

Bliss Effect of Tax Payers on Adopting Blockchain Technology

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Abstract:

Research aims: This study aimed to investigate the intention to adopt blockchain technology (BT) from taxpayer's perspective.

Design/Methodology/Approach: The data is collected from an online survey with 135 effective respondents and analyzed using Partial Least Square (PLS) for model and hypothesis testing

Research findings: It is found that perceived enjoyment can mediate the effect of autonomy on intentions to use blockchain technology in tax administration. Although, it is proven that autonomy has a greater direct effect than the indirect effect of perceived enjoyment as a mediation.

Theoretical contribution/Originality:

Practitioner/Policy implication: The findings of this study offer a practical guide for tax authorities as regulators in designing the implementation of BT in the tax administration system that will increase transparency and efficiency.

Research limitation/Implication: There are several limitations to this study. First, the model and hypothesis in this study have never been researched as one model. Second, some respondents only have a hazy understanding of how the blockchain works. Future research may be able to broaden the research by investigating the outcomes of blockchain technology adoption.

Keywords: Adoption of Blockchain Technology, Tax, Self-determination Theory, Technology Acceptance Model, Autonomy, Perceived Enjoyment, Behavioural Intention



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Introduction

The presence of new technology always increases research effort to discover the motivation that drives users to use the technology. Furthermore, understanding that human nature can be expressed actively, passively even constructively, or slowly becomes a strong foundation for understanding the motivation behind an action. In general, based on Theory Acceptance Model (TAM) the effective implementation of any information technology or information system is dependent on the user acceptance (Florenthal, 2019; Rakhmawati et al., 2019; Rifat et al., 2019). However, several studies explain TAM's weaknesses, which is that it does not provide adequate insight about individual perspectives on the new system and ignores the relation between use and behavioral intention (Chao, 2019; Tsai et al., 2017). On the other hand, the intrinsic approach

Introduction

is still not widely used in technological studies of individual behaviour. Meanwhile the failure of employees to comply the information security policy determines the success of information technology implemented in an organization (Gangire et al., 2019). Martela et al., (2021) Use the Self Determination Theory (SDT) approach to understand a person's intrinsic motivation that is responsive to regulations in order to create an autonomous condition where a person does these tasks consciously, wholeheartedly, and joyfully. Ryan & Deci (2000) as the initiator of SDT theory, focuses on the search for motivation based on one's personality that is associated with that person's basic need. SDT start off with the assumption that the three primary psychological needs are autonomy (which emphasize personal support to do something), competence (the need to feel effective in interacting with their surrounding, and relatedness (the need to feel meaningfully connected with others). The added value of SDT theory is it differentiates between the autonomous motivation and controlled motivation, which will indicate the continuation of a person's behavior whether to change or comply. This control motivation is influenced by demands, pressures, and obligation (Ryan et al., 2021). Taxpayers who comply with tax provisions due to pressure indicate that tax compliance is not voluntary and is driven by extrinsic motivation rather than intrinsic motivation.

In taxation, when the government use external regulations with a heavy penalty and strict supervision approach, taxpayer trust and compliance will be decreased. (Hofmann et al., 2017). Compliance under strict regulatory control relies more on extrinsic factors that give rise to controlled motivation. Controlled motivation means that the person engages in certain actions because they feel compelled and pressured to do so. In the SDT concept, when the taxpayer's autonomy goes well, the taxpayer will carry out tax provisions voluntarily free from pressure. The explanation above is confirmed by (Widyarini, 2021)) who proves that there is an influence between autonomy and competence on the behavioral intention to adopt Self Service Technology with the support of the availability of information quality, system quality, and service quality. Likewise Fathali & Okada (2016) where the SDT dimension has an effect on understanding the basic psychological needs of students in choosing to continue their intention to learn language independently using technology. This study is interesting because it investigates the motivation of taxpayers if the tax authorities implement BT. Blockchain technology is one of the results of the development of digital information technology which is part of the presence of the industrial revolution 4.0. Blockchain technology was created as a massive data repository that categorizes data based on its type and characteristics. BT is similar to an open ledger where all transactions are recorded in it and anyone can connect, send, or authenticate transactions in it (Heidari et al., 2017). Following the simple description of blockchain technology above, tax authorities can use blockchain technology to improve taxpayer compliance (Fatz et al., 2019). Furthermore, Fatz et al. (2019) explain that the benefit of blockchain technology for tax authorities is the availability of decentralized and real-time taxpayer data from relevant tax documentation, allowing tax examiners to test taxpayer compliance in a short period of time.

The level of taxpayer compliance in carrying out their tax obligations will be greatly influenced by taxpayers' trust in tax officers. According to (Mukoffi et al., 2022), tax justice has a significant impact on taxpayer compliance, as taxpayers will feel more equitable regional development and receive more equitable services from tax officials when paying taxes. Corruption is one of the forms of injustice felt by the society, according to Law No.31/ 1999 as amended by Law No.20/ 2001, corruption is defined as anyone who unlawfully commits an act of enriching himself or another person or a corporation that can harm state finances or the state economy. Corruption is endemic in Indonesia, which has risen to the top of the corruption pyramid when compared to other countries (Sabani, 2020). The result of a manual process in the tax administration system is tax fraud acts that reduce the amount of income and the mode of reporting overpaid taxes. As a result, the OECD explains in its report that technology is a solution that can be proposed to anticipate non-compliance that utilize the advantage of technology (OECD, 2017). Blockchain technology is one of the technologies that can be proposed to anticipate tax fraud. The effects of adopting blockchain technology for taxpayers' compliance will bring significant differences. Many studies discuss the adoption of blockchain technology, but no studies on taxpayers' perspectives as parties carrying out tax compliance in adopting blockchain technology have been undertaken thus far. In this study, we discussed the desire of taxpayers, which arise from within themselves, to adopt blockchain technology by seeing all the pros of using blockchain technology. Apart from that, we also discussed whether, in adopting blockchain technology, taxpayers need to feel the "bliss" before wanting to adopt blockchain technology. This study's findings will show taxpayers' reactions or how much they want to adopt blockchain technology. A large portion of the study focuses solely on the definition and application of blockchain technology in various nations (Yayman, 2021). Setyowati et al. (2020) also discuss how blockchain technology can be applied to Indonesia's VAT system, mainly to e-invoices, where the system is relatively new. In addition, Hartono & Budiarsih (2022) discuss applying blockchain technology to crypto asset transactions. Therefore, many studies on blockchain technology in Indonesia are concerned with its implementation and effectiveness rather than analysing taxpayer revenue from a motivational perspective. Therefore this research is aimed at filling this gap.

Information technology reform is a must for regulators such as the Directorate General of Taxes (DGT). The tax regulation reform package, with the presence of the Tax Harmonization Law Number 7 of 2021, needs to be supported with administrative aspects in the form of information technology support. In Indonesia, information technology has been implemented sustainably in tax administration. For example, Blockchain technology is used for fulfilling VAT obligations by uploading digital invoices into a country's tax reporting system. The invoice will be verified and inputted into a blockchain-based network that can be accessed by the tax administration and state auditors who need it. Such a system allows VAT payments to be automated and creates a transaction history that authorities can easily access.

Tax authorities, through this research, can understand whether taxpayers use information technology such as BT based on personal will by involving internal considerations that tax information technology increases efficiency and effectiveness in

fulfilling tax obligations. A person's behaviour response will be determined based on his desires. This study directly examines the autonomic factor as a component of intrinsic motivation based on SDT to the intention to use BT. The study was motivated by the statement (Ryan & Deci, 2000), that even while a person is limited by a set of rules, there is a strong reason behind its implementation so that a person feels or perceives enjoyment in carrying out these provisions. This study is also inspired by Lee et al., (2015) which examines how a person's motivational determinants such as autonomy indirectly affect intentions through the mediating role of perceived enjoyment. PE is an intrinsic motivation that determines how far a new information technology can provide pleasure (Chao, 2019; Luo et al., 2021). Previous researches has confirmed the effect of perceived enjoyment on behavior intention to use information systems (Atombo et al., 2017; Tsai et al., 2017). According to previous study, perceived enjoyment is an important predictor of behavior intention. A person intends to act when the action will be pleasurable, even if it is risky.

Through the SDT approach, the study will uncover the motivation behind taxpayers' decision to use blockchain technology based on a basic psychological need that needs to be met, namely the need for autonomy, that is taxpayers' compliance decision without any coercion. Is the tax environment through the existence of a taxation system, namely tax policies, tax laws, tax administration, and the tax officer itself as a tax environment able to provide fulfillment of the basic psychological needs of taxpayers? The fulfillment of these psychological needs becomes the basis of values that are owned by taxpayers as individuals, which will ultimately shape their behavior. Another strong basis behind this research is the phenomenon of information technology, which has become a central issue in accounting and taxation. For example, in the field of accounting, blockchain technology implementation has become a research trend because it can change the role of accountants and auditors, also to understand the opportunities and challenges of blockchain technology applications and regulation of crypto assets (Garanina et al., 2021).

5

Based on the description above, the model developed in this study aims to synthesize the SDT constructions into the concept of user acceptance of the information system used by the Technology Acceptance Model (TAM) so that it can explain the determinants of behavioral intentions in using blockchain technology. Perceived enjoyment becomes the central to test how far perceived enjoyment mediates the need for autonomy and use intentions. Furthermore, perceived enjoyment is used as a direct predictor of the need for autonomy itself. In the context of this research, taxpayers have a need to feel autonomous about their choices. In other words, humans have a need for self-determination. The results of this study provide an important contribution to the tax authorities to ensure the fulfillment of the basic needs of taxpayers before implementing tax policies and provisions, so that taxpayers have a high intention to behave as expected, especially related to blockchain technology. This study provides an important implication that tax authorities in introducing technological innovations as part of tax administration should focus on aspects related to excitement when aiming to introduce blockchain technology applications that are going to be widely accepted by taxpayers.

Literature Review and Hypotheses Development

⁶ Taxpayers' trust in tax officers will significantly affect the level of compliance of taxpayers in carrying out their obligations in paying taxes. In Mukoffi et al. (2022), tax justice greatly influences taxpayer compliance, where taxpayers will experience more equitable regional development and get fairer services from tax officers when paying taxes. One form of injustice that the people themselves feel is corruption. Where corruption, according to Law No. 20 of 2001 about an amendment to Law No. 31 of 1999 concerning The Eradication of Criminal Acts, is every person who unlawfully commits an act of enriching himself or another person or a corporation that can harm state finances or the country's economy. Corruption itself is endemic in Indonesia, where corruption in Indonesia has reached the top level of the pyramid compared to other countries. It can be seen from Transparency International, Indonesia itself in 2021 is at level 96 with a score of 38, where the value is calculated from 0, which means a very high level of corruption, to 100, which means no corruption.

⁷ As in technological innovation, we step up the 4.0 industrial revolution. It is signed by the appearance of new technologies such as artificial intelligence, the Internet of things, robotics, and blockchain. Blockchain is a very different and disruptive technology in the 21st century (Falwadiya & Dhingra, 2022). The blockchain system was initially used in cryptocurrency, known as bitcoin. The use of the blockchain is for recording and verifying the existing transactions, and if it is further developed correctly, it can be used and utilized in various fields (CC Lee, 2019). It is also in line with Falwadiya & Dhingra (2022) opinion that states the features of the blockchain can be used by public organizations, companies, and other organizations to authorize transactions and update data in sync in the same network. Transaction data in the blockchain will also be distributed in a decentralized manner and processed by data management technology. Then, it results in trusted, guaranteed, integrated, and anonymized data without involving third parties to control the data (CC Lee, 2019). There are four basic concepts in recognizing blockchain (Gupta, 2009), namely a distributed shared ledger where all recorded transactions cannot be deleted and edited. Permission, the members inside this network have unique permissions, such as unique code to access a network. Consensus, It is a mutual agreement between members in a network. Last, the smart contracts, it formed as a set of rules stored by the blockchain and automatically executed as part of a transaction.

There are four basic concepts in recognizing blockchain, according to Gupta (2009). First, shared ledger which will record all transactions and the written transactions cannot be deleted or edited, and everyone on the network can access it. Second, permission that makes member of the network obtains permission. It requires unique code to access the network. Third, consensus, an agreement between participants in the network so that only one transaction is verified and distributed to all nodes. Last smart contracts which is a set of rules stored by the blockchain and executed automatically as part of a transaction.

The effectiveness of implementing blockchain technology in taxation is heavily reliant on numerous uncontrollable elements, such as the motivation of the taxpayer, which is

split into intrinsic and extrinsic motivation (Nandi & Mehendale, 2022). In this study, autonomy and perceived enjoyment are used as determinants of behavioral intention, where the two variables are closely related because both are intrinsic motivation (Achyari, 2009). Because SDT and TAM have been tried and approved as a method of examining the adoption of new technologies, they are integrated into one in the study (Nandi & Mehendale, 2022). Integrated study about SDT and TAM to identify behavioral intention can be seen in numerous research, including (Linares et al., 2021) which incorporates both theories, where the variables are autonomy and perceived enjoyment.

Widyarini (2021) explained that SDT is a theory that explains the motivation and the individual psychological roles in creating motivation in individuals to act according to their own will. Motivation can be influenced by intrinsic motivation, namely needs, activities, and values, or extrinsic motivation that comes from outside, such as rewards and punishments. Extrinsic motivation is the motivation that comes from outside. It can be illustrated that when an individual is not interested in what he is doing, it will decrease their motivation for what he is doing (Knee et al., 2013). Deci (1971) has experimented that there is extrinsic motivation, such as the presence of prizes or awards for certain attitudes. The results show a negative impact on self-motivation, compared to motivation triggered by prizes or rewards for certain attitudes. Widyarini supports this statement that motivation comes from the self, but if there is extrinsic motivation, such as rewards or punishments, then the result of motivation will be negative. SDT is used to measure someone who is intrinsically motivated. The individual tends to learn intensely, persistent, and diligent, and it will give better results than people who are not intrinsically motivated (Martela, 2020). SDT has three basic needs to achieve individual intrinsic motivation. The first is competence, which is an ability to master some things effectively. The second is relatedness or interconnected feeling. The last is autonomy, which is the ability to make decisions for themselves without interference from others (Ryan & Deci, 2008). Indeed, the variable that will be used in this study is autonomy.

Racero et al., (2020) state that autonomy is closely related to the self. It is defined as an action based on our choice or self-control. Autonomy produces a feeling that impacts individual behavior and triggers someone to take action voluntarily. Autonomy can also lead to better performance in individuals interested in their work. The existence of a supportive autonomy environment will also increase individuals to behave specifically. Perceived enjoyment has a relationship with intrinsic motivation. Y. Lee et al., (2015) state that there was a positive relationship between Autonomy and Perceived Enjoyment. It is also in line with Luo et al., (2021) statement that the positive relationship between Autonomy and Perceived Enjoyment results in individuals not feeling pressured to make their own decisions. Then, the individuals can feel high Perceived Enjoyment. Not only those statements but also the research by Kabir (2021) results that Autonomy positively and significantly affects Behavioral Intention. Therefore, the hypothesis is formulated:

H1: Autonomy has a positive effect on Perceived Enjoyment.

H2: Autonomy has a positive effect on Behavioral Intention.

Technology Acceptance Model (TAM) is one of the models that can predict how users behave toward new technology. In technological innovation, TAM can provide a plausible explanation for society's psychological mechanisms in adopting technology. It is such as the user's perspective on the certain technology, what factors will affect users, and how the intention of users to accept the existence of a technology (Shin et al., 2022). Thus, TAM is often used to describe or predict how the behavior of potential users in adopting new technologies in various fields (Shin et al., 2022). TAM is widely used to investigate individual intentions to adopt blockchain. For example, in research conducted by Khazaei (2020) and Gao & Li (2021), they used TAM to study individual acceptance toward blockchain to get significant results. Behavioral intention is defined as how far an individual consciously conducts or does not conduct a certain behavior in the future (Shrestha & Vassileva, 2019). Two variables become the community's key in accepting the technology: perceived usefulness and perceived ease of use (Man et al., 2021).

An activity is considered enjoyable in personal rights regardless of the results received (Sarosa, 2019). Thus, it can be said that perceived enjoyment, often known as intrinsic motivation, is the personal enjoyment felt from behavioral experiences for its own sake (Hu et al., 2022) and (Hasan et al., 2021). Perceived enjoyment is often included in the TAM model as one of the basic factors influencing the user's intention. The enjoyment felt by the user can also be felt through direct interaction with the factors that will be used (Chen et al., 2016). It can have a side effect on the attitude and willingness of users to use new technology positively (Oyman et al., 2022). The research results of Pipitwanichakarn & Wongtada (2019) and Gao & Li (2021) stated that perceived enjoyment has an important role in technology users' intention to adopt blockchain technology. Therefore, the hypothesis is formulated:

H3: Perceived Enjoyment has a positive effect on Behavioral Intention.

Mediation is the third variable that intervenes with exogenous and endogenous variables. In this study, perceived enjoyment is proposed to mediate between (1) autonomy and (2) behavioral intention. However, there is no research about the mediation of perceived enjoyment between autonomy and behavioral intention, several studies, such as Hasan et al., (2021), use perceived enjoyment as a mediation on buyer intentions, Baños et al., (2020) used behavioral intention as a mediator of autonomy. Septiana et al. (2020) used behavioral intention to mediate perceived enjoyment. Thus, it is related to research on perceived enjoyment as a mediating variable between autonomy and behavioral intention.

H4: Perceived Enjoyment mediates the influence of Autonomy on Behavioral Intention.

Research Method

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The sample of this study was taken by using a purposive sampling technique. It is applied by distributing questionnaires with the criteria that the respondent is an Individual Taxpayer (WPOP) with an Individual Taxpayer Identification Number (NPWP). Some have a job as an employee, freelancers, or business people. A total of 153 questionnaires were collected, including 135 valid questionnaires with an effective questionnaire

response rate of 88.23%. The questionnaire will be used ³ to determine the factors that influence the intention of individual taxpayers to use blockchain technology in the tax system in Indonesia. The questionnaire was made using a Likert Scale. The answer value consists of numbers 1 to 5, provided that number 1 strongly disagrees, number 2 disagrees, number 3 neutral, number 4 agrees, and number 5 strongly agrees. This study processed and analyzed the data using Structural Equation Modeling (SEM) with Partial Least Square (PLS)-SEM approach.

Table 1. Demographic Profile of Respondent (n=135)

Variables	n	Percentage (%)
Gender		
Male	65	48.4%
Female	70	51.6%
Age (Years)		
18 to 25	77	56.9%
26 to 30	26	19.0%
31 to 35	16	11.8%
36 to 40	5	3.9%
41 to 45	4	2.6%
>46	8	5.9%
Understanding of Blockchain		
Yes	84	62.1%
No	51	37.9%

Self-determination theory is a motivation theory that explains individuals' acts determined and motivated by themselves. The motivation of this individual will increase if those three needs are met, one of which is autonomy. Autonomy is an internal sense of approval of one's behavior. Autonomy is measured by indicators of self-control, interest, and self-confidence (Micarelli et al., 2016).

The perceived enjoyment that someone has will influence the behavioral intentions of taxpayers in adopting blockchain technology-based applications for tax activities. Perceived enjoyment is an intrinsic motivation that assumes that using technology is enjoyable without considering the performance of the technology. Perceived enjoyment in this research is measured by indicators of user enjoyment and satisfaction in using blockchain technology (Balog & Pribeanu, 2010).

The behavioral intention in TAM depicts the person's intention to use technology. The discourse from the government in using tax based on the blockchain system does not exist. Therefore we examine the behavioral intention, not the actual use of blockchain technology for taxes. Behavioral intention is measured by indicators of interest in using technology (Balog & Pribeanu, 2010; Chayomchai, 2020)

Result and Discussion

² The framework used in this study is Structural Equation Modeling (SEM). The research data will be analyzed in two stages: Confirmatory Factor Analysis (CFA) and SEM. In the first stage, the researcher uses CFA to test the hypothesis between the indicator variables and the latent construct as the basis. In short, CFA is an analysis used to assess measurement theory. The second stage is SEM, which tests whether there is meaning in the theoretical structural relationship and the construct.

The questionnaire was online-distributed got as many as 135 effective respondents. Respondents consisted of 48.9% male and 51.1% female. All respondents have taxpayer identification Numbers (NPWP). A total of 45.2% of respondents live in Surabaya, and other respondents live in other cities. Most of their occupations are entrepreneur, private worker, and accountant.

The research by Kabir (2021) has the same goal as this research, which is to see the intention to adopt blockchain technology for the transparency and effectiveness of the tax system. However, there are some differences between our study and that of Kabir (2021). The first difference lies in the jurisdictions studied, where we examine taxpayers with Indonesian citizenship and taxpayers living in Indonesia. The next difference is in the variables that are the object of research. Research by Kabir (2021) does not use any mediating variable that might be give such effects. While our research discusses the desire that arises from the taxpayers having the intention to adopt blockchain and whether to have this intention, even though there is encouragement from within themselves, taxpayers need to feel happy. In this case, we discuss the direct effect of autonomy from SDT and indirect effects from perceived enjoyment as the mediating variable from TAM to the intention to adopt blockchain technology.

Outer Model Analysis

² Table 2. Reability and Convergent Validity

Variable	Statement	Loading Factor	Composite Reliability	Cronbach's Alpha	AVE
Autonomy (AM)	If the process of reporting, depositing and paying taxes is done using blockchain technology, it will be very helpful for me.	0,799	0,927	0,902	0,719
	The application of blockchain technology will make me more motivated to complete my tax obligations.	0,865			
	If Blockchain Technology is implemented, I will enjoy registering, reporting, depositing and paying taxes.	0,862			
	I will be happy if the process of implementing tax administration is carried out	0,816			

1 Mangoting, Nuralim, Setiawan
 Efek "Bliss" Wajib Pajak Dalam Mengadopsi Blockchain Technology

	using blockchain technology.				
	I will feel comfortable using blockchain technology in carrying out my tax obligations.	0,895			
Perceived Enjoyment (PE)	Using an integrated application based on Blockchain Technology to carry out tax obligations is fun.	0,87	0,922	0,887	0,747
	I enjoy using an integrated website or application based on Blockchain Technology to carry out my tax obligations.	0,9			
	I feel excitement when using a website or application based on Blockchain Technology to carry out tax obligations.	0,818			
	The actual process of using just one website or application based on Blockchain Technology for taxation is fun.	0,868			
Behavioural Intention (BI)	I plan to use a website or application based on Blockchain Technology when it becomes available.	0,919	0,944	0,93	0,707
	I plan to use Blockchain Technology-based websites or applications for taxation when they become available.	0,865			
	I plan to use a website or application based on Blockchain Technology to speed up activities.	0,779			
	I plan to use a website or application based on Blockchain Technology as a tool for the tax system.	0,824			
	I plan to use a website or application based on Blockchain Technology for taxation when it becomes available.	0,857			
	I want to continue using websites or applications based on Blockchain Technology for taxation.	0,816			
	I plan to recommend a website or application based on Blockchain Technology to carry out tax obligations to other parties or people.	0,816			

2 The outer model is a test to determine whether the research instrument consistently presents the measurement concept. The outer model was tested using convergent validity, discriminant validity, reliability, and internal consistency. AVE (Average Variance Extracted) is used to measure convergent validity. Cronbach Alpha and composite reliability were used to test internal consistency. Discriminant validity is measured as mentioned in Table 1 (Hasan et al., 2021) and (Mangoting et al., 2021).

2 The reliability test is measured by a loading factor that has a value of more than 0.7. The average variance extracted (AVE) is tested with a value of more than 0.5. It means 50% or more of the variance of the explained indicator. The reliability test is measured to **3** prove the instrument's consistency and accuracy in measuring the construct. It is tested with composite reliability and Cronbach's Alpha with the provision that the value must be higher than 0.7 (Ghozali & Latan, 2015). The variables in this study have met the requirements of convergent validity and reliability tests because they have exceeded the provisions above, which can be seen in Table 1.

Table 3. Discriminant Validity

Variabel	Autonomy	PE	BI
Autonomy	(0,848)	0,821	0,787
PE	0,821	(0,864)	0,762
BI	0,787	0,762	(0,841)

Discriminant validity measures different latent variables that should not be highly correlated. The requirement of discriminant validity is cross-loading, where the other constructs (cross-loading) must be lower than the construct. Besides, there is a square root of AVE where the construct must be higher than latent variables in the same column (Sholihin & Ratmono, 2013). Table 2 has met the criteria of discriminant validity.

Inner Model Analysis

2 The inner model is the second stage in the PLS method, which aims to determine the effect of the independent variable on the dependent variable. This effect can be seen in the p-value, where the hypothesis is accepted and considered to have an effect if the p-value is <0.05 (Meyer et al., 2017). Inner model testing includes Average Path Coefficient (APC), Average R-Squared (ARS), and Average Block VIF (AVIF). APC and ARS have p-value <0.05 and AVIF <5 (Widyawati, 2018). **2** Based on the results in table 3, it can be seen that APC and ARS in this study have p-value <0.05 and AVIF <5. Indeed, it can be concluded that the inner model has met the criteria.

Table 4. Model Fit and Quality Indices

	Index	P-value	Criteria	Explanation
APC	0,560	< 0,001	P < 0,05	Acceptable
ARS	0,686	< 0,001	P < 0,05	Acceptable
AARS	0,683	< 0,001	P < 0,05	Acceptable
AVIF	4,323		≤ 5, Ideal, ≤ 3,3	Acceptable
AFVIF	3,392		≤ 5, Ideal,	Acceptable

		≤ 3,3	
GoF	0,705	Small ≥ 0,1	Large
		Medium ≥ 0,25	
		Large ≥ 0,36	
SPR	1,000	≥ 0,7, Ideal = 1	Ideal
RSCR	1,000	≥ 0,9, Ideal = 1	Ideal
SSR	1,000	≥ 0,7	Acceptable
NLBCCR	1,000	≥ 0,7	Acceptable

Hypothesis testing

Table 5. Model Fit and Quality Indices

Direct Effect	Path Coefficient	P-value
Autonomy → PE	0,84	< 0,01
Autonomy → BI	0,57	< 0,01
PE → BI	0,27	< 0,01

From the first hypothesis, it can be seen that the autonomy variable on perceived enjoyment has a P-value <0.01 and a path coefficient of 0.84. So the results of the first hypothesis (H1) are accepted. It shows that the higher the fulfillment feeling of taxpayer autonomy, the significant positive effect on the perceived enjoyment of the taxpayer. It is in line with (Luo et al., 2021), who state that individuals who are not under control or not suppressed in accepting the technology will feel higher enjoyment. (Y. Lee et al., 2015) said that the more individuals can control themselves, they will get the higher pleasure feeling in using technology. The results of this study support the Self-Determination Theory, which reveals that intrinsic motivation arises from fulfilling autonomy needs.

2 The results of the second hypothesis (H2) in Table 4 show that autonomy has a significant positive effect on the behavioral intention with a p-value <0.01 and a path coefficient of 0.57. It shows that the higher fulfillment of the autonomy feeling of taxpayers who adopt blockchain technology voluntarily results in taxpayers' higher intention to adopt it. It is in line with (Kabir, 2021), where the more taxpayers have freedom or control, the higher the taxpayer's intention to adopt blockchain technology. Widyarini (2021) also said there is a relationship between autonomy and behavioral intention to use technology.

5 The results of the third hypothesis (H3) are accepted. The perceived enjoyment variable has a significant positive effect on behavioral intention. It is proven by the p-value <0.01 and the path coefficient of 0.27. It means that the higher the enjoyment and pleasure of taxpayers in using blockchain technology, the greater the behavioral intention to adopt

blockchain technology for taxes. This study's research results align with (Gao & Li, 2021), where the perceived enjoyment of taxpayers will affect the behavioral intention to adopt tax administration using blockchain technology. Septiana et al. (2020) and Shrestha & Vassileva (2019) also state that user convenience in using technology is very influential, so perceived enjoyment is an important construct related to taxpayers' intention to adopt blockchain technology.

The results of the fourth hypothesis (H4) will be seen by testing the mediating effect as follows:

SEM can be used to determine the mediating effect and quantify the mediating variable's power (Zhao et al., 2010). In this study, the parameter of mediating effect calculated directly using WarpPLS. Explained by Zhao et al. (2010), there are classifications of the type of mediation or not mediation is as follows:

- a. Complementary mediation, where indirect effect (axb) also ⁴ direct effect (c) are significant and both point at the same direction.
- b. Competitive mediation, where indirect effect (axb) also direct effect (c) significant but they point in opposite directions.
- c. Indirect-only mediation, where indirect effect (axb) significant but the direct effect (c) not significant.
- d. Direct-only non-mediation, where indirect effect (axb) not significant but the direct effect (c) significant.
- e. No effect non-mediation, where indirect effect (axb) and direct effect (c) both are not significant.

Line C is the direct effect which is autonomy to behavioural intention, line A is from autonomy to perceived enjoyment, and line B is from perceived enjoyment to behavioural intention which can be seen from figure 1. As seen from figure 1, the direct effect (c) have path coefficient value of 0.57 with P-Value <0.01 which means line C is significant. For the indirect effect (axb), WarpPLS has provided the calculation directly that can be seen at table 5, the P-Values of Indirect Effects for Path with 2 segments shows that the P-Value<0.001 with path coefficient of 0.225.

Figure 1. Indirect Effect Estimation

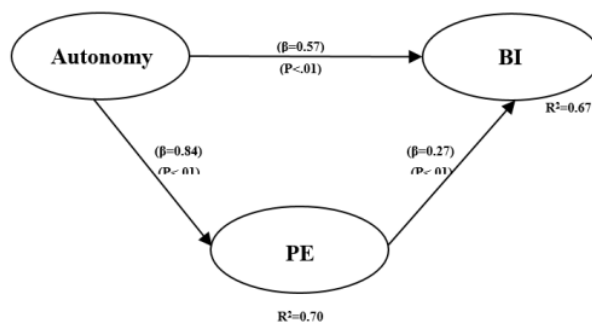


Table 6. P-values of Indirect Effects For Path With 2 Segments

	Autonomy	PE	BI
Autonomy			
PE			
BI	< 0,001		

Therefore, based on the mediation variable test above, perceived enjoyment² partially mediates the relationship between autonomy and behavioral intention with a p-value <0.001 and a path coefficient of 0.225. Then, the fourth hypothesis (H4) is accepted. Testing the effect of mediation based on theory shows a partial relationship. It can be seen from the decrease in the c path coefficient from 0.81 to 0.57 but with a significant p-value. The results of this mediation indicate that the intrinsic motivation of taxpayers, namely the enjoyment feeling, has an indirect effect in creating the fulfillment of taxpayer autonomy feeling, which has implications for increasing the taxpayer's behavioral intention in adopting blockchain technology.

Conclusion

This research develops an integrative model³ to explain how taxpayers' behavior intentions to use blockchain technology are influenced by autonomy and perceived enjoyment. The findings in this study indicate that there is behavioral intention of taxpayers in using blockchain technology, as evidenced by the encouragement (autonomy) of taxpayers. The ability to do something without interference from others is important because it can influence taxpayers' willingness to adopt blockchain technology. Furthermore, the perceived enjoyment obtained from taxpayers who have their own freedom or are not controlled by others in the use of blockchain technology in tax administration will create intentions for taxpayers.

The mediation test results show that perceived enjoyment is a significant mediator, but it is not greater than the direct effect between autonomy and behavioral intention. The intention to use blockchain technology in the tax administration system will then emerge as a result of the taxpayer's desire to use the technology (autonomy). Taxpayers do not need to be happy (perceived enjoyment) in order to be motivated to use blockchain technology.

There are several limitations in this research. First, the models and hypotheses in this study have never been studied as a series. Therefore, the model and hypothesis need to be investigated more deeply. Second, most respondents only briefly understand how blockchain technology works. Third, other factors might affect user intentions in adopting blockchain technology.

Future research regarding the effect of blockchain technology on taxpayers⁴ is still greatly needed. The researcher could expand by investigating the results of the adoption of blockchain technology with several enhancements. The first researcher could aim for a respondent with a good understanding of blockchain technology. A respondent that lacks an understanding of blockchain technology will significantly impact the result of

the data process. Future researchers can also consider using another variable, such as perceived usefulness, perceived ease of use, and trust to conduct the research.

This research provides insight into the application of blockchain technology in the tax system will increase transparency and effectiveness. For now, Indonesia might still not have sufficient technology to apply blockchain technology in the tax system. This research was conducted to observe whether later, when this blockchain technology will enter and be used in Indonesia in the taxation system, what is the reaction or intention of taxpayers in using it. Because later, the use of blockchain technology will lead to transparency and effectiveness; this will encourage taxpayers to carry out their obligations without feeling fear and difficulty when using a "system" built by the tax authority.

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