed	68	41.5
	Self-employed	9	5.5
	Unemployed	3	1.8
	Retired	2	1.2
	Unable to work	3	1.8
	Other (Please specify below)	3	1.8
What is the highest degree or level of education you have completed to date?	Some college or further education	12	7.3
	Bachelor's degree	60	36.6
	Master's degree	80	48.8
	PhD or higher	3	1.8
	Secondary school	9	5.5
How familiar are you with the topic of cryptocurrencies?	Not familiar at all	16	9.8
	Slightly familiar	53	32.3
	Moderately familiar	50	30.5
	Very familiar	34	20.7
	Extremely familiar	11	6.7
Do you own or have you previously owned a social token?	Yes	31	18.9
	No	133	81.1

Table C2: Cronbach Alpha

	Number of items	M	SD	Cronbach Alpha
Social Influence	3	2.4533	1.07578	0.859
Hedonic Motivation	3	3.1748	1.07677	0.880
Performance Expectancy	4	2.5366	1.08293	0.889
Behavioral Intention	3	2.4715	1.16989	0.901

Facilitating Conditions	4	3.3125	0.81369	0.629
Image	3	2.8008	1.04807	0.788
Effort Expectancy	4	3.4375	0.86531	0.799

Table C3: Pearson Correlation

	1	2	3	4	5	6	7
1	1						
2	.794**	1					
3	.680**	.563**	1				
4	.857**	.791**	.697**	1			
5	.381**	.397**	.349**	.321**	1		
6	.654**	.633**	.581**	.701**	.328**	1	
7	.343**	.376**	.339**	.318**	.756**	.295**	1

1= Behavioral Intention, 2= Social Influence, 3= Hedonic Motivation, 4= Performance Expectancy, 5= Facilitating Conditions, 6= Image, 7= Effort Expectancy,

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table C4: Shapiro-Wilk Tests

Tests of Normality^c

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
What is your age?		Statistic	df	Sig.	Statistic	df	Sig.
behavioural_intention	Under 18	.260	2	.			
	18 - 24	.106	52	.200*	.957	52	.058
	25 - 34	.178	88	.000	.910	88	.000
	35 - 44	.149	14	.200*	.907	14	.141
	45 - 54	.385	3	.	.750	3	.000
	55 - 64	.293	4	.	.860	4	.262

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

c. behavioural_intention is constant when What is your age? = 85 or older. It has been omitted.

Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
What gender do you identify with? - Selected Choice		Statistic	df	Sig.	Statistic	df	Sig.
behavioural_intention	Male	.148	56	.004	.895	56	.000
	Female	.130	96	.000	.938	96	.000
	Non-binary	.230	8	.200*	.847	8	.088
	Prefer not to answer	.151	4	.	.993	4	.972

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

What is your occupation? - Selected Choice		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
behavioural_intention	Student	.112	76	.019	.965	76	.033
	Employed	.192	68	.000	.871	68	.000
	Self-employed	.261	9	.077	.730	9	.003
	Unemployed	.269	3	.	.949	3	.567
	Retired	.260	2	.			
	Unable to work	.385	3	.	.750	3	.000
	Other (Please specify below)	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

Tests of Normality

What is the highest degree or level of education you have completed to date?		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
behavioural_intention	Some college or further education	.221	12	.107	.878	12	.082
	Bachelor's degree	.132	60	.011	.928	60	.002
	Master's degree	.156	80	.000	.913	80	.000
	PhD or higher	.385	3	.	.750	3	.000
	Secondary school	.185	9	.200 [*]	.937	9	.555

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

How familiar are you with the topic of cryptocurrencies?		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
behavioural_intention	Not familiar at all	.209	16	.060	.842	16	.011
	Slightly familiar	.157	53	.002	.901	53	.000
	Moderately familiar	.159	50	.003	.911	50	.001
	Very familiar	.131	34	.152	.939	34	.058
	Extremely familiar	.165	11	.200 [*]	.895	11	.159

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Table C5: Kruskal Wallis H-Test

	N	Median	χ^2	p
Under 18	2	3.6667	11.061	0.086
18 - 24	52	2.6667		
25 - 34	88	2.0000		
35 - 44	14	3.1667		
45 - 54	3	1.0000		
55 - 64	4	2.0000		
85 or older	1	3.3333	7.857	0.049
Male	56	2.0000		
Female	96	2.6667		

Non-binary	8	2.5000		
Prefer not to answer	4	4.0000		
Student	76	2.6667	16.659	0.011
Employed	68	1.6667		
Self-employed	9	1.3333		
Unemployed	3	3.3333		
Retired	2	4.3333		
Unable to work	3	3.0000		
Other	3	2.3333		
Some college or further education	12	2.8333	3.199	0.525
Bachelor's degree	60	2.6667		
Master's degree	80	2.3333		
PhD or higher	3	1.0000		
Secondary school	9	3.0000		
Not familiar at all	16	2.0000	12.99	0.011
Slightly familiar	53	2.0000		
Moderately familiar	50	2.6667		
Very familiar	34	2.6667		
Extremely familiar	11	4.0000		

Table C5: Durbin-Watson Test

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.886 ^a	.786	.778	.55166	2.065

a. Predictors: (Constant), effort_exceptancy, image, hedonic_motivation, social_influence, facilitating_conditions, performance_exceptancy

b. Dependent Variable: behavioural_intention

Table C6: Multicollinearity VIF Test

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-.426	.204		-2.086	.039	-.829	-.023					
	social_influence	.310	.069	.285	4.521	.000	.175	.446	.794	.339	.167	.343	2.917
	hedonic_motivation	.151	.058	.139	2.612	.010	.037	.265	.680	.204	.096	.481	2.077
	performance_exceptancy	.544	.079	.503	6.846	.000	.387	.700	.857	.479	.253	.253	3.959
	facilitating_conditions	.111	.083	.078	1.340	.182	-.053	.276	.381	.106	.050	.408	2.453
	image	.029	.060	.026	.479	.633	-.090	.147	.654	.038	.018	.473	2.114
	effort_exceptancy	-.050	.077	-.037	-.648	.518	-.202	.102	.343	-.052	-.024	.419	2.385

a. Dependent Variable: behavioural_intention

Appendix D

Qualitative Analysis

Table D1: Overview of participants

Participant	Gender	Age	Mean of Behavioural Intention	Familiarity with Social Tokens	Familiarity with Cryptocurrency
P1	Female	26	Low	No	Low
P2	Male	31	High	Medium	High
P3	Male	30	Medium	Low	Low
P4	Male	29	Low	Low	High
P5	Male	25	Medium	No	Low
P6	Female	27	Low	No	Medium
P7	Male	31	Low	No	Medium
P8	Male	28	Medium	High	Medium
P9	Male	31	Medium	No	Medium
P10	Male	38	High	High	High
P11	Female	34	High	High	High

Table D2: Themes and Subthemes

Barriers/ Facilitators	Theme	Sub-themes
Barriers	Risk (82)	Missing Rules (41)
		Financial Risk (36)
	Lack of Knowledge (43)	Technological Complexity (25)
		Lack of Awareness (14)
	Lack of Usefulness (54)	Niche Target Audience (32)
		Missing Implementation (8)
		Lack of Differentiation (7)
Facilitators	Trust (49)	Trusted Entity (12)

	Mass Adoption (25)
	Trust Mechanisms (10)
Value (134)	Financial Return (26)
	Utility Value (37)
	Community Value (31)
	Personal Value (31)
Education (59)	Information (37)
	Experience (19)