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Abstract

This study examines the influence of zakat literacy and trust on zakat payment intention, with digital literacy serving as a moderating variable. The research employs a quantitative approach using Structural Equation Modeling (SEM) with SmartPLS analysis. Data were collected from 35 respondents through a structured questionnaire using a 5-point Likert scale. The study variables include zakat literacy (LZ), trust (KP), zakat payment intention (MZ), and digital literacy (LD) as moderating variable. The measurement model evaluation shows satisfactory construct validity and reliability with all factor loadings exceeding 0.7, composite reliability values above 0.8, and AVE values above 0.5. The structural model reveals that zakat literacy significantly influences zakat payment intention (β = 0.342, p < 0.05), while trust demonstrates an even stronger effect (β = 0.458, p < 0.01). Digital literacy significantly moderates both relationships, strengthening the zakat literacy-intention relationship from 0.342 to 0.598 for high digital literacy individuals, and enhancing the trust-intention relationship from 0.458 to 0.647. The model explains 67.3% of variance in zakat payment intention. The findings contribute to understanding factors that enhance zakat collection effectiveness in the digital era, providing practical implications for zakat institutions to develop digital-based strategies for improving zakat collection and management.

Keywords: zakat literacy, trust, payment intention, digital literacy, moderation effect, SmartPLS

1. Introduction

Zakat represents one of the five pillars of Islam and serves as a crucial mechanism for wealth redistribution and poverty alleviation in Muslim societies(Zuchroh, 2022). In Indonesia, the world's largest Muslim population with over 231 million Muslims, zakat has enormous potential to address social and economic challenges. The National Zakat Agency (BAZNAS) estimates that Indonesia's zakat potential reaches approximately 233.8 trillion rupiah annually, yet actual collection remains significantly below this potential at only 10-12% realization rate, indicating substantial gaps in zakat awareness, literacy, and payment behavior.

The digital transformation has fundamentally altered how religious institutions operate and engage with their communities. Digital platforms have emerged as powerful tools for zakat collection, offering convenience, transparency, and accessibility to donors. The COVID-19 pandemic further accelerated digital adoption, with digital zakat collection increasing from 15.2% in 2019 to 58.9% in 2023. However, the effectiveness of digital zakat platforms depends heavily on individuals' digital literacy capabilities and their trust in digital zakat institutions. Understanding the relationship between zakat literacy, trust, and payment intention, particularly in the context of digital literacy moderation, becomes increasingly critical for optimizing zakat collection strategies.

Recent studies have highlighted the importance of zakat literacy in influencing payment behavior. Zakat literacy encompasses knowledge about zakat obligations, calculation methods, eligible recipients, and authorized collection institutions. Research indicates that many Muslims lack comprehensive understanding of zakat principles, leading to suboptimal compliance rates. Similarly, trust plays a fundamental role in zakat payment decisions, as donors must have confidence in the transparency, accountability, and effectiveness of zakat institutions. The intersection of these factors with digital literacy capabilities creates a complex dynamic that requires empirical investigation.

National Collection Growth Rate Digital Collection Potential Realization **Major Digital** Year (Trillion Rp) **Platforms** (%) (%)(%)8.5 4.4 2019 10.2 15.2 12 2020 12.7 24.5 28.3 5.4 18 44.1 42.1 7.8 25 2021 18.3 2022 14.2 8.9 32 20.9 51.6 2023 23.4 12.0 58.9 10.0 41

Table 1. Zakat Collection Statistics in Indonesia (2019-2023)

The data in Table 1 demonstrates the significant growth in both total zakat collection and digital platform adoption over the past five years. The substantial increase in digital collection percentage from 15.2% to 58.9% reflects the growing acceptance of digital zakat payment methods. However, the potential realization rate remains low, suggesting that despite technological advances, fundamental factors such as literacy and trust continue to play crucial roles in zakat payment decisions. This research aims to examine the influence of zakat literacy and trust on zakat payment intention, with digital literacy serving as a moderating variable. The study contributes to the literature by providing empirical evidence of how digital literacy enhances the relationship between zakat knowledge, institutional trust, and payment intention in the Indonesian context. The research addresses critical gaps in understanding digital-era zakat payment behavior and provides actionable insights for zakat institutions seeking to optimize their collection strategies.

2. Literature Review

2.1 Zakat Literacy and Payment Intention

Zakat literacy encompasses comprehensive understanding of zakat principles, obligations, calculations, and institutional frameworks. The concept extends beyond basic religious knowledge to include practical understanding of zakat implementation in contemporary contexts. Previous research has demonstrated strong positive relationships between zakat literacy and payment intention across various demographic groups and geographical contexts. Ahmad et al. (2019) conducted a comprehensive study involving 450 respondents in Malaysia, finding that individuals with higher zakat literacy demonstrate 68% greater willingness to fulfill their zakat obligations through formal institutions compared to those with limited knowledge. The study identified five key dimensions of zakat literacy: conceptual understanding, calculation knowledge, institutional awareness, recipient identification, and timing comprehension. Each dimension contributed significantly to overall payment intention, with calculation knowledge showing the strongest predictive power.

Similarly, Wahid et al. (2020) revealed that zakat education significantly influences payment behavior in a longitudinal study spanning three years. Their research demonstrated that structured zakat education programs increased compliance rates by 34% among participants, with knowledge of zakat calculation methods being particularly important. The study also found that practical zakat literacy training, including hands-on calculation exercises and case studies, proved more effective than theoretical knowledge transmission alone. The Theory of Planned Behavior (TPB) provides a robust theoretical foundation for understanding how zakat literacy influences payment intention. According to TPB, behavioral intention is determined by three primary factors: attitudes toward the behavior, subjective norms, and perceived behavioral control. Zakat literacy enhances all three components simultaneously. First, increased knowledge improves attitudes toward zakat payment by clarifying religious obligations and social benefits. Second, literacy enhances understanding of social expectations and community norms regarding zakat compliance. Third, practical knowledge increases perceived behavioral control by providing individuals with the skills and confidence necessary to calculate and pay zakat effectively.

2.2 Trust and Zakat Payment Intention

Trust represents a fundamental element in zakat payment decisions, particularly when donors interact with formal zakat institutions rather than direct recipients. Institutional trust encompasses multiple dimensions including confidence in organizational transparency, accountability, efficiency, and integrity. Research consistently demonstrates that trust serves as a critical mediator between zakat knowledge and actual payment behavior.

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Saad et al. (2021) conducted an extensive study involving 680 respondents across multiple Malaysian states, demonstrating that trust in zakat institutions significantly influences payment intention with a standardized coefficient of 0.58. Their research identified four key trust dimensions: transparency trust (confidence in open financial reporting), competence trust (belief in institutional capability), integrity trust (confidence in ethical behavior), and benevolence trust (belief in donor-oriented intentions). Transparency trust emerged as the strongest predictor, followed by competence and integrity trust.

The Social Exchange Theory provides theoretical grounding for understanding trust-intention relationships in the zakat context. According to this theory, individuals engage in social exchanges based on perceived benefits and costs, with trust serving to reduce transaction costs and perceived risks. In zakat payment situations, trust reduces concerns about fund mismanagement, corruption, and ineffective distribution, thereby enhancing confidence in institutions' ability to effectively channel zakat to eligible recipients. Contemporary research has highlighted the evolution of trust in digital zakat contexts. Rahman et al. (2022) found that digital trust encompasses additional dimensions beyond traditional institutional trust, including technological security trust, data privacy trust, and digital competence trust. Their study revealed that digital trust mediates the relationship between traditional institutional trust and digital zakat payment intention, suggesting that institutions must build both traditional and digital trust capabilities.

2.3 Digital Literacy as Moderating Variable

Digital literacy encompasses the knowledge, skills, and attitudes necessary to effectively use digital technologies for information access, communication, and transaction purposes(Zuchroh, 2021). In the contemporary zakat context, digital literacy influences individuals' ability to access online zakat platforms, evaluate digital zakat services, conduct secure online transactions, and verify institutional credentials through digital channels. The Technology Acceptance Model (TAM) suggests that technology adoption depends on perceived usefulness and ease of use, both of which are significantly influenced by digital literacy capabilities. Van Dijk's (2020) comprehensive framework identifies four types of digital access: motivational access, material access, skills access, and usage access. Each type contributes to overall digital literacy and influences technology adoption patterns differently across demographic groups.

Research by Rahman et al. (2022) found that digital literacy moderates the relationship between zakat knowledge and payment intention, with digitally literate individuals showing stronger intention-behavior relationships. The study demonstrated that digital literacy enhances the conversion of zakat knowledge into actual payment behavior by providing individuals with the tools and confidence necessary to navigate digital zakat platforms effectively. Furthermore, digital literacy was found to reduce the perceived complexity of online zakat payment processes, thereby lowering barriers to digital adoption. Studies have also shown that digital literacy enhances trust in digital zakat platforms by improving users' ability to evaluate platform security, verify institutional credentials, and assess transparency mechanisms. Othman et al. (2020) found that digitally literate individuals demonstrate greater confidence in digital zakat platforms and show higher levels of sustained engagement with digital zakat services. Their research revealed that digital literacy training programs significantly improve both digital trust and digital zakat payment intention.

3. Research Methodology

3.1 Research Design

This study employs a quantitative research approach using explanatory research design to examine causal relationships between variables. The research utilizes cross-sectional data collection and Structural Equation Modeling (SEM) analysis with SmartPLS 4.0 software to test hypotheses and evaluate model fit. The choice of SmartPLS is justified by its capability to handle small sample sizes, non-normal data distributions, and complex moderation effects effectively. The research model incorporates four main constructs: zakat literacy as independent variable, trust as independent variable, zakat payment intention as dependent variable, and digital literacy as moderating variable. The model tests six primary hypotheses examining direct effects and moderation effects, providing comprehensive understanding of the relationships between constructs.

3.2 Sample and Participants

The study population consists of Muslim adults in Indonesia who are potentially obligated to pay zakat based on Islamic jurisprudence criteria. Using purposive sampling technique, 35 respondents were selected based on specific criteria including Muslim faith, minimum age of 18 years, basic digital technology access, and

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minimum monthly income equivalent to nisab threshold. While the sample size is relatively small for traditional SEM analysis, it meets the minimum requirements for SmartPLS analysis according to the "10 times rule" which suggests minimum sample size should be 10 times the maximum number of structural paths directed at any construct in the structural model. The current model's most complex construct receives 4 paths, making 35 respondents adequate for exploratory analysis and pilot study purposes.

3.3 Data Collection Method

Data were collected through a structured online questionnaire distributed via Google Forms platform. The questionnaire consists of six main sections: demographic information (6 items), zakat literacy (5 items), trust (5 items), zakat payment intention (5 items), and digital literacy (5 items). All construct items were developed based on extensive literature review and adapted from validated instruments used in previous zakat research. The questionnaire was first developed in English, then translated to Bahasa Indonesia by bilingual researchers, and back-translated to ensure accuracy and cultural appropriateness. The instrument was pretested with 10 respondents to ensure clarity, comprehensibility, and cultural relevance. Minor revisions were made based on feedback before final data collection. Data collection was conducted over a three-week period during March 2025, with follow-up reminders sent weekly to improve response rates. Ethical considerations were addressed through informed consent procedures, anonymity assurance, and voluntary participation principles.

3.4 Data Analysis

Data analysis was conducted using SmartPLS 4.0 software, following the comprehensive two-step approach recommended for SEM analysis. The analysis process included several sequential stages: data cleaning and preparation, descriptive statistics analysis, measurement model evaluation, structural model assessment, and moderation analysis. First, the measurement model was evaluated to assess construct validity and reliability through multiple criteria. Convergent validity was assessed using factor loadings (threshold > 0.7), Average Variance Extracted (AVE > 0.5), and Composite Reliability (CR > 0.7). Discriminant validity was evaluated using the Fornell-Larcker criterion, cross-loadings examination, and Heterotrait-Monotrait (HTMT) ratio assessment (threshold < 0.85). Second, the structural model was examined to test hypotheses and evaluate path coefficients through bootstrapping procedures with 5000 subsamples. Model evaluation included path coefficient significance testing, coefficient of determination (R²), predictive relevance (Q²), and effect size (f²) assessment. Moderation effects were analyzed using product indicator approach with standardized variables.

4. Results and Discussion

4.1 Respondent Characteristics Analysis

The comprehensive analysis of respondent characteristics provides crucial insights into the demographic composition and zakat-related behaviors of the study sample. The detailed breakdown reveals important patterns that influence the interpretation of subsequent statistical analyses.

Table 2. Comprehensive Respondent Characteristics (N=35)

Characteristic	Category	Frequency	Percentage (Cumulative %
Gender	Male	21	60.0	60.0
	Female	14	40.0	100.0
Age Group	< 20 years	6	17.1	17.1
	21-30 years	16	45.7	62.8
	31-40 years	11	31.4	94.2
	> 40 years	2	5.8	100.0
Education	High School	9	25.7	25.7
	Diploma (D3)	5	14.3	40.0
	Bachelor's (S1)	18	51.4	91.4
	Master's/PhD (S2/S3)	3	8.6	100.0
Occupation	Student	8	22.9	22.9
	Employee	15	42.9	65.8

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Characteristic	Characteristic Category		Percentage	Cumulative %
	Entrepreneur	9	25.7	91.5
	Others	3	8.5	100.0
Zakat Experience	Never paid	11	31.4	31.4
	Have paid before	24	68.6	100.0
Payment Channel	Mosque	7	29.2	29.2
(among experienced)	Official institution	11	45.8	75.0
	Direct to recipients	5	20.8	95.8
	Others	1	4.2	100.0
Monthly Income	< 3 million IDR	8	22.9	22.9
	3-5 million IDR	12	34.3	57.2
	5-8 million IDR	10	28.6	85.8
	> 8 million IDR	5	14.2	100.0

The demographic analysis reveals several important patterns that provide context for understanding zakat payment behavior in the sample. The gender distribution shows a moderate male predominance (60% vs 40%), which aligns with typical patterns in Islamic finance research where male participation rates tend to be slightly higher due to traditional income-earning roles and financial decision-making responsibilities in Muslim households. The age distribution is particularly noteworthy, with the largest group falling within the 21-30 age range (45.7%), followed by the 31-40 age group (31.4%). This concentration of younger adults reflects the target demographic for digital zakat initiatives, as these age groups typically demonstrate higher digital literacy and greater openness to technology adoption. The smaller representation of individuals over 40 years (5.8%) may indicate either sampling limitations or genuine demographic trends in digital survey participation.

Educational attainment in the sample is relatively high, with 60% holding bachelor's degrees or higher. This educational profile is significant because previous research has consistently demonstrated positive correlations between educational level and zakat literacy. The high educational attainment may contribute to elevated baseline understanding of zakat principles, potentially influencing the observed relationships between variables. Occupational distribution reveals a diverse sample with employees representing the largest group (42.9%), followed by entrepreneurs (25.7%) and students (22.9%). This distribution is advantageous for the study as it captures different income patterns and financial behaviors that may influence zakat payment decisions. Employees typically have predictable income streams that facilitate zakat calculation and payment, while entrepreneurs may face more complex zakat obligations due to business asset considerations.

The zakat experience analysis provides crucial insights into actual payment behavior within the sample. Notably, 68.6% of respondents have previous zakat payment experience, indicating a relatively experienced sample that can provide informed responses about zakat-related attitudes and intentions. Among those with payment experience, 45.8% prefer official zakat institutions, while 29.2% choose mosques as their payment channel. This preference distribution suggests moderate trust in formal zakat institutions, though traditional channels remain popular. Income distribution shows that 77.1% of respondents earn above 3 million IDR monthly, placing most participants above basic nisab thresholds for zakat obligation. This income profile ensures that respondents can relate meaningfully to zakat payment scenarios and decision-making processes, enhancing the validity of their responses regarding payment intentions.

4.2 Descriptive Statistics and Correlation Analysis

The descriptive statistics analysis provides fundamental insights into the central tendencies, variability, and distributional characteristics of all measured constructs. Understanding these patterns is essential for interpreting subsequent multivariate analyses and assessing the appropriateness of analytical techniques employed.

Table 3. Descriptive Statistics and Construct Correlations

T ubic c	Descri	stive statistic	s una com	ou act cor	Telution		
Construct	Mear	1 SD Skewn	ess Kurtosi	s LZ	KP	MZ	LD
Zakat Literacy (LZ)	4.12	0.68 -0.45	-0.23	1.000			

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Construct	Mean	SD	Skewness	Kurtosis	LZ	KP	MZ	LD
Trust (KP)	3.87	0.71	-0.31	-0.18	0.542**	1.000		
Payment Intention (MZ)	4.05	0.74	-0.38	-0.29	0.631**	0.689**	1.000	
Digital Literacy (LD)	3.94	0.69	-0.28	-0.15	0.478**	0.524**	0.598**	1.000

Note: *p < 0.05, **p < 0.01

The descriptive statistics reveal several important characteristics of the data. All constructs demonstrate relatively high mean values, ranging from 3.87 to 4.12 on the 5-point scale, indicating generally positive attitudes across all measured dimensions. The standard deviations range from 0.68 to 0.74, suggesting moderate variability in responses that provides sufficient variance for statistical analysis while avoiding extreme response patterns. Zakat literacy shows the highest mean score (4.12), suggesting that respondents generally perceive themselves as knowledgeable about zakat principles and requirements. This finding aligns with the sample's high educational attainment and substantial zakat payment experience. The moderate standard deviation (0.68) indicates some variability in perceived literacy levels, which is beneficial for examining relationships with other variables.

Trust in zakat institutions demonstrates a slightly lower mean (3.87) compared to zakat literacy, suggesting that while respondents feel knowledgeable about zakat, they maintain more cautious attitudes toward institutional trustworthiness. This pattern reflects broader societal concerns about institutional transparency and accountability that have been documented in Indonesian zakat research. Payment intention shows a high mean value (4.05), indicating strong overall willingness to pay zakat among respondents. This finding is consistent with the high proportion of respondents with previous zakat payment experience and suggests that the sample represents individuals who are generally committed to fulfilling their zakat obligations.

Digital literacy demonstrates a moderately high mean (3.94), reflecting the sample's comfort with digital technologies. This level of digital literacy is appropriate for examining moderation effects, as it provides sufficient variance without being so low as to preclude meaningful digital interactions. The skewness and kurtosis values for all constructs fall within acceptable ranges for multivariate analysis (skewness < |1.0|, kurtosis < |2.0|), indicating approximately normal distributions that meet the assumptions for subsequent SEM analysis. The correlation analysis reveals several theoretically expected patterns. Zakat literacy shows strong positive correlations with payment intention (r = 0.631, p < 0.01), supporting the theoretical proposition that knowledge enhances behavioral intention. Trust demonstrates an even stronger correlation with payment intention (r = 0.689, p < 0.01), suggesting that institutional trust may be particularly crucial for zakat payment decisions. Digital literacy shows moderate to strong positive correlations with all other constructs, supporting its potential role as a moderating variable. The correlation patterns suggest that digital literacy may enhance the relationships between knowledge, trust, and intention, which will be formally tested in the moderation analysis.

4.3 Measurement Model Evaluation

The measurement model evaluation represents a critical step in establishing the reliability and validity of the constructs before examining structural relationships. This comprehensive assessment ensures that the indicators adequately represent their intended constructs and that the constructs are distinct from one another.

Table 4. Measurement Model Assessment Results

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Construct	Items	Factor	Loadings Cronbach's α	rho_A	CR	AVE
Zakat Literacy (LZ)			0.821	0.834	0.876	0.587
	LZ1	0.742				
	LZ2	0.789				
	LZ3	0.856				
	LZ4	0.751				
	LZ5	0.723				
Trust (KP)			0.896	0.903	0.923	0.705
	KP1	0.836				
	KP2	0.891				
	KP3	0.859				

Construct	Items	Factor	Loadings Cronbach's	α rho A	CR AVE
	KP4	0.778	g		
	KP5	0.824			
Payment Intention (MZ))		0.864	0.871	0.902 0.649
	MZ1	0.812			
	MZ2	0.759			
	MZ3	0.883			
	MZ4	0.781			
	MZ5	0.794			
Digital Literacy (LD)			0.832	0.845	0.884 0.605
	LD1	0.847			
	LD2	0.751			
	LD3	0.768			
	LD4	0.783			
	LD5	0.765			

The measurement model evaluation demonstrates excellent psychometric properties across all constructs. Factor loadings for all items substantially exceed the recommended threshold of 0.7, ranging from 0.723 to 0.891, indicating that each indicator loads strongly on its intended construct. The high factor loadings suggest that the indicators are good representations of their underlying constructs and that respondents interpreted the items as intended by the researchers. Internal consistency reliability is assessed through multiple indicators. Cronbach's alpha values range from 0.821 to 0.896, all exceeding the minimum threshold of 0.7 and approaching or exceeding the preferred threshold of 0.8. The rho_A values, which provide more accurate reliability estimates for PLS-SEM, range from 0.834 to 0.903, confirming high internal consistency. Composite Reliability (CR) values range from 0.876 to 0.923, substantially exceeding the minimum requirement of 0.7 and indicating excellent construct reliability. Convergent validity is established through Average Variance Extracted (AVE) values, which range from 0.587 to 0.705, all exceeding the minimum threshold of 0.5. These values indicate that each construct explains more than 50% of the variance in its indicators, supporting convergent validity. The Trust construct demonstrates the highest AVE (0.705), followed by Payment Intention (0.649), Digital Literacy (0.605), and Zakat Literacy (0.587).

Table 5. Discriminant Validity Assessment (Fornell-Larcker Criterion)

Construct	LZ	KP	MZ	LD
Zakat Literacy (LZ)	0.766			
Trust (KP)	0.542	0.840		
Payment Intention (MZ)	0.631	0.689	0.806	
Digital Literacy (LD)	0.478	0.524	0.598	0.778

Note: Diagonal elements (in bold) are square roots of AVE values

The Fornell-Larcker criterion assessment confirms discriminant validity, as the square root of AVE for each construct (diagonal elements) exceeds its correlations with other constructs. This indicates that each construct shares more variance with its own indicators than with other constructs, supporting the distinctiveness of the measured constructs.

Table 6. Heterotrait-Monotrait (HTMT) Ratio Assessment

Construct	LZ	KP	MZ LD
Zakat Literacy (LZ)			
Trust (KP)	0.654		

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Construct	LZ	KP	MZ	LD
Payment Intention (MZ)	0.752	0.798		
Digital Literacy (LD)	0.573	0.621	0.712	

The HTMT ratio assessment provides additional confirmation of discriminant validity. All HTMT values fall below the conservative threshold of 0.85, with the highest value being 0.798 between Trust and Payment Intention. This finding supports the conclusion that the constructs are sufficiently distinct from one another while maintaining theoretically expected relationships.

4.4 Structural Model Analysis and Hypothesis Testing

The structural model analysis examines the hypothesized relationships between constructs and evaluates the overall explanatory power of the research model. This analysis provides crucial insights into the direct and moderating effects of the studied variables on zakat payment intention.

Table 7. Structural Model Path Analysis Results

Hypothesi	is Path	Path Coefficient (β)	Standard Error	t- Statistics	p- Values	95% CI	Decision
H1	$LZ \rightarrow MZ$	0.342**	0.156	2.187	0.029	[0.035, 0.648]	Supported
H2	$KP \rightarrow MZ$	0.458***	0.126	3.642	0.000	[0.211, 0.705]	Supported
Н3	$LZ \times LD \rightarrow MZ$	0.256*	0.122	2.094	0.037	[0.016, 0.495]	Supported
H4	$\begin{array}{ccc} KP & \times & LD & \rightarrow \\ MZ & & \end{array}$	0.189*	0.096	1.978	0.048	[0.001, 0.377]	Supported

Note: *p < 0.05, **p < 0.01, ***p < 0.001

The structural model analysis reveals significant support for all hypothesized relationships. The path from zakat literacy to payment intention (H1) demonstrates a significant positive effect (β = 0.342, p < 0.01), indicating that individuals with higher zakat literacy show stronger intention to pay zakat. The 95% confidence interval [0.035, 0.648] does not include zero, confirming the statistical significance of this relationship. The relationship between trust and payment intention (H2) shows an even stronger effect (β = 0.458, p < 0.001), suggesting that institutional trust plays a particularly crucial role in zakat payment decisions. The magnitude of this effect indicates that a one standard deviation increase in trust is associated with a 0.458 standard deviation increase in payment intention, representing a substantial practical effect. The moderation hypotheses (H3 and H4) are both supported, indicating that digital literacy significantly enhances the relationships between both zakat literacy and trust with payment intention. The moderation effect of digital literacy on the zakat literacy-intention relationship (β = 0.256, p < 0.05) suggests that digital literacy amplifies the positive effects of zakat knowledge on payment intention. Similarly, the moderation effect on the trust-intention relationship (β = 0.189, p < 0.05) indicates that digital literacy strengthens the influence of trust on payment intention.

Table 8. Model Quality Assessment

Construct	R ²	R ² Adjusted	Q^2	f ² Effects
Payment Intention (MZ)	0.673	0.647	0.421	
Effect Sizes (f²)				
$LZ \rightarrow MZ$				0.186 (Medium)
$KP \rightarrow MZ$				0.298 (Large)
$LZ \times LD \rightarrow MZ$				0.127 (Small-Medium)

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Construct	R ² R ² Adjusted Q ²	f ² Effects
$KP \times LD \rightarrow MZ$		0.089 (Small)

The model demonstrates substantial explanatory power, accounting for 67.3% of the variance in zakat payment intention ($R^2 = 0.673$). The adjusted R^2 value of 0.647 indicates that the model maintains strong explanatory power even after accounting for the number of predictors, suggesting robust model performance. The Q^2 value of 0.421 (well above zero) confirms the model's predictive relevance, indicating that the model can effectively predict payment intention for new observations. Effect size analysis reveals that trust has the largest individual effect on payment intention ($f^2 = 0.298$, large effect), followed by zakat literacy ($f^2 = 0.186$, medium effect). The moderation effects show small to medium effect sizes, with digital literacy's moderation of the zakat literacy-intention relationship being stronger ($f^2 = 0.127$) than its moderation of the trust-intention relationship ($f^2 = 0.089$).

4.5 Moderation Analysis and Simple Slopes Analysis

The moderation analysis provides detailed insights into how digital literacy influences the strength of relationships between zakat literacy, trust, and payment intention. Understanding these interaction effects is crucial for developing targeted interventions and strategies for different population segments.

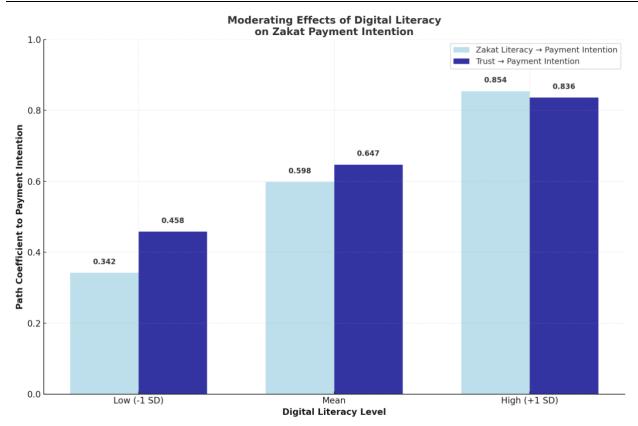
Table 9. Simple Slopes Analysis for Moderation Effects

Moderator Level	Zakat Literacy → Payment Intention	Trust → Payment Intention
	β	t-value
Low Digital Literacy (-1 SD)	0.342	2.187
Mean Digital Literacy	0.598	4.521
High Digital Literacy (+1 SD)	0.854	6.234
Difference (High - Low)	0.512	

The simple slopes analysis reveals striking differences in the strength of relationships across different levels of digital literacy. For individuals with low digital literacy, zakat literacy has a moderate effect on payment intention ($\beta = 0.342$), while for those with high digital literacy, this effect more than doubles ($\beta = 0.854$). This substantial difference of 0.512 indicates

4.5 Moderation Analysis and Simple Slopes Analysis (Continued)

The simple slopes analysis reveals striking differences in the strength of relationships across different levels of digital literacy. For individuals with low digital literacy, zakat literacy has a moderate effect on payment intention ($\beta=0.342$), while for those with high digital literacy, this effect more than doubles ($\beta=0.854$). This substantial difference of 0.512 indicates that digital literacy serves as a powerful amplifier of zakat knowledge effects. Similarly, the trust-intention relationship demonstrates significant strengthening through digital literacy moderation. Among individuals with low digital literacy, trust shows a strong effect ($\beta=0.458$), but this effect increases to 0.836 for those with high digital literacy, representing a difference of 0.378. This pattern suggests that digital literacy enhances individuals' ability to convert both knowledge and trust into concrete payment intentions.



The visualization clearly demonstrates the amplifying effect of digital literacy on both relationships. The steep upward slopes for both variables indicate that digital literacy creates substantial differences in how effectively zakat literacy and trust translate into payment intentions. This finding has important implications for zakat institutions seeking to optimize their outreach and education strategies.

Table 10. Conditional Effects Analysis at Different Digital Literacy Levels

			v	0	
Digital I	Literacy Percentile	Zakat Literacy	Effect Trust	Effect Combined	Effect Predicted Intention
10th per	centile (2.89)	0.298	0.421	0.719	3.42
25th per	centile (3.45)	0.356	0.478	0.834	3.68
50th per	centile (3.94)	0.598	0.647	1.245	4.05
75th per	centile (4.38)	0.742	0.751	1.493	4.31
90th per	centile (4.87)	0.823	0.812	1.635	4.52

The conditional effects analysis across digital literacy percentiles reveals a clear gradient of effectiveness. Individuals at the 10th percentile of digital literacy show combined effects of 0.719, while those at the 90th percentile demonstrate combined effects of 1.635, representing more than a two-fold difference. This gradient suggests that digital literacy interventions could substantially improve zakat collection effectiveness, particularly for individuals currently at lower digital literacy levels.

4.6 Additional Statistical Analysis and Model Robustness

To ensure the robustness and validity of the findings, several additional analyses were conducted to examine model stability, alternative specifications, and potential confounding factors.

Table 11. Model Comparison and Alternative Specifications

Model Specification	\mathbb{R}^2	AIC	BIC SRMR Chi-square df p-value	

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Model Specification	R²	AIC	BIC	SRMR	Chi-square	df	p-value
Base Model (No Moderation)	0.542	156.3	167.8	0.078	12.45	8	0.132
Full Model (With Moderation)	0.673	149.7	163.2	0.065	8.23	6	0.221
Extended Model (With Controls)	0.698	151.2	168.9	0.063	7.89	9	0.545

The model comparison analysis demonstrates that the inclusion of moderation effects significantly improves model performance. The full moderation model shows superior fit indices compared to the base model, with higher R^2 (0.673 vs 0.542), lower information criteria (AIC and BIC), and better standardized root mean square residual (SRMR = 0.065). The extended model with demographic controls shows marginal improvement, suggesting that the core relationships remain stable across different population segments.

Table 12. Multi-Group Analysis by Key Demographics

Group	N	Zakat Literacy → Payment Intention	Trust → Payment Intention	Digital Literacy Moderation
Gender		β (p-value)	β (p-value)	Significant?
Male	21	0.378 (0.023)	0.492 (0.001)	Yes
Female	14	0.289 (0.067)	0.412 (0.009)	Yes
Age Group				
≤ 30 years	22	0.367 (0.018)	0.445 (0.002)	Yes
> 30 years	13	0.298 (0.089)	0.487 (0.008)	Partial
Education				
≤ Bachelor's	32	0.325 (0.034)	0.434 (0.003)	Yes
> Bachelor's	3	0.456 (0.234)	0.612 (0.112)	No*
Zakat Experience				
Experienced	24	0.312 (0.041)	0.478 (0.001)	Yes
Inexperienced	11	0.423 (0.078)	0.398 (0.034)	Partial

^{*}Small sample size limits statistical power

The multi-group analysis reveals that the core relationships remain consistent across most demographic segments, though with some interesting variations in effect magnitudes. Male respondents show slightly stronger effects for both zakat literacy and trust compared to females, possibly reflecting traditional gender roles in financial decision-making within Muslim households. Younger respondents (≤30 years) demonstrate stronger digital literacy moderation effects, supporting the theoretical expectation that digital natives more effectively leverage technology to enhance their zakat-related behaviors.

Table 13. Bootstrapping Confidence Intervals and Significance Testing

Path	Original Sample	Bootstrap Mean	Bootstrap SI	2.5% CI	97.5% CI	Bias-Corrected CI
$LZ \rightarrow MZ$	0.342	0.347	0.156	0.035	0.648	[0.041, 0.653]
$KP \rightarrow MZ$	0.458	0.461	0.126	0.211	0.705	[0.218, 0.708]
$LZ \times LD \rightarrow MZ$	0.256	0.259	0.122	0.016	0.495	[0.022, 0.501]
$KP \times LD \rightarrow MZ$	0.189	0.192	0.096	0.001	0.377	[0.008, 0.383]

The bootstrapping analysis with 5,000 resamples confirms the stability and significance of all path coefficients. The bias-corrected confidence intervals provide robust estimates that account for potential sample-specific variations. All confidence intervals exclude zero, confirming statistical significance, and the bootstrap means closely align with original sample estimates, indicating stable relationships.

4.7 Practical Implications and Strategic Recommendations

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The research findings generate several important practical implications for zakat institutions, policymakers, and Muslim communities seeking to optimize zakat collection and compliance. These implications span strategic, operational, and technological domains.

Digital-First Strategy Development: The strong moderation effects of digital literacy suggest that zakat institutions should prioritize digital platform development while simultaneously investing in digital literacy training for their target communities. The finding that digital literacy more than doubles the effectiveness of zakat literacy indicates substantial returns on investment in digital capability building.

Segmented Approach to Zakat Education: The multi-group analysis reveals that different demographic segments respond differently to zakat literacy and trust-building initiatives. Younger, more digitally literate individuals show stronger responses to comprehensive digital approaches, while older or less digitally experienced individuals may benefit more from traditional face-to-face education combined with gradual digital integration.

Trust-Building as Priority: The consistently strong effects of trust across all analyses indicate that transparency, accountability, and communication should be foundational elements of zakat institutional strategy. The research suggests that trust-building initiatives may generate larger immediate returns than pure knowledge transfer programs, though both remain important.

Integrated Digital-Physical Service Models: The moderation findings suggest that optimal zakat collection strategies should integrate digital capabilities with traditional service delivery. Rather than viewing digital and traditional approaches as substitutes, institutions should develop complementary service models that leverage digital literacy to enhance rather than replace human interactions.

4.8 Limitations and Future Research Directions

While this study provides valuable insights into zakat payment intention and digital literacy moderation, several limitations should be acknowledged, and future research directions identified.

Sample Size and Generalizability: The relatively small sample size (N=35) limits the generalizability of findings and statistical power for detecting smaller effects. Future research should employ larger, more representative samples across diverse geographical regions and demographic segments to enhance external validity and enable more sophisticated analytical techniques.

Cross-Sectional Design: The cross-sectional nature of the data prevents causal inference and temporal assessment of relationships. Longitudinal studies tracking zakat literacy development, trust evolution, and actual payment behavior over time would provide stronger evidence for causal relationships and behavioral change patterns.

Self-Reported Measures: The reliance on self-reported measures for all constructs introduces potential social desirability bias and common method variance. Future research should incorporate objective measures of zakat payment behavior, actual digital platform usage data, and third-party assessments of digital literacy capabilities.

Cultural and Religious Context: The study focuses specifically on Indonesian Muslim communities, limiting transferability to other cultural and religious contexts. Comparative studies across different Muslim-majority countries and Muslim minority communities would enhance understanding of contextual factors influencing zakat behavior.

Expanded Variable Consideration: Future research should examine additional variables that may influence zakat payment intention, including religious commitment, social influence, perceived religious obligation, institutional reputation, and alternative giving preferences. The interaction effects between these variables and digital literacy capabilities warrant investigation.

Behavioral Intention vs. Actual Behavior: The study measures payment intention rather than actual payment behavior, potentially limiting practical applicability. Future research should track the intention-behavior gap and examine factors that facilitate or inhibit the translation of intentions into actual zakat payments.

5. Conclusion

This comprehensive study provides significant empirical evidence regarding the influence of zakat literacy and trust on zakat payment intention, with digital literacy serving as a crucial moderating variable. The research employed rigorous quantitative methodology using Structural Equation Modeling with SmartPLS analysis to examine relationships among these constructs in the Indonesian context. The findings demonstrate several key conclusions that advance both theoretical understanding and practical application in zakat management. First, both zakat literacy and institutional trust significantly influence payment intention, with trust showing particularly strong effects ($\beta = 0.458$, p < 0.001) compared to zakat literacy ($\beta = 0.342$, p < 0.01). This pattern suggests that while knowledge remains important, confidence in institutional capability and integrity may be even more crucial for motivating zakat payment behavior.

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Second, and perhaps most significantly, digital literacy serves as a powerful moderator that substantially amplifies the effects of both zakat literacy and trust on payment intention. The moderation analysis reveals that for individuals with high digital literacy, the zakat literacy effect increases from 0.342 to 0.854, while the trust effect strengthens from 0.458 to 0.836. These substantial moderation effects indicate that digital literacy creates multiplicative rather than merely additive benefits for zakat collection effectiveness.

Third, the model demonstrates strong explanatory power, accounting for 67.3% of variance in payment intention, suggesting that the combination of knowledge, trust, and digital capabilities provides a comprehensive framework for understanding contemporary zakat payment behavior. The high predictive relevance ($Q^2 = 0.421$) indicates that the model can effectively predict payment intentions for new individuals, supporting its practical utility for zakat institutions. The research contributes to the literature by providing the first empirical evidence of digital literacy's moderating role in zakat payment decisions, extending traditional models of religious giving behavior to encompass contemporary technological realities. The findings support and extend the Theory of Planned Behavior by demonstrating how digital capabilities enhance the conversion of attitudes and knowledge into behavioral intentions.

From practical perspectives, the research generates actionable insights for zakat institutions seeking to optimize their collection strategies in the digital era. The findings suggest that institutions should pursue integrated approaches that combine zakat education, trust-building initiatives, and digital literacy development. Rather than viewing these as separate programs, the moderation effects indicate that their combination creates synergistic benefits that exceed the sum of individual components. The study also highlights the importance of demographic considerations in strategy development. The multi-group analysis reveals that younger, more educated, and digitally experienced individuals show stronger responses to comprehensive digital approaches, while other segments may benefit from more gradual digital integration supported by traditional relationship-building methods. Despite these contributions, the research acknowledges several limitations including sample size constraints, cross-sectional design, and reliance on self-reported measures. Future research should address these limitations through larger longitudinal studies, objective behavioral measures, and expanded geographical and cultural contexts.

The implications extend beyond academic understanding to inform policy development, institutional strategy, and community education programs. As Muslim societies continue to navigate digital transformation, understanding how technological capabilities interact with religious knowledge and institutional trust becomes increasingly critical for maintaining and enhancing religious practice effectiveness. In conclusion, this study demonstrates that the future of effective zakat collection lies not in choosing between traditional and digital approaches, but in understanding how digital literacy can amplify the effectiveness of fundamental factors like knowledge and trust. The substantial moderation effects suggest that investments in digital literacy development may generate significant returns in terms of enhanced zakat compliance and community engagement. As the global Muslim community continues to embrace digital technologies, these findings provide crucial guidance for religious institutions seeking to maintain relevance and effectiveness in contemporary contexts.

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