ISSN-P 2599-2708
ISSN-E 2654-8526
EKSISBANK
EKONOMI SYARIAH DAN BISNIS PERBANKAN
Volume 8 Nomor 2, Desember 2024
DOI: https://doi.org/10.37726/ee.v8i2.1520

Analysis Of Indonesian Muslim Intention To Give Digital Intellectual Property Rights For Productive Waqf

Refit Gustaroska Darfiti[1], Indra Indra[2], Bayu Taufiq Possumah[3]
[1,2,3]*Tazkia University*
Jl. Ir. H. Djuanda No. 78 Sentul, Citaringgul, Kec. Babakan Madang, Kota Bogor, Jawa Barat 16810 Indonesia
[1]gustaroska@gmail.com
[2]indra@tazkia.ac.id
[3]bayuposuma@tazkia.ac.id

ABSTRAK

Penelitian ini bertujuan untuk menganalisis faktor-faktor yang mempengaruhi intensi umat Muslim dalam mewakafkan hak atas kekayaan intelektual digitalnya sebagai harta benda wakaf produktif dengan pendekatan Theory of Planned Behaviour (TPB). Penelitian ini menggunakan metode Structural Equation Modelling (SEM) dengan teknik purposive sampling dan data primer dari kuesioner yang disebarkan pada tahun 2022. Hasil menunjukkan bahwa sikap terhadap perilaku, norma subjektif, dan persepsi kontrol perilaku berpengaruh positif signifikan terhadap intensi tersebut, dengan sikap terhadap perilaku sebagai faktor dominan. Hal ini membuka peluang bagi pengelolaan wakaf dalam bentuk aset digital oleh lembaga wakaf di Indonesia. Penelitian ini dibatasi pada individu Muslim di wilayah Jakarta dan sekitarnya serta jenis HKI berupa hak cipta yang dapat dialihkan secara ekonomi, sesuai dengan UU Wakaf dan UU Hak Cipta. Penelitian ini memberikan kontribusi teoritis terhadap ekonomi syariah dan panduan praktis bagi lembaga pengelola wakaf dalam mengembangkan program wakaf berbasis digital di era teknologi.

Kata Kunci: *Hak Kekayaan Intelektual, Theory of Planned Behaviour, Wakaf Produktif, Structural Equation Modelling*

ABSTRACT

This study aims to analyze the factors that influence the intention of Muslims to donate their digital intellectual property rights as part of productive waqf assets using the Theory of Planned Behaviour (TPB) model. The research employs Structural Equation Modelling (SEM) and utilizes purposive sampling with primary data collected from a questionnaire distributed to selected respondents in 2022. The findings reveal that attitude toward behavior, subjective norm, and perceived behavioral control significantly and positively influence the intention to donate digital intellectual property for productive

waqf. Among these, attitude toward behavior emerges as the most dominant factor. This indicates the potential for digital intellectual property to be a viable waqf asset, offering new opportunities for waqf institutions in Indonesia. The study is limited to Muslim individuals in the Jakarta area, focusing on copyright as a transferrable digital asset under Indonesian waqf and copyright laws. This research contributes to Islamic economics and waqf management by applying TPB in a digital context and providing practical insights for developing digital-based waqf programs.
Keywords: Intellectual Property Rights, Theory of Planned Behaviour, Productive Waqf, Structural Equation Modelling

I. INTRODUCTION

The development of waqf in Indonesia continues to grow each year, as seen from the increasing number and value of waqf assets from various regions (Fauzia et al., 2016). However, public understanding of waqf objects in Indonesia remains limited primarily to immovable assets (Sulistyaningsih et al., 2019), which are directly used to provide public services such as madrasas or hospitals (Bakhri & Srifariyati, 2017). The enactment of Law No. 41 of 2004 on Waqf marked a momentum for empowering productive waqf as a means of supporting the social and economic development of the Muslim community (Fikri & Noor, 2012).

The development of productive waqf is strongly encouraged by the Indonesian Waqf Board (BWI), which expects religious institutions to support the advancement of the Muslim ummah and society at large (Fauzia et al., 2016). Waqf institutions, especially those legally recognized or organized as legal entities, are expected to become alternative philanthropic institutions that collaborate with civil society organizations to address national issues (Kasdi, 2014). Although the practice of productive waqf is still relatively new in Indonesia, this form of waqf has undergone significant transformation in line with the advancement of economics and legal sciences in the country (Siregar, 2012). In the last two decades, Islamic jurisprudence on waqf has evolved considerably, one example being the recognition of intellectual property as an innovative waqf model involving intangible assets that can generate continuous income (Abdullah, 2018).

Intellectual Property Rights (IPR) are not a new concept in Islam. Although there are differing opinions among Muslim scholars, intellectual property is generally regarded as a form of private ownership (Malkawi, 2013) and is classified as property in the form of intangible assets, as agreed upon by the majority of scholars (Arif & Hanapi, 2017). Therefore, intellectual property deserves proper legal protection (Fikri & Noor, 2012). Legal protection for IPR in Indonesia has been emphasized since the enactment of Law No. 19 of 2002 on Copyright, and further supported by the Indonesian Ulema Council (MUI) through Fatwa No. 1/MUNAS VII/MUI/5/2005. Despite its intangible nature and the limited duration of legal protection, intellectual property holds significant value and should be formally acknowledged as a waqf asset (Raji et al., 2015).

Managing waqf assets particularly intellectual property as productive waqf poses various challenges. One of the main issues is the weak management and development of waqf due to limited education provided by BWI to nazhir (waqf managers) on the concept of IPR-based waqf, especially at the regional level, which impedes effective implementation (Praja et al., 2019). Beyond understanding, nazhir also need to improve their skills and competencies in managing waqf assets, transitioning from traditional

methods to digital systems or application-based management (Iman et al., 2020). Waqf should ideally be managed by legal entities to establish clear boundaries between the founder and the waqf, particularly in terms of benefits and asset distribution. Hence, the competence of legal-entity-based nazhir is crucial, as they are expected to establish frameworks, goals, documentation, and specific regulations for managing waqf outcomes (Harun et al., 2016).

Despite the enactment of Government Regulation (GR) No. 42 of 2006 as the implementing regulation of Law No. 41 of 2004 on waqf, there remain significant challenges in executing IPR-based waqf in Indonesia. A major issue is the lack of clarity and firmness regarding the mechanism for IPR waqf implementation in the form of specific legal provisions (Niswah, 2018). Furthermore, the revision of the copyright law—from Law No. 19 of 2002 to Law No. 28 of 2014 has introduced technical difficulties for wakif (waqf donors) and nazhir in transferring IPR. According to the law, only the economic rights of the intellectual property can be endowed, while the moral rights remain with the wakif (Praja et al., 2019).

The growth of internet media has created space for individuals to publish their creative works in digital form as an expression of creativity and intellect. Today, a wide variety of digital works can be uploaded online, such as photography, graphic design, writing, documents, audio, video, software, and mobile applications. Aside from non-Islamic content, this phenomenon has become a part of modern life. Numerous digital intellectual works are positive and beneficial to the Muslim community, such as e-books of classical Islamic texts, podcast-style lectures, infographic posts on Islamic teachings, and mobile applications that offer Islamic services such as digital Qur'an apps, Qibla direction finders, Islamic inheritance calculators, and more many of which are freely downloadable.

The Directorate General of Intellectual Property (DJKI) has recorded an increasing trend in copyright applications across all categories since 2015. Notably, during the COVID-19 pandemic in 2020, there was a significant surge in copyright protection applications in several categories—for instance, book copyright applications rose to 12,000 submissions, followed by growth in literary works and computer program categories.

Among the collection of published journals, both at the national and international levels, research on intellectual property (IP) waqf remains extremely rare. Some journals only discuss the status of intellectual property as waqf assets from the perspective of Islamic law, such as those written by Malkawi (2013), Raji et al. (2015), Arif & Hanapi (2017), and Khairunnisa (2019). Others focus on legislation, regulatory frameworks, and the implementation of IP waqf in Indonesia, such as works by Fikri & Noor (2012), Affandi (2017), Niswah (2018), Praja et al. (2019), and Sulistyaningsih et al. (2019). A survey by Habibah et al. (2019) revealed that 62% of 324 respondents in Indonesia had never heard of IP waqf. Furthermore, Praja et al. (2020) discussed the institutional strengthening of waqf bodies to support the development of IP waqf programs in Indonesia.

Many previous studies on giving behavior have applied the Theory of Planned Behaviour (TPB) as a foundational theory for predicting waqf-related behavior. However, no research has been found that specifically applies the TPB approach to predict digital-based IP waqf behavior. At least two previous studies have explored factors influencing individuals' interest in IP waqf. The first, by Haikal & Hanafi (2023), analyzed public

knowledge about IP waqf, religiosity, and trust in *nazhir* (waqf managers) in relation to IP waqf intentions. The second, by Huda et al. (2023), examined the intention of Indonesian Muslims to participate in IP waqf from the perspectives of understanding, Islamic religiosity, product knowledge, and trust in waqf institutions or *nazhir*.

Entrepreneurship plays a critical role in growth and development, serving as a powerful tool for capacity-building at both the global and individual levels, ultimately driving economic progress (Harun & Possumah, 2024). As part of the entrepreneurship concept, the utilization of IP as a form of productive waqf—when monetized and commercially exploited—has the potential to enhance the economic well-being of Muslims in Indonesia (Affandi, 2017). Especially in today's era of advanced technology and internet media, IP objects in the form of digital works can be marketed globally with great ease and speed. Therefore, the intention to participate in digital IP waqf becomes an intriguing subject of study, as it offers Muslims an opportunity to earn *jariyah* (continuous) rewards beyond traditional material assets such as land or money. This serves as the background and motivation for conducting the present research.

II. LITERATURE REVIEW

A. Conceptual Description

According to the World Intellectual Property Organization (WIPO), intellectual property refers to creations of the mind, such as inventions, literary and artistic works, symbols, names, images, and designs used in commerce. Based on this definition, intellectual property (IP) can be understood as a right derived from the creative outcomes of activities involving human intellectual capacity, intended to benefit the public in various forms that support human life, and possessing economic value generated from human intellectual works. Therefore, there is a need for intellectual property law that grants creators the rights to protect their intellectual works, giving them authority over how the work is used and preventing others from using it without the creator's permission (Arif & Hanapi, 2017).

B. Intellectual Property in Digital Objects

In our daily lives, we use various physical objects for different routines, such as the clothes we wear, the buildings we live in, and the furniture around us. In addition to these physical objects, we also interact daily with digital items, such as emails, websites, computer programs or apps, and digital photos. Just like physical objects, not all digital items hold the same value for everyone—what is valuable to one person may not be valuable to another. Therefore, opportunities for designing new products and systems that support the creation of more meaningful digital objects can be achieved through the integration of physical and digital elements, by extrapolating the advantages of physical objects into digital forms (Golsteijn et al., 2012).

C. Intellectual Property from the Islamic Perspective

Intellectual property is not a new concept. Even in the pre-Islamic era, poetry and poetic expression were highly respected, and poets received elevated social status and recognition. Similarly, in Islam, although the concept of intellectual property protection is not explicitly discussed, it is understood that intellectual property has long been recognized and respected (Khan & Lone, 2015). Islam provides a comprehensive religious legal system, or *shariah*, which covers every dimension of life—not just spirituality. Conceptually, it can be said that *shariah*

aligns with the principles of intellectual property protection. *Shariah* recognizes certain fundamental forms of intellectual property rights as a part of private ownership, although debates among scholars on this issue still exist. Intellectual property protects the right to gain commercial benefit for a limited period (Malkawi, 2013).

D. Theory of Planned Behaviour (TPB)

This theory was originally known as the Theory of Reasoned Action (TRA), developed in 1967 and continuously revised and expanded by Icek Ajzen and Martin Fishbein. Since the 1980s, the theory has been widely used to study human behavior and develop more behaviorally relevant interventions (Mahyarni, 2013). In 1988, Ajzen introduced an extension to the existing TRA model, which became known as the Theory of Planned Behavior (TPB), to address limitations found in earlier research using TRA. As such, TPB is considered a development or extension of the Theory of Reasoned Action (Werner, 2004).

TPB explains how planned behavior can be used to predict whether a person will engage in a particular action. The theory uses three constructs as antecedents of intention: **attitude toward the behavior**, **subjective norm**, and **perceived behavioral control**—which together influence a person's intention to perform a specific behavior.

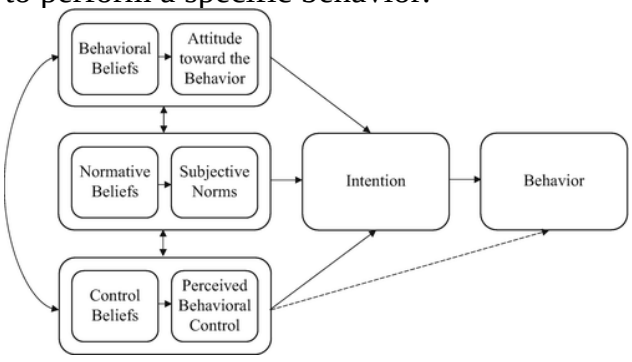

Figure 1. Theory of Planned Behavior Model Diagram

Intention: Represents an individual's readiness to perform a particular behavior and is considered the direct antecedent of behavior (Ajzen & Fishbein, 1980). The stronger the intention, the more likely the behavior will be carried out (Ajzen & Fishbein, 1985; Mahyarni, 2013).

Attitude Toward Behavior: Determined by beliefs about the consequences of a behavior (Ajzen, 2005), involving a subjective evaluation of oneself and the surrounding environment.

Subjective Norm: Reflects the expectations of others regarding certain behaviors and is influenced by the individual's belief in those opinions (subjective norms).

Perceived Behavioral Control: Indicates the individual's perception of the ease or difficulty in performing a behavior (Ajzen & Fishbein, 2005), which varies by situation and is affected by beliefs about the availability of resources and opportunities that support the behavior.

In the Theory of Planned Behavior, Ajzen (2005) explains that perceived control is influenced by an individual's beliefs about the availability of resources such as tools, skills, and opportunities (control belief strength) that may support or hinder the predicted behavior. The stronger the individual's belief in the availability of these resources, the greater their perceived control over the behavior. Individuals with high perceived control tend to be more motivated and strive for success because they believe that with the available resources and opportunities, any obstacles can be overcome.

E. Previous Research

Previous studies indicate that Intellectual Property Rights (IPR) in Islam can be categorized as property (*al-maal*) that deserves legal protection. Khairunnisa (2019) emphasizes that endowing IPR does not

contradict Islamic jurisprudence, especially according to the Maliki school, which holds that the legality of waqf lies in the benefit derived from the endowed asset. In Indonesia, IPR can be treated as waqf assets under Law No. 41 of 2004 and is protected under Law No. 28 of 2014. Nizar (2016) noted the significant potential for waqf in Indonesia, particularly from the income of productive Muslim populations, though challenges exist in managing productive waqf, especially due to limited databases on *nazhir* (waqf managers) and poor data governance. Additionally, Islamic financial institutions play a vital role in supporting productive waqf, although their involvement is currently limited to cash waqf management. Muntaqo (2015) pointed out that the implementation of waqf regulations in Indonesia remains suboptimal, especially in the management of productive waqf by *nazhir*, and highlighted the need for government and public oversight.

Affandi (2017) argued that IPR-based waqf can enhance community performance and the quality of human resources, while serving as an alternative resource for economic development. Sulistyaningsih et al. (2019) noted that the procedure for endowing IPR in Indonesia is similar to that of immovable assets, but it requires additional steps, such as proving IPR ownership from the Directorate General of Intellectual Property, which causes delays and hampers productivity. Praja et al. (2020) proposed an IPR waqf implementation model that considers legal barriers, while Iman et al. (2020) suggested an online-based administrative system to improve transparency.

Hasbullah et al. (2016) discussed factors influencing corporate waqf contributions, while Osman et al. (2016) applied the Extended Theory of Planned Behavior and found that trust and religiosity influence intentions for cash waqf. Baqutayan & Mahdzir (2017) demonstrated that combining TPB with cultural factors can explain waqf behavior, while Ratnasari & Arifin (2018) showed that attitude and subjective norms significantly affect cash waqf intentions, although many still lack understanding of the cash waqf mechanism.

F. IPR as a Waqf Asset

Intellectual property is described as an asset capable of generating income, reducing costs, expanding and protecting competitive positions, enhancing customer value propositions, and increasing business appeal (Prashar & Aggarwal, 2009). Several Muslim scholars, after examining the Qur'an and Sunnah, acknowledge that the owners of intellectual property are entitled to legal rights. Malkawi (2013) argued that, with the exception of the Hanafi school, the other three schools—Maliki, Shafi'i, and Hanbali—accept intellectual works as a form of wealth. Therefore, IPR should be seriously considered as an asset for waqf. Despite being intangible, intellectual property possesses qualities that make it valuable, with inherent worth due to its ability to be transferred (sold), licensed, reproduced, and franchised (Raji et al., 2015).

G. Conceptual Framework

The advancement of digital technology opens up opportunities for the Muslim generation to increase intellectual capacity and creativity, while also contributing to economic growth. With more than 80% of Indonesia's population being Muslim, there is vast potential for producing digital works that can be endowed as intellectual property waqf (IPR waqf). This study focuses on the management of productive waqf through digital intellectual works, which can yield economic benefits and support small enterprises. To develop productive

intellectual assets, it is crucial to understand Muslims' intentions to participate in IPR waqf.

The conceptual framework of this study analyzes IPR waqf intention using the Theory of Planned Behavior (TPB). The factors influencing waqf intention include:

- individuals' attitudes toward the legality and benefits of waqf,
- subjective norms from their surrounding environment, and
- perceived behavioral control, which encompasses perceived abilities and challenges in creating digital works.

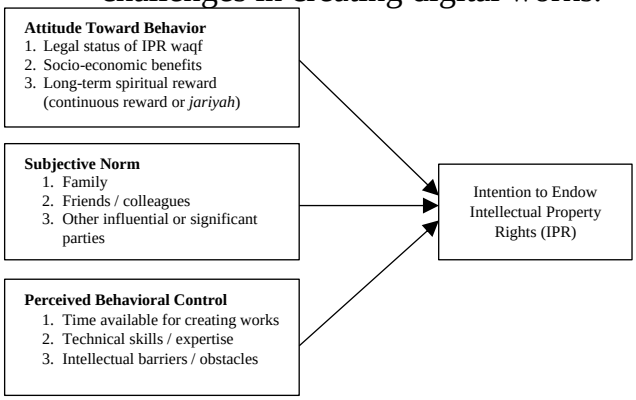

Figure 2. Conceptual Framework

III. METHOD

This study adopts a quantitative research design using a survey method to analyze the factors influencing the intention of Muslims to participate in digital-based waqf through intellectual property rights (IPR). The research was conducted in Jakarta and surrounding areas between July and December 2022.

The population of this study consists of Muslims who are active in creative or intellectual work and are aware of or interested in waqf. The sampling technique used is non-probability purposive sampling, targeting individuals who meet specific criteria: being Muslim, residing in Greater Jakarta, and having basic knowledge of digital content creation or intellectual works. A total of 89 respondents were selected as the research sample.

The survey instrument was a structured questionnaire developed based on the Theory of Planned Behavior (TPB), covering key variables:

1. Attitude toward behavior (e.g., perception of legal status of IPR waqf, socio-economic benefits, long-term spiritual reward),
2. Subjective norm (e.g., influence of family, friends, and important others),
3. Perceived behavioral control (e.g., time availability, technical ability, perceived intellectual challenges), and
4. Intention to endow IPR.

The questionnaire was distributed online using Google Forms to facilitate efficient data collection. All responses were collected as primary data, which were then cleaned, coded, and prepared for analysis.

The data analysis was performed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique. The statistical tool used for this analysis was SmartPLS software version 4. This modeling approach allows for the estimation of complex relationships between latent variables and helps evaluate both the measurement model (reliability and validity) and structural model (path coefficients and significance levels).

This methodological approach enables the study to comprehensively examine the predictive power of TPB constructs in explaining the intention to participate in digital IPR waqf.

IV. RESULTS AND DISCUSSION

A. Data Description

This study involved 89 respondents. The data are described based on several characteristics, including gender, age,

occupation, level of education, and digital skills. Based on the collected data, 62 respondents were male (70%) and 27 were female (30%), indicating that male respondents outnumbered female respondents in this study.

Table 1. Characteristic of Respondents

Respondent Characteristics	Frequency	Percentage
Gender		
Male	62	70%
Female	27	30%
Age		
21–30 years	22	25%
31–40 years	46	52%
41–50 years	20	22%
51–60 years	1	1%
≥ 61 years	0	0%
Occupation		
Student	6	7%
Professional / Senior Management	38	43%
Technical / Entry-Level Staff	15	17%
Self-employed / Freelancer	8	9%
Lecturer	6	7%
Others	16	18%
Education Level		
Undergraduate (Diploma / Vocational HS)	9	10%
Bachelor's Degree (S1)	44	49%
Master's Degree (S2)	34	38%
Doctoral Degree (S3)	2	2%
Digital Skills		
Software Developer / Programmer	38	43%
Book Author / Copywriter	9	10%
Graphic Designer / Digital Artist	11	12%
Photographer	7	8%
Content Creator	9	10%
Translator	3	3%
Others	12	13%

The chaacteristics of the respondents in this study are summarized as follows: A total of 89 respondents participated, consisting of 70% male and 30% female. Most respondents were aged between 31–40 years (52%), followed by those aged 21–30 years (25%), 41–50 years (22%), and only 1% were between 51–60 years. In terms of occupation, the majority were professionals or in senior management positions (43%), followed by technical or entry-level staff (17%), others (18%), self-employed or freelancers (9%), students (7%), and lecturers (7%). Regarding education level, most respondents held a bachelor's degree (49%), followed by master's degree holders (38%), undergraduate-level education such as diploma or vocational high school (10%), and doctoral degree holders (2%). In terms of digital skills, the highest proportion of respondents were software developers or programmers (43%), followed by graphic designers or digital artists (12%), content creators (10%), book authors or copywriters (10%), photographers (8%), translators (3%), and others (13%).

B. SEM Model Analysis

The analysis of the Structural Equation Modeling (SEM) is divided into two stages: the measurement model analysis and the structural model analysis. The purpose of the measurement model analysis is to determine how strongly the manifest variables (indicators) represent each latent variable, both exogenous and endogenous. The structural model analysis aims to assess the relationships between the exogenous and endogenous variables.

1. Measurement Model Results (Outer Model)

In SEM-PLS, several criteria are used to assess the validity and reliability of the measurement model. These include Convergent Validity (CV), Average Variance Extracted (AVE), Discriminant Validity, Composite Reliability, and Cronbach's Alpha. The Convergent Validity test of the reflective measurement model is evaluated based on the correlation between the item

scores and the construct scores, which is calculated using SmartPLS.

Table 2. Convergent Validity (CV)

Indicator Code	Indicator Description	CV	Valid
SN1	I will donate in the form of IPR waqf based on encouragement and support from my family.	0.823	Yes
SN2	My friends from work and community think that I should perform IPR waqf.	0.883	Yes
SN3	Most people important to me think that I should perform IPR waqf.	0.917	Yes
AB1	I have a positive perception of IPR waqf.	0.938	Yes
AB2	I believe that waqf in the form of IPR is highly beneficial.	0.955	Yes
AB3	IPR waqf is a good idea.	0.918	Yes
PBC1	I have sufficient resources (skills) to perform IPR waqf.	0.929	Yes
PBC2	I have the ability to carry out IPR waqf.	0.958	Yes
PBC3	I have the knowledge to carry out IPR waqf.	0.833	Yes
I1	I want to endow my intellectual property as a form of charity.	0.930	Yes
I2	I intend to perform IPR waqf in the future.	0.925	Yes
I3	My intention to endow intellectual property is increasing.	0.923	Yes

Convergent validity indicates the extent to which the measurement results of a variable correlate with the measurements of other variables that are theoretically expected to have a positive correlation. Based on Table 2 above, the results of the Convergent Validity test show that all indicators have outer loading factor values greater than 0.70. An individual reflective measure is considered high if it correlates more than 0.70 with the construct it is intended to measure (Hair et al., 2014). Therefore, all the variable indicators listed above can be considered valid and suitable for continued research and further analysis.

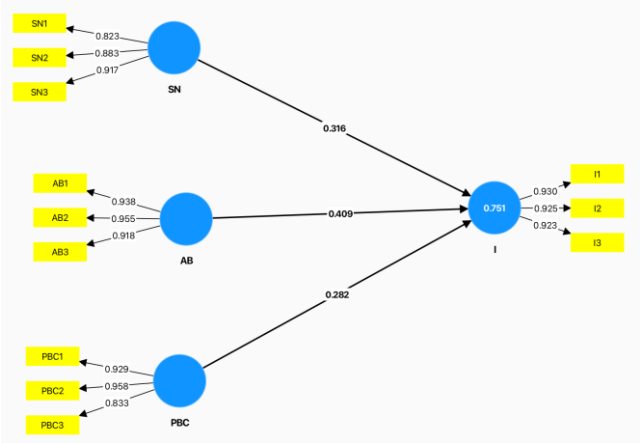

Figure 3. Factor Loading Diagram

2. Discriminant Validity Test

Table 3. Cross-Loading Values

Indicator	Attitude Toward Behavior	Intention	Perceived Behavioral Control	Subjective Norm
AB1	0.938	0.753	0.574	0.606
AB2	0.955	0.731	0.511	0.638
AB3	0.918	0.670	0.496	0.525
I1	0.665	0.930	0.666	0.754
I2	0.704	0.925	0.622	0.687
I3	0.763	0.923	0.678	0.639
PBC1	0.509	0.642	0.929	0.618
PBC2	0.531	0.724	0.958	0.639
PBC3	0.499	0.549	0.833	0.399
SN1	0.375	0.501	0.421	0.823
SN2	0.536	0.613	0.529	0.883
SN3	0.686	0.796	0.633	0.917

The cross-loading values in the discriminant validity test are used to determine whether a construct has adequate discriminant validity. An indicator is considered to meet discriminant validity if its cross-loading value on its associated variable

is higher than its correlation with other variables. Based on Table 3, the cross-loading values of each indicator in this study are highest on the construct they are intended to measure, compared to their cross-loadings on other variables. Therefore, the indicators used in this study demonstrate good discriminant validity in representing their respective constructs.

3. Average Variance Extracted (AVE), Composite Reliability dan Cronbach's Alpha

Another method to assess discriminant validity is by examining the Average Variance Extracted (AVE). For a model to be considered good, each construct should have an AVE value greater than 0.50 (Hair et al., 2014). Based on Table 4 above, all AVE values for each variable are greater than 0.50. Therefore, it can be concluded that each variable has demonstrated good discriminant validity.

Table 4. AVE, Composite Reliability dan Cronbach's Alpha

Construct	AVE	Cronbach's Alpha	Composite Reliability
Attitude Toward Behavior	0.878	0.931	0.956
Intention	0.857	0.917	0.947
Perceived Behavioral Control	0.825	0.893	0.934
Subjective Norm	0.766	0.849	0.907

Composite Reliability tests the reliability of the indicators within each variable. Cronbach's Alpha is another measure used to assess the reliability of a variable, although its value tends to be lower than that of Composite Reliability. A variable is considered reliable if both its Composite Reliability and Cronbach's Alpha values exceed 0.70 (Hair et al., 2014). Based on Table 9 above, the Composite Reliability and Cronbach's Alpha values for all research variables are greater than 0.70. This indicates that all variables have a high level of reliability.

4. Structural Model Results (Inner Model) Inner Variance Inflation Factor (VIF)

The Variance Inflation Factor (VIF) values for the predictor variables of the intention construct indicate that there is no multicollinearity problem in the model. The VIF value for Attitude Toward Behavior is 1.809, Perceived Behavioral Control is 1.758, and Subjective Norm is 1.994. All of these values are well below the critical threshold of 5, suggesting that the independent variables do not exhibit high intercorrelations. This confirms that each predictor contributes uniquely to explaining the variance in the intention to participate in intellectual property-based waqf.

Model evaluation includes assessments of multicollinearity, predictive relevance (Q^2), and the coefficient of determination (R-Square or R^2). Multicollinearity testing is conducted by examining the Inner Variance Inflation Factor (VIF) values. A high level of collinearity is indicated by a tolerance value of 0.20 or lower. If the VIF value exceeds 5, it is recommended to consider removing one of the indicators. Each indicator should have a VIF value less than 5. Based on Table 10 above, all Inner VIF values for the indicators in this study are below 5, indicating that all indicators are free from multicollinearity.

5. Predictive Relevance

Table 4. Predictive Relevance

	SSO	SSE	Q^2 (=1-SSE/SSO)
Intention	261.000	97.427	0.627

Predictive Relevance can be assessed using the Blindfolding procedure by examining the Q^2 value of the dependent variable. According to Hair et al. (2014), Q^2 values of 0.02, 0.15,

and 0.35 indicate that the exogenous constructs have small, medium, and large predictive relevance for the endogenous construct, respectively. Based on Table 11, it can be concluded that the predictive capacity of each variable forming the intention variable as the endogenous construct is very strong, as the Q^2 value is above 0.35—specifically, 0.627.

Next, the R-Square value is assessed to measure how much the endogenous variable is influenced by other variables. R-Square is used to evaluate the strength of the relationship between variables. The R-Square value for the Intention variable is 0.751, which indicates that Intention can be explained by the variables Attitude Toward Behavior, Perceived Behavioral Control, and Subjective Norm by 75.1%, while the remaining 24.9% is explained by other variables not included in this study.

6. Model Fit Test

Model fit is evaluated by examining the Standardized Root Mean Square Residual (SRMR) value in the model fit table. An SRMR value is considered acceptable if it is less than 0.10. The SRMR value in this study is 0.074, indicating that the model's predicted values tend to accurately predict responses in other samples.

7. Robustness Testing

Several methods can be used to assess the robustness of a structural model in PLS-SEM. Two common approaches include testing for linearity to assess non-linearity effects and testing for endogeneity (Sarstedt et al., 2020).

a. Linearity Test

Linearity testing is conducted by examining the quadratic effects within the structural model. A model is considered robust if the p-values of the quadratic effects are not significant (p > 0.05). The quadratic effect results for each variable in the TPB model—namely, subjective norms, attitude toward behavior, and perceived behavioral control on the intention to endow digital intellectual property rights—all show p-values greater than 0.05. Therefore, it can be concluded that the structural model in this study is reliable and robust.

Table 5. Results of Quadratic Effect – Linearity Test

Non-Linear Relationship	Coefficient	T Statistics	P Values
Quadratic Effect (SN) → I	0.012	0.213	0.831
Quadratic Effect (AB) → I	0.117	1.412	0.158
Quadratic Effect (PBC) → I	-0.111	1.646	0.100

b. Endogeneity Test

The endogeneity test is conducted by examining the Gaussian Copula values within the structural model. A model is considered reliable if the p-values resulting from the Gaussian Copula are not significant (p-values > 0.05). The Gaussian Copula results for each variable in the TPB model are divided into seven testing models. Models 1, 2, and 3 assess each variable individually, while Models 4, 5, and 6 test combinations of two variables. Model 7 examines the combination of all three construct variables—subjective norms, attitude toward behavior, and perceived behavioral control—on the intention to endow digital intellectual property. The p-values from all models are not significant (p-values > 0.05), indicating that the structural model in this study is reliable and robust.

Table 6. Gaussian Copula Test – Endogeneity Assessment

Endogenous Variables	Endogenous Relationship	Coefficient	T Statistics	P Values
Model 1 (SN)	Gaussian Copula (SN) → Intention	0.074	0.914	0.361

Endogenous Variables	Endogenous Relationship	Coefficient	T Statistics	P Values
Model 2 (AB)	Gaussian Copula (AB) → Intention	0.090	0.776	0.438
Model 3 (PBC)	Gaussian Copula (PBC) → Intention	-0.062	0.373	0.709
Model 4 (SN, AB)	Gaussian Copula (SN) → Intention	0.060	0.670	0.503
	Gaussian Copula (AB) → Intention	0.041	0.327	0.743
Model 5 (SN, PBC)	Gaussian Copula (SN) → Intention	0.087	1.021	0.307
	Gaussian Copula (PBC) → Intention	-0.133	0.748	0.455
Model 6 (AB, PBC)	Gaussian Copula (AB) → Intention	0.102	0.823	0.411
	Gaussian Copula (PBC) → Intention	-0.104	0.576	0.565
Model 7 (SN, AB, PBC)	Gaussian Copula (SN) → Intention	0.071	0.783	0.434
	Gaussian Copula (AB) → Intention	0.048	0.374	0.709
	Gaussian Copula (PBC) → Intention	-0.139	0.751	0.453

C. Discussion

The hypothesis testing in this study is conducted by analyzing the values of the Path Coefficient, T-Statistics, and P-Values. A hypothesis is considered accepted if the Path Coefficient is greater than 0, the T-Statistics value exceeds 1.96 (at a 5% significance level), and the P-Value is less than 0.05. These three indicators are essential parameters in determining whether a hypothesis is accepted or rejected. Additionally, they are used to indicate the significance level of the relationship between variables.

Table 7. Presents The Results of The Direct Relationships Between Variables.

Hypothesis	Path Coefficient	T Statistics	P Values	Hypothesis Analysis	Result
H1: Attitude toward Behavior → Intention	0.409	4.211	0.000	Positive and Significant	Accepted
H2: Subjective Norms → Intention	0.316	3.395	0.001	Positive and Significant	Accepted
H3: Perceived Behavioral Control → Intention	0.282	3.796	0.000	Positive and Significant	Accepted

Based on Table 16, the analysis results indicate that all three hypotheses proposed in this study H1, H2, and H3 are positively and significantly supported. Each hypothesis meets the acceptance criteria: Path Coefficient > 0, T-Statistic > 1.96 (with a 5% significance level), and P-Values < 0.05. These findings suggest that each of the examined constructs significantly influences the intention to participate in intellectual property-based waqf.

1. Attitude Toward Behavior

The relationship coefficient between attitude and intention is 0.409, with a T-Statistic value of 4.209 (>1.96) and a P-Value of 0.000 (<0.05). These results indicate that attitude has a positive and significant effect on intention. In other words, a more positive attitude leads to a stronger intention among Muslims to engage in intellectual property waqf, thus supporting Hypothesis 1 (H1).

According to the Theory of Planned Behavior (TPB), an individual's intention to perform a behavior is influenced by three key factors: attitude toward the behavior, subjective norms, and perceived behavioral control. A positive attitude towards a behavior, such as IP-based waqf, enhances the motivation and commitment to perform it. Numerous studies have supported this relationship (Ajzen, 1991; Ali et al., 2014; Chiou, 1998; Knowles et al., 2012; Lee et al., 2010; Lim et al., 2011; Lin & Chen, 2011; Linden, 2011; Osman, 2014; Teo & Lee, 2010; Truong, 2009; Xiao & Wu, 2006).

Ismail et al. (2018) found that a positive attitude towards waqf significantly influences the intention to donate, including through intellectual property. This is reinforced by Aziz et al. (2019), who argued that better awareness and understanding of the benefits of IP-based waqf enhance positive attitudes, which in turn increases the intention to participate in waqf.

Positive perceptions regarding legal status, socioeconomic benefits, and spiritual reward such as the long-term merit of giving digital

IP assets—form the basis of a strong attitude that drives higher intention.

2. Subjective Norms

The coefficient between subjective norms and intention is 0.316, with a T-Statistic of 3.408 (>1.96) and a P-Value of 0.001 (<0.05), indicating a positive and significant influence. This suggests that stronger perceived social expectations lead to greater intention to participate in intellectual property waqf, thereby supporting Hypothesis 2 (H2).

In TPB, subjective norms reflect the social pressure perceived by individuals from important others such as family, peers, or respected figures. If individuals perceive strong support for IP-based waqf from their social environment, their intention to act accordingly increases. This finding is consistent with previous studies (Ajzen, 1991; Chiou, 1998; Lee et al., 2010; Lim et al., 2011; Lin & Chen, 2011; Linden, 2011; Osman, 2014; Teo & Lee, 2010; Truong, 2009).

Community leaders, religious scholars, and media influencers can play a key role in shaping these norms through advocacy, education campaigns, and storytelling that highlight the impact of IP-based waqf. Social media also enhances subjective norms by circulating success stories and mobilizing public support.

The research also shows that subjective norms are influenced by the opinions of family, colleagues, and other influential figures in one's life. Therefore, initiatives that reinforce supportive social expectations are crucial for strengthening intention.

3. Perceived Behavioral Control

The coefficient between perceived behavioral control and intention is 0.282, with a T-Statistic of 3.735 (>1.96) and a P-Value of 0.000 (<0.05). This indicates that perceived behavioral control positively and significantly affects intention, thereby confirming Hypothesis 3 (H3).

Osman (2014) argued that the greater the perceived behavioral control, along with a favorable attitude and subjective norm, the stronger the intention to perform the behavior. This is in line with studies that identified perceived behavioral control as a significant predictor of intention (Ajzen, 1991; Chiou, 1998; Knowles et al., 2012; Lee et al., 2010; Linden, 2011; Truong, 2009; Xiao & Wu, 2006).

Ismail et al. (2018) showed that individuals who believe they have the ability to participate in waqf are more likely to form strong intentions. Similarly, Amin et al. (2014) found that access to information and resources improves individuals' perceived control and, in turn, their philanthropic intentions.

Perceived control includes beliefs about one’s ability to perform the behavior and overcome any associated challenges. When individuals feel confident in their skills, knowledge, and available resources to donate digital IP assets, their intention to do so increases. Hence, enhancing education, technical support, and access to digital waqf platforms will significantly strengthen perceived control and drive higher intention.

V. CONCLUSION

This research was conducted to examine the factors that influence the intention of Muslims to donate their digital intellectual property (IP) rights as waqf assets in a productive waqf scheme, using the Theory of Planned Behavior (TPB) as a theoretical framework. The study specifically aimed to understand how attitudes toward the behavior, subjective norms, and perceived behavioral control shape an individual’s intention to participate in digital IP-based waqf. The

findings, obtained through data analysis using Structural Equation Modeling (SEM), indicate that all three constructs of the TPB model significantly and positively influence a Muslim's intention to contribute digital IP for waqf purposes. Among these, attitude toward the behavior was found to be the most influential factor, suggesting that the more positively individuals perceive digital IP waqf in terms of legality, social and economic benefits, and spiritual rewards, the more likely they are to engage in such actions. These results suggest that raising awareness and building a positive perception around digital IP waqf can serve as a strategic entry point for waqf institutions in Indonesia to innovate and expand productive waqf programs by integrating digital intellectual property as a valuable endowment asset.

DAFTAR PUSTAKA

Abdullah, M. (2018). Waqf, Sustainable Development Goals (SDGs) and maqasid al-shariah. *International Journal of Social Economics*, *45*(1), 158–172.

Affandi, B. P. (2017). Analisis Hak Kekayaan Intelektual Sebagai Objek Wakaf Dalam Upaya Meningkatkan Perekonomian di Indonesia. *Al-Awqaf: Jurnal Wakaf Dan Ekonomi Islam*, *10*(2), 162–183.

Ajzen, I. (1991). The Theory of Planned Behaviour. *Organizational Behaviour and Human Process*, *50*(2), 179–211.

Ajzen, I., & Fishbein, M. (2005). *The Influence of Attitudes on Behavior. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.)* (pp. 173–221). The handbook of attitudes.

Ali, S., Zani, R., & Kasim, K. (2014). Intention – behaviour relations : A conceptual and literature review. *Research Journal of Finance and Accounting*, *5*(19), 168–178.

Arif, M. I. A. M., & Hanapi, H. (2017). The Concept of Intellectual Property As Al Mal: An Islamic Perpective Approach. *International Journal of Educational Best Practices*, *1*(1), 102–108.

Bakhri, A., & Srifariyati. (2017). Peran Wakaf Produktif Dalam Pemberdayaan Ekonomi. *Jurnal Madaniyah*, *1*(12), 129–153.

Baqutayan, S. M., & Mahdzir, A. M. (2017). The psychology theories of waqf-giving behaviors. *Journal of Economic and Social Thought*, *4*(4), 424–432.

Chin, W. W. (1998). The partial least squares approach to structural equation modelling. In Marcoulides G. A. (Ed.). *Modern Methods for Business Research*, *295*(2), 295–336.

Chiou, J.-S. (1998). The Effects of Attitude , Subjective Norm , and Perceived Behavioral Control on Consumers ' Purchase Intentions : The Moderating Effects of Product Knowledge and Attention to Social Comparison Information. *Attitude, Subjective Norms and Perceived Behavioral Control*, *9*(2), 298–308.

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. Lawrence Erlbaum Associates.

Cohen, J. (1992). A Power Primer. *Psychological Bulletin*, *112*(1), 155–159.

Diamantopoulos, A., Sarstedt, M., Fuchs, C., Wilczynski, P., & Kaiser, S. (2012). Guidelines for choosing between multi-item and single-item scales for construct measurement: A predictive validity perspective. *Journal of the Academy of Marketing Science*, *40*(3), 434–449.

Diamantopoulos, A., & Winklhofer, H. M. (2001). Index construction with formative indicators: An alternative to scale development. *Journal of*

Marketing Research, *38*(2), 269–277.

Fauzia, A., Rohayati, T., & Garadian, E. A. (2016). *Fenomena Wakaf di Indonesia: Tantangan Menuju Wakaf Produktif*. Badan Wakaf Indonesia.

Fikri, D. F., & Noor, A. (2012). Reformasi Hukum Wakaf Di Indonesia. *Jurnal Al-Ahkam*, *22*(41), 43–60.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.

Fuadi, N. F. Z. (2013). *Intensi Nasabah Bank Syariah untuk Berwakaf Uang di Badan Wakaf Indonesia (Studi Kasus Pada Bank Syariah Mandiri Jakarta Pusat)*. Universitas Indonesia.

Golsteijn, C., Van Den Hoven, E., Frohlich, D., & Sellen, A. (2012). Towards a more cherishable digital object. *Proceedings of the Designing Interactive Systems Conference, DIS '12*, 655–664.

Gudergan, S. P., Ringle, C. M., Wende, S., & Will, A. (2008). Confirmatory tetrad analysis in PLS path modeling. *Journal of Business Research*, *61*(12), 1238–1249.

Habibah, S., Zuhdi, M. L., & Huda, N. (2019). Survei Wakaf Hak Kekayaan Intelektual. *Al-Awqaf: Jurnal Wakaf Dan Ekonomi Islam*, *12*(2), 177–188.

Haikal, M. F. & Ismail, N. (2023). Analysis of the Influence of Knowledge About Intellectual Property Rights Waqf, Religion, and Mandate on Nadzir on Interests in Intellectual Property Rights Waqf in East Jakarta City. *PJIEFAS: Postgraduated Journal of Islamic Economics, Finances and Accounting Studies*, *2*(2), 372-425.

Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*, *26*(2), 106–121.

Harun, F. M. & Possumah, B. T. (2024). Waqf Based Sustaining Entrepreneurship: An Analytical Mechanism (Malaysia Example). *TIJARAH: Jurnal Ekonomi, Manajemen dan Bisnis Syariah, 1*(1), 64-76.

Harun, F. M., Possumah, B. T., Shafiai, M. H. B. M., & Noor, A. H. M. (2016). Issues and Economic Role of Waqf in Higher Education Institution: Malaysian Experience. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah (Journal of Islamic Economics), 8*(1), 149-168.

Hasbullah, N. A., Khairi, K. F., & Ab. Aziz, M. R. (2016). Intention To Contribute in Corporate Waqf: Applying the Theory of Planned Behaviour. *UMRAN - International Journal of Islamic and Civilizational Studies (EISSN: 2289-8204)*, *3*(1), 39–48.

Iman, N., Santoso, A., & Kurniawan, E. (2020). Online based waqf management system in Indonesia: A new model in management of waqf administration. *International Journal of Innovation, Creativity and Change*, *10*(11), 164–180.

Kasdi, A. (2014). Model Pemberdayaan Wakaf Produktif Di Indonesia. *Jurnal Ziswaf*, *1*(1), 108–122.

Khairunnisa, I. (2019). Hak Kekayaan Intelektual (HKI) Sebagai Objek Waqaf Dalam Hukum Islam. *Iqtishaduna:Jurnal Ekonomi & Keuangan Islam*, *10*(2), 161–172.

Kasri, R. A. & Chaerunnisa, S. R. (2022). The role of knowledge, trust, and religiosity in explaining the online cash waqf amongst Muslim millennials. *Journal of Islamic Marketing, 13(6),* 1334-1350.

Khan, J. I., & Lone, N. A. (2015). Intellectual Property Rights in Islam: A Perspective.

SSRN Electronic Journal, *3*(1), 153–162.

Knowles, S. R., Hyde, M. K., & White, K. M. (2012). Predictors of young people's charitable intentions to donate money: An extended theory of planned behavior perspective. *Journal of Applied Social Psychology*, *42*(9), 2096–2110.

Krueger, N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, *5*(4), 315–330.

Lee, J., Cerreto, F. A., & Lee, J. (2010). Theory of Planned Behavior and Teachers' Decisions Regarding Use of Educational Technology. *Journal of Educational Technology & Society*, *13*(1), 152–164.

Lim, Y. M., Yap, C. S., & Lee, T. H. (2011). Intention to Shop Online: A study of Malaysian Baby Boomers. *African Journal of Business Management*, *5*(5), 1711–1717.

Lin, C.-H. S., & Chen, C.-F. (2011). Application of theory of planned behavior on the study of workplace dishonesty. *2010 International Conference on Economics, Business and Management*, *2*, 66–69.

Linden, S. van der. (2011). Charitable Intent: A Moral or Social Construct? A Revised Theory of Planned Behavior Model. *Current Psychology*, *30*(4), 355–374. https://doi.org/10.1007/s12144-011-9122-1

Mahyarni. (2013). Sebuah Kajian Historis tentang Perilaku. *Jurnal El-Riyasah*, *4*(1), 13–23.

Malkawi, B. (2013). Intellectual property protection from a Sharia perspective. *Southern Cross University Law Review*, *16*, 87–121.

Muntaqo, F. (2015). Problematika Dan Prospek Wakaf Produktif Di Indonesia. *Al-Ahkam*, *1*(25), 83.

Niswah, E. M. (2018). Problematika Yuridis Wakaf Hak Kekayaan Intelektual di Indonesia. *Volksgeist: Jurnal Ilmu Hukum Dan Konstitusi*, *1*(2), 123–138.

Nizar, M. A. (2016). Pengembangan wakaf produktif dan peranan sektor keuangan di Indonesia. In *Pusat Kebijakan Sektor Keuangan* (pp. 1–15).

Nurcholis, M. (2018). Keabsahan Wakaf Intellectual Property Right Dalam Undang-Undang Perwakafan Di Indonesia Menurut Hukum Islam. *Computers and Industrial Engineering*, *6*(Juni), 107–118.

Osman, A. F. (2014). An Analysis of Cash Waqf Participation among Young Intellectual. *Istanbul 9th International Academic Conference*.

Osman, A. F., Mohammed, M. O., & Fadzil, A. (2016). Factor Influencing Cash Waqf Giving Behavior: a Revised Theory of Planned Behavior. *Journal of Global Business and Social Entrepreneurship (GBSE)*, *1*(2), 12–25.

Osman, A. F. & Mohammed, M. O. (2017). Measuring A Cash Waqf Giving Behavior Among Muslim Donor In Malaysia: A Theory of Planned Behavior Approach Using Structural Equation Modeling. *The Journal of Muamalat and Islamic Finance Research*, *14(2)*, 17-34.

Praja, C. B. E., Sulistyaningsih, P., Mulyadi, & Riswandi, B. A. (2019). Intellectual property rights as a WAQF asset: The way to change an old paradigm in Indonesia. *International Journal of Innovation, Creativity and Change*, *6*(1), 26–39.

Praja, C. B. E., Sulistyaningsih, P., Riswandi, B. A., & Mulyadi. (2020). Strengthening Waqf Institution To Develop

Intellectual Property As a Waqf Asset. *Humanities & Social Sciences Reviews*, *8*(3), 610–617.

Raji, F., Tahir, M., Muhammad, S., & Omar, I. (2015). Intellectual Property an Asset for Awqaf. *International Journal of Real Estate Studies*, *9*(1), 1–6.

Ratnasari, R. T., & Arifin, M. H. (2018). Theory of Planned Behavior in Intention to Pay Cash Waqf. In *Proceedings of the 1st International Conference on Islamic Economics, Business, and Philanthropy (ICIEBP 2017) - Transforming Islamic Economy and Societies* (pp. 641–644). Science and Technology Publications, Lda.

Ringle, C. M., Sarstedt, M., & Zimmermann, L. (2011). Customer satisfaction with commercial airlines: The role of perceived safety and purpose of travel. *Journal of Marketing Theory and Practice*, *19*(4), 459–472.

Sarstedt, M, & Wilczynski, P. (2009). More for less? A comparison of single-item and multi-item measures. *Die Betriebswirtschaft*, *69*(2), 211–227.

Sarstedt, Marko, & Schloderer, M. P. (2010). Developing a measurement approach for reputation of non-profit organizations. *International Journal of Nonprofit and Voluntary Sector Marketing*, *15*(3), 276–299.

Sarstedt, M., Ringle, C. M., Cheah, J.-H., Ting, H., Moisescu, O. I., & Radomir, L. (2020). Structural model robustness checks in PLS-SEM. *Tourism Economics*, *26*(4), 531-554.

Siregar, I. (2012). Pembaruan Hukum Perwakafan di Indonesia. *Jurnal Tsaqafah*, *8*(2), 273–294.

Sulistyaningsih, P., Heniyatun, Praja, C. B. E., & Nurjaman, D. (2019). Pelaksanaan Hak Kekayaan Intelektual Sebagai Objek Wakaf. *Journal of Intellectual Property*, *2*(2), 14–22.

Teo, T., & Lee, C. B. (2010). Examining the efficacy of the theory of planned behavior (TPB) to understand pre-service teachers' intention to use technology. *Curriculum, Technology & Transformation for an Unknown Future. Proceeding Ascilite Sydney 2010*, 968–972.

Truong, Y. (2009). An Evaluation of the Theory of Planned Behaviour in Consumer Acceptance of Online Video and Television Services. *The Electronic Journal Information System Evaluation*, *12*(2), 177–186.

Werner, P. (2004). Reasoned Action and Planned Behavior, in S.J. Peterson and T.S. Bredow (eds). In *Middle range theories: Application to nursing research* (pp. 125–147). Philadeliphia, PA: Lippincott, Williams, & Wilkins.

Xiao, J. J., & Wu, J. (2006). Applying the Theory of Planned Behavior to Retain Credit Counseling Clients. *SSRN Electronic Journal*.

Zulkarnaen, D., Mukhlisin, M. & Pramono, S. E. (2021). Can Blockchain Technology Improve Accountability and Transparency of Cash Waqf in Indonesia?. *Journal of Economic Impact, 3*(3), 158-166