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Consumer preferences and trust as determinants of halal product marketing strategies: Initial validity and reliability testing

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Abstract

The rapid growth of Indonesia's halal industry has intensified the need for robust measurement tools capable of capturing consumer perceptions, trust, and behavioral tendencies toward halal-labeled products. This study conducts an initial validity and reliability assessment of a newly developed instrument designed to evaluate consumer behavior toward halal products. A total of 56 indicators were adapted from established theoretical frameworks, including the Theory of Planned Behavior (TPB) and the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2). Data were obtained from 30 Indonesian consumers through an online and offline survey and analyzed using Pearson Product Moment correlation and Cronbach's Alpha. The results show that two items were invalid and subsequently removed, after which all remaining indicators met the validity criteria. Reliability testing yielded a Cronbach's Alpha of 0.974, indicating excellent internal consistency. Preliminary hypothesis testing using SmartPLS further demonstrated that 12 of the 15 proposed relationships were significant. These findings confirm that the instrument demonstrates strong psychometric properties and is suitable for use in large-scale data collection. The validated measurement model serves as a methodological foundation for future research aiming to formulate evidence-based marketing strategies that strengthen consumer trust and preference for halal-certified products.

Keywords: Halal; Initial Validity and Reliability Testing; Theory of Planned Behavior; UTAUT2

1. Introduction

According to the World Population Review (1), Indonesia is recorded as the country with the largest Muslim population in the world, around 242 million Muslims out of a total population of 286 million in 2025. Given this demographic composition, the demand for halal products in Indonesia continues to increase—across the food, cosmetic, and service sectors (2). This growing demand is not only driven by religious factors but also by heightened awareness of quality, safety, and healthy lifestyle choices associated with halal products (3). This particular trend presents both an opportunity and a challenge for Indonesia's halal industry. The increasing demand creates potential for local growth and global competitiveness. However, Indonesia becomes one of the world's largest importers of halal products (4). This situation reflects the globalization of the halal industry, where consumers have wider access to a variety of products from different countries. In the context of halal certification, consumers also consider the credibility of certifying institutions from the product's country of origin. In addition, consumers today are increasingly influenced by perceptual factors such as halal labels and trust built through effective marketing strategies, for example through the presence of influencers and branding that emphasizes product quality and safety.

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In recent study by Fachrurrozie et al. (5), it analyzed the factors that determine halal food purchasing decisions among GoFood and ShopeeFood app users. In addition, this study also examined the influence of TPB, UTAUT2, and MCDM theories on halal food purchasing behavior. This study stated that the intention to purchase halal food significantly influences halal food purchasing behavior. However, path analysis revealed that attitudes and subjective norms influence the intention to purchase halal food, and halal awareness emerges as a strong predictor of purchase intention. Furthermore, Handriana et al. (6) analyzed the purchasing behavior of millennials regarding halal cosmetic products in Indonesia and it also contributed to marketing theory related to consumer behavior of halal cosmetic products. The outcomes of their study showed that there is a significant influence between the purchasing behavior of millennials and their attitudes and intentions to buy. In addition, this study also emphasizes the importance of consumer trust in maintaining a positive attitude towards halal cosmetics.

Based on previous studies, it can be concluded that further exploration is needed in order to develop marketing strategies that do not rely merely on halal labels and conventional promotions, but also utilize perceptual preferences, social proof, and trust-building to increase consumer loyalty and purchasing decisions regarding halal-labeled products. Given the urgency described above, a study is needed to identify the factors that influence consumer perceptions and trust in halal products. This will enable the formulation of recommendations for strategies to penetrate the domestic market, ensuring that consumers continue to favor local products. The selection of halal-certified products as the research subject was grounded in several conceptual and empirical considerations. This focus is particularly relevant given that halal assurance extends to numerous products and services used in daily life, rendering halal labeling a critical source of information that guides consumer evaluation, trust, and purchase intention.

Therefore, the primary objective of this study is to conduct an initial validation and reliability testing of the measurement instruments developed to assess consumer behavior toward halal products. The indicators used in these instruments were adapted from established theories and prior empirical studies, including the Theory of Planned Behavior (TPB) and the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2). Conducting this preliminary validation and reliability is essential to confirm the psychometric robustness of the instruments and to prevent potential measurement bias prior to the large-scale data collection phase. This process strengthens the methodological rigor of the study and guarantees that subsequent empirical analyses are grounded in theoretically coherent and empirically reliable measures.

2. Material and methods

2.1. Research Design

Data were collected at a single point in time using a structured questionnaire consisting of 56 indicators, each representing items developed from relevant constructs within the proposed model. All indicators were measured using a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). This scale was selected to encourage respondents to express a clear degree of agreement or disagreement, reducing the tendency for neutral responses that might obscure the interpretation of behavioral tendencies. The use of a cross-sectional quantitative method allows the researcher to capture patterns of perception, attitude, and behavioral intention among consumers toward halal-labeled products, while minimizing potential biases that could arise from temporal or situational variations.

2.2. Sample

The target population of this study consisted of Indonesian consumers who currently use, purchase, or demonstrate an interest in halal-labelled products as part of their daily consumption activities. To ensure that respondents possessed sufficient purchasing autonomy and decision-making capacity, only individuals aged 18 years and above were included in the study. The sample encompassed a diverse range of consumer groups, including university students, employed individuals, and housewives, as these segments represent significant contributors to the consumption of halal products in Indonesia.

2.3. Data Collection

The data was collected using questionnaires in the format of Google Forms distributed via WhatsApp and also handed out directly to students on campus. Data collection was conducted for approximately one week in October 2025, with a total of 30 respondents. Johanson & Brooks (7), stated that 30 representative participants from the population of interest is a reasonable minimum recommendation for a pilot study where the purpose is preliminary survey or scale development.

2.4. Data Analysis

The data was processed using SPSS software to verify whether each item in the questionnaire was correctly understood by respondents. In addition, this also aims to evaluate the validity and reliability of the instrument. Hence, the instrument used in the main study is expected to produce accurate and consistent data. The validity testing was evaluated using the Pearson Bivariate test (Pearson Product Moment), which is considered **valid** if: 1) Calculated r value > Table r value; and 2) Significance value (sig.) < 0.05. Meanwhile, reliability testing can only be carried out on statements that have been validated. Reliability test results are considered **reliable** if the Cronbach's Alpha value is greater than or equal to (≥ 0.70) (8).

3. Results and discussion

3.1. Demographic Data

A total of 30 valid responses were obtained for the study. The sample exhibited a balanced gender composition, comprising 15 male respondents (50%) and 15 female respondents (50%). The age distribution was largely concentrated in the 20–29-year age group, which is consistent with the study's focus on university students as the primary target population. In terms of religious background, 28 respondents (93%) identified themselves as Muslims, whereas 2 respondents (7%) reported adherence to other religions.

3.2. Research Variables and Indicators

In this study, there were 16 latent variables selected based on the Theory of Planned Behavior (TPB) combined with the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2). These variables were measured using indicators developed based on literature reviews and the relevance of the research context. **Table 1** presents the variables and indicators used in this study.

Table 1 Research Variables and Indicators

Nr	Items	Source
Consumer Behavior (PAP)		
1	I use halal products	(9)
2	I often shop halal products	
3	I more often shop halal product than other product	
4	Allocation of my monthly spending for shopping halal product is muchmore than non halal labeled product	
Purchase Intention (NMP)		
5	I intend to buy halal products in the future	(6)
6	I will choose halal products to consume	
7	I will tend to choose halal products in the future	
8	I will fulfill my needs by buying halal products	
Habit (KEB)		
5	I intend to buy halal products in the future	(10)
6	I will choose halal products to consume	
7	I will tend to choose halal products in the future	
8	I will fulfill my needs by buying halal products	

Hedonic Motives (MH)		
13	Using e-commerce for purchasing halal products is fun	(10)
14	Using e-commerce for purchasing halal products is enjoyable	
15	Using e-commerce for purchasing halal products is very entertaining	
Price Value (NH)		
16	I can save money by using e-commerce for purchasing halal products by comparing the prices offered at different online stores	(10)
17	I like to search for cheap deals at different online stores when I purchase halal products through e-commerce	
Attitude (SPH)		
18	Choosing halal products is a good idea	(11)
19	I like to choose halal products	
20	Using halal products is pleasant	
Subjective Norms (NS)		
21	My family thinks that I should consume halal products rather than non-halal products	(11)
22	Most people I value would consume halal products rather than non-halal products	
23	My close friends, whose opinions are important to me, think that I should consume halal products	
Perceived Behavioral Control (PKP)		
24	I can afford to buy halal products brands, even if slightly expensive	(11)
25	Buying or not buying halal products is solely my decision	
26	If halal products are available in stores, I am sure that I will only buy halal products and brands	
Halal Literacy (LH)		
27	I understand Islamic laws of halal and haram for products	(11)
28	I feel capable of differentiating which products are permissible (halal) and which are forbidden (haram)	
29	I have enough knowledge to differentiate between permissible (halal) and forbidden (haram) stuff	
30	I feel that I need the help of someone else more knowledgeable to differentiate which products are permissible (halal) and which are forbidden (haram)	
Halal Awareness (KH)		
31	I realize and know that this product is halal	(6)
32	I realize and know that this product comes from halal ingredients	
33	I am aware and know that this product is processed halal	
Trust (KEP)		
34	I feel the performance of this halal product meets expectations	(6)
35	I feel this halal product can be trusted	
36	I feel this halal product is reliable	
37	I feel confident with this halal product	
Religiosity (REL)		

38	I use halal products because of my religious beliefs	(6)
39	I choose halal products because halal products are good products in my religion	
40	I follow the advice of religion to buy halal products	
41	I avoid purchasing products that are considered makruh	
Brand Image (CM)		
42	I think this halal brand has a personality that distinguishes itself from competitors	(6)
43	I think this halal brand does not disappoint its customers	
44	I think this halal brand is one of the best brands in the sector	
45	I think this halal brand is very consolidated in the market	
Perceived Value (ND)		
46	I think this halal product is reliable	(6)
47	I think this halal product has good functions	
48	I think this halal product fulfils my needs well	
49	I think this halal product has superiority	
Halal Certification (SH)		
50	I think that halal certification used by manufacturers can convince consumers that the product is halal	(6)
51	Halal-certified products are important to me	
52	I think halal certification can improve product capabilities in the market	
53	I think halal logo has more appeal when compared to non-logo products	
54	I know that some products have halal logos that are not original	
Financial Literacy (LK)		
55	I have a good level of financial knowledge	(12)
56	I have a high capacity to deal with financial matters	

3.3. Validity Testing Result

A total of 56 measurement items were initially assessed to determine their validity. Item validity was evaluated using the Pearson Product-Moment Correlation analysis, which measures the degree of association between each individual item score and the overall construct score. The validity of each item was determined by comparing the obtained correlation coefficient (r -value) with the critical r -value from the correlation table, as well as by examining the corresponding significance level (p -value). An item was considered valid when its calculated r -value exceeded the critical threshold and its p -value was below 0.05. For a sample size of 30 respondents at a 5% significance level, the critical r -value was established at 0.361.

The results of the initial validity assessment, presented in **Table 2**, revealed that two items, namely PKP2 and SH5, did not satisfy the required validity criteria. Consequently, these items were removed from the instrument. A subsequent validity analysis was then conducted using the revised set of items. The second assessment demonstrated that all remaining items met the established validity requirements, with correlation coefficients exceeding 0.361 and significance values below the 0.05 threshold. These findings indicate that the final measurement instrument possesses satisfactory item validity and is appropriate for further analysis.

Table 2 Validity Testing by SPSS

Items	r-table	r-value	p (Sig.)	Result	Items	r-table	r-value	p (Sig.)	Result
PAP1	0.361	0.836	<0.001	Valid	LH3	0.361	0.815	<0.001	Valid
PAP2	0.361	0.836	<0.001	Valid	LH4	0.361	0.698	<0.001	Valid
PAP3	0.361	0.734	<0.001	Valid	KH1	0.361	0.816	<0.001	Valid
PAP4	0.361	0.659	<0.001	Valid	KH2	0.361	0.461	0.010	Valid
NMP1	0.361	0.760	<0.001	Valid	KH3	0.361	0.415	0.023	Valid
NMP2	0.361	0.814	<0.001	Valid	KEP1	0.361	0.753	<0.001	Valid
NMP3	0.361	0.836	<0.001	Valid	KEP2	0.361	0.523	0.003	Valid
NMP4	0.361	0.751	<0.001	Valid	KEP3	0.361	0.661	<0.001	Valid
KEB1	0.361	0.540	0.002	Valid	KEP4	0.361	0.691	<0.001	Valid
KEB2	0.361	0.505	0.004	Valid	REL1	0.361	0.666	<0.001	Valid
KEB3	0.361	0.457	0.011	Valid	REL2	0.361	0.844	<0.001	Valid
KEB4	0.361	0.672	<0.001	Valid	REL3	0.361	0.833	<0.001	Valid
MH1	0.361	0.673	<0.001	Valid	REL4	0.361	0.602	<0.001	Valid
MH2	0.361	0.661	<0.001	Valid	CM1	0.361	0.449	0.013	Valid
MH3	0.361	0.491	0.006	Valid	CM2	0.361	0.803	<0.001	Valid
NH1	0.361	0.531	0.003	Valid	CM3	0.361	0.733	<0.001	Valid
NH2	0.361	0.596	<0.001	Valid	CM4	0.361	0.491	0.006	Valid
SPH1	0.361	0.786	<0.001	Valid	SH1	0.361	0.790	<0.001	Valid
SPH2	0.361	0.668	<0.001	Valid	SH2	0.361	0.836	<0.001	Valid
SPH3	0.361	0.790	<0.001	Valid	SH3	0.361	0.797	<0.001	Valid
NS1	0.361	0.794	<0.001	Valid	SH4	0.361	0.539	0.002	Valid
NS2	0.361	0.459	0.011	Valid	ND1	0.361	0.718	<0.001	Valid
NS3	0.361	0.601	<0.001	Valid	ND2	0.361	0.649	<0.001	Valid
PKP1	0.361	0.637	<0.001	Valid	ND3	0.361	0.752	<0.001	Valid
PKP3	0.361	0.611	<0.001	Valid	ND4	0.361	0.695	<0.001	Valid
LH1	0.361	0.836	<0.001	Valid	LK1	0.361	0.622	<0.001	Valid
LH2	0.361	0.797	<0.001	Valid	LK2	0.361	0.602	<0.001	Valid

3.4. Reliability Testing Result

A reliability analysis was performed to assess the consistency of the measurement instrument and to verify that the indicators consistently reflected their respective constructs. Reliability refers to the degree to which an instrument produces stable and dependable results when applied under similar conditions. In the present study, internal consistency was evaluated using Cronbach's Alpha coefficient, a widely accepted statistical measure for determining the reliability of multi-item scales. Higher Cronbach's Alpha values indicate stronger inter-item correlations and greater consistency among the indicators used to measure a construct. According to commonly accepted criteria, a Cronbach's Alpha coefficient of 0.70 or higher demonstrates an acceptable level of reliability. As reported in **Table 3**, the instrument achieved a Cronbach's Alpha value of > 0.9, substantially exceeding the recommended threshold. This result confirms that the measurement items exhibit excellent internal consistency and are therefore suitable for subsequent statistical analyses.

Table 3 Reliability Testing by SPSS

Items Total	Std.	α value	Result
54	≥ 0.70	0.974	Reliable

3.5. Hypothesis Testing Result

This stage of analysis aimed to examine the statistical significance and direction of the relationships specified in the conceptual framework. To achieve this objective, data were analyzed using SmartPLS, employing bootstrapping procedures to generate T-statistics and path coefficients for assessing the structural model. Hypotheses were evaluated based on their corresponding p -values, with relationships considered statistically significant when the p -value was below 0.10. As presented in **Table 4**, the results showed that 12 out of the 15 proposed hypotheses were supported, while three hypotheses were not supported by the data, namely MH \rightarrow NMP (H2), NH \rightarrow NMP (H3), and NS \rightarrow NMP (H5). A noteworthy finding concerns the relationship between NS and NMP. While previous research by Fachrurrozie et al. (2023) (5), reported a significant positive effect of NS on NMP, the present study did not find sufficient evidence to support this relationship. This discrepancy suggests that contextual factors, sample characteristics, or differences in research settings may influence the strength and significance of the relationship between these variables, highlighting the importance of considering situational conditions when interpreting behavioral models.

Table 4 Hypothesis Testing by SmartPLS

Hypothesis	Original Sample	StDev	T-statistics	p -values	Decision
H1: KEB \rightarrow NMP	0.152	0.051	2.961	0.003**	Accepted
H2: MH \rightarrow NMP	0.083	0.060	1.377	0.169	Rejected
H3: NH \rightarrow NMP	-0.066	0.046	1.425	0.154	Rejected
H4: SPH \rightarrow NMP	0.463	0.050	9.289	0.000***	Accepted
H5: NS \rightarrow NMP	0.070	0.048	1.467	0.143	Rejected
H6: PKP \rightarrow NMP	0.102	0.057	1.791	0.073*	Accepted
H7: LH \rightarrow NMP	0.184	0.047	3.897	0.000***	Accepted
H8: LK \rightarrow NMP	-0.084	0.044	1.898	0.058*	Accepted
H9a: KH \rightarrow SPH	-0.091	0.048	1.878	0.060*	Accepted
H9b: KEP \rightarrow SPH	0.191	0.079	2.406	0.016**	Accepted
H9c: REL \rightarrow SPH	0.493	0.061	8.094	0.000***	Accepted
H9d: CM \rightarrow SPH	0.130	0.064	2.021	0.043**	Accepted
H10: SH \rightarrow KH	0.229	0.056	4.094	0.000***	Accepted
H11: ND \rightarrow KEP	0.358	0.061	5.832	0.000***	Accepted
H12: NMP \rightarrow PAP	0.731	0.046	15.859	0.000***	Accepted

Note: *** $p < 0.001$, ** $p < 0.05$, * $p < 0.1$

4. Conclusion

This study aimed to conduct an initial validation and reliability assessment of a measurement instrument developed to examine consumer perceptions, trust, and behavioral intentions toward halal products. Using a pilot sample of 30 respondents, the findings confirmed that the majority of indicators demonstrated satisfactory psychometric properties. Of the 56 items tested, only two were identified as invalid and subsequently removed; the remaining items met the required statistical criteria and were suitable for further analysis. Reliability testing also showed a high level of internal consistency, with a Cronbach's Alpha value of 0.974, indicating that the refined instrument is stable and dependable for use in the main study.

The results of the preliminary hypothesis testing provide additional insight into the behavioral mechanisms shaping consumer purchase intentions for halal products. Twelve out of fifteen hypotheses were supported, highlighting the significant roles of attitude, habit, halal literacy, religiosity, trust, brand image, and perceived value. In contrast, hedonic motivation, price value, and subjective norms did not significantly influence purchase intention in this pilot context. These variations suggest that consumer decision-making regarding halal products may be shaped more by cognitive and value-driven considerations than by enjoyment, cost perceptions, or social pressure.

Overall, this pilot study strengthens the methodological foundation for the subsequent full-scale research. The validated and reliable measurement instrument ensures that future data collection will be more accurate and theoretically grounded. Moreover, the early empirical insights underscore the importance of developing marketing strategies that prioritize trust-building, strengthening positive attitudes, enhancing literacy, and reinforcing the perceived credibility of halal certification—particularly for local products competing in an increasingly globalized market.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare no conflicts of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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