DIALEKTIKA
Jurnal Ekonomi dan Ilmu Sosial

P-ISSN: 2502-4094
E-ISSN: 2598-781X
Volume 10 Nomor 1 (Maret 2025) hlmn. 161 – 174

http://ejournal.uniramalang.ac.id/index.php/dialektika *DOI: https://doi.org/10.36636/dialektika.v10i1.5619*

How Product Attributes, Halal Certification, and Labdoor Certification Affect Purchasing Decisions for Whey Protein Supplements?

Rafie Mumtaz Azca[a], Nurul Hidayati[b,*], Nisa Zahra[c]

[a,b,c]IPB University, Indonesia

***e-mail: nurulhidayati91@apps.ipb.ac.id**

ARTICLE HISTORY

Submitted:
October 9, 2024
Revised:
April 15, 2025
Accepted:
April 29, 2025
Available Online:
May 8, 2025

***Correspondence Author**

Name:
Nurul Hidayati
e-mail:
nurulhidayati91@apps.ipb.ac.id

ABSTRACT

This research aimed to analyze customer characteristics, the influence of product attributes, halal certification, and labdoor certification on whey protein purchasing decisions among Muslim customers on the island of Java. The research was carried out from January to December, 2023. The sampling method was purposive sampling. The data analysis method for this research used descriptive analysis and SEM-PLS. The research revealed that the majority of customers were female students aged 17-23 with limited income. Product attributes and labdoor certification significantly impacted purchasing decisions, while halal certification, although positive, lacked statistical significance. The study suggested managerial implications for whey protein industry players, emphasizing strategies such as Porter's Five Forces analysis to enhance competition, buyer and supplier bargaining power, and counter threats from substitutes and new products.

Keywords: Halal Certification; Labdoor Certification; Whey Protein; Product Attributes; Purchase Decisions.

ABSTRAK

Penelitian ini bertujuan untuk menganalisis karakteristik konsumen, pengaruh atribut produk, sertifikasi halal, dan sertifikasi labdoor terhadap keputusan pembelian whey protein di kalangan konsumen Muslim di pulau Jawa. Penelitian ini dilakukan pada bulan Januari hingga Desember 2023. Metode pengambilan sampel adalah purposive sampling. Metode analisis data untuk penelitian ini menggunakan analisis deskriptif dan SEM-PLS. Hasil penelitian menunjukkan bahwa mayoritas pelanggan adalah mahasiswi berusia 17-23 tahun dengan pendapatan terbatas. Atribut produk dan sertifikasi labdoor secara signifikan mempengaruhi keputusan pembelian, sementara sertifikasi halal, meskipun positif, tidak memiliki signifikansi secara statistik. Penelitian ini menyarankan implikasi manajerial bagi para pemain industri whey protein, dengan menekankan strategi seperti analisis Lima Kekuatan Porter untuk meningkatkan persaingan, daya tawar pembeli dan pemasok, dan melawan ancaman dari produk pengganti dan produk baru.

Kata Kunci: Sertifikasi Halal; Sertifikasi Labdoor; Whey Protein; Atribut Produk; Keputusan Pembelian.

This is an open access article under the CC BY NC SA licence.

INTRODUCTION

The impact of Covid-19 in Indonesia involves health, economic, educational, and social aspects of the community. Large-scale social restrictions (PSBB) were implemented by several local governments to control the spread of the virus (The SMERU Research Institute 2020). The Central Bureau of Statistics (BPS) conducted a survey to understand public behavior related to health protocols during the pandemic (Statistics 2022). During the pandemic, there has been a shift from exercise to at-home activities, and consumption of supplements, such as whey protein, has increased by 40% (Mediaindonesia.com 2021). Whey protein, particularly in relation to sports nutrition, is experiencing significant growth, driven by public awareness of the importance of health (Mordor Intelligence 2023).

Product certification is key to ensure product safety and quality in the market. However, some whey protein products lack certification, as reported by pom.go.id and Compas Dashboard Research (Sutiani 2022). In fact, Polda Metro Jaya revealed the circulation of counterfeit drugs and supplements without a distribution permit in June 2023 (Kompas.id 2023). Therefore, attention to product quality, especially whey protein, is very important for consumers.

Certifications such as BPOM, GMP, NSF, halal, and labdoor are guarantors of product quality and safety. Halal certification, for example, not only provides safety assurance for Muslims but can also eliminate negative images among Muslim consumers (Aziz and Chok 2013, Salehudin and Luthfi 2013). Labdoor, as an independent agency with FDA certification, has an important role in providing quality assurance labeling on whey protein products (Food and Drug Association 2014).

Consumer awareness of certifications, such as halal or labdoor, can have a positive impact on perceived product quality, customer satisfaction, and customer loyalty (Pandanwangi et al. 2023, Chatterjee et al. 2022). However, despite these known benefits, the relationship between halal and labdoor certification and consumer purchase decisions specifically within the whey protein market has received limited empirical attention. Compas Dashboard research (2022) shows Muscle First, Puro, Fitlife, L-Men, and Muscletech dominate the whey protein market in Indonesia. Although all brands have halal certification, only 4 have halal labels, and only 3 have labdoor certification labels (Sutiani 2022). Interestingly, some uncertified products still achieve high sales and significant profits, indicating potential consumer indifference or lack of awareness regarding the importance of these certifications.

Ekawati et al. (2020) stated that Java islands has the highest score of physical fitness and sports participation in Indonesia. The majority of dairy consumers are in Java, with Islam being the religious identity of the majority of the island's population (Kusnandar 2022). Given the religious and demographic profile of Java, it is crucial to explore empirically how halal and labdoor certifications influence purchasing decisions for whey protein supplements among Muslim consumers. Previous studies have often overlooked the combined effect of product attributes and certifications, especially labdoor, on consumer decision-making processes in this context, thus creating a research gap. Therefore, further research is needed to analyze the influence of product attributes, halal certification, and labdoor certification on whey protein purchasing decisions, especially in Java (Compas Dashboard Research, Ekawati et al. 2020, Kusnandar 2022). This study addresses this gap by providing novel insights into how these specific certifications impact purchasing decisions, thereby contributing new empirical evidence to existing literature.

LITERATURE REVIEW

Consumer Behavior Theory and Purchase Decision

According to Engel, Blackwell, and Miniard (1995), consumer behavior theory is a grand theory that explains consumer decision-making processes. This theory highlights several stages including problem recognition, information search, evaluation of alternatives, purchase decision, and post-purchase behavior. The purchase decision, specifically, involves evaluating various attributes and certifications that may influence the consumer's choice, highlighting the relevance of product attributes, halal certification, and labdoor certification in this context.

Theory of Planned Behavior (TPB)

Ajzen's (1991) Theory of Planned Behavior (TPB) serves as the middle theory guiding this research. TPB emphasizes that consumer intentions and behaviors are influenced by attitudes toward behavior, subjective norms, and perceived behavioral control. Certifications such as halal and labdoor can significantly influence consumer attitudes and perceived behavioral control, thereby affecting purchasing decisions.

The Effect of Product Attributes toward Purchase Decision

Zuhrufi and Herliana (2022), which analyzes factors influencing the purchase interest of whey protein milk. Product Attributes are one of the factors analyzed in their study. According to Kardes (2022), customer preferences are influenced by product attributes, which customers consider when evaluating a product and can affect their purchase decisions. Product attributes consist of three main components: product quality, product features, and product style and design (Kotler and Armstrong 2016). The research by Zuhrufi and Herliana (2022) indicates that among these three dimensions of product attributes, only product quality and product features have a positive and significant influence. This aligns with recent findings by Helfi et al. (2019), who concluded that product attributes such as quality, taste, price, and availability significantly influence purchasing decisions in the premium consumer segment.

The Effect of Halal Certification toward Purchase Decision

Efendi (2020), which analyzes the influence of halal certification, halal awareness, and product knowledge on the purchase decision of halal fashion products. The study indicates that halal certification has a positive but not significant influence on the purchase decision of halal fashion products. The findings also refer to research by Aziz and Vui (2013), Waskito (2015), and Ashari (2019), which suggest that halal certification has a positive influence on purchase decisions. Additionally, Salehudin and Luthfi (2013) argue that halal certification significantly influences Muslim consumer purchasing intentions across various product categories, reflecting its importance as a trust and compliance indicator. This view is reinforced by recent empirical findings from Pramintasari and Fatmawati (2020), who emphasize the increasing awareness and importance of halal certification among Muslim consumers in Indonesia.

The Effect of Labdoor Certification toward Purchase Decision

Based on three leading whey protein brands in the Indonesian protein milk market: Musclefirst, Puro, and L-men, all of which have Labdoor certification. However, due to the absence of research on the influence of Labdoor certification on purchase decisions, the researcher refers to several studies discussing the impact of certification on customer purchase decisions regarding food choices, as well as the effects of label inaccuracies on customers. Petty and Cacioppo (1986) and Solomon's consumer behavior framework (2017) are used to establish dimensions and indicators of Labdoor certification, which include trust and confidence, product quality, label accuracy, safety assurance, purchase intent, and perceived value. Recent studies by Chatterjee et al. (2022) further reinforce the significance of ethical certifications, such as Labdoor, highlighting their role in enhancing customer trust, product transparency, and influencing consumer decision-making processes positively, particularly in markets sensitive to health and safety.

Hypothesis

The research model could be seen at Figure 1. This research had several hypotheses, including:

H1: Product Attributes have a positive influence on the purchase decision of whey protein supplements for Muslim customers in Java.

H2: Halal Certification has a positive influence on the purchase decision of whey protein supplement products for Muslim customers in Java.

H3: Labdoor certification has an influence on the purchase decision of whey protein supplements for Muslim customers in Java.

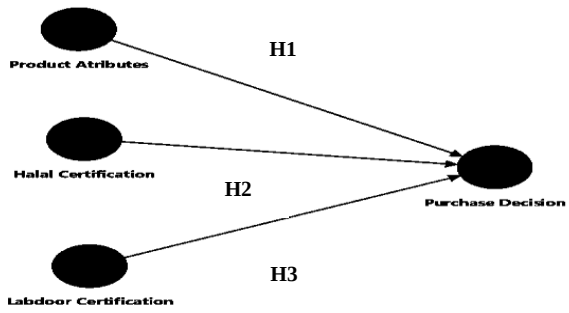

Figure 1. Research Model
Source: Processed data, 2025

The product attributes included quality, features, and style and design, as expressed by Malhotra (2009), Juric & Worsley (1998), Kotler & Armstrong (2016), and Zuhrufi & Herliana (2022). Each attribute is formulated into 4 statements, 6 statements, and 2 statements in the questionnaire. Halal certification, as discussed by Shaari and Arifin (2009) and Waskito (2015), comprises several components: the importance of the halal logo, consideration of halal certification, knowledge and awareness of halal certification, attitude and preference towards halal certification, perceived quality, and rigorous testing. Each component of halal certification is derived into 5 statements for the importance of the halal logo, 3 statements for the consideration of halal certification, 3 statements for knowledge and awareness of halal certification, and 3 statements for attitude and preference towards halal certification. And then, for Labdoor Certification (Petty & Cacioppo 1986; Solomon 2017) consists of trust and confidence, product quality, label accuracy, and safety assurance. Each component is formulated into 2 statements in the questionnaire. Meanwhile, the purchase decision based on Kotler & Keller (2007) consists of the following components: Attention Reinforcement (1 statement), Recent Purchase Behavior Consumer Advocacy (2 statements), and Post-purchase Satisfaction (1 statement). The detail of statements was below in Table 1.

Table 1. Operational Variables

Numb	Variable	Dimension	Indicator	Symbol
1	Product Attributes (Malhotra, 2009); (Juric & Worsley, 1998); (Kotler & Armstrong, 2016); (Zuhrufi & Herliana (2022)	Product Quality	I choose to buy whey protein with delicious taste.	X1.1
			I chose to buy whey protein with a fast-feeling effect.	X1.2
			I choose to buy whey protein that has a price that is worth buying.	X1.3
			I chose to buy whey protein which is easily available.	X1.4
		Product Features	I choose to buy whey protein that has a high protein content.	X1.5
			I choose to buy whey protein with low carbohydrate and fat content and low fat content.	X1.6
			I choose to buy whey protein that has a high content of positive mixed substances.	X1.7
			I choose to buy whey protein that has many variety of flavors.	X1.8
			I choose to buy whey protein with product certification.	X1.9
			I choose to buy whey protein that provides bonuses for purchasing Purchase.	X1.10
		Product and Style Design	I choose to buy whey protein with attractive packaging.	X1.11
			I choose to buy whey protein that is	X1.12

Numb	Variable	Dimension	Indicator	Symbol
			easy to use.	
2.	Halal Certification (Shaari & Arifin 2009; Waskito 2015)	Importance of Halal Logo	Having a halal logo on whey protein packaging is important.	X2.1
		Consideration of Halal Certification	The halal logo is my consideration in buying whey protein.	X2.2
			I will choose whey protein products based on the presence or absence of the halal logo.	X2.3
			I will be careful when choosing whey protein products with the halal logo.	X2.4
			I will continue to buy whey protein products from other countries with the halal logo.	X2.5
		Knowledge and Awareness of Halal Certification	I know the authentic halal logo from MUI.	X2.6
			I can distinguish between authentic halal logo from MUI and inauthentic halal logo.	X2.7
			I know that some whey protein products received halal certification from other countries.	X2.8
		Attitude and Preference towards Halal Certification	I will still buy halal whey protein products without considering the company that produces them.	X2.9
			I do not mind the institution that makes the halal logo.	X2.10
			I prefer whey protein products with the halal logo over whey protein products that do not have the halal logo.	X2.11
		Perceive Quality and Halal Rigorous Testing	Whey protein products with the halal logo do not contain impurities.	X2.12
			Quality halal certified whey protein products	X2.13
			Whey protein products with the halal logo have gone through a series of strict halal testing processes	X2.14
3.	Labdoor Certification (Petty & Cacioppo 1986;	Trust and Confidence	I feel confident in the accuracy and reliability of Labdoor-certified	X3.1

Numb	Variable	Dimension	Indicator	Symbol
	Solomon 2017)		products.	
			I trust Labdoor as an independent, third-party certification source for nutritional supplements.	X3.2
		Product Quality	I believe that Labdoor-certified products are of higher quality than non-Labdoor-certified products.	X3.3
			In my opinion, LAbdoor certification is effective in ensuring the quality and purity of nutritional supplements.	X3.4
		Label Accuracy	I believe that the label information of Labdoor-certified products accurately represents their actual nutritional content and value.	X3.5
			I believe that Labdoor-certified products have proper and honest ingredient labeling compared to products without Labdoor certification.	X3.6
		Safety Assurance	I feel peace of mind when purchasing Labdoor-certified products in terms of safety and potential health risks.	X3.7
			I consider Labdoor certification important in influencing my decision to choose products that meet certain safety standards.	X3.8
4.	Purchase Decision (Kotler & Keller 2007)	Attention Reinforcement	I look for as much information as possible about whey protein products when I buy them.	Y1.1
		Recent Purchase	I bought whey protein products within the last 1-2 months	Y1.2
		Behavior Consumer Advocacy	.I recommend other people who are exercising to buy whey protein products.	Y1.3
		Post-purchase Satisfaction	I feel satisfied after making a whey protein purchase.	Y1.4

Source: Processed data, 2025

RESEARCH METHODS

The method used in this research is a quantitative method using a 6-point positive Likert scale questionnaire instrument. The questionnaire was filled out by respondents who are Muslim whey protein

supplement customers living in Java Island. The data collected in this study are primary and secondary data. Primary data used comes from the main data source which is done by distributing questionnaires through Google Forms distributed through kudata.id, social media such as Instagram, and Whatsapp to respondents who complete the criteria; buy and consume whey protein supplements, are Muslim, and live in Java. This research was conducted from January to December 2023.

This study used non-probability sampling method, specifically purposive sampling, to determine the influence of product attributes, Labdoor certification, and halal certification on the purchase of whey protein products by Muslim customers. The respondents selected were Muslim customers who actively exercise and adopt a healthy lifestyle, with a focus on those who have purchased whey protein products. . Using the calculation formula of Lemeshow et al (1991), the minimum sample size required was 145 respondents with an error rate of 7.5%, and the researcher managed to collect 149 respondents through the distributed online form. But before that, the statement items contained in the questionnaire have been tested for validity and reliability.

The purpose of this study is to determine the effect of product attributes, labdoor certification and halal certification in purchasing whey protein supplements by Muslim customers. The author took most of the samples from Muslim customers who have purchased whey protein supplements. In addition, according to Nugroho (2010), the majority of dairy customers are concentrated in Java. Meanwhile, the total population in this study is unknown. Therefore, the researcher used the minimum sample size calculation method using Lemeshow et al. (1991).

RESULTS AND DISCUSSION

Characteristics of Respondents

The characteristics of respondents in this study are Muslim whey protein supplement customers on the island of Java in this study classified by gender, marital status, age, domicile, latest education, employment status, monthly income/receipts, monthly expenses, average expenditure per month to buy protein powder milk products (excluding pre-workout, BCAA, creatine, etc.), usage/consumption of protein powder milk per month and protein powder milk brands that have been purchased and consumed, Characteristics of Muslim protein powder milk customers on the island of Java in full are presented in Table 2.

Table 2. Characteristics of Muslim Whey Protein Customers in Java

Customer Characteristics	Category	Number (people)	Percentage (%)
Gender	Female	78	52.4
	Male	71	47.6
Marriage Status	Single	129	86.5
	Married	18	12.1
	Divorced	2	1.4
Age (years old)	<17	7	4.7
	17-23	103	69.1
	24-30	31	20.9
	31-45	6	4
	>45	2	1.3
Domicile	Jawa Barat	50	33.6
	Jawa Tengah	30	20.1
	Jawa Timur	35	23.5
	DKI Jakarta	21	14.1
	DI Yogyakarta	4	2.7
	Banten	9	6
Education	Not graduated from elementary school	0	0
	Elementary School	4	2.6
	Junior High School	5	3.1
	Senior High School	87	58.3
	Diploma Degree	10	6.7

	Bachelor's Degree	40	26.8
	Master's Degree	3	3
	Doctoral's Degree	0	0
Employment Status	Students	92	61.7
	Civil Servant/Military/Police	0	0
	State-owned Enterprise Employee	2	1.3
	Freelance	12	8.1
	Enterpreneur	15	10.1
	Private Employee	25	16.8
	Housewife	2	1.7
	Online Driver	1	0.7

Source: Processed data, 2025

Based on Table 2, we could see that the customers of whey protein supplement are young customers (17-23 years old) and students tend to be interested in whey protein as a healthy lifestyle, especially those with limited monthly income (<Rp1,000,000.00) (Table 1). This finding aligns with reports that suggest this age group is highly responsive to health trends, facilitated by extensive access to information via social media (Statista 2022).

Studies indicate differences in motivations for supplement use between genders. Men typically focus on strength and muscle mass, while women prioritize health and recovery (Knapik et al. 2016). This is supported by the current study, wherein female respondents (52.4%), predominantly students, perceived physical benefits such as increased energy and psychological improvements like enhanced concentration from consuming whey protein (Cudjoe 2022). Self-image and convenience are major factors in whey protein purchase decisions, especially by new generation consumers who are active in keeping fit and consuming health food products (Chanwatitanont 2017). The high number of Instagram users in Indonesia (97.17 million) and the prevalence of online shopping (47%) in the purchase of dietary supplements (Statista 2022) reflect the influence of social media in consumption trends.

Similarly, the majority of whey protein customers in Java Island are university students aged 17-23 years who consider price in supplement purchases (Table 1). These findings provide valuable insights for whey protein marketers and manufacturers in developing marketing strategies that suit the characteristics and needs of the market in Java Island. This is in line with the results of Pillay and Pillay (2019) who stated that dietetics students in UKZN have a low prevalence of supplement use, mainly due to high costs.

Customer Perceptions of Product Attributes, Halal Certification, Labdoor Certification, and Purchase Decisions

The perception of Muslim whey protein supplement customers in Java Island towards Product Attributes, Halal Certification, Labdoor Certification and Purchasing Decisions is high. This is indicated by most respondents who have the perception of agreeing or strongly agreeing with the positive statements in the questionnaire.

Smart Equation Modelling – Partial Least Square (SEM-PLS) Analysis

SEM-PLS analysis was carried out using SmartPLS 3 software. The data processing results are used for hypothesis testing and analysis of the influence between variables. Sarwono (2015) revealed that SEM-PLS consists of two sub-sections, measurement model (outer model) and structural model (inner model). Therefore, the results of this study were obtained through two stages of evaluation, namely outer model evaluation and inner model evaluation.

1. Evaluation of the Measurement Model (Outer Model)

Based on Figure 2, the outer model after pruning with product attribute variables is reflected by 5 main indicators, namely X1.1 (good taste), X1.3 (commensurate price), X1.4 (easy to obtain), X1.5 (high protein content), X1.9 (has product certification). Of all the indicators in the product attribute variable, indicator X1.5 (high protein content) reflects the product attribute variable with the greatest value, namely 0.765. Respondents require high protein content if they are going to buy

milk protein powder products.

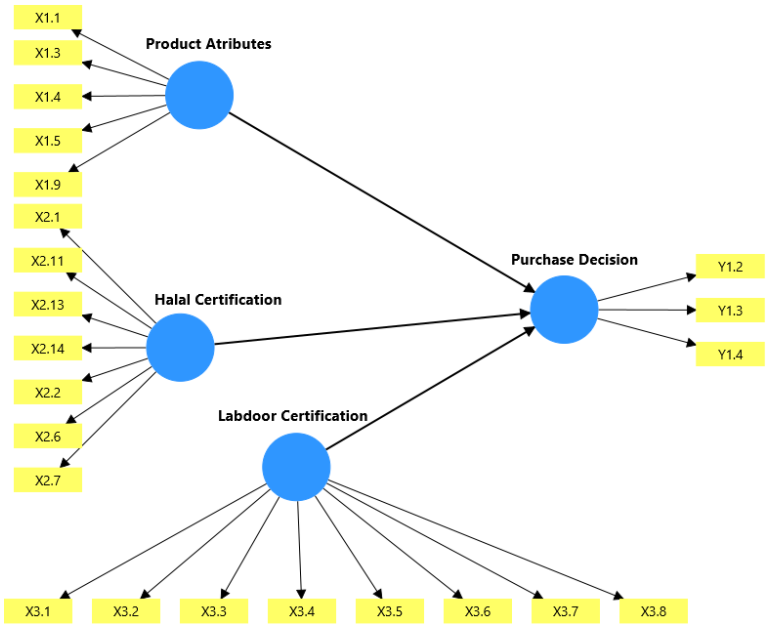

Figure 2. Path Model After Dropping the PLS Algorithm Process
Source: Processed data, 2025

The halal certification variable is reflected by 7 main indicators, namely X2.1, X2.11, X2.13, X2.14, X2.2 X2.6, X2.7. Of all the indicators in the halal certification variable, indicator X2.2 (The halal logo is my consideration in buying protein powder milk products) reflects the halal certification variable with the largest value, namely 0.832. Respondents consider purchasing decisions from the presence or absence of a halal logo. The labdoor certification variable is reflected by 8 main indicators, namely X3.1, X3.2, X3.3, X3.4, X3.5, X3.6, X3.7, X3.8. Of all the indicators on the Labdoor certification variable, indicator X3.5 (I believe that Labdoor certified product label information accurately represents its actual nutritional content and value.) reflects the labdoor certification variable with the greatest value of 0.905. Respondents believe that Labdoor certified product label information accurately represents its actual nutritional content and value. In Y varibable had 3 indicators, Y1.2, Y1.3, and Y1.4 which Y1.4 (I feel satisfied after purchasing whey protein) had the largest outer loading (0.884).

Furthermore, validity testing is carried out with convergent validity, namely by looking at the Average Variance Extracted (AVE) value of the construct. The AVE value of each construct must be above 0.50 (Hair et al. 2014). The Average Variance Extracted (AVE) value before and after the dropping process can be seen in Table 3.

Table 3. AVE Validity Test Results

Variable	AVE Value
Product Attributes	0.559
Halal Certification	0.582
Labdoor Certification	0.741
Purchase Decision	0.717

Source: Processed data, 2025

After all latent variables are declared valid, then the reliability test was carried out by looking at the Cronbach's alpha or Composite Reliability value. According to Ghozali and Latan (2015), Cronbach's alpha and Composite Reliability values must be more than 0.7 to be reliable. All latent variables have Cronbach's alpha and Composite Reliability values above 0.7. This showed that all variables are reliable which can be seen in Table 4.

Table 4. Construct Reliability Test Results

Variable	*Cronbach's Alpha*	*Composite Reliability*
Product Attributes	0.807	0.864
Halal Certification	0.804	0.883
Labdoor Certification	0.881	0.907
Purchase Decision	0.950	0.958

Source: Processed data, 2025

Furthermore, testing the reliability of the discriminant validity stage by looking at the cross loadings value and the results showed that the correlation of latent variables with their own indicators is greater than the correlation of latent variables with other indicators. So, it could be concluded that the latent variable has predicted its own indicators well. This statement could be seen in Table 5.

Table 5. Discriminant Validity Results

Variable	Product Attributes	Halal Certification	Labdoor Certification	Purchase Decision
Product Attributes	0.748			
Halal Certification	0.429	0.763		0.537
Labdoor Certification	0.445	0.638	0.601	0.861
Purchase Decision	0.847			

Source: Processed data, 2025

2. Evaluation of Structural Model or Inner Model

Evaluation of the structural model (inner model) is done by looking at the R-square value and the T-statistics value on the path coefficients. The R-square value is used to measure the level of variation in change or influence caused by exogenous latent variables on endogenous latent variables. Meanwhile. the R-square value in this study is 0.484. This indicates that purchasing decisions are only influenced by 48.4% of product attributes. halal certification. labdoor certification on variables and scope in this study. Meanwhile. most of it is influenced by other variables or factors. Meanwhile. the results of the bootstrapping analysis could be seen in Figure 3.

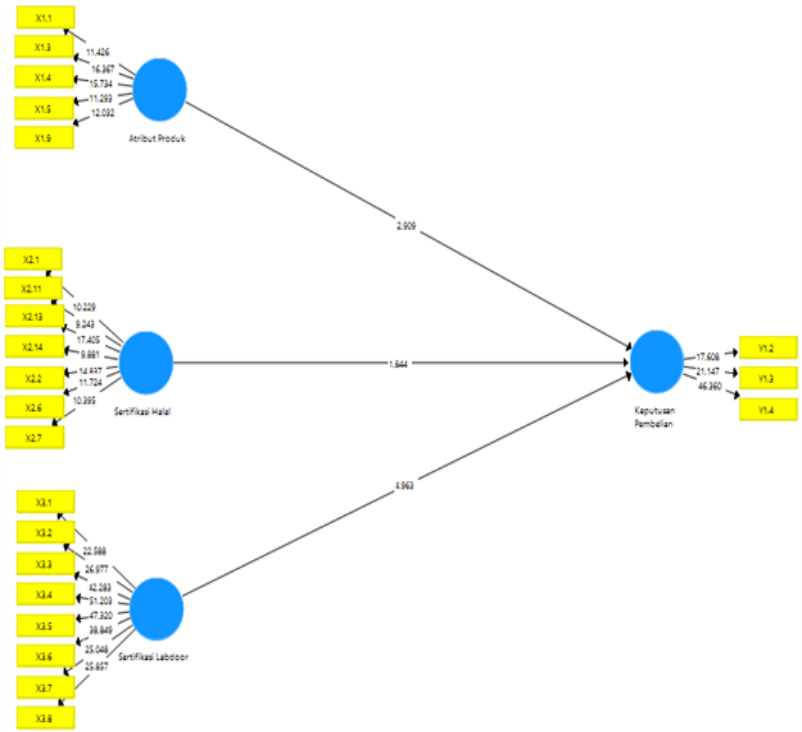

Figure 3. Path Model after Bootstrapping

Source: Processed data, 2025

The next model evaluation is to test the effect and significance level of exogenous variables on endogenous variables in each relationship path. Inner model measurement is carried out by bootstrapping. which is done by assessing the significance of the t statistic to determine the effect between variables. Hypothesis testing is done by looking at the path coefficient. by comparing the calculated T value with the T table. The test criterion is the t-count value> t-table (1.96). To see the nature of the relationship between latent variables (positive and negative). it can be seen from the original sample value. The effect and significance level of exogenous latent variables on endogenous latent variables can be seen in Table 6.

Table 6. Results of Path-Coefficients

Hypothesis	Original Sample (O)	T Statistics (|O/STDEV|)	Decision
H1: Product Attributes -> Purchase Decision	0.229	2.909	Accepted
H2: Halal Certification -> Purchase Decision	0.182	1.844	Rejected
H3: Labdoor Certification -> Purchase Decision	0.427	4.963	Accepted

Source: Processed data, 2025

The Effect of Product Attributes on Purchasing Decisions

The original sample value of product attributes on purchasing decisions for whey protein among Muslim customers in Java is 0.229, with a t-statistic value of 2.909, indicated a positive and significant relationship (Helfi et al. 2019). This finding was in line with research highlighting that product quality and features have a positive effect on purchasing decisions, especially in whey protein (Zuhrufi and Herliana 2022). Research has also linked the positive influence of product attributes such as quality and features on purchasing decisions, as observed in Honda PCX products (Helfi et al. 2019).

The Effect of Halal Certification on Purchasing Decisions

The results of the analysis showed that the original sample value of halal certification on purchasing decisions for whey protein among Muslim customers in Java is 0.182, with a t-statistic value of 1.844, indicating a positive but insignificant relationship (Efendi 2020). This finding supports previous research which states that halal certification has a positive but insignificant influence on purchasing decisions for halal fashion products (Efendi 2020). Furthermore, the literature states that religiosity factors and Muslim customers' perceptions of halal certification can influence purchasing decisions for halal products, providing further context regarding this phenomenon (Pramintasari and Fatmawati 2020, Nugroho and Anwar 2020, Ulya 2021).

The Effect of Labdoor Certification on Purchasing Decisions

The analysis showed that the original sample value of Labdoor certification on whey protein purchase decisions among Muslim customers in Java is 0.427, with a t-statistic value of 4.963, indicating a positive and significant relationship (Pandanwangi et al. 2023, Chatterjee et al. 2022, Helm et al. 2018). This illustrates that consumers strongly trust product quality information guaranteed by third-party certifications such as Labdoor, indirectly enhancing consumer confidence regarding product safety. Previous research confirms that product certifications, such as those provided by Labdoor, have a positive effect on perceived product quality, customer satisfaction, and customer loyalty (Pandanwangi et al. 2023). In addition, ethics certification, as proposed by Chatterjee et al. (2022), can increase consumer trust and purchase intention. In this context, Labdoor not only provides accurate information but also offers sports certification, guaranteeing consumer safety by testing products according to certification limits for banned substances (Helm et al. 2018, Labdoor.com 2023).

Managerial Implications

The results of this study revealed a number of significant managerial implications for milk whey protein producers operating in the target market. To understand these managerial implications in more depth, let's first define Porter Five Force analysis. Porter Five Force Analysis is a framework used to evaluate the competitive

dynamics in an industry or market. It includes five key elements: Strength of Competition Among Rivals, Threat from Substitute Products, Threat from New Product Offerings, Bargaining Power of Buyers, and Bargaining Power of Suppliers. In the context of this study, the researcher will relate the research results to these elements:

(1) Strength of Rivalry Among Competing Firms
Improved Quality of Product Attributes: Improving the quality of product attributes, such as taste, price, availability, high protein content, and product certifications can help firms differentiate themselves from competitors in the industry. This can reduce price competition and increase product appeal.

(2) Threat of Substitutes
Improved Product Attributes: By improving product attributes such as taste, price, availability, high protein content, and product certifications. Companies can reduce the threat of substitutes. Consumers will tend to choose products that have better attributes compared to substitutes.

(3) Threat of New Entrants
   a) **Product Monitoring and Development:** By running effective processes to monitor and develop products, companies can create barriers for new competitors trying to enter the market. Products that are constantly updated and refined can make it difficult for new competitors to compete.
   b) **Collaboration with Certification Bodies:** By collaborating with halal and Labdoor certification bodies, companies can strengthen entry barriers for new competitors who may find it difficult to meet stringent certification standards.

(4) Bargaining Power of Buyers
   a) **Market Segmentation and Proper Communication:** Through market segmentation, companies can identify groups of buyers who are most sensitive to price and product attributes. By effectively communicating with these segments and offering appropriate pricing, companies can reduce the bargaining power of buyers.
   b) **Consumer Education on Certification:** Through educational campaigns, companies can increase consumer understanding of the importance of halal and Labdoor certification. This can reduce the bargaining power of buyers by ensuring that they are more likely to choose products that meet certification standards.

(5) Bargaining Power of Suppliers
Differentiation Through Labdoor Certification: If companies are able to leverage Labdoor certification as a point of differentiation, this can reduce the bargaining power of suppliers. Suppliers may be more willing to work with companies that have advantages recognized by consumers.

Through the implementation of these managerial implications, companies can influence the dynamics in the industry and strengthen their competitive position in the face of market competition by using Porter's Five Forces analysis strategy. Thus, companies can achieve better competitive advantage and optimize their business strategies.

CONCLUSIONS AND RECOMMENDATIONS

Characteristics of whey protein supplement customers in Java showed the majority of whey protein customers in Java are women aged 17-23 years old, the majority are students with limited income. The regions of origin of the majority of customers were West Java, East Java and Central Java. Product attributes had a positive and significant impact on purchasing decisions. Specifically, product quality and features emerged as crucial factors that shape consumer perceptions and purchase behaviors. Halal certification had a positive, but insignificant, influence on purchasing decision, suggesting variability in consumer perceptions and religiosity toward halal products in this context. Labdoor certification had a positive, but insignificant, influence on purchasing decisions**.**

This research acknowledges several limitations. First, the scope of the study was limited to Java Island, restricting the generalizability of findings. Second, the study relied on self-reported data, which could introduce response bias. Future research is recommended to address these limitations by expanding geographical coverage, utilizing experimental or longitudinal methodologies, and exploring deeper interactions between certification types and consumer characteristics, thereby providing comprehensive insights into purchasing behaviors for whey protein supplements.

BIBLIOGRAPHY

Aziz YA, Chok NV. (2013). The Role of Halal Awareness, Halal Certification, and Marketing Components in Determining Halal Purchase Intention Among Non-Muslims in Malaysia: A Structural Equation Modeling Approach. J Int Food Agribus Mark. 25(1):1–23. doi:10.1080/08974438.2013.723997.

BPOM MUI. (2023). Label Pangan. https://istanaumkm.pom.go.id/regulasi/pangan/label.

Chanwatitanont N. (2017). Factors Driving Attitudes Towards the Consumption of Whey Protein Among People Who Exercise a Thematic Paper Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Management College of Management Factors Driving Attitudes Toward.

Chatterjee S, Sreen N, Rana J, Dhir A, Sadarangani PH. (2022). Impact of Ethical Certifications and Product Involvement on Consumers Decision to Purchase Ethical Products at Price Premiums in an Emerging Market Context. Int Rev Public Nonprofit Mark. 19(4):737–762. doi:10.1007/s12208-021-00288-1.

Cudjoe M. (2022). Utilization of Dietary Supplements among University Students : A Review Utilization of Dietary Supplements among University Students : A Review. December.

Ekawati FF, Purnama SK, Nuryadin I. (2020). Is the Participation of Indonesian People in Exercise and Their Level of Physical Fitness Quite Sufficient? 464 Psshers 2019:486–488. doi:10.2991/assehr.k.200824.117.

Food and Drug Association. (2014). Dietary Supplements: Questions and Answers. What is a dietary supplement?

Helfi Y, Akbar F, Pratiwi DM, Maolani FM. (2019). How Product Attributes Affect Consumer Decision To Purchase A Premium Scooter Matic? JEMA J Ilm Bid Akunt dan Manaj. 16(1):93. doi:10.31106/jema.v16i1.1749.

Helm JS, Nishioka M, Brody JG, Rudel RA, Dodson RE. (2018). Measurement of Endocrine Disrupting and Asthma-Associated Chemicals in Hair Products Used by Black Women. Environ Res. 165 February:448–458.

Intelligence M. (2023). Indonesia Whey Protein Market Size & Share Analysis - Growth Trends & Forecasts (2023 - 2028). https://www.mordorintelligence.com/industry-reports/indonesia-whey- protein-market.

Juric B, Worsley A. (1998). Consumers' Attitudes Towards Imported Food Products. Food Quality and Preference, 9(6), 431-441. https://doi.org/10.1016/S0950-3293(98)00027-5.

Knapik J, Steelman R, Hoedebecke S, Austin K, Farina E, Lieberman H. (2016). Prevalence of Dietary Supplement Use by Athletes: Systematic Review and Meta-Analysis. Sport Med 2016 Jan;46(1)103-123., siap terbit.

Kompas.id. (2023). Polisi Tangkap Penjual Suplemen Palsu di Jakarta. https://www.kompas.id/baca/metro/2023/06/01/obat-palsu-dan-pidana- pemulih-kekayaan-intelektual.

Kotler P, Keller K.L. (2007). Marketing Management (12th ed.). Pearson Education.

Kotler P, Armstrong G. (2016). Principles of Marketing (16th ed.). Pearson Education.

Kusnandar VB. (2022). Jumlah Penduduk di Pulau Jawa yang Beragama Islam (Jun 2022). https://databoks.katadata.co.id/datapublish/2022/08/03/sebanyak- 148-juta-penduduk-jawa-beragama-islam-pada-juni-2022.

Malhotra N.K. (2009). Review of Marketing Research. In N.K. Malhotra (Ed.), Review of Marketing Research (Vol. 5, pp. ix-xvi). Emerald Group Publishing Limited. https://doi.org/10.1108/S1548-6435(2008)0000005004.

Mediaindonesia.com. (2021). Pergeseran Tren Olahraga saat Pandemi. https://mediaindonesia.com/olahraga/422395/pergeseran-tren-olahraga-saat- pandemi.

Nugroho WA, Anwar MK. (2020). Hubungan Religiusitas Dan Labelisasi Halal Terhadap Keputusan Pembelian Produk Non Makanan Dan Minuman. J Ekon dan Bisnis Islam. 3(2):13–25. doi:10.26740/jekobi.v3n2.p13-25.

Pandanwangi K, Putra ARS, Haryadi FT, Astuti A, Syahlani SP. (2023). Does Product Certification Matter? A Review of Mechanism to Influence Customer Loyalty in the Poultry Feed Industry. Open Agric. 8(1). doi:10.1515/opag- 2022-0160.

Petty RE, Cacioppo JT. (1986). The Elaboration Likelihood Model of Persuasion. In: Communication and Persuasion. Springer Series in Social Psychology. Springer, New York, NY. https://doi.org/10.1007/978-1-4612-4964-1_1.

Pillay L, Pillay K. (2019). Dietary Supplement Use Among Dietetics Students at the University of Kwazulu-natal. Heal SA Gesondheid. 24:1–6. doi:10.4102/hsag.v24i0.1298.

Pramintasari TR, Fatmawati I. (2020). Pengaruh Keyakinan Religius, Peran Sertifikasi Halal, Paparan Informasi, dan Alasan Kesehatan Terhadap Kesadaran Masyarakat Pada Produk Makanan Halal. J Manaj Bisnis. 8(1):1–33. https://journal.umy.ac.id/index.php/mb/article/view/3922/3384.

Salehudin I, Luthfi BA. (2013). Marketing Impact of Halal Labeling toward Indonesian Muslim Consumer's Behavioral Intention Based on Ajzen's Planned Behavior Theory: Policy Capturing Studies on Five Different Product Categories. ASEAN Mark J. 3(1):35–44. doi:10.21002/amj.v3i1.2013.

Shaari JAN, Mohd Arifin NS. (2009). Dimension of Halal Purchase Intention: A Preliminary Study. Conference or Workshop Item. Retrieved from http://eprints.um.edu.my/11147/1/Pages_from_Dimension_of_Halal_Purchase.pdf

Statista. (2022). Preferred Purchase Channels for Dietary Supplements or Nutraceuticals in Indonesia as of March 2022.

Badan Pusat Statistik. (2022). Perilaku Masyarakat Pada Masa Pandemi Covid-19: Hasil Survei Perilaku Masyarakat Pada Masa Pandemi Covid-19. https://www.bps.go.id/publication/2022/03/15/5026d1ebbb39697c4d2f280a/ perilaku-masyarakat-pada-masa-pandemi-covid-19--hasil-survei-perilaku- masyarakat-pada-masa-pandemi-covid-19.html.

Sutiani L. (2022). Data Penjualan Whey Protein, Muscle First Konsisten Juara Berturut-turut! Compas.co.id., siap terbit. https://compas.co.id/article/whey- protein-muscle-first/.

The SMERU Research Institute. (2020). Studi Dampak Sosial-Ekonomi Pandemi COVID-19 di Indonesia. https://smeru.or.id/id/research-id/studi-dampak- sosial-ekonomi-pandemi-covid-19-di-indonesia.

Ulya I. (2021). Pengaruh Sertifikasi Halal, Religiusitas dan Bahan Makanan Terhadap Minat Beli Produk Makanan Halal. Ekon dan Keuang Islam. 2(1):42. http://journal.unilak.ac.id/index.php/JIEB/article/view/3845%0Ahttp://dspace.uc.ac.id/handle/123456789/1288.

Waskito D. (2015). Pengaruh Sertifikasi Halal, Kesadaran Halal, dan Bahan Makanan Terhadap Minat Beli Produk Makanan Halal (Sudi Pada Mahasiswa Muslim di Yogyakarta). Univ Negeri Yogyakarta. 1:1–12.

Zuhrufi MA, Herliana S. (2022). The Analysis of Factors Affecting Customer's Purchase Intentions of Whey Protein Products.