THE TOKEN ECONOMY IN A DEVELOPING COUNTRY

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Abstract

The token economy is a decentralized digital economy enabled by blockchain technology based on the premise of controlling asset ownership with digital tokens (Zhao et al., 2019). The increase in digital asset ownership among Thai residents over the past year (Kemp, 2022) is indicative of the expansion of the token economy. Therefore, the purpose of this study is to analyze the factors influencing the token economy in Thailand. Multiple regression analysis has been used to analyze the data acquired from Thai investors who are at least 20 years old, hold financial instruments, and frequently access the Internet. The findings show that an individual's education level and monthly income, as well as their obtaining of investment news through mass, online, or print media or through meetings, have a statistically significant positive relationship to the token economy, while the savings rate has a negative one. The research proposes that these factors should be considered when a company prepares promotional activities, and that consumers with low savings rates should receive more attention because they are more inclined to embrace digital tokens.

Keywords: Token Economy, Digital Token, Cryptocurrency, Digital Asset, Blockchain

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1. INTRODUCTION

Digital platforms have become the backbone of economic ecosystems by enhancing the automation of corporate operations, favoring economies of scale, and facilitating enhanced consumer engagement (Pfster et al., 2022). *A business ecosystem* is a group of interacting economic actors, such as individuals and companies, whose actions influence one another (Jacobides et al., 2018). Digital platforms are frequently used to manage the ownership of assets, such as fiat currency and securities in online banking or electronic money systems, in which assets are represented by tokens (Pfster et al., 2022). Asset ownership management in this sense refers to the production of tokens that reference real-world assets (such as fiat currency) and the use of these tokens to prove and transfer asset ownership (Sunyaev et al., 2021). The principle of managing asset ownership with digital tokens is known as the token economy.

The token economy is a decentralized digital economy supported by blockchain technology (Zhao et al., 2019). Token economies relate to the economics of tokenized products and services. Blockchain technology facilitates the functioning of these economies without the need for intermediaries or third parties. Blockchain and token economies provide a way to bridge the gap between our increasingly global and virtual worlds and the real

ones. In a token economy, blockchain technology is employed to digitize tangible goods, verify their ownership, and possibly facilitate their exchange. Tokenizing an item that already exists in a digital form adheres to the same principles (Schweifer, n.d.). In the wake of blockchain technology, token offerings have arisen as a new method of business financing, in which corporations sell digital tokens reflecting some form of value to the general public, generally in return for cryptocurrency or fiat currencies. Within a few years, numerous sorts of tokens with distinct functions have been created. Their potential influence extends well beyond the financial industry and has far-reaching repercussions for businesses and the whole economy (Lesche et al., 2022). Digital reward tokens are highly powerful motivators for consumer loyalty. Their special ability is versatility. Traditional awards use one private ledger kept by the company that issues the incentive. When a rewards programme incorporates external partners, these ledgers frequently require human reconciliation and maintenance. In contrast, tokenized rewards are issued on a blockchain, with issuance and reconciliation following its rules and smart contracts (Romanowski & Jacklich, 2022). According to Attico and Chuvyrov (2022), companies may customize their business strategies by connecting their tokens in a Lego-like fashion. For instance, the 185-year-old jeweler Tiffany & Co. has made its special NFTiff token available to all CryptoPunks owners ("Tiffany offers exclusive jewelry", 2022). Similarly, an airline may offer a token that grants lounge access to guests who have proven their environmental consciousness or a corporation may provide charitable staff with vouchers redeemable for time off. Moreover, token economies allow enterprises to cultivate a community around their brand. This is already occurring in the realm of non-fungible tokens (NFTs). Token collectors are building groups and organizing meetups worldwide. In the fashion sector, digital tokens are utilized to generate anticipation prior to a product's release, by establishing a community of individuals who are excited about the product even before it hits shelves (Chan, 2022). On a large scale, it is token reinforcement.

Cryptocurrency, NFTs, and digital assets, including digital tokens, are the most popular and alluring digital trends among a large number of individuals globally, especially in Thailand. According to Kemp (2022), Thais own cryptocurrencies at a rate of up to 20.1%, greater than the global average of 10.1%, and the majority of these owners are males between the ages of 25 and 34. According to Siam Commercial Bank (SCB, n.d.), the chief executive officer (CEO) of Token X, Ms. Jittinun Chatsiharach, commented that although digital tokens are relatively new in Thailand, there is growth potential. In the near future, digital tokens will play a crucial role and become a part of the fundraising sector, allowing firms or organizations with innovative ideas or projects to collect cash through the issuance of digital tokens, often known as an initial coin offering (ICO). In Thailand, the Securities and Exchange Commission (SEC, n.d.) classifies digital tokens into two types: 1) investment and 2) utility tokens. Investment tokens are comparable to holding shares on a stock exchange. This signifies that the token holder invests in tokens in order to receive returns in the future in various forms as described by the unit issuer (e.g., profit or revenue sharing, etc.) and to obtain other rights that may be introduced (e.g., voting rights, etc.). For instance, SiriHub Investment Token is Thailand's first real estate token available to all investors. It will be an investment through leasing, in that SPV 77 Company Limited has purchased the Siri Campus building and rented it back to Sansiri for use as the company's headquarters, and will distribute tokens as a return to investors from the rental revenue (SPV 77 Company Limited, n.d.). In contrast, *utility tokens* are digital tokens that confer the right to exchange goods and services in accordance with the coin's terms. Typically, this denotes the extent to which products or services may be exchanged and a predetermined exchange rate. Alternatively, the token may be regarded as a means of payment (Luengnaruemitchai, 2022). The governance BNK Token issued by Token X, for example, is accepted in public voting activities for BNK48, a popular Thai pop girl group, and can be traded on the iAM48 application for company-specific goods and services (BNK48, 2022).

The rise of the token economy has been the subject of numerous studies conducted in various countries. However, limited research has focused specifically on the token economy in Thailand. Understanding the factors that influence the token economy in Thailand is essential for developing targeted strategies and policies as the increasing ownership of digital assets among Thai individuals reflects the growing influence of the token economy. Hence, understanding the factors that drive the token economy in the country is crucial. This study aims to investigate the key factors influencing the token economy in Thailand. The dependent variable, the *token economy,* is defined as the average ratio of token ownership to total financial assets. The sample consists of Thai investors aged 20 years old or above, holding financial instruments, and having regular Internet access. Multiple logistic regression analysis was conducted to identify statistically significant factors. The results revealed that education level, monthly income, sources of investment news, and savings rate are important determinants of the token economy. These findings can assist companies, organizations, and the government in tailoring their strategies to cater to the needs of digital asset investors and promote the growth of Thailand's token economy.

The article is organized into six sections to provide an overview of this paper. Section 1 serves as an introduction. Section 2 provides a review of the related literature. Section 3 describes the methodology. Section 4 presents the findings, while Section 5 discusses the findings. Section 6 includes the summary, limitations, implications, and suggestions for further research.

2. LITERATURE REVIEW

2.1. Token economy

Tokens are digital assets whose attributes and rights are often outlined in a whitepaper released on

the website of the issuer. Typically, tokens are issued by startups to raise capital for the development of their ideas (Arnold et al., 2019). However, unlike stock offers, token sales do not always imply the transfer of ownership to token purchasers. In the majority of instances, the token offers its holder access to whatever service or property the issuer will or intends to supply in the future (Hacker & Thomale, 2018). In many contexts, the token contains the right to vote, although the subject of the vote differs between tokens. In many circumstances, token issuers implicitly or explicitly guarantee holders of their tokens a profit (Shakow, 2017). Although tokens use the same technology as bitcoins, they have different purposes. Bitcoins were created to provide a currency alternative to those issued by governmental entities. No one paid the creator of Bitcoins to obtain more Bitcoins. Tokens are issued to raise capital, with the expectation that whoever buys them will be interested in obtaining whatever service or good the seller furnishes (Seetharaman et al., 2017). Tokens come with many combinations of rights and powers. In some cases, they provide the right to obtain a service in the future at a favorable rate, such as the infrastructure needed to mine bitcoins, but little more. In other cases, the issuer offers to buy back tokens, share profits and provide limited voting rights (Shakow, 2017; Sunyaev et al., 2021).

To describe the new economic phenomena of cryptocurrencies and other distributed ledger-based assets, it is necessary to clarify the notion of crypto-economics. Crypto-economics differs from traditional economics in three respects. First, it is sometimes referred to as a programmable economy, because blockchain technology may be utilized to build an economic system that reflects complexity and volatility. Such a system can inspire participant trust (Bose & Rushdi, 2023; De Filippi et al., 2020). A blockchain-based system lacks a central server and stores the original data on distributed servers, rendering them less susceptible to hacking and making it more difficult to modify data after they have been registered, hence ensuring irreversible trust (Nakamoto, 2008). Second, an incentive system for user engagement can be built. In crypto-economics, the property of currency may be coded, and human behavior can be controlled within a predetermined range by programming incentives. For instance, users can be incentivised to participate in activities that increase the value of the currency and improve system efficiency through the application of incentives (Kim & Chung, 2019). Lastly, a crypto-economic system is global. For example, bitcoin may be liquidated in most nations with simply a wallet address and used to make payments with quick response (QR) codes, while carrying the wallet address cannot be considered an unlawful transfer of foreign money (Frankenfield et al., 2022; Hunhevicz & Hall, 2020).

The creation of a token economy model is the essence of crypto-economics. *A token* is a means of trade that possesses value and usefulness in this context. It should be structured such that the features and management techniques of the token are related to user incentives, incentivising users to voluntarily contribute to the development of the system for crypto-economics to flourish sustainably (Conley, 2017). *Token economics* is a discipline designed for the systematic reward of a desired student or patient behavior (Kim & Chung, 2019). A token economy is a management system that encourages a desired behavior, and it has been broadly applied to shift the behavior of students and patients (DeFrancis, 2016; Michie et al., 2020). It is anticipated that supplying tokens, which can be exchanged for other products or rights, will encourage desired conduct. The ability to construct a model with programmable incentives is fundamental to the token economy. Moreover, the terms for supplying and exchanging a token should be made explicit (Hackenberg, 2009). In other words, the creator of the system should define "*desirable behaviors*" and provide appropriate incentives for each activity, as well as describe what users may do with tokens. If the system is well constructed, desirable behaviors will be reinforced.

In a token economy concentrating on cryptocurrencies, all members' rewards should be assessed equitably and distributed transparently. The Swiss Financial Market Supervisory Authority (FINMA) classifies tokens into three categories in its ICO regulations. The first category consists of payment tokens, which may be used as a payment or transfer method. The second category is utility tokens, which are designed to grant digital access to a blockchain-based application or service. The last one is asset tokens, which represent assets that replace equities and are utilized as dividend entitlements (FINMA, 2018). Patrick Byrne, CEO of Overstock.com, the world's first online shop to accept Bitcoin as payment, emphasized that all participants in the creation of a token economy system are entitled to a stake, and predicted that all assets will be tokenized in the future (Rooney, 2018).

As previously mentioned, crypto-economics offers programmable incentives, which are the foundation of the conventional token economy, using blockchain technology for cryptocurrencies. In crypto-economics, produced value, which was formerly monopolized by a handful of large corporations, may now be disbursed to individual community users, combining their social motivations and monetary value (Anand, 2018). Tokens promote transactions between users and aid in the expansion of communities. The worth of a token is contingent on the number of users and the quality of the platform (Cong et al., 2020). Tokens enable decentralized and independent communities, whose policies and norms are influenced by community members (Lundy et al., 2018). Tokens are key to the sustained growth and equilibrium of crypto-economics, as they induce desired participant behavior (Kampakis, 2018).

2.2. Factors influencing the token economy

This study's dependent variable, *token economy*, is defined as the average proportion of token ownership to total financial assets. Since investors have tokens, this may indicate that they accepted digital tokens before investing in them. The greater the proportion of tokens in a holding, the stronger the token economy. Consequently, the literature review examined the factors that influence the adoption of digital assets, which is crucial for the growth of the token economy.

The most prominent digital assets are cryptocurrencies. Thus, several studies have been conducted on the usage of digital currencies. As tokens are a form of cryptocurrency, this may be relevant to this research. Numerous works have shown that socioeconomic variables are related to the adoption of digital currencies. By applying the unified theory of acceptance and use of technology (UTAUT) model, Seong et al. (2021) analyze the influence of demographic factors, such as: 1) gender, 2) race, 3) age, 4) education, and 5) income, on millennials' attitudes and intentions to adopt virtual currency in Malaysia. A total of 304 responses were collected for the data analysis process. The data were analyzed utilizing the binomial logit qualitative response regression econometric model. Millennials' propensity to embrace cryptocurrencies is influenced by: 1) gender, 2) age, 3) education, and 4) income, but not by race. Singh et al. (2020) explored fintech adoption and utilization from the standpoint of technological acceptance, by using sub-concepts including: 1) the technology acceptance model, 2) UTAUT, 3) ServPerf, and 4) WebQual 4.0. An online questionnaire was employed to collect data from 439 frequent Internet users, which were subsequently analyzed through structural equation modeling and multigroup analysis. The statistics reveal that age has a significant impact on older consumers' beliefs regarding security, which determines their adoption of fintech.

Several factors, including information technology and decision support systems, have an impact on people's decision-making. In the past 50 years, information technology has become more interconnected and powerful (Power & Phillips-Wren, 2011). Recent advancements in user interfaces for social tools and a rise in the usage of the Internet have produced quick, geographically dispersed, mostly unmanaged, and invasive social networks. The evolution of information technology continues to create new opportunities (Mim & Ahmed, 2020). The advancement of social media has created brand-new methods for searching for and gathering information on the vast array of products and services available in the marketplace. It has enabled quick customer engagement and brand dialogue (Powers et al., 2012). Multiple studies have demonstrated the influence of Internet media on decision-making. DiStaso and Mccorkindale (2017) examined the impact of social media on four sectors: 1) healthcare, 2) banking, 3) personal travel (not business travel), and 4) retail. The statistics were collected from 1,783 Internet users. Social media was deemed crucial for decision-making and advice-seeking, despite differences in the level of influence among industries. Across all generations, 40% of the respondents indicated that social media affected their travel-related decisions. Social media platforms are also influential, albeit to a lesser degree, in other industries, with 25% of respondents citing their impact in financial services, 22% in retail, and 21% in healthcare. In addition, the results indicate that the majority of customers seek advice on social media. Also, 38% of respondents expressed a propensity to consult social media for travel advice. Nearly one-fifth (21%) of respondents claimed they would seek assistance when making decisions on financial services, healthcare, and retail purchases (18%) (DiStaso & Mccorkindale, 2017, p. 3).

This aspect was analyzed to discover whether it influences the acceptance of tokens, which is essential for the expansion of the token economy. This research defines this variable as the channels used to obtain investment news (mass, online, and print media, as well as meetings).

3. RESEARCH METHODOLOGY

3.1. Population and samples

The demographic consisted of Thai investors who were at least 20 years old, possessed financial instruments such as stocks, bonds, and mutual funds, and had frequent Internet access. This cohort was chosen because it was considered to have a sufficient level of maturity, investing knowledge and technical proficiency. Convenience sampling was used to select the sample of 1,280 investors. The sample size for this research was selected utilizing Yamane's formula with a significance level (p) of 0.5, precision levels of ±5%, and a confidence level of 95% (Uakarn et al., 2021). The computed minimum number allows for 384 participants. Therefore, the sample size of 1,280 participants is sufficient to generate accurate and precise outcomes while minimizing an abnormal data distribution.

3.2. Data collection

The data were collected using an online questionnaire, which was created and developed in the following manner. Primarily, scholarly papers, articles, books, and trustworthy websites pertaining to digital tokens and the token economy were researched and reviewed. Then, questions were constructed based on such documents, and a draft of the questionnaire was evaluated by five experts to ensure that all questions were appropriate in terms of context, language and structure by scoring the questionnaire to determine the value of the index of item objective congruence (IOC). The minimum permissible IOC score is 0.50 (Wangkawan et al., 2020). Nonetheless, this study generates IOC values between 0.80 and 1.00. Next, the questionnaire was developed until it received a sufficient IOC score, and then a pilot test with 30 non-sample participants was undertaken to determine the reliability by computing the Cronbach alpha coefficient. The alpha coefficient of the questionnaire that can be accepted must be at least 0.70 (Salloum et al., 2021). With an alpha value of 0.75, the final version of the questionnaire could be employed for data collection. The questionnaire was subsequently disseminated via many Internet platforms, including: 1) email, 2) LINE, and 3) Messenger. Before completing the questionnaire, the respondents were requested to provide permission for their responses to be utilized in published research. If they did not consent, they were able to choose not to complete the survey.

3.3. Data analysis

The data were analyzed using descriptive statistics (percentage, mean, and standard deviation) and

multiple regression analysis. The *token economy*, which in this study is defined as the average ratio of token holdings to all financial assets, was the dependent variable. There were two groups of independent variables: 1) demographic factors (*gender*, *education level*, *occupation*, *monthly income*, and *savings rate*), and 2) channels employed to obtain investment news (*mass*, *online*, and *print media*, as well as *meetings*). *Mass media* may include television, and radio, whereas social media sites like Facebook and Instagram, web forums, websites and YouTube are examples of *online media*. *Print media* includes newspapers, magazines, books and journals. *Meetings* include conferences, training sessions and other types of gatherings. Table 1 displays a summary of each independent variable.

Table 1. Independent variables

Independent variables	*Abbreviations*	*Measurements*
Gender	X_1	Male = 1, Female = 0
Education level	X_2	Scale
Occupation	X_3	Business person = 1, Others = 0
Monthly income	X_4	Scale
Savings rate	X_5	Scale
Obtaining investment news through mass media	$Channel_1$	Yes = 1, No = 0
Obtaining investment news through online media	$Channel_2$	Yes = 1, No = 0
Obtaining investment news through print media	$Channel_3$	Yes = 1, No = 0
Obtaining investment news through meetings	$Channel_4$	Yes = 1, No = 0

4. RESULTS

The token economy, the dependent variable in this study, is defined as the average holding's ratio of tokens to all financial assets. According to Table 2, the *token economy* is calculated by dividing the average value of the token assets by that of the total financial assets that a single investor holds, and the result is multiplied by 100. The average value of the token assets that a single investor holds equals 26,890.62 Thai baht (THB), while that of the other financial assets is THB49,406.25, meaning that the average value of the total financial assets that a single investor owns is THB76,296.87. As a result, the token economy is 35.24%.

Table 2. A token economy

Assets	*N*	*Mean*	*Std. deviation*
Other financial assets	1280	49,406.25	33,871.264
Token assets	1280	26,890.62	12,898.069
Token economy[a]	1280	35.24%	

Note: [a] $The\ token\ economy\ =\ (token\ assets\ \div\ total\ financial\ assets)\ \times\ 100.$

The model summary in Table 3 provides the R, R-square (R^2), adjusted R-square, and the standard error of the estimate, which are used to assess how well a regression model fits the data. The value of R is the multiple correlation coefficient, which may be viewed as a measure of the accuracy of the forecast of the dependent variable, in this context, the *token economy*. In this analysis, an R-value of 0.734 shows a satisfactory degree of prediction. The R-square is the coefficient of determination or the fraction of the variation in the dependent variable that can be explained by the independent variables. The R-square of 0.538 in this test shows that this model's independent variables explain 53.8% of the variability of the dependent variable, which is the *token economy*. However, because the R-square computed on sample data tends to overstate the R-square for the entire population, an adjusted R-square (R^2_{adj}) should be given, as it is a more accurate estimator of population R-square. R^2_{adj} of 0.535 thus shows that the independent variables included in this model explain 53.5% of the variability of the token economy.

Table 3. Model summary

Model	*R*	*R-square*	*Adjusted R-square*	*Std. error of the estimate*	*Durbin-Watson*
1	0.734[a]	0.538	0.535	13.06236	0.390

Note: a. Predictors: (Constant), Score, $Channel_4$, X_2, $Channel_2$, X_3, X_1, X_5, $Channel_3$, $Channel_1$, X_4.
Source: Authors' calculations.

Table 4 is the analysis of variance (ANOVA) table, showing the F-statistic which equals the ratio between regression mean square and residual mean square. This statistic is used to calculate the p-value. The table shows that the independent variables statistically significantly predict the dependent variable, the *token economy*, with $F(9, 1270) = 164.349$ and $p < 0.05$.

Table 4. ANOVA analysis

Model		*Sum of squares*	*Degrees of freedom*	*Mean square*	*F*	*Sig.*
1	Regression	252378.509	9	28042.057	164.349	0.000[a]
	Residual	216694.206	1270	170.625		
	Total	469072.715	1279			

Note: a. Predictors: (Constant), Score, $Channel_4$, X_2, $Channel_2$, X_3, X_1, X_5, $Channel_3$, $Channel_1$, X_4.
Source: Authors' calculations.

The statistical significance of each independent variable is depicted in Table 5. A β-coefficient is statistically significant if its "Sig." or p-value is less than 0.05 ($p < 0.05$). Hence, the variables influencing the *token economy* are *education level* (X_2) and *monthly income* (X_4), *savings rate* (X_5), as well as accessing *investment news through mass* ($Channel_1$), *online* ($Channel_2$), or *print media* ($Channel_3$), or through *meetings* ($Channel_4$). The model's equation is shown in Eq. (1).

$$Token\ economy = 28.6 + 8.9X_2 + 3.3X_4 - 4.6X_5 + 5.7Channel_1 + 0.4Channel_2 + 1.8Channel_3 + 1.3Channel_4 \quad (1)$$

Each β-coefficient indicates the average increase in costs associated with a one-unit increase in a predictor. Hence, the associations between the *token economy* and each independent variable are as follows. A one-unit rise in education level, such as from high school to a bachelor's degree, results in an 8.9% increase in the token economy. A growth in the token economy in this study means a higher proportion of the average holding's ratio of tokens to all financial assets. A 1-baht boost in monthly income leads to a 3.3% increase in the *token economy*, while a 1-baht increment in savings rate is associated with a 4.6% decrease in the *token economy*. A 1-unit surge in *accessing investment news through mass media*, *online media*, *print media*, and *meetings* results in a 5.7%, 0.4%, 1.8%, and 1.3% expansion in the *token economy*, respectively.

Beta coefficients or regression coefficients that have been standardized are useful for determining the relative strengths of individual predictors. Therefore, the strongest predictors in the coefficients table are *getting investment news through mass media* ($\beta = 0.406$), the *savings rate* ($\beta = -0.346$) and accessing *investment news through online media* ($\beta = 0.270$). The moderate predictors are *education level* ($\beta = 0.266$) and *monthly income* ($\beta = 0.231$), while the weakest ones are *obtaining investment news through print media* ($\beta = 0.113$) and *through meetings* ($\beta = 0.081$).

Table 5. Coefficients

Model	Unstandardised coefficients		Standardized coefficients	t	Sig.
	Beta	Std. error	Beta		
(Constant)	28.593	2.572		11.116	0.000
X_1	-1.302	0.899	-0.034	-1.449	0.148
X_2	8.927	0.762	0.266	11.709	0.000
X_3	1.753	0.915	0.041	1.916	0.056
X_4	3.340	0.402	0.231	8.317	0.000
X_5	-4.574	0.347	-0.346	-13.170	0.000
$Channel_1$	5.732	0.355	0.406	16.145	0.000
$Channel_2$	0.366	0.328	0.270	13.326	0.000
$Channel_3$	1.805	0.411	0.113	4.386	0.000
$Channel_4$	1.305	0.401	0.081	3.251	0.001
Score	2.884	0.319	0.187	9.036	0.000

5. DISCUSSION

This study explores the variables influencing the token economy in Thailand, which is defined as the average ratio of token holdings to total financial assets. According to the multiple regression analysis, the factors of *education level* and *monthly income*, in addition to *obtaining investment news through mass*, *online*, or *print media* as well as through *meetings* all have a positive correlation with the *token economy*, whereas the *savings rate* has a negative correlation. In contrast, *gender* and *occupation* have almost no effects on the *token economy*. Since the average proportion of token ownership to total financial assets defines the token economy, this may imply that investors accepted digital tokens prior to investing in them, given that they own tokens. The token economy grows stronger as the proportion of tokens in a holding increases. Therefore, the discussion of major aspects will centre on the acceptance of digital assets, which is essential for the expansion of the token economy.

In this research, an individual's education level is significant for the token economy. This aspect provides a mechanism for acquiring knowledge that may be applied in a number of scenarios and can make life simpler. According to Prihatini and Widakdo (2022), learning is applied to determining the best technique to execute a job-related activity. Lin (2011) also reveals that a person's educational background influences their behavior and outlook. The greater one's knowledge, the more wisely one performs his or her responsibilities. Therefore, a person with a high level of education possesses more self-efficacy. In other words, the higher the level of formal education, the greater the possibility of undertaking further study and obtaining superior job-related knowledge. This may be pertinent to investing. The amount of skill possessed by a trader may be determined by his or her level of experience. According to the findings of this study, the likelihood of growth in the token economy improves as formal education increases. It may be assumed that if investors obtain more information and have a deeper understanding of token investments, they will invest more in these assets. This would increase the expansion of Thailand's token economy.

The token economy is greatly influenced in a positive manner by income. This demonstrates that those with higher incomes are more likely than those with lower ones to accept tokens and invest in them. Consequently, the token economy is expected to grow in percentage terms. This may be because individuals with higher salaries are more willing than those with lower incomes to accept financial risks. This study is in line with Xi et al.'s (2020) findings that income is a major element in Australian cryptocurrency investing, with individuals who had previously engaged in the market earning between 1,000 United States dollar (USD) and USD2,500 per week. The findings are consistent with

the nature of cryptocurrencies, which enable those who have never invested beyond their retirement accounts to engage in something that offers the possibility of becoming wealthy.

The correlation between savings and the economy is statistically significant and negative. This shows that investors with more savings are more likely to reject digital token investments and slow down the progress of the token economy. An investor's amount of savings may be indicative of their financial acumen. According to Stolper and Walter (2017), higher levels of financial literacy are associated with more planning and behavior related to saving, greater stock market participation, and better judgements regarding the selection of financial products. Inadequate financial literacy, on the other hand, is associated with worse financial decisions, more expensive loans, exorbitant credit card spending, and excessive debt build-up. Numerous works demonstrate that financial knowledge predicts financial behavior. Based on a review of pertinent studies, Lusardi and Mitchell (2014) find that the greater a person's financial competence, the more likely they are to engage in stock markets and make stock investments. Hastings et al. (2013) demonstrate in their literature review that financial literacy impacts credit card use, as well as investments, home loans, and employee pension programmes. Several prior papers indicate that individuals with greater savings are more financially savvy and, therefore, more willing to invest in equities. Investing in digital tokens, however, may provide a different dynamic, as research indicates that investors with more savings are more likely to reject digital token investments, therefore hindering the development of the token economy. Individuals with greater savings could potentially invest in the stock market, but not in digital asset markets.

Accessing investment news from mass, web, or print media or through meetings is essential for a token economy to trend upward. The conclusion is that the media have an effect on the acceptance of digital tokens and the expansion of the token economy. Powers et al. (2012) demonstrate that the social media explosion has developed different ways to search for and gather data about the great variation of existing goods and services. It has also enabled rapid customer involvement and discussion with businesses. Smith (2009) also implies that digital connections have a growing impact on customer sentiments towards products and services, which in turn determine offline decisions. Consequently, the usage of social networks may potentially influence investors' acceptance of digital assets and the expansion of the token economy.

6. CONCLUSION

The present study employed multiple logistic regression analysis to investigate the factors influencing the token economy among Thai investors, with the aim of addressing the research objectives. Specifically, the analysis examined the potential impact of demographic parameters (i.e., gender, level of education, occupation, monthly income, and savings rate) and the various channels utilized to access investment news (i.e., mass media, web-based platforms, print media, and meetings) on the token economy in Thailand. The term "*token economy*" in this research pertains to the average proportion of token ownership relative to total financial assets. The findings of this investigation revealed that education level and monthly income, along with the utilization of mass media, online platforms, print media, and meetings to obtain investment-related information, exhibit a positive correlation with the token economy. Conversely, the savings rate exhibits a negative correlation. On the other hand, gender and occupation demonstrate minimal influence on the token economy. Based on these results, it is recommended that entities involved in the issuance of digital tokens take into consideration their clients' educational background, income level, savings rate, and the communication channels employed to disseminate company information when formulating promotional activities. This consideration is necessary due to the substantial influence these factors exert on digital token investment and adoption, which ultimately impact the growth of the token economy. Furthermore, given that the expansion of the token economy diminishes with increasing savings rates, it is advisable for companies to concentrate their marketing and development efforts on attracting new consumers who possess lower savings rates, as they are more inclined to embrace digital tokens.

The implications of these findings are twofold. Firstly, businesses and organizations operating within the token economy can leverage these insights to enhance their comprehension of the target audience and devise more effective marketing strategies. By aligning their approaches with the identified factors, these entities can attract and engage a wider range of users. Secondly, policymakers within the governmental sector of Thailand can utilize these results to formulate policies that promote investment in digital assets. By fostering a supportive environment for digital asset investment, Thailand's token economy can experience sustained and substantial growth.

In conclusion, this study contributes to the existing knowledge regarding the determinants of the token economy in Thailand. The identified factors, namely education level, monthly income, sources of investment news, and savings rate, offer valuable insights for companies, organizations, and policymakers. By incorporating these factors into their decision-making processes, stakeholders can deepen their understanding of consumers, develop targeted strategies, and foster the expansion of Thailand's token economy.

It is important to acknowledge a limitation of this study, namely the exclusive focus on analyzing the association between the components and the token economy without delving into the underlying relevance of each element. Thus, future research endeavors may benefit from employing in-depth interviews or focus group interviews. Such qualitative approaches could shed light on the motivations behind investors' decisions to invest or refrain from investing in digital tokens and other digital assets, which are pivotal to the growth of the token economy. Additionally, conducting interviews with specialists in the field of digital asset investments or related domains may facilitate a comprehensive understanding of the investment patterns pertaining to digital tokens.

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