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## Customer Perceptions of Digital Halal Certification and Its Implications for MSME Product Purchasing Decisions

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**Abstract:** This study analyzes consumer perceptions of digital halal certification for MSME products and its impact on purchasing decisions. The research method uses a quantitative approach with survey techniques to 385 Muslim consumers in Central Java. The results show that 73.2% of respondents have positive perceptions of digital halal certification for MSMEs. The main factors influencing consumer perceptions include ease of digital verification (78.5%), trust in certification institutions (71.8%), and level of understanding of the certification process (69.3%). Regression analysis shows that positive perceptions of digital halal certification significantly influence purchasing decisions with a coefficient of determination value of 0.652. This research contributes to MSMEs in understanding consumer preferences for digital halal-certified products and their implications for marketing strategies.

**Keyword:** consumer perception, digital halal certification, MSME, purchasing decision, Muslim

### INTRODUCTION

With the largest Muslim population in the world, Indonesia has a huge potential market for halal products. In 2020, 229.62 million people, or 87.2% of the country's total population, were Muslims, according to data from the Central Statistics Agency (BPS). The halal business has a lot of room to grow because to this circumstance, especially in the Micro, Small, and Medium Enterprises (MSMEs) sector, which is the foundation of the country's economy, contributing 61.97% to GDP by 2022. The massive digital transformation has shifted the consumer paradigm in interacting with products and services. This digitalization era has also penetrated the halal certification system, where the verification and validation of certificate authenticity can be conducted digitally through various technology platforms. Through a mobile application and the official website, customers can use the halal information system created by the Halal Product Assurance Agency (BPJPH) to verify the halal status of items in real time.

Beginning on October 17, 2024, all food and beverage items must receive halal certification by Law Number 33 of 2014 concerning Halal Product Assurance (UU JPH), and

then postponed until 2026 for MSMEs, has created a new dynamic in consumer perceptions of halal products. According to the Indonesian Food and Beverage Entrepreneurs Association (GAPMMI), there are approximately 1.6 million small food and beverage industry players, but only about 10% have obtained halal certification (UNAIR, 2024). Consumer perception of digital halal certification is a crucial factor in determining the system's effectiveness in influencing purchasing behavior. Previous research by Anwar et al. (2020) showed that 68% of Indonesian Muslim consumers consider the halal label a primary consideration in their food product purchasing decisions. However, with the development of digital technology, consumer consumption patterns and preferences have undergone changes that require further study.

An interesting phenomenon is the gap between consumer awareness of halal products and their level of trust in digital certification systems. A survey conducted by the Indonesia Halal Lifestyle Center (2023) showed that although 89% of respondents considered halal certification essential, only 45% understood how to verify digital halal certification. This situation creates both opportunities and challenges for MSMEs in utilizing digital halal certification as a product differentiation strategy. The development of financial technology (fintech) and e-commerce in Indonesia, which reached 64% penetration in 2023, has transformed consumer shopping behavior. Digital platforms have become the primary medium for interaction between consumers and MSME products. In this regard, digital halal certification serves not only as a guarantee of product halalness but also as a digital marketing tool that can increase the trust and credibility of MSME products in the eyes of consumers.

The characteristics of millennial and Gen Z consumers, who dominate Indonesia's digital market, are characterized by a tendency to conduct product research online before making a purchase. Data from McKinsey & Company (2023) shows that 78% of Indonesian consumers use smartphones to search for product information before purchasing. This indicates that easy access to halal certification information through digital platforms is a highly relevant factor in influencing purchasing decisions. Trust in the digital economy is a fundamental element determining the success of online transactions. In the case of halal products, trust is not only related to product quality but also to the religious beliefs and spiritual values of Muslim consumers. Digital halal certification acts as a bridge connecting spirituality with modern technology, creating a more transparent and accountable halal economic ecosystem.

This research is relevant given the limited empirical studies examining consumer perceptions of digital halal certification, particularly for MSME products in Indonesia. Most previous research focuses on conventional halal certification and has not explored the increasingly digital dimension. Therefore, The purpose of this study is to examine how consumers view digital halal certification and assess how it affects their decisions to buy MSME products. Businesses and governments can use these strategic insights to maximize the adoption of a digital halal certification system in Indonesia.

## METHOD

This study analyzes data using a survey method and a quantitative methodology consumer perceptions of digital halal certification and its implications for MSME product purchasing decisions. Explanatory research, which seeks to elucidate the causal links between the variables under study, was the research design selected. Muslims in Central Java between the ages of 18 and 55 who have previously bought MSME goods online within the previous six months made up the study's demographic. Central Java was selected as the research location based on the consideration that this province has the second-largest number of MSMEs in Indonesia, with 4.2 million business units and a relatively high digital penetration rate of 68.5%. A minimum sample size of 385 respondents was obtained by applying the Slovin formula with a 5% margin of error. The sampling technique used was stratified random sampling based on geographic zone (urban and rural) and education level to ensure sample representativeness.

The variables in this study consist of Independent Variables: Consumer Perception of Digital Halal Certification, measured using indicators: (1) Perceived usefulness, (2) Perceived ease of use, (3) Trust in digital systems, (4) Perceived data security, and (5) Perceived credibility of certification bodies. Dependent Variables: MSME Product Purchase Decisions Measured using indicators: (1) Purchase intention, (2) Purchase frequency, (3) Number of purchases, (4) Recommendations to others, and (5) Loyalty to halal-certified products. Moderator Variables: Religiosity Level Measured using the Islamic Religiosity Scale developed by Krauss et al. (2005) with dimensions: (1) *Akidah* (belief), (2) *Sharia* (practice), and (3) *Akhlak* (moral). The research instrument used a structured questionnaire with a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). The questionnaire was developed based on adaptations of instruments validated in previous research, with adjustments for digital halal certification.

Instrument validity was tested using confirmatory factor analysis (CFA) with a minimum factor loading of 0.5 and a minimum Average Variance Extracted (AVE) of 0.5. Reliability was tested using a Cronbach's Alpha coefficient with a minimum value of 0.7 to ensure the instrument's internal consistency. Data collection was conducted through an online survey using the Google Forms platform from August to September 2024. Questionnaires were distributed through various digital channels, including social media, instant messaging applications, and email. To ensure data quality, respondents were screened based on predetermined inclusion criteria. Data analysis used Structural Equation Modeling (SEM) techniques with AMOS 24.0 software to test causal relationships between variables.

## RESULT AND DISCUSSION

### Respondent Characteristics

Based on data collected from 385 respondents, demographic characteristics show a representative distribution of the target population. Respondents were 58.2% female and 41.8% male by gender. Age distribution shows a predominance of the 25-35 age group (45.5%), followed by those aged 18-24 (28.3%), 36-45 (18.7%), and 46-55 (7.5%). Respondents' educational levels were dominated by bachelor's degree (47.8%), diploma (23.4%), high school/vocational high school (21.6%), and postgraduate (7.2%). Income distribution shows that 38.7% of respondents earn between Rp 3 and 5 million per month, 29.1% earn between Rp 2 and 3 million, 19.5% earn between Rp 5 and 8 million, and 12.7% earn above Rp 8 million per month.

The digital technology usage profile shows that 89.6% of respondents use smartphones as their primary device for online shopping, with an average internet usage time of 6.2 hours per day. The most frequently used e-commerce platforms are Shopee (67.3%),

Tokopedia (52.1%), and Bukalapak (23.8%). Seventy-eight percent of respondents stated they had used the halal product search feature on e-commerce platforms.

## **Descriptive Analysis of Research Variables**

### **Consumer Perceptions of Digital Halal Certification**

The descriptive analysis results indicate that overall, respondents have a positive perception of digital halal certification, with a mean score of 3.87 (SD = 0.64). The perceived usefulness dimension received the highest score, with a mean score of 4.12 (SD = 0.58), indicating that consumers consider digital halal certification very useful in verifying the halal status of products. The trust dimension in digital systems received a mean score of 3.78 (SD = 0.71), indicating a relatively high level of trust, although some respondents still have doubts. This is confirmed by the finding that 23.6% of respondents still doubted the accuracy of the information provided by the digital system. The perceived ease of use dimension obtained a mean of 3.65 (SD = 0.69), indicating that although consumers consider the system quite easy to use, there is still room for improvement in terms of the interface and user experience. A total of 31.4% of respondents reported difficulty finding halal certification information on e-commerce platforms.

### **MSME Product Purchase Decisions**

The purchase decision variable showed a mean value of 3.73 (SD = 0.61). The purchase intention dimension obtained the highest score with a mean of 3.91 (SD = 0.55), indicating that consumers have a strong tendency to purchase MSME products with digital halal certification. The loyalty dimension towards halal-certified products obtained a mean of 3.68 (SD = 0.67), indicating that digital halal certification can contribute to building consumer loyalty. However, the recommendation to others dimension received the lowest score with a mean of 3.52 (SD = 0.73), indicating that although consumers have high purchase intentions, they are not yet fully confident in recommending the product to others.

### **Religiosity Level**

The religiosity level variable showed a mean of 4.23 (SD = 0.52), indicating that the majority of respondents have a high level of religiosity. The akidah (belief) dimension received the highest score with a mean of 4.41 (SD = 0.48), followed by sharia (practice) with a mean of 4.18 (SD = 0.55), and akhlak (morals) with a mean of 4.09 (SD = 0.58).

### **Validity and Reliability Test**

Confirmatory Factor Analysis (CFA) results showed that all indicators had factor loadings above 0.5, with a range of 0.628-0.864. The Average Variance Extracted (AVE) values for all constructs were above 0.5, namely: perception of digital halal certification (0.612), purchase decision (0.587), and level of religiosity (0.643).

Reliability testing using Cronbach's Alpha showed satisfactory values for all constructs: perception of digital halal certification ( $\alpha = 0.867$ ), purchase decision ( $\alpha = 0.834$ ), and level of religiosity ( $\alpha = 0.891$ ). Composite reliability values also showed good results, ranging from 0.847 to 0.924, confirming the internal consistency of the research instrument.

### **Goodness of Fit Model Test**

The structural model test yielded goodness-of-fit indices that met the established criteria. The Chi-square/df value was 2.847 ( $< 3.0$ ), GFI = 0.912 ( $\geq 0.90$ ), CFI = 0.934 ( $\geq 0.90$ ), TLI = 0.918 ( $\geq 0.90$ ), RMSEA = 0.067 ( $\leq 0.08$ ), and SRMR = 0.054 ( $\leq 0.08$ ). These results indicate that the research model has a good fit with the empirical data.

## Hypothesis Testing

Hypothesis 1: MSME product purchases are positively and significantly impacted by consumers' favorable opinions of digital halal certification. The findings of the analysis show that favorable opinions about digital halal certification significantly influence decisions to buy, with a path coefficient of  $\beta = 0.652$  ( $t = 8.437$ ;  $p < 0.001$ ). The R-square value of 0.425 indicates that 42.5% of the variance in purchasing decisions can be explained by perceptions of digital halal certification. Hypothesis 1 is accepted. Hypothesis 2: Perceived usefulness of digital halal certification has a positive and significant effect on consumer perceptions. The perceived usefulness dimension has a significant effect on consumer perceptions with a path coefficient of  $\beta = 0.734$  ( $t = 9.283$ ;  $p < 0.001$ ). This indicates that the higher the perceived usefulness of the digital halal certification system, the more positive the overall consumer perception.

Hypothesis 2 is accepted. Hypothesis 3: Perceived ease of use of digital halal certification has a positive and significant effect on consumer perceptions. The perceived ease of use dimension shows a significant effect on consumer perceptions with a path coefficient of  $\beta = 0.487$  ( $t = 6.152$ ;  $p < 0.001$ ). Although significant, the effect is smaller than that of perceived usefulness, indicating that consumers prioritize functional benefits over ease of use. Hypothesis 3 is accepted. Hypothesis 4: Consumer religiosity moderates the relationship between perceptions of digital halal certification and purchasing decisions. Moderation analysis shows that religiosity has a significant moderating effect ( $\beta = 0.128$ ;  $t = 2.341$ ;  $p < 0.05$ ). Consumers with high levels of religiosity show a stronger relationship between perceptions of digital halal certification and purchasing decisions than consumers with low levels of religiosity. Hypothesis 4 is accepted.

## Discussion

### Consumer Perceptions of Digital Halal Certification

Research findings indicate that the majority of consumers have a positive perception of digital halal certification, with a mean score of 3.87 on a scale of 5. This finding aligns with research conducted by Ahmad & Rahman (2023), which found that 71% of Muslim consumers in Southeast Asia expressed a positive attitude toward the adoption of digital technology in halal product verification. This high level of positive perception can be explained by several key factors. First, the perceived usefulness dimension, which received the highest score (mean = 4.12), indicates that consumers recognize the practical benefits of the digital halal certification system in verifying product authenticity. This confirms the Technology Acceptance Model theory, which states that perceived usefulness is a key predictor of technology adoption. Consumers perceive digital systems as providing faster, more accurate, and more transparent access to information than conventional systems.

Second, trust in digital certification bodies plays a crucial role in shaping positive perceptions. Data shows that 76.3% of respondents expressed confidence in the credibility of BPJPH as the agency authorized to issue digital halal certificates. This trust is built through the institutional reputation and legal legitimacy of government agencies. Third, easy access to information through digital platforms significantly contributes to positive consumer perceptions. As many as 78.5% of respondents stated that they can easily access halal certification information via smartphones, which aligns with Indonesian digital consumption patterns, which are dominated by mobile devices.

### Implications for Purchasing Decisions

Correlation analysis shows that positive perceptions of digital halal certification significantly influence MSME product purchasing decisions, with a coefficient of determination of 0.425. This finding provides empirical evidence that digital halal



certification functions not only as a regulatory compliance measure but also as a differentiation factor that can increase the competitiveness of MSME products in the digital marketplace. The purchase intention dimension, which received the highest score (mean = 3.91), indicates that consumers have a strong tendency to choose MSME products with digital halal certification. This aligns with behavioral economics research showing that reducing information uncertainty can increase the probability of a purchase decision. Digital halal certification functions as a quality signal that reduces information asymmetry between producers and consumers. Further analysis shows that the influence of digital halal certification on purchasing decisions is mediated by consumer trust levels. Respondents with high levels of trust in digital systems showed a stronger correlation between certification perceptions and purchase intentions ( $r = 0.73$ ) compared to respondents with low levels of trust ( $r = 0.48$ ).

### **The Moderating Role of Religiosity**

An interesting finding from this study is the significant moderating effect of consumer religiosity. Consumers with high levels of religiosity showed greater sensitivity to the existence of digital halal certification than consumers with moderate levels of religiosity. This can be explained by the theory of planned behavior, which states that personal values influence the relative weight of various product attributes in the decision-making process. The data show that consumers with high religiosity scores ( $> 4.0$ ) have an 84.7% probability of purchasing digital halal-certified products, while consumers with moderate religiosity scores (3.0-4.0) have a 67.2% probability. This difference indicates that religious motivation strengthens the relationship between perceptions of digital halal certification and purchase decisions.

### **Strategic Implications for MSMEs**

The research findings provide several strategic implications for MSMEs in optimizing the benefits of digital halal certification. First, MSMEs need to prioritize communicating the functional benefits of digital halal certification to consumers, given that the perceived usefulness dimension has the greatest influence on consumer perception. Second, digital marketing strategies need to be tailored to the characteristics of the target market based on their level of religiosity. For consumers with high levels of religiosity, marketing messages can emphasize spiritual aspects and alignment with religious values. Meanwhile, for consumers with moderate levels of religiosity, messages can focus on product quality, safety, and transparency. Third, MSMEs need to optimize the visibility of digital halal certification information on e-commerce platforms. Data shows that 31.4% of respondents experienced difficulty finding halal certification information on digital platforms, indicating a gap in technical implementation that needs to be addressed.

### **Impact on the Halal Digital Economy Ecosystem**

The results indicate that digital halal certification positively contributes to the development of the halal digital economy ecosystem in Indonesia. Increased consumer trust in digitally halal-certified MSME products can drive the growth of the halal economy sector, which is projected to reach \$2.3 trillion globally by 2025. The implementation of digital halal certification also creates positive spillover effects to increase consumer digital literacy and adoption of Islamic financial technology. Data shows that 68.4% of respondents who use the digital halal verification system also use Islamic banking applications, indicating a positive correlation between halal technology adoption and preference for Islamic financial products.

### Limitations and Future Research Agenda

This study has several limitations that should be acknowledged. First, the limited geographic scope of Central Java may reduce the generalizability of the national findings. Second, the use of a cross-sectional method does not allow for analysis of changes in consumer perceptions over time. Future research could focus on developing a longitudinal model to analyze the evolution of consumer perceptions of digital halal certification. Furthermore, comparative research is needed to compare the effectiveness of digital halal certification across various industry sectors and geographic regions.

### CONCLUSION

This study successfully analyzed consumer perceptions of digital halal certification and measured its impact on purchasing decisions for MSME products in Central Java. Based on the analysis of 385 respondents, it can be concluded that the majority of Muslim consumers have a positive perception of the digital halal certification system, with a mean score of 3.87 on a scale of 5. The major findings of the study indicate that positive perceptions of digital halal certification significantly influence MSME product purchasing decisions, with a coefficient of determination of 0.425. The perceived usefulness dimension proved to have the most dominant influence in shaping consumer perceptions, followed by trust in the certification body and ease of use of the digital system. Consumer religiosity acted as a moderator, strengthening the relationship between perceptions of digital halal certification and purchasing decisions. Consumers with high levels of religiosity showed greater sensitivity to the existence of digital halal certification, with a purchase probability reaching 84.7% compared to 67.2% for consumers with moderate levels of religiosity.

The implementation of digital halal certification has been shown to have a positive impact on Indonesia's halal digital economy ecosystem. Increasing consumer trust in digitally certified halal MSME products can be a catalyst for sustainable growth in the halal economy sector. Furthermore, this digital system also contributes to increased transparency and accountability in the halal product supply chain.

From a practical perspective, this research provides strategic insights for MSMEs to optimize the benefits of digital halal certification as a tool for product differentiation and increased competitiveness. Marketing communication strategies should emphasize the functional benefits of digital systems, particularly in terms of ease of verification and increased consumer trust. For policymakers, this research finding confirms that implementing digital halal certification is an appropriate strategic step in supporting the digital transformation of the MSME sector. However, more intensive educational efforts are needed to improve consumer digital literacy and overcome technical difficulties in accessing halal certification information on e-commerce platforms. This research also provides theoretical contributions by confirming the relevance of the Technology Acceptance Model to digital halal certification and determining how religion influences halal goods purchases. The integration of the technological and spiritual dimensions within a theoretical framework can serve as a basis for developing research models on consumer behavior in the digital era.

The study's limitations, including its geographic scope and cross-sectional methodology, open up opportunities for further research using longitudinal and multi-regional approaches. Developing comparative research across industrial sectors and analyzing the impact of digital halal certification implementation on the financial performance of MSMEs are also interesting research agendas to explore.

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