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THE IMPACT OF BRAND TOKENIZATION ON CUSTOMER ENGAGEMENT ON THE EXAMPLE OF CRYPTOCURRENCY INDUSTRY

Master's thesis

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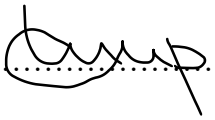
Elena Shirokova ……09.05.2023…… 

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ABSTRACT

In today's world with extreme competition, businesses are desperate for customer's attention that they try to attract with different ways. Even blockchain found its implementation in marketing – nowadays various companies are getting involved in the use of such technologies like NFT to engage customers. However, a new thing that is emerging and not thoroughly investigated yet is brand tokenization. It was initially used to raise funding for blockchain startups, but now it is gradually put to use for the access to exclusive benefits, that tend to increase customer engagement.

This study brings together blockchain technology and marketing, aiming to examine how brand tokenization could affect customer engagement. To specify the aim of the research, three research questions are put to define the influence of brand tokens, issued by companies from cryptocurrency industry, on customer engagement; to identify the factors influencing the engagement with brand tokens; and to determine the difference of customer engagement between owners and non-owners of brand tokens.

To gather necessary data for the research, a quantitative method of the survey was applied. The analysis of the obtained data, carried out with descriptive statistics methods, shows that brand tokens contribute to the increasing customer engagement, furthermore, token non-owners are more inclined to negative engagement, compared with token owners.

Keywords: Customer engagement, blockchain, tokens, brand tokenization

INTRODUCTION

Nowadays, in the rapidly developing world, with the vast variety of choices for products and services, businesses are forced to fiercely compete for customer's attention. In order to attract potential customers and keep engaged with the existing ones, marketers try to find new opportunities and adopt new tools. Moreover, it is important for them to figure out how new digital technologies can influence customers and their behavior (Grewal *et al*., 2019, p. 1). Blockchain did not become an exception, as this technology has spread out far beyond financial sector and found its applications in many different spheres and industries. Combining unique characteristics, such as data security, transparency and, at the same time, anonymity, for marketing purposes blockchain is already implemented in areas of data storage, digital identity, customer knowledge, and especially, loyalty programs (Dimitrov, 2019). Besides, nowadays a lot of companies are involved in the use of non-fungible tokens (NFTs) to increase engagement or introduce new products (Fai, 2021, p. 4). But one of the latest blockchain implementations in marketing that is emerging and gaining attraction is brand tokenization.

The research problem is that the influence of brand tokens, being a relatively new technological innovation for marketing, on customer engagement needs further research. Originally, advanced blockchain technologies enabled businesses to issue their own fungible tokens to raise funding and maintain them on the market as a financial asset for other investors, like Bitcoin. So financial advantages of tokenization are well covered and proved in scientific literature. Later on, fungible tokens were gradually put to use for internal transactions with customers, for reward programs or various additional benefits (Bruneau *et al*., 2016). Such brand tokenization intends to create more ways for engagement and interaction between businesses and stakeholders, as they tend to engage and disengage over time (Lievens *et al*., 2021, p. 129). However, this effect is not sufficiently researched, as companies and customers are yet about to discover the full potential of brand tokens for the marketing purposes. So this paper tends to make its contribution to filling in this gap in scientific knowledge.

The aim of this research paper is to investigate how crypto tokens issued by brands would affect the engagement with their customers. The research is conducted within cryptocurrency industry that primarily utilized the idea to benefit from brand tokens in terms of marketing and that has some solid examples of efficient brand tokenization programs, appropriate for the study.

To support the aim, the following research questions are defined:
RQ1: How brand tokenization affects the engagement of customers in cryptocurrency industry?
RQ2: What are the main factors that are influencing customer engagement with brand tokens?
RQ3: How does customer engagement differ among owners and non-owners of brand tokens?

This study consists of three main parts. The first part is dedicated to the theoretical framework of the research with the focus on the overview of scientific literature and the theory of customer engagement, as well as the evolution of blockchain technology, cryptocurrencies and tokens, their potential implementation for marketing purposes and as engagement drivers. The second part of the study provides an overview of the research context, justification of the research methodology and sampling, describes the research design for collecting primary data and methods of analysis. The third part of the study presents results of the research analysis, main valuable findings and conclusions, as well as suggestions for further studies.

This study is supposed be valuable for businesses considering adoption of such new technologies, as brand tokens, for increasing engagement and expanding customer base. Besides, the paper is hoped to bring up the interest in the topic among students, scholars, professionals in marketing to promote discussion and encourage further research.

1. THEORETICAL FRAMEWORK

The first part of the study includes theoretical approach to the definitions of positive and negative customer engagement, as well as their determining factors; the overview of blockchain as the core technology for cryptocurrencies and tokens, main differences between them, and blockchain marketing applications; the concept of brand tokenization and its potential implementation for marketing purposes.

1.1. The concept of customer engagement

The concept of customer engagement takes its origins in the late 1990s, as a result of marketing shift from a product to a customer orientation (Verhoef *et al.*, 2010, p. 247). Throughout the time, the interest in the concept of customer engagement has intensified, furthermore, a rapid economic and technological growth has marked recent research in this field. By today, a significant amount of knowledge has been generated about customer engagement, however, there is a considerable variation in definitions, concepts and approaches to examine the construct (Harmeling *et al*., 2016, p. 313). In marketing literature, customer engagement in general is defined as the process by which customers build or strengthen their relationships with a company or brand (Van Doorn *et al*., 2010, p. 254). According to Hollebeek (2011), customer engagement is the extent, meaning the depth and breadth of a customer's interaction with a brand over time. Such ongoing series of interaction between customers and a company or brand aim to value-add and nurture the relationships, lead to enhanced customer lifetime value (Brodie *et al*., 2011, p. 253) and fostered brand loyalty (Sashi, 2012). As per Verhoef (2010), a customer can be fully involved in the consumption experience to the extent which is characterized by increased loyalty, advocacy, and willingness to pay a price premium. Further scientific research indicates that the interaction between customers and brands can be described from the perspective of cognitive, emotional, and behavioral responses to a particular brand or firm (Vivek *et al.*, 2012). With the technological development, the concept of customer engagement has also transformed, as the range of interactive experiences became possible by utilizing a range of new digital technologies, including social media (Brodie *et al*., 2011, p. 254). Customer's cognitive, emotional, and behavioral investments turned into a brand's

online content and interactions (Pansari & Kumar, 2016, p. 295), a digital world pushed brands to adopt new innovative solutions to the changing modes of customer engagement (Hollebeek & Sprott, 2019, p. 14). The level of interaction started to depend on such key elements of digital environment as the quality of user experience (Chen *et al*., 2018, p. 412) and gamification (Hamari *et al*., 2014). Social media made interactive process more dynamic and continuous that includes the customer's willingness to invest time, effort, and resources in a brand-related experience (Shawky *et al*., 2020, p. 568).

There are several main factors, application of which may greatly contribute to the increased engagement of customers (see Figure 1). One of the important factors is considered the customer's active participation in the co-creation of value with a firm (Van Doorn et al., 2010, p. 254). Nowadays customer's contribution towards the brand does not end with the purchase. Customers may also take the role of innovators (helping to develop and deliver products), community builders (engaging with other customers and interacting with non-customers) (Shawky et al., 2020, p. 568). For instance, some most loyal customers might be involved in testing new products or features before their official release to the general public, in order to gather feedback from the customer perspective. It allows to reveal if the improvements truly meet customers' expectations and to complete the modifications without dropping overall satisfaction of customers.

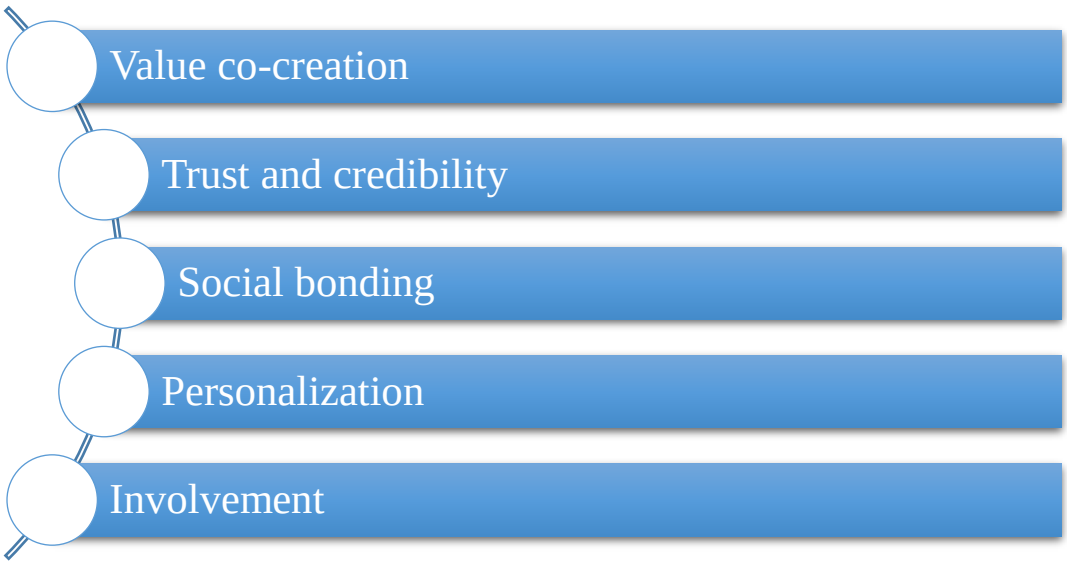

Figure 1. Customer engagement factors
Source: Created by the author.

Building trust and credibility between the brand and its customers is crucial for customer engagement, especially in digital environment. Transparency in interaction, available information and used technologies can help maintaining a strong reputation online and thus, increase engagement (Duan et al., 2008). Apart from that, a sense of identity and social bonding, based on the brand stimulus, is considered as an important channel for fostering customer engagement. If the brand has the ability to create a sense of community among its customers, allowing them to interact with one another, and to build an effective two-way communication by sharing opinions, experiences, and recommendations, this will lead to customer satisfaction and engagement (Malthouse *et al*., 2013). With personalized digital content in social media, as well as targeted communication and tailored solutions to individual customer preferences, companies can create a more relevant and engaging experience for customers (Verhoef *et al*., 2010, p. 249). If the brand is inclined to create an emotional connection with the customers, when they feel their contribution is valued, social bonding might overcome the stage of loyalty and advocacy of the existing customers and lead to attraction of new ones by them (Pansari & Kumar, 2016, p. 296). With so many factors taken into account and a lot of other choices available in terms of products/services and brand content, it becomes more and more difficult to catch the attention of potential customers and to keep constantly engaged the existing ones. For this reason, some new ways of involving customers in interaction with a brand should be considered.

To understand the concept of customer engagement, it is essential to explore not only positive, but also negative customer engagement. According to Hollebeek & Chen (2014), comprehension of both positive and negative engagement is crucial for developing a complete overview of customer-brand interactions and effective engagement strategies that account for both types of behavior. Negative customer engagement refers to a situation when customers engage with a brand in a negative manner, such as complaining, boycotting, or spreading negative word-of-mouth (Harmeling *et al*., 2016, p. 320). Negative customer engagement is reflected in customer behavior that can damage the brand (Hollebeek *et al*., 2016, p. 167). According to Naumann, Bowden, and Gabbott (2017), negative customer engagement may characterize the type of behavior that is directed against the brand, but does not necessary involve disengagement or switching to a competitor, it may involve criticizing the brand or engaging in behavior that is not aligned with the brand's values. Do, Rahman, and Robinson (2019) describe the determinants of negative customer engagement behavior that can be grouped into four categories:

1. Customer-related factors: dissatisfaction with the product or service, negative emotions such as anger or frustration, a sense of injustice or unfairness.

2. Social-related factors: negative word-of-mouth from peers or social media influencers, perceived social norms or expectations, social comparison with others.
3. Brand-related factors: perceived brand authenticity, trustworthiness, ethical behavior, perceived level of effort required to engage with the brand.
4. Technology-related factors: perceived ease of use and usefulness of digital platforms, concerns around privacy and security.

It is crucial to consider negative engagement factors mentioned above, since negative engagement can be as impactful as positive engagement, as it can lead to sales decrease, damage of brand reputation, and decreased customer loyalty over time (Hollebeek & Chen, 2014, p. 63). Besides, negative engagement might be a valuable source of feedback, since it can highlight areas where improvement is needed and can help brands to understand the preferences of their customers better (Naumann *et al*., 2017, p. 895). Within the framework of this study, the construct of negative engagement is as crucial to cover as of positive engagement, since it might emerge in further analysis of influencing customer engagement with brand tokens.

1.2. The evolution of blockchain technology

Prior to exploring the idea of brand tokenization, it is essential to make an overview of the core technology first – blockchain. This unique solution in terms of digital architecture already disrupted a lot of industries, not only information technologies, but finance, business and marketing as well.

Blockchain was initially introduced to the public through Bitcoin (Antoniadis *et al*., 2019, p. 8). The technology refers "to a fully distributed system for cryptographically capturing and storing a consistent, immutable, linear event, log of transactions between networked actors" (Risius & Spohrer, 2017, p. 386). Building a chain of data blocks, it records and distributes data but does not edit it, preventing destructive erasure or change of data (Hayes, 2022), this is why the technology is otherwise known as Distributed Ledger Technology (DLT). The architecture of blockchain gives it several main characteristics: decentralized nature and operation, transparency of data's records, open-source access, autonomy and trust, immutability, anonymity (Lin & Liao, 2017; Zheng *et al*., 2018). A distributed ledger is accessible, all transactions are traceable and easily audible, but at the same time, no single entity has full control of them, and data on the blockchain cannot be

changed or deleted (Bezovski *et al*., 2021, p. 17). This reduces the risks of a network collapse or data leaks that are common problems of traditional database systems (Collomb & Sok, 2016). Besides, blockchain technology does not imply intermediaries for transactions, which reduces transaction costs for all participating parties (Antoniadis *et al*., 2019, p. 9).

Blockchain technology was initially implemented in cryptocurrencies that use blockchain-based tokens to represent and exchange value without the need for centralized governance architecture to facilitate clearing (Adigüzel, 2021). As Bitcoin was the first publicly presented cryptocurrency, later other cryptocurrencies became generally known as just coins. In this regard, it is important to understand the difference between coins and tokens. Coins have their standalone blockchain and operate on their own independent network (such as Bitcoin, Ethereum), whereas tokens operate on top of another coin network (Wu *et al*., 2018, p. 2). Besides, coins are deemed a financial asset with the preliminary payment function, but tokens' functionality goes beyond money. They can also represent an amount of a company's equity and offer some type of functional utility and that can be spent within the relevant ecosystem (Boreiko *et al*., 2019, p. 672). So, in this research, 'token' term is supposed to be used in the sense of a utility that provides access to a platform or its various functions or benefits.

Despite the promising prospects of blockchain, the majority of research papers consider the technology mainly in its financial applications (Zheng *et al*., 2018, p. 352), leaving out marketing area. However, blockchain has recently received a growing attention, that revealed a great number of its potential applications in marketing (*Ibid.*, p. 353). Brauer & Eriksson (2020) discuss such possible areas of implementation of blockchain in marketing as big data, digital identity, customer knowledge, digital marketing. These directions have such potential since blockchain systems may help to store personal data at multiple locations while ensuring security and verification (Dimitrov, 2019, p. 55). As per customer needs, data protection, transparency and at the same time, anonymity are the major characteristics of blockchain system towards the marketing (Bezovski *et al*., 2021, p. 17). The scope of digital marketing expands with new advertising strategies for attracting consumers (Ferrag *et al*., 2019). Another marketing area for potential improvements by blockchain is loyalty programs. The advantages of a decentralized loyalty program include privacy, meanwhile security, multiple brands involvement, tokenized reward points that can be easily exchanged or sold (Rejeb *et al.*, 2020).

One of the recent implementations of blockchain technology in marketing is through NFT that stands for non-fungible token. It represents a unique asset that is not interchangeable (represent a certificate of a distinct ownership) and, being based on blockchain, is easily transferable (Treiblmaier, 2023, p. 238). The most common types of NFTs are in the form of digital art, such as images, videos, gifs (Terry & Fortnow, 2021, p. 18). Companies already take advantage of NFTs in order to increase customer engagement and stimulate interest in their brands and products by creating tokens that represent some real-world items or digital products whose supply is (artificially) limited (Treiblmaier, 2023, p. 239). NFTs were found a perfect implementation on the platforms that offer collectibles, access keys, lottery tickets, numbered seats for concerts, matches, etc. (Ali & Bagui, 2021, p. 54). Possession of such unique items can be represented by NFT since uniqueness is guaranteed by the technology - only one token has its specific characteristics and they are completely different from any other NFT on the market. However, interchangeable characteristics make the implementation of NFTs in marketing rather limited, so in the process of finding new engagement tools, the focus of marketers gradually shifted to fungible tokens. As opposed to the concept of "non-fungibility", fungible tokens represent a property of an asset that can be exchanged with other assets of the same type and value (Posavec *et al*., 2022, p. 700).

1.3. Brand tokenization for marketing

In the context of blockchain technology, tokenization is the process of converting some assets into a digital token that can be used within a blockchain application. Assets, that can be tokenized, are represented by tangible assets (money, gold, art) or intangible assets such as voting rights or ownership (*Ibid*., p. 701). Initially tokens were used as a form of investments, in order to raise early-stage financing for blockchain startups through ICO – initial coin offering. ICO is a form of funding, in which participants exchange existing forms of capital for entity-specific crypto tokens that provide investors with the right for the part of potential profit of the project (Robinson, 2017, p. 924). As ICO is used to gather preliminary funding for the lifetime of a crypto project, in this case issued tokens mainly represent an idea and promises associated with the platform that purchasers invest in. So underlying assets of fungible tokens gradually shifted to a variety of intangible entitlements that bring many opportunities to engage customers through other application of tokens (Treiblmaier, 2023).

Some specific features of fungible tokens, being the product of blockchain technology, can act as important drivers of customer engagement. In order to illustrate that, the author conducted a comparative analysis to align token characteristics with customer engagement factors, previously stated in this study.

1. Value co-creation: fungible tokens can represent a functional utility within a certain ecosystem (Boreiko et al., 2019) that might include granted opportunity to contribute to value co-creation process.
2. Trust and credibility: the essence of blockchain technology endows tokens and their data records with security and public anonymity, meanwhile, makes them transparent and audible (Lin & Liao, 2017; Zheng et al., 2018) that strengthens trust among customers to the company and brand with the use of such technology.
3. Social bonding: as possession of tokens provides access to some privileged functions (Boreiko et al., 2019), it may create a sense of community among token purchasers and arouse interest among non-holders, thus, lead to their increasing engagement.
4. Personalization: token creation by any company demonstrates its personalized approach to customers, since blockchain origin empowers each generated token with uniqueness and exclusivity – its configuration and data cannot be copied or changed (Bezovski et al., 2021).
5. Involvement: as tokens are usually issued with limited supply (Robinson, 2017), the scarcity may intensify the willingness to buy them and squeeze the opportunity to get special offers. Increasing demand might attract those customers who did not even have the initial incentive for token purchase.

Realizing the potential of fungible tokens to increase customer engagement, businesses from different industries started utilizing this idea – at first, mainly in loyalty programs. For instance, major airlines like Lufthansa, Cathay Pacific, Singapore Airlines and AirAsia have converted their miles benefit schemes into digital wallets and added gamification elements on mobile devices with the use of blockchain to offer more convenience and a better brand experience for their customers (Antoniadis *et al.,* 2019, p. 12). Deloitte, international audit and consulting company, is piloting blockchain on the internal rewards program known as DCoins, in order to customize rewards for their employees, as well as different partner programs in retail, credit cards, travel and hospitality industries (MacKenna, 2018). Some companies that are not willing to make huge investments in tokenized company-specific loyalty points, try to implement reward programs with generic loyalty points. Through such platforms users may obtain universal loyalty cryptocurrencies accepted by

many other companies using the same platform (Orioncoin, Elements, Loyyal, etc.) (Agrawal *et al.*, 2018, p. 85). Blockchain technology is supposed to eliminate the inefficiencies that companies might face while providing loyalty program services, such as data recording, control of the liabilities related to redeeming loyalty points (*Ibid.*, p. 82). By implementing tokenized loyalty programs, companies can elevate customer experience with more secure and instantaneous rewards for every purchase.

However, fungible tokens are seeing more and more applications emerge for marketing purposes, brand tokenization is one of them. It refers to the issuance of a smart contract token by a particular company or brand through (but not necessarily) ICO, which might grant token purchasers access to the existing or prospective value proposition (Lotti, 2019, p. 288). This process allows to monetize such an intangible asset as brand value or goodwill without giving away company's equity. Besides, it might be employed to benefit customers, stakeholders, as well as the company itself, in various ways (Hegadekatti, 2017, p. 5). The designed system must provide token purchasers with additional benefits (see Figure 2), enhancing customer engagement, which is crucial for the success of tokenization program (Bruneau *et al.*, 2016).

Figure 2. Example of brand token utility
Source: Created by the author.

As for the present, there are very few established brand tokenization examples, and they are mainly within cryptocurrency industry for several reasons. Getting into this process requires resources and excellent knowledge of the technology, even though, they cannot guarantee a complete success of the token issue (An et al., 2019, p. 39). Also, customers who intend to purchase tokens, are better have at least the basic knowledge of blockchain, tokens and a general understanding of their operations. Considering these factors, the following research will be conducted on the examples from the sector of crypto platforms that already went through the process of brand tokenization.

To summarize the theoretical framework, it can be concluded that brand tokens, being the product of blockchain evolution, possess certain characteristics that have great potential to be used as factors increasing customer engagement. By providing access to various benefits with their purchase, tokens are believed to attract customers to deeper interaction and strong connection to the brand. The theoretical part forms the scientific basis for further research of influence of brand tokens on customer engagement in this paper.

2. RESEARCH CONTEXT AND METHODOLOGY

The second part of this study introduces the research context, methodology used for the research and the description of the research design. The research context is framed by several case studies from crypto industry that describe successful launches of brand tokens. The research methodology includes the justification of chosen research and sampling methods. In addition, details of the research design are provided to explain its logic and the structure of the survey, along with chosen methods of analysis.

2.1. Case studies

As the concept of brand tokenization is relatively new and still emerging, its sufficient examples can be found mainly within crypto companies that specialize in blockchain and application of its products. Since people, who are involved in this industry, are likely to have necessary knowledge and expertise to launch such a project and offer it to the market. An overview of brand tokenization case studies on the example of crypto industry is supposed to outline the research context for this study and create a vision of potential implementation of brand tokens by other industries.

- Binance Coin (BNB)

Binance, one of the largest cryptocurrency exchanges in the world, launched its token called BNB in July 2017. The total supply was defined as 200,000,000 tokens, at the price of around 0.11 USD per token. BNB has multiple use cases within the Binance ecosystem, as well as on the partners' platforms. The main benefit provided to BNB token holders is the discount on trading fees. Besides, the holders are able to qualify for Binance VIP program and referral program that open access to various rewards and exclusive token sales. Some of the Binance partners integrated BNB payments on their platforms, providing the way to use BNB tokens as a means of payment for travel and entertainment expenses, lending and virtual gifts, etc. According to Binance statistics, just on their platform people have used more than 40 million BNB tokens to pay for the trading fees of more than 127 billion transactions (Binance Academy, 2018).

- Bitpanda Ecosystem Token (BEST)

Bitpanda is a fintech company from Austria that has grown since 2014 into a global investment platform. In August 2019 it issued its Bitpanda Ecosystem Token (BEST) with the total supply of 1 billion tokens. The initial idea behind this token launch was to add value to the company's most loyal users and provide to the BEST token holders the access to Bitpanda Loyalty Programme. Exclusive benefits within the loyalty program include VIP support and affiliate bonuses, trading rewards, weekly payouts depending on VIP level, etc. Upcoming perks are going to be about referral rewards, a unique opportunity to test new platform features, access to some of the partners' solutions. Engaging users with the BEST token contributed to Bitpanda's growth into a multi-billion-dollar company in 2021 (Bitpanda, 2023).

- KuCoin Token (KCS)

KuCoin is the largest Asian cryptocurrency exchange that launched its KuCoin Token (KCS) in 2017 with 200,000,000 token supply. KCS token holders are able to qualify for daily rewards, fee discounts according to various VIP levels, and access to primary sales of new coins that cannot be found on any other crypto exchanges. KCS token already reached Top 30 in market cap in 2022 (KuCoin, 2023).

- Blocktrade Exchange Token (BTEX)

Among Estonian cryptocurrency exchanges there is also an example of brand tokenization. Blocktrade platform is launching its second brand token - Blocktrade Exchange Token (BTEX) - that is intended to unlock the beneficial experience of the platform to BTEX token holders. This token is going to provide access to a multi-level rewards program, NFT avatars, trading bonuses and discounts, priority support, etc. Subsequently, BTEX will become an entry key to a wide range of utilities on Blocktrade platform and its partners' ecosystems (Blocktrade, 2023). Since this project is still in progress, its clear assessment in terms of revenue or new users is yet to come. However, it has a great potential to engage users more frequently with the platform, ultimately increasing usage and customer loyalty.

2.2. Research methodology and sampling

This research relies on the positivism paradigm, which assumes that the reality is independent of people's actions and remains objective during investigation process (Collins & Hussey, 2021, p. 40). So it means that in order to explain or predict any social phenomena it is possible to provide mathematical or logical justification (Walliman, 2021). Since the phenomena can be measured, positivism requires high accuracy and precision of the collected data that is supported by quantitative research data and its statistical analysis.

The choice of the quantitative approach for this research is influenced by several factors. The dominant form of the academic research in marketing is quantitative (Hanson & Grimmer, 2007, p. 60), as well as in customer engagement research (Hao, 2020, p. 1845). Besides, quantitative data shows a numerical representation of the examined issue that is generalized with a high degree of reliability and validity (Hanson & Grimmer, 2007, p. 60), so it will likely provide a clear result for the research questions of this study.

To investigate the influence of brand tokenization on customer engagement, this study adopts the research methodology of an online survey, that is supported by the positivism paradigm (Collins & Hussey, 2021, p. 50). As there is a scarcity of secondary data related to the topic of this research, it requires the collection of primary data through the questionnaire. Although, secondary data was also used in this research in the form of a literature review and case studies to frame the research context and create connections between the concept of customer engagement and brand tokens.

Non-probability sampling method for this research is determined by its specific topic. As it is particularly focused on the crypto industry, it requires the basic knowledge of cryptocurrencies and general awareness of tokens from the respondents. To contact people, who are not only aware of any crypto brand tokens, but also own them, a judgment sampling was used to intentionally select the potential respondents who might be related to the research topic. In order to reach respondents, who are aware of any crypto brand tokens, but who do not own them, snowball sampling was used to distribute the questionnaire from the initial number of participants to other people, who might be also aware of such tokens. The target population of this study includes people with the awareness of crypto brand tokens and with their purchasing experience, specifically, who have ever purchased brand tokens from such crypto platforms as Binance, Bitpanda, KuCoin and Blocktrade, described as case studies for this research. As the information about the number of

token holders is not publicly provided by the mentioned crypto exchanges, the sample size is assumed between 30 and 500 respondents, as an appropriate one for most research (Bougie & Sekaran, 2020, p. 264). A very low response rate of online surveys should be also taken into consideration with respect to sample size (*Ibid*., p. 265).

2.3. Research design

Primary data for this research was collected through the questionnaire, that is presented in Appendix 1. The questions were drafted in accordance with the theoretical framework of the research, specifically relying on the concepts of positive and negative customer engagement from Brodie et al. (2011), Hollebeek & Chen (2014), Hollebeek & Sprott (2019).

The survey consists of three main parts. The first part includes introductory questions about respondents' knowledge of crypto industry and trading practice, as well as their awareness of any crypto brand tokens and their purchasing experience. As the topic of this research is narrowed down to specific industry, it is assumed that survey participants with more extensive knowledge about crypto and with deeper involvement in this sphere will be likely aware of existing brand tokens and have ever purchased some of them. So, responses to the questions from the first part will provide an understanding of the sample characteristics, as for the research questions it is necessary to differentiate people who own brand tokens and who do not own, but still aware of them, in order to compare the extent of their customer engagement.

The next part of the questionnaire provides the questions that intend to identify respondents' engagement (positive or negative) with brand tokens, as well as factors that may influence respondents' decision to be engaged with them. Initial questions aim to define people's engagement with certain tools widely used by companies in general, as well as if they were accessed by brand tokens. These tools are directly associated with the factors that tend to increase customer engagement, which were covered within the theoretical framework in Brodie et al. (2011), Van Doorn et al. (2010), Verhoef et al. (2010). The following questions address to token characteristics, described in theoretical part by Boreiko et al. (2019), Bezovski et al. (2021), Lin & Liao (2017), and relation to a company or brand that may affect the choice to purchase brand tokens. The questions related to consuming resources and potential increased price are supposed to provide information of how respondents consider such factors of token purchase – positively or

negatively, that allows to identify positive or negative type of engagement. In addition, final questions tend to identify the factors of positive or negative customer engagement towards a company or brand that issued brand tokens, according to Hollebeek & Chen (2014), Do et al. (2020). All questions in this part are designed as closed, with different anchors on Likert scale (e.g. Completely disagree to Completely agree, Not at all important to Extremely important, Very negative to Very positive, etc.). This way respondents are able to make a pondered decision among provided alternatives that are reasonably included in the questionnaire according to the framework of the research. The third part finalizes the questionnaire with the questions to gather data for demographic and statistical analysis.

The questionnaire was distributed via personal messages and social media to reach out to people who have ever purchased crypto brand tokens and who are aware but do not own them. Respondents were also asked to distribute the questionnaire to other people from their environment who might also relate to the topic of the research.

The analysis methods of the collected primary data include descriptive statistics, that allows to obtain frequency distribution, measure the central tendency and visualize data in tables and charts (Collis & Hussey, 2021, p. 279). This method allows to identify patterns and associations, to summarize and demonstrate data in a manageable form. In order to find the relationship between some categorical variables, χ^2 test was used for the analysis.

3. RESEARCH ANALYSIS

The third part of the study contains the findings from the research analysis of the primary data, collected via online survey. The findings are generalized to the main conclusions, that contribute to the research aim and the research questions. This part also takes into consideration some limitations of the conducted research, that could be eliminated in further studies.

3.1. Survey findings

Data for the research analysis, that was collected via the online questionnaire, is presented in Appendix 2. The total sample amounts to 97 people, which is within the assumed sample size, as the research was distributed directly to people who have purchased brand tokens or might have knowledge about them, according to selected judgment and snowball sampling methods. The total number of respondents includes 41 people who have purchased brand tokens, and 56 people who did not make the purchase. The prevailing amount of token non-holders is possible because of the specificity of the research topic that currently is not of universal interest. Though, from 56 people being non-holders of brand tokens, 17 people are not only aware of them, but also have ever considered their purchase, so taking this into consideration, the amount of two parts are quite comparable.

According to the demographic data gathered from the questionnaire (see Figure 3), 61% of the respondents are men, 37% of the respondents are women, and 2 people refused to name their gender. This data represents the pattern of men traditionally being more involved in the sphere of technologies, apart from that, create preconditions for further research of consumer behavior of those people who refuse to say gender. As for age groups, the majority of survey participants (58%) fall into the group of the age 26-41. As blockchain technology is known to the public for more than 15 years, it is supposed to be of the most interest of people that got acquainted with it in their younger years.

Almost a quarter (24%) of the respondents is 18-25 years old. The group of 42-55 years old is also not scarce – it represents 18% of the total number, and 1 participant is even 56 years old or older, that indicates some interest in the topic of cryptocurrencies and tokens among not only young, but also middle-aged people.

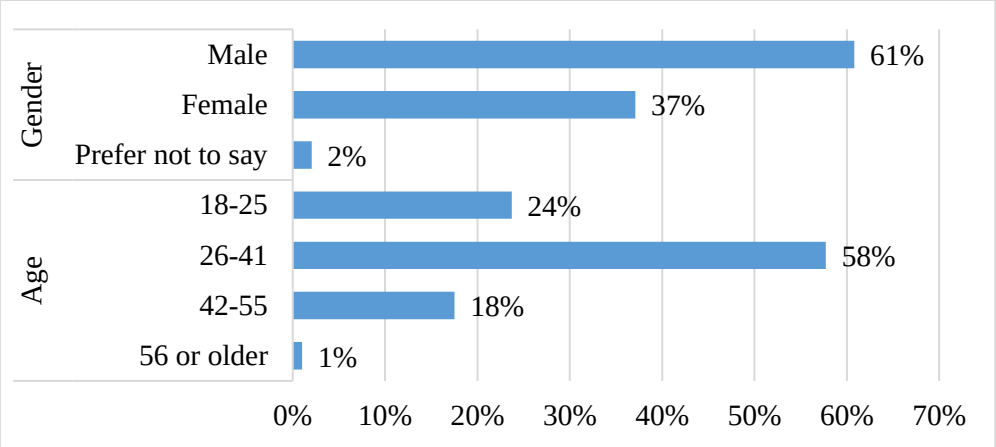

Figure 3. Demographic profile of the sample
Source: Created by the author based on data from Appendix 2 and author's calculations.

Specifying the demographic data according to brand token owners and non-owners division (see Figure 4), 47% of men own brand tokens, 53% do not. Numbers of women are more opposed – 36% own brand tokens, 64% do not.

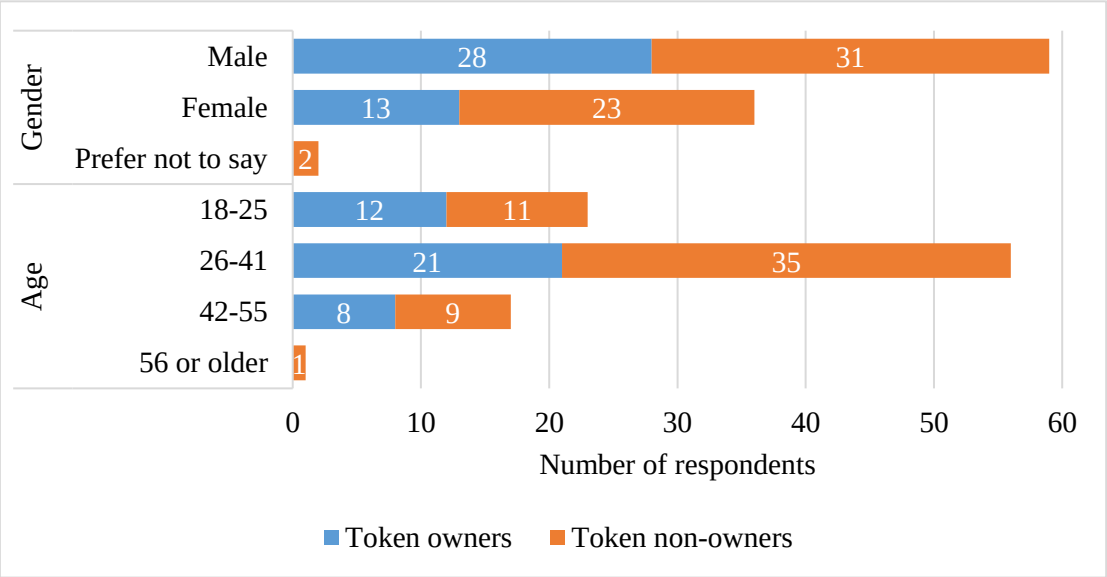

Figure 4. Relationship between gender and brand token purchase
Source: Created by the author based on data from Appendix 2 and author's calculations.

According to age groups, the most frequent owners of brand tokens fall into the largest group of the age 26-41 (22% of total number), among younger respondents there are 12 people who own brand tokens (12% of total number), and 8% of total number of respondents at the age of 42-55 years old have purchased brand tokens.

During the research design process, there was an assumption made that there might be a relationship between the respondents' knowledge of crypto industry and brand token purchase. In order to find the association between these two variables, χ^2 test was conducted. As Table 1 shows, p-value is less than 0.05 level of significance, meaning that an association between the knowledge level about cryptocurrencies and the fact of brand token purchase takes place. Additionally, Cramer's V coefficient of 0.34 with the degrees of freedom 4 shows a strong association between the variables. Along with that, the same relationship can be identified between crypto trading experience and brand token purchase: p-value is also less than 0.05 level of significance, whereas Cramer's V coefficient is 0.35 with the degrees of freedom 5, that confirms a strong association between two variables. This interdependence is quite consistent, since the more knowledge and experience people have in crypto industry, the more likely they will realize the risks and benefits from owning crypto brand tokens.

Table 1. χ^2 test measures

	p-value	Cramer's V	df
Knowledge level	0.0000000033	0.34	4
Trading experience	0.000000000014	0.35	5

Source: Author's calculations based on data from Appendix 3.

Among engagement factors that may influence the decision to purchase brand tokens (see Figure 5), 88 out of 97 respondents (91%) consider access to a loyalty program as the most substantial benefit that brand tokens can grant. 86% of participants would also appreciate personalized offers from companies or brands that issue brand tokens, 80% would like to get rewards across the network of partners through the brand token purchase. These numbers align with the general opinion of the respondents on such engagement tools – 93 out of 97 respondents have a positive feeling to a loyalty program, 86% are set up favorably to personalized offers, and 94 respondents – to the rewards across the network of partners. Opportunity to test new products and features

looks important to the least amount of respondents, apparently, people do not consider this offering as the one that they can directly benefit from.

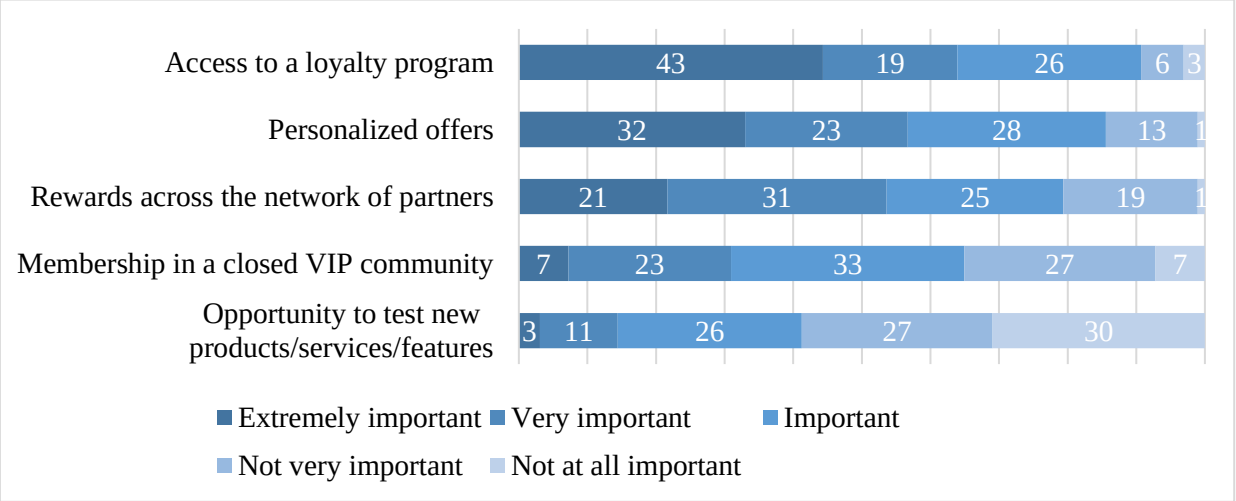

Figure 5. Importance of benefits provided by brand token purchase
Source: Created by the author based on data from Appendix 2.

Among token characteristics that may affect the decision in favor of their purchase (see Figure 6), almost every respondent (96 out of 97) chose potential profit as the most important one. But if to put aside the financial aspect, amid the characteristics describing the nature of tokens, the most important are their secure technology (for 96% of the respondents) and uniqueness and exclusivity (for 79% of the respondents).

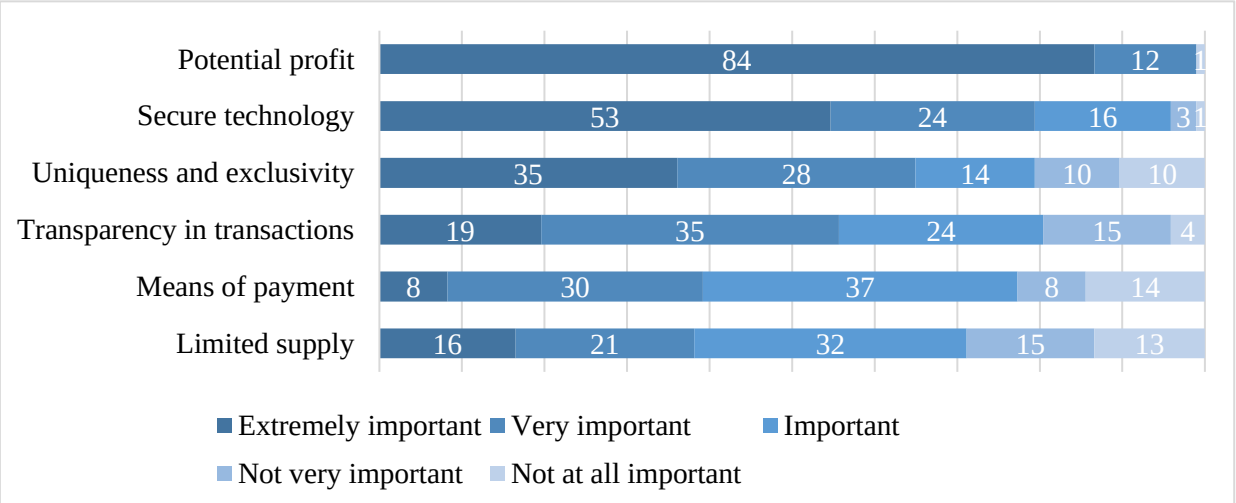

Figure 6. Importance of token characteristics for brand token purchase
Source: Created by the author based on data from Appendix 2.

In order to indicate the level of engagement associated with purchasing brand tokens, respondents were presented with four statements to agree or disagree with according to 5-point Likert scale. These statements tend to identify the factors that might be crucial for the engagement of customers and show connection between their engagement and brand token purchasing decision. To find the most frequent answers and measure the central tendency, descriptive statistics was used as analysis method. Results from Table 2 show that the frequency of interaction with a company or brand (buying products or services more often) does not influence brand token purchasing decision. However, the trust to a company or brand that issued brand tokens is more crucial for the survey participants, this supports the research of Duan et al. (2008). Token purchase as an action itself leads to a deeper connection with a company or brand, and respondents also agree that they will be definitely more interested in a company's future performance and success, which illustrates a deeper engagement.

Table 2. Descriptive statistics measures

	Mean	Median	Mode
I will likely purchase brand tokens of a company or brand, which products/services I use more often	3.40	3.00	3.00
I will likely purchase brand tokens of a company or brand that I trust	4.53	5.00	5.00
If I purchase brand tokens of a company or brand, I will feel more connected to it	4.09	4.00	5.00
If I purchase brand tokens of a company or brand, I will be more interested in its success	4.55	5.00	5.00

Source: Author's calculations based on data from Appendix 2.

As token issuance is a very consuming process in terms of resources (intellectual, financial, etc.), this factor might make some people reluctant to purchase brand tokens. However, according to the survey outcomes, 78% of respondents do not find this fact negative or considerable to refuse from purchasing tokens. Apart from that, consuming resources, necessary to create and issue tokens, tend to greatly increase expenses of the issuing company, thus, the final price of tokens might end up above customer's expectations, so it is essential to define the influence of high price on a token purchase, as well as the factors that customers may value even more than that.

As Figure 7 shows, 98% of participants responded that they would still make a token purchase because of the potential profit, 67% would buy tokens to get access to some privileged offers, and 47% would make a purchase because of token uniqueness and exclusivity.

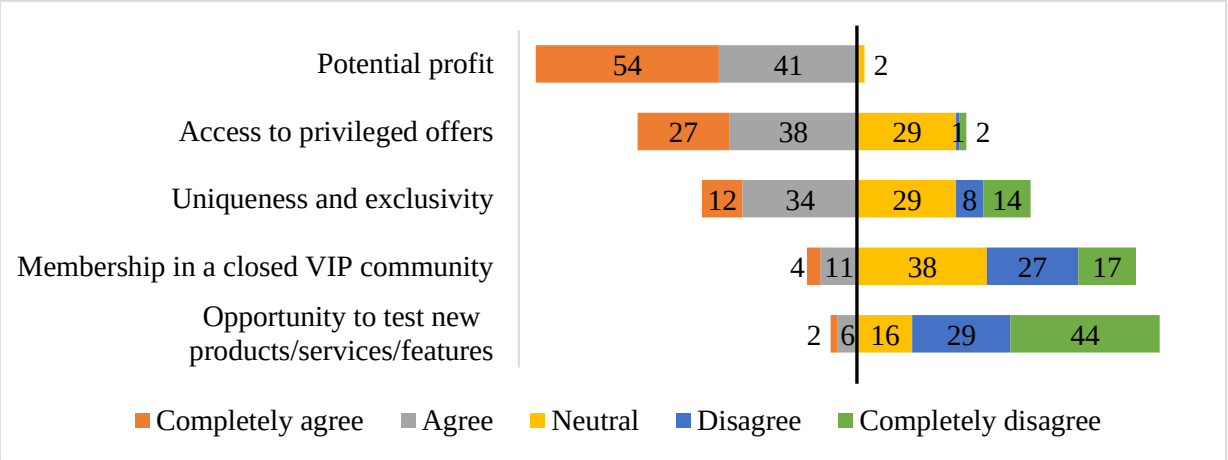

Figure 7. Importance of factors for brand token purchase despite high price
Source: Created by the author based on data from Appendix 2.

The abovementioned factors differ between analyzed age groups. According to descriptive statistics analysis (see Table 3), respondents from a younger age group are not so rejective with the opportunity to test new products/features, since they are likely to be more enthusiastic and open-minded to trying new things, and testing process may be curious, as well as useful in terms of getting new experience and getting to know more about the internal product development processes, that younger people are ready to dedicate their time to. Besides, results show that with the years people tend to appreciate more some additional benefits offered by businesses, as well as new and exclusive items and technologies that they are ready to pay for.

Table 3. Mode measures

	18-24	26-41	42-55	56 or older
Membership in a closed VIP community	3	3	4	3
Access to privileged offers	4	4	5	5
Uniqueness and exclusivity	3	4	5	1
Opportunity to test new products/services/features	2	1	1	4
Potential profit	5	5	5	5

Source: Author's calculations based on data from Appendix 2.

Considering a possible negative engagement with a company or brand that issued brand tokens, Figure 8 clearly shows a behavioral pattern that respondents, who do not own brand tokens, are more likely to engage with a company in a negative way and demonstrate their dissatisfaction to the brand and other people. Contrariwise, people, who own brand tokens of a particular company or brand, are less prone to negativity towards it. These results underpin the abovementioned outcome that the purchase of brand tokens is likely to contribute to a deeper connection with a company that issued them.

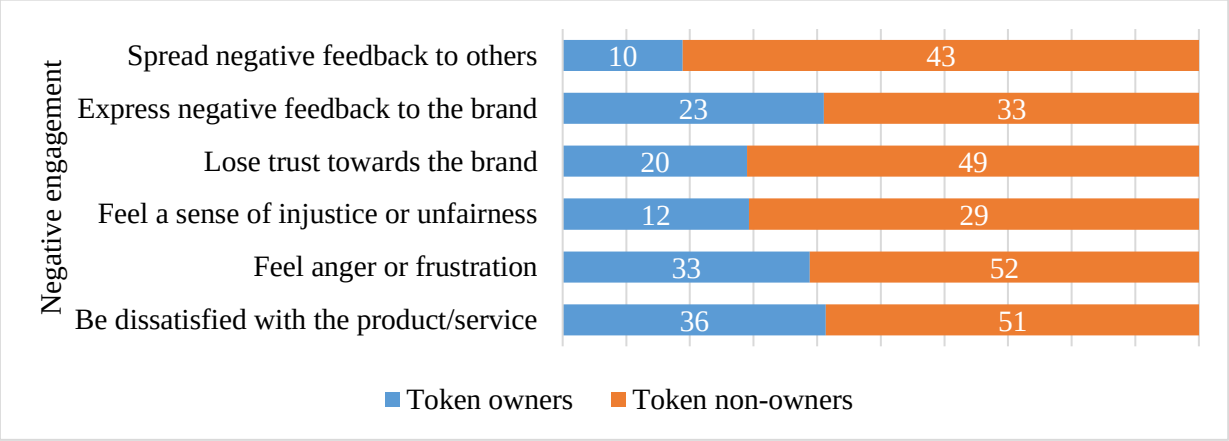

Figure 8. Negative engagement factors
Source: Created by the author based on data from Appendix 2 and author's calculations.

A similar question about positive engagement factors allowed to identify that respondents, owning brand tokens, in case of some positive experience are more likely to interact with the company that issued them, as well as feel more loyal towards the brand (see Figure 9).

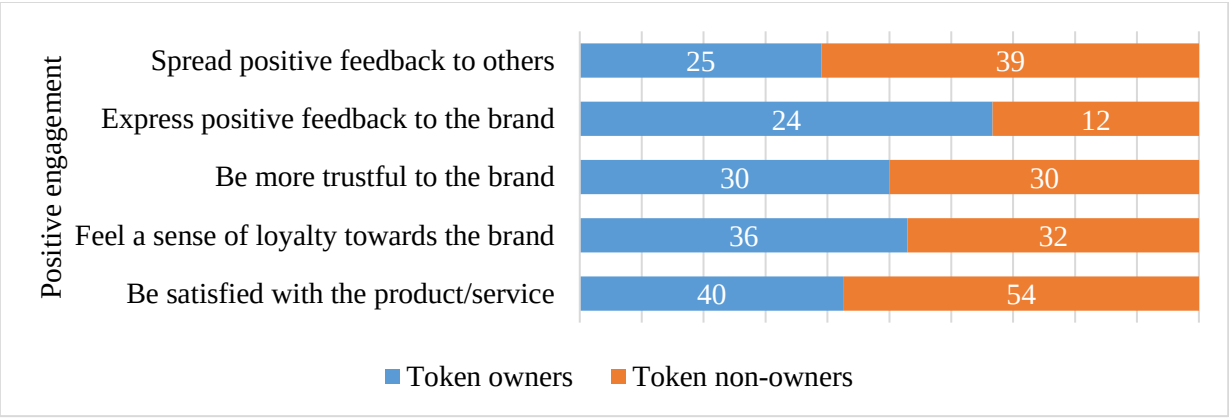

Figure 9. Positive engagement factors
Source: Created by the author based on data from Appendix 2 and author's calculations.

3.2. Outcomes and suggestions

The research aim of this paper was set to identify how the fact of purchasing brand tokens affects the engagement of customers, particularly in the sector of cryptocurrencies. The scope of the study was bounded to the crypto industry that led the way to brand tokenization process and currently has some sufficient case studies for the research basis. The research aim was specified in three research questions that created connections between two phenomena – customer engagement and brand tokenization. As customer engagement can be on both sides of the spectrum, according to Hollebeek & Chen (2014), the influence of brand tokens on both positive and negative engagement is crucial to comprehend for businesses in order to create effective engagement strategies for more intense customer-brand interactions.

The first research question (RQ1) aims to determine how brand tokenization impacts the engagement of customers within the cryptocurrency industry. The results show that 79% of respondents will feel themselves more connected to the company if they buy its brand tokens. Moreover, owners of brand tokens more likely express their positive feedback to the brand and feel a greater sense of loyalty to it. At the same time, 93% of the respondents in case of a token purchase will be more interested on the company's success, that is a certain indication of more intense positive customer engagement. The difference between the numbers above might be additionally determined by the financial incentive of brand tokenization process, since token purchase as an action itself represents a form of investment, a kind of customers' vote for the company with their money, that makes them more concerned with its success, specifically financial.

The second research question (RQ2) tends to define the factors influencing customers' engagement with brand tokens and the decision to purchase them. The survey includes several groups of factors according to the theoretical framework: related to customer engagement, to token characteristics. According to the results, almost all of respondents (98%) are ready to purchase brand tokens because of the promised potential profit, even for the higher price than they expected. To amend the financial aspect, respondents marked access to privileged offers (67%) among engagement factors and the uniqueness and exclusivity (47%) among token characteristics as the important factors in favor of the token purchasing decision. These factors represent a certain additional value (combining both monetary and non-monetary value) that customers potentially get with the token purchase. Apart from that, 98% of participants will likely make a token purchase from the brand

that they trust, which is also an important factor leading to increased customer engagement (Duan et al., 2008).

Regarding the third research question (RQ3), it is essential to understand how customer engagement differs among owners and non-owners of brand tokens. The results reveal that non-holders of brand tokens tend more to a negative engagement, expressing their dissatisfaction and frustration, in comparison with token holders, who are more likely to be more loyal to a company or brand. In the survey, negative and positive engagement is represented from the perspective of cognitive, emotional, and behavioral responses (Vivek *et al.*, 2012) to a brand or firm that issued tokens. As for negative engagement factors the results do not show any variations, for positive engagement factors they demonstrate not the common pattern, so this aspect is suggested for further research on a larger scope.

Furthermore, it is important to point out the limitations of this research. As the concept of brand tokenization is relatively new and still emerging, mainly within the crypto industry for now, the research framework was intentionally narrowed down to a particular sector. Therefore, the topic requires some basic knowledge about cryptocurrencies and general awareness of brand tokens. During the research a strong relationship between brand token purchase and knowledge of crypto industry, as well as trading experience, was statistically confirmed. Apart from that, the research is limited with the sample size, that also leads to a constrained demographic profile of the sample. So, as the phenomena of brand tokenization spreads out to other industries and becomes more familiar to the general public, a further research is suggested to students, scholars and marketing professionals with a bigger representative sample.

CONCLUSION

The concept of brand tokenization is a tool that can contribute not only to financial, but also to marketing goals of various businesses. Despite the fact that this phenomenon is widespread mainly within the particular sector of cryptocurrencies for now, its implementation in other industries has a huge potential.

For the research problem of this study, the gap in scientific knowledge of the influence of brand tokenization on marketing indicators and processes is identified. As brand tokenization has all the perspectives to create another level of engagement with existing customers and attract new ones, that all businesses compete for nowadays, the research aim of this study is set to examine how crypto tokens affect customer engagement. The aim of the research is elaborated in the following research questions:
RQ1: How brand tokenization affects the engagement of customers in cryptocurrency industry?
RQ2: What are the main factors that are influencing customer engagement with brand tokens?
RQ3: How does customer engagement differ among owners and non-owners of brand tokens?

The theoretical background of this paper reveals that brand tokenization is inclined to enhance brand awareness and to make a deeper interaction between businesses and stakeholders, as tokens have some characteristics (like secure technology, uniqueness and exclusivity, etc.) that can create conditions for the increased engagement. Purchased brand tokens may grant access to various additional benefits, not available to every customer. Such an exclusive offering is supposed to pique a huge interest and attract the attention of customers. In order to confirm this proposition with the research, a quantitative research is conducted and primary data for the analysis is gathered with an online survey.

The results of the first research question (RQ1) show that brand tokenization, applied by companies from the crypto industry, tends to increase positive customer engagement among token

owners. Brand token purchase leads to a deeper connection with a company or brand that issued them, token holders get to be more interested in the company's success.

As for the main factors that influence customer engagement with brand tokens, that is brought up in the second research question (RQ2), the findings confirm that almost all the respondents pointed out that they will likely make a brand token purchase from the company or brand that they trust. Besides, among the engagement factors people would appreciate the most the access to some privileged offers and, unanticipatedly, the uniqueness of the token as its core technology peculiarity.

Answering the third research question (RQ3), it was found that customer engagement among owners and non-owners of tokens differs noticeably. Token non-owners prone more to a negative engagement that may show up in the form of frustration or expressing dissatisfaction, whereas token owners more likely feel a greater sense of loyalty to a company or brand that issued them, as well as express their positive feedback.

In conclusion, it is important to note such limitations of this research as a narrowed scope to one particular sector and a limited sample size, that are better to be eliminated in further studies, as brand tokenization gains more popularity in other industries. Despite these limitations, this paper makes its contribution to the scientific knowledge in the marketing field, related to customer engagement and the use of a new tokenization technology. This research might find some practical implications by various businesses that might consider adoption of tokenization in order to expand their customer base and increase engagement.

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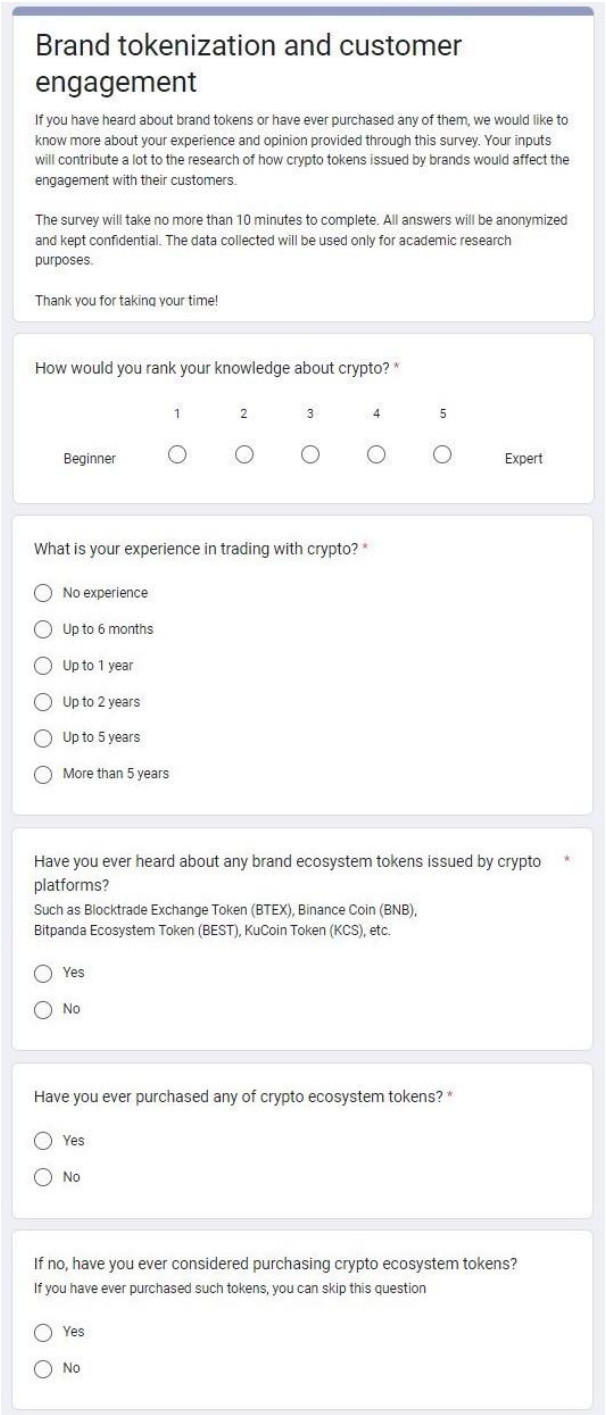
APPENDICES

Appendix 1. Survey questions



Brand tokenization and customer engagement

If you have heard about brand tokens or have ever purchased any of them, we would like to know more about your experience and opinion provided through this survey. Your inputs will contribute a lot to the research of how crypto tokens issued by brands would affect the engagement with their customers.

The survey will take no more than 10 minutes to complete. All answers will be anonymized and kept confidential. The data collected will be used only for academic research purposes.

Thank you for taking your time!

How would you rank your knowledge about crypto? *

	1	2	3	4	5	
Beginner	○	○	○	○	○	Expert

What is your experience in trading with crypto? *

- ○ No experience
- ○ Up to 6 months
- ○ Up to 1 year
- ○ Up to 2 years
- ○ Up to 5 years
- ○ More than 5 years

Have you ever heard about any brand ecosystem tokens issued by crypto platforms? *

Such as Blocktrade Exchange Token (BTEX), Binance Coin (BNB), Bitpanda Ecosystem Token (BEST), KuCoin Token (KCS), etc.

- ○ Yes
- ○ No

Have you ever purchased any of crypto ecosystem tokens? *

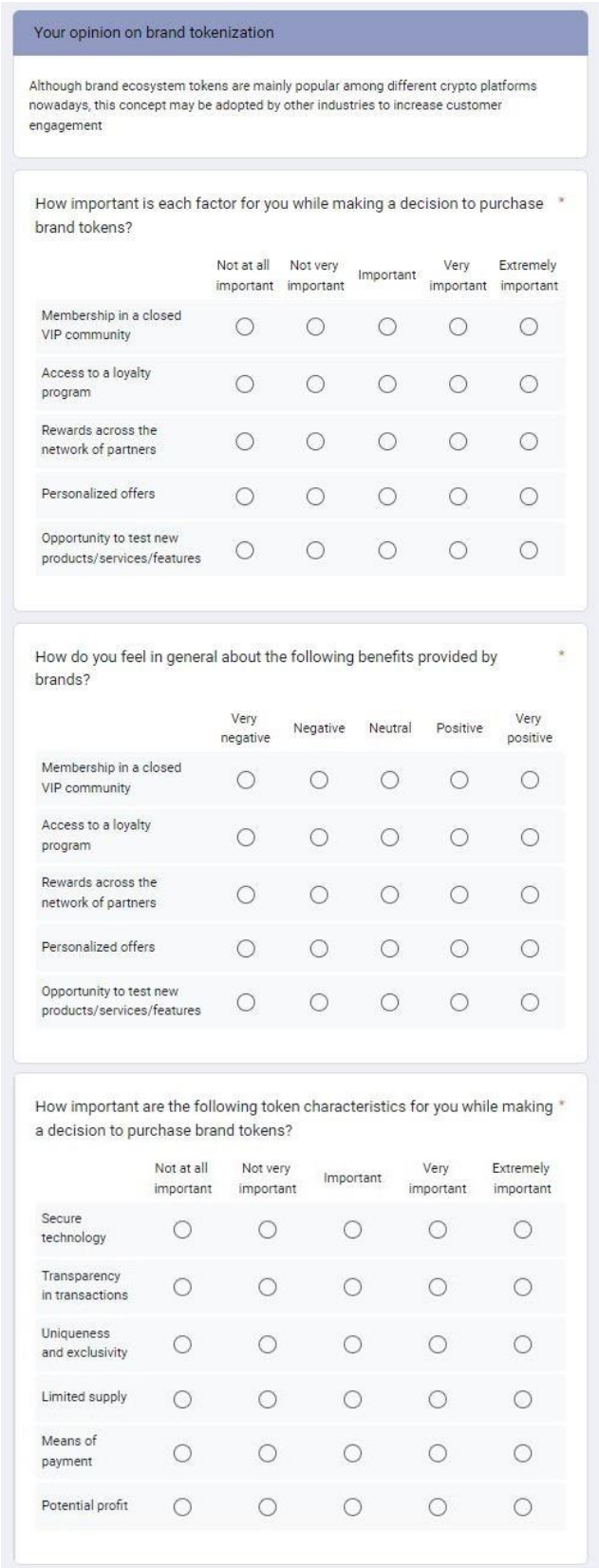
- ○ Yes
- ○ No

If no, have you ever considered purchasing crypto ecosystem tokens?

If you have ever purchased such tokens, you can skip this question

- ○ Yes
- ○ No

Appendix 1 continued



Your opinion on brand tokenization

Although brand ecosystem tokens are mainly popular among different crypto platforms nowadays, this concept may be adopted by other industries to increase customer engagement

How important is each factor for you while making a decision to purchase brand tokens? *

	Not at all important	Not very important	Important	Very important	Extremely important
Membership in a closed VIP community	○	○	○	○	○
Access to a loyalty program	○	○	○	○	○
Rewards across the network of partners	○	○	○	○	○
Personalized offers	○	○	○	○	○
Opportunity to test new products/services/features	○	○	○	○	○

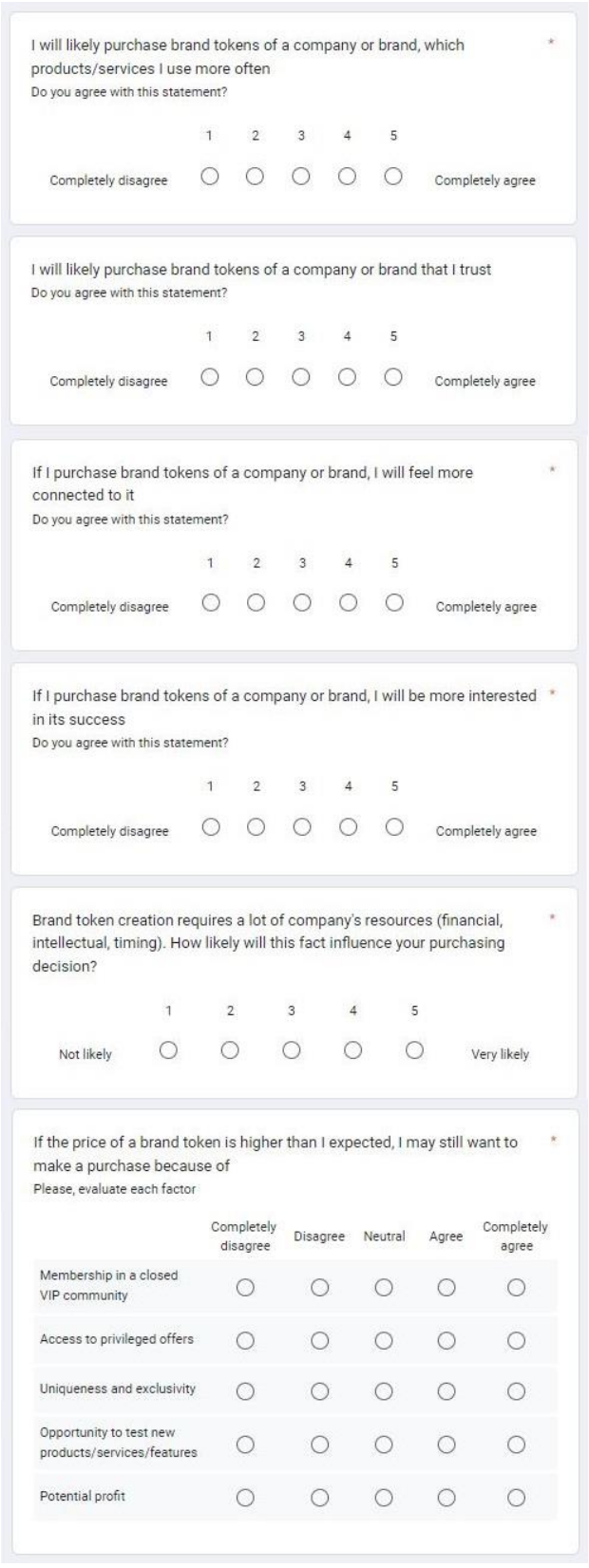
How do you feel in general about the following benefits provided by brands? *

	Very negative	Negative	Neutral	Positive	Very positive
Membership in a closed VIP community	○	○	○	○	○
Access to a loyalty program	○	○	○	○	○
Rewards across the network of partners	○	○	○	○	○
Personalized offers	○	○	○	○	○
Opportunity to test new products/services/features	○	○	○	○	○

How important are the following token characteristics for you while making a decision to purchase brand tokens? *

	Not at all important	Not very important	Important	Very important	Extremely important
Secure technology	○	○	○	○	○
Transparency in transactions	○	○	○	○	○
Uniqueness and exclusivity	○	○	○	○	○
Limited supply	○	○	○	○	○
Means of payment	○	○	○	○	○
Potential profit	○	○	○	○	○

Appendix 1 continued



I will likely purchase brand tokens of a company or brand, which products/services I use more often *
Do you agree with this statement?

	1	2	3	4	5	
Completely disagree	○	○	○	○	○	Completely agree

I will likely purchase brand tokens of a company or brand that I trust
Do you agree with this statement?

	1	2	3	4	5	
Completely disagree	○	○	○	○	○	Completely agree

If I purchase brand tokens of a company or brand, I will feel more connected to it *
Do you agree with this statement?

	1	2	3	4	5	
Completely disagree	○	○	○	○	○	Completely agree

If I purchase brand tokens of a company or brand, I will be more interested in its success *
Do you agree with this statement?

	1	2	3	4	5	
Completely disagree	○	○	○	○	○	Completely agree

Brand token creation requires a lot of company's resources (financial, intellectual, timing). How likely will this fact influence your purchasing decision? *

	1	2	3	4	5	
Not likely	○	○	○	○	○	Very likely

If the price of a brand token is higher than I expected, I may still want to make a purchase because of *
Please, evaluate each factor

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Membership in a closed VIP community	○	○	○	○	○
Access to privileged offers	○	○	○	○	○
Uniqueness and exclusivity	○	○	○	○	○
Opportunity to test new products/services/features	○	○	○	○	○
Potential profit	○	○	○	○	○

Appendix 1 continued

If you have a negative experience with a brand that issued brand tokens, you will more likely *

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Be dissatisfied with the product/service	○	○	○	○	○
Feel anger or frustration	○	○	○	○	○
Feel a sense of injustice or unfairness	○	○	○	○	○
Lose trust towards the brand	○	○	○	○	○
Express negative feedback to the brand	○	○	○	○	○
Spread negative information about the brand to others	○	○	○	○	○

If you have a positive experience with a brand that issued brand tokens, you will more likely *

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Be satisfied with the product/service	○	○	○	○	○
Feel a sense of loyalty towards the brand	○	○	○	○	○
Be more trustful to the brand	○	○	○	○	○
Express positive feedback to the brand	○	○	○	○	○
Spread positive information about the brand to others	○	○	○	○	○

Thank you for your responses!

At last, please, answer some questions for the statistical analysis

Your gender

- ○ Male
- ○ Female
- ○ Prefer not to say
- ○ Other

Your age

- ○ 18-25
- ○ 26-41
- ○ 42-55
- ○ 56 or older

Appendix 2. Survey data

Question	Answer options		Frequency
How would you rank your knowledge about crypto?	1		23
	2		25
	3		22
	4		20
	5		7
What is your experience in trading with crypto?	No experience		25
	Up to 6 months		23
	Up to 1 year		10
	Up to 2 years		20
	Up to 5 years		12
	More than 5 years		7
Have you ever heard about any brand ecosystem tokens issued by crypto platforms?	Yes		74
	No		23
Have you ever purchased any of crypto ecosystem tokens?	Yes		41
	No		56
If no, have you ever considered purchasing crypto ecosystem tokens?	Yes		17
	No		41
How important is each factor for you while making a decision to purchase brand tokens?	Membership in a closed VIP community	Not at all important	7
		Not very important	27
		Important	33
		Very important	23
		Extremely important	7
	Access to a loyalty program	Not at all important	3
		Not very important	6
		Important	26
		Very important	19
		Extremely important	43
	Rewards across the network of partners	Not at all important	1
		Not very important	19
		Important	25
		Very important	31
		Extremely important	21
	Personalized offers	Not at all important	1
		Not very important	13
		Important	28
		Very important	23
		Extremely important	32

Appendix 2 continued

Question	Answer options		Frequency
How important is each factor for you while making a decision to purchase brand tokens?	Opportunity to test new products/services/features	Not at all important	30
		Not very important	27
		Important	26
		Very important	11
		Extremely important	3
How do you feel in general about the following benefits provided by brands?	Membership in a closed VIP community	Very negative	0
		Negative	2
		Neutral	19
		Positive	51
		Very positive	25
	Access to a loyalty program	Very negative	0
		Negative	0
		Neutral	4
		Positive	13
		Very positive	80
	Rewards across the network of partners	Very negative	0
		Negative	0
		Neutral	3
		Positive	39
		Very positive	55
	Personalized offers	Very negative	0
		Negative	0
		Neutral	14
		Positive	14
		Very positive	69
	Opportunity to test new products/services/features	Very negative	3
		Negative	13
		Neutral	48
		Positive	27
		Very positive	6
How important are the following token characteristics for you while making a decision to purchase brand tokens?	Secure technology	Not at all important	1
		Not very important	3
		Important	16
		Very important	24
		Extremely important	53
	Transparency in transactions	Not at all important	4
		Not very important	15
		Important	24
		Very important	35
		Extremely important	19

Appendix 2 continued

Question	Answer options		Frequency
How important are the following token characteristics for you while making a decision to purchase brand tokens?	Uniqueness and exclusivity	Not at all important	10
		Not very important	10
		Important	14
		Very important	28
		Extremely important	35
	Limited supply	Not at all important	13
		Not very important	15
		Important	32
		Very important	21
		Extremely important	16
	Means of payment	Not at all important	14
		Not very important	8
		Important	37
		Very important	30
		Extremely important	8
	Potential profit	Not at all important	1
		Not very important	0
		Important	0
		Very important	12
		Extremely important	84
I will likely purchase brand tokens of a company or brand, which products/services I use more often	1		2
	2		19
	3		35
	4		20
	5		21
I will likely purchase brand tokens of a company or brand that I trust	1		0
	2		0
	3		2
	4		42
	5		53
If I purchase brand tokens of a company or brand, I will feel more connected to it	1		4
	2		5
	3		11
	4		35
	5		42
If I purchase brand tokens of a company or brand, I will be more interested in its success	1		0
	2		0
	3		7
	4		30
	5		60

Appendix 2 continued

Question	Answer options		Frequency
Brand token creation requires a lot of company's resources (financial, intellectual, timing). How likely will this fact influence your purchasing decision?	1		24
	2		21
	3		31
	4		17
	5		4
If the price of a brand token is higher than I expected, I may still want to make a purchase because of	Membership in a closed VIP community	Completely disagree	17
		Disagree	27
		Neutral	38
		Agree	11
		Completely agree	4
	Access to privileged offers	Completely disagree	2
		Disagree	1
		Neutral	29
		Agree	38
		Completely agree	27
	Uniqueness and exclusivity	Completely disagree	14
		Disagree	8
		Neutral	29
		Agree	34
		Completely agree	12
	Opportunity to test new products/services/features	Completely disagree	44
		Disagree	29
		Neutral	16
		Agree	6
		Completely agree	2
	Potential profit	Completely disagree	0
		Disagree	0
		Neutral	2
		Agree	41
		Completely agree	54
If you have a negative experience with a brand that issued brand tokens, you will more likely	Be dissatisfied with the product/service	Completely disagree	0
		Disagree	2
		Neutral	8
		Agree	47
		Completely agree	40
	Feel anger or frustration	Completely disagree	2
		Disagree	3
		Neutral	7
		Agree	42
		Completely agree	43

Appendix 2 continued

Question	Answer options		Frequency
If you have a negative experience with a brand that issued brand tokens, you will more likely	Feel a sense of injustice or unfairness	Completely disagree	4
		Disagree	10
		Neutral	42
		Agree	28
		Completely agree	13
	Lose trust towards the brand	Completely disagree	1
		Disagree	4
		Neutral	23
		Agree	43
		Completely agree	26
	Express negative feedback to the brand	Completely disagree	10
		Disagree	7
		Neutral	24
		Agree	34
		Completely agree	22
	Spread negative information about the brand to others	Completely disagree	3
		Disagree	14
		Neutral	27
		Agree	23
		Completely agree	30
If you have a positive experience with a brand that issued brand tokens, you will more likely	Be satisfied with the product/service	Completely disagree	0
		Disagree	0
		Neutral	3
		Agree	63
		Completely agree	31
	Feel a sense of loyalty towards the brand	Completely disagree	3
		Disagree	4
		Neutral	22
		Agree	48
		Completely agree	20
	Be more trustful to the brand	Completely disagree	0
		Disagree	1
		Neutral	36
		Agree	37
		Completely agree	23
	Express positive feedback to the brand	Completely disagree	16
		Disagree	1
		Neutral	44
		Agree	26
		Completely agree	10

Appendix 2 continued

Question	Answer options		Frequency
If you have a positive experience with a brand that issued brand tokens, you will more likely	Spread positive information about the brand to others	Completely disagree	1
		Disagree	0
		Neutral	32
		Agree	48
		Completely agree	16
Your gender	Man		59
	Woman		36
	Prefer not to say		2
	Other		0
Your age	18-25		23
	26-41		56
	42-55		17
	56 or older		1

Source: Appendix 1; author's calculations

Appendix 3. Supplementary data for analysis

Knowledge level	Token non-owners	Token owners	Total
1	22	1	23
2	22	3	25
3	6	16	22
4	4	16	20
5	2	5	7
Total	56	41	97

Source: Appendix 2; author's calculations

Trading experience	Token non-owners	Token owners	Total
No experience	25	0	25
Up to 6 months	21	2	23
Up to 1 year	4	6	10
Up to 2 years	4	16	20
Up to 5 years	2	10	12
More than 5 years	0	7	7
Total	56	41	97

Source: Appendix 2; author's calculations

Degrees of freedom	Cramer's V coefficient		
	weak	moderate	strong
1	0.10	0.30	0.50
2	0.07	0.21	0.35
3	0.06	0.17	0.29
4	0.05	0.15	0.25
5	0.04	0.13	0.22

Source: Akoglu (2018, 92).

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