JURNAL BISNIS, MANAJEMEN & PERBANKAN

RESEARCH ARTICLE
Published: April, 06, 2024
doi: 10.21070/jbmp.v10i1.1802

Sugar-Free Herbal Beverage Preferences: Customer Clustering Insights

Hasna Nadiyah Banafsaj Sudaryono[1], Hardiana Widyastuti[2], Indra Refipal Sembiring[3], Mokhamad Syaefudin Andrianto[4]*

[1234]Department of Management, Faculty of Economics and Management, IPB University, Indonesia

Amidst the increased demand for public health products caused by the COVID-19 epidemic, Indonesia's herbal business has recognized opportunity for expansion, particularly in the area of sugar-free instant herbal beverages. The purpose of this study is to define customer profiles and identify the factors impacting customers' willingness to pay for such products using a dual technique of cluster analysis and Structural Equation Modeling - Partial Least Squares (SEM-PLS). The study identifies three unique client groups: teen students (Cluster 1), early adult workers (Cluster 2), and late adult workers (Cluster 3). Income, health consciousness, product quality, and price are factors that have a favorable and significant impact on willingness to pay across all clusters. Notably, in Cluster 3, willingness to pay is more influenced by product quality, health consciousness, and price. These findings are useful for the Indonesian herbal business, as they will guide targeted marketing tactics and product development efforts to efficiently serve to varied consumer demographics.

OPEN ACCESS

Keywords: *Customer Clustering, Sugar Free Beverages, Marketing Strategy, Herbal Industry, Willingness to Pay*

ISSN 2528-4649 (online)
ISSN 2338-4409 (print)

**Correspondence:*
Hasna Nadiyah Banafsaj Sudaryono
hasnanadiyah@apps.ipb.ac.id

Citation:
Received: ***August, 14, 2023***
Accepted: ***March, 16, 2024***
Published: ***April, 06, 2024***
JBMP: Jurnal Bisnis, Manajemen dan Perbankan.
doi: 10.21070/jbmp.v10i1.1802

1. INTRODUCTION

In realizing the 8th Sustainable Development Goal, decent work and economic growth can be realized through efforts to increase economic productivity by maximizing Indonesia's natural resources, including the wealth of medicinal plants. Indonesia produces medicinal plants or herbs with fertile soil conditions, a good climate, and flora diversity (Mabel, Simbala, & Koneri, 2016). Researchers found that Indonesia's tropical forests have at least 19,871 medicinal plants as traditional ingredients (Indonesia's Center for Research and Development of Medicinal Plants and Traditional Medicines, 2015). The high diversity of medicinal plants in Indonesia triggers the production of medicinal plants in Indonesia trend to continue to increase.

The COVID-19 pandemic has brought major changes to the health awareness of the Indonesian community, supported by data that the largest percentage change in consumption patterns is the consumption of health products at 73.3%. The health products include herbal vitamins, supplements, and medicines (Indonesia's Central Bureau of Statistics, 2020). The community often consumes herbal beverages as a health product. People believe in the efficacy of certain herbal plants to avoid viruses, including COVID-19 (Jumalda, Suwarni, Marlenywati, Selviana, & Mawardi, 2021). 34.6% of respondents experienced increased consumption of herbal beverages during the COVID-19 pandemic with a routine consumption frequency (Mustakim, Efendi, & Sofiany, 2021).

The richness of medicinal plants and the changing consumption patterns of health products in society show great potential for advancing Indonesia's herbal industry. Global market demand for herbs is expected to grow at a Compound Annual Growth Rate (CAGR) of 7.9% from 2022 to 2027, with a market value of USD 248.6 billion (Global Industry Analysts, 2023). Overseas markets have also welcomed Indonesian herbal products, including Singapore, Taiwan, Thailand, Malaysia, Philippines, Thailand, Japan, India, and Saudi Arabia. However, the market share of Indonesian herbs in the global market is still around 0.47%, which is relatively low, with the sales value of Indonesian herbal exports worth USD 635 million from the total sales value of herbs in the global market of USD 135.8 billion (Indonesia's Ministry of Industry, 2020). The value of Indonesia's herbal import purchases is higher than the value of its export sales, which amounted to USD 1.68 billion. The low market share of Indonesian herbs in the global market is due to the high need for imports of pharmaceutical raw materials and the lack of exports of finished herbal products with added value compared to raw herbal products.

The market share of Indonesian herbs in the global market depends on the progress of the herbal industry in Indonesia, so efforts to develop the herbal industry in Indonesia need to be made to expand the marketing of Indonesian herbs in the global market. The Indonesian herbal industry must continuously innovate with increased competition (Kotler & Keller, 2016). The industry continues to innovate in response to market changes and trends. Instant herbal beverages generally have added sugar to make them sweet, even though this can reduce efficacy. In addition, excessive sugar consumption also has adverse effects on health (Indonesia's Ministry of Health, 2018). The need for instant herbal beverages without sugar content is also supported by the recommendation of sugar consumption based on (Indonesia's Ministry of Health, 2013), which is four tablespoons or 50 grams of sugar per person per day. For these reasons, the Indonesian herbal industry should innovate the development of sugar-free instant herbal beverage products to compete in the global market.

Properly marketed sugar-free instant herbal drink products can support changes in people's healthier lifestyles so that these products can also contribute to realizing the 3rd Sustainable Development Goals, good health and well-being. The innovation of sugar-free instant herbal beverages as part of product development requires market research, including observing customers' willingness to pay. Research on customers' willingness to pay for health food products in Indonesia has not reviewed the different profiles of customer characteristics. Thus, there is a need for further research on willingness to pay and the factors that influence it through clustering respondent profiles. Based on the study background, this study aims to cluster customer profiles and compare the factors affecting customers' willingness to pay for sugar-free instant herbal beverages.

2. LITERATURE REVIEW

Relevant previous research is used as a reference, obtained from literature used as a basis for research information. Previous research that is a reference in this study is presented in Table 1.

TABLE 1 | Recapitulation of Previous Research

Writer	Title	Method	Result	Source
(Arimurti et al. 2021)	Willingness to Pay for Organic Rice in Banyumas Regency and its Influencing Factors	Contingent valuation method (CVM), logistic regression analysis	Income, consumption length, and perceived quality significantly affect the WTP of organic rice customers.	Journal of Agribusiness Forum
(Ali & Ali, 2020)	Factors Affecting The Customers' Willingness to Pay For Health and Wellness Food Products	Poisson count regression model (PCRM)	Demographic factors (income and education), psychological (health awareness), product attributes (quality, taste, packaging, price), and marketing attributes (shopping convenience) affect the WTP of health products.	Journal of Agriculture and Food Research
(Fajria et al. 2020)	Analysis of Customers' Willingness to Pay for Organic Vegetables in Purwokerto Modern Market and its Influencing Factors	Contingent valuation method (CVM), logistic regression analysis	Education, jobs, and income have a significant effect on WTP.	Journal of Agricultural Socioeconomics and Agribusiness
(Sugiyanthi et al. 2020)	Customer Attitudes and Willingness to Pay (WTP) on Buavita Royale Products	Fishbein analysis, importance-performance analysis (IPA)	Product price has a significant effect on customer WTP for Buavita Royale products.	Journal of Management and Business Applications
(Wei et al. 2018)	Willingness to Pay More For Green Products: The Interplay of Consumer Characteristics and Customer Participation	Path analysis	Customer participation positively and significantly affects customer WTP in the presence of motivation, sustainability-oriented skills, and environmental literacy skills.	Journal of Retailing and Customer Services

Source: Data Processed (2023)

Based on the results of previous research, factors that have a positive and significant effect on influencing customers' willingness to pay for health and fitness products are education, income, health awareness, product quality, product packaging, and product price (Ali & Ali, 2020). Another study states that education and income positively and significantly influence customer willingness to pay (Fajria, Ethika, & Kusnaman, 2020). Furthermore, income and perceived quality also affect customer willingness to pay (Arimurti, Sularso, & Hartati, 2021).

3. RESEARCH METHOD

This research uses quantitative methods with primary and secondary data sources. Comprehensive questionnaire responses were collected from sampling, while the secondary data used included official archives, journals, books, and other kinds of literature. This study used non-probability sampling with a purposive sampling technique considering specific criteria. The sample criteria in this study are customers aged 17-55 years old, domiciled in West Java and DKI Jakarta, and who have purchased instant herbal drinks and sugar-free products in the last three months. To determine the number of samples, the study states that the number of samples used is at least five times the number of manifest variables that have been determined (Hair et al., 2010). The minimum number of research respondents uses the formula reference (Hair et al. 2010), which is as follows:

n = 5 x number of manifest variables ..... (1)

n = 5 x 33 manifest variables

n = 165 ~ 170

Notes:

n = number of samples (respondents)

From the calculation, the minimum number of samples in the study is 165 respondents, rounded up to 170 respondents.

Based on the sampling technique, the respondents in this study were 170 samples aged 17-55 years, domiciled in West Java or DKI Jakarta, and had purchased instant herbal drinks and sugar-free products during the last three months.

There are four stages of analysis related to sugar-free instant herbal beverages—first, cluster analysis to cluster customer profiles. Second, the Continuous Valuation Method (CVM) analysis is used to analyze customer willingness to pay (WTP) values. Third, SEM-PLS analysis analyzes customer willingness to pay (WTP). Lastly, a descriptive study formulates product marketing strategies. Operational variables are listed in Table 2.

TABLE 2 | Operational Variables

Factor	Variables	Manifest Variable	Code	Source
Demographics	Income	1. income received	INC1	(Bramastuti, 2009)
		2. Jobs	INC2	
		3. Cost budget	INC3	
		4. Family burden received	INC4	
	Education	1. Level of education	EDU1	(Tirtarahardja, 2005)
		2. Major suitability	EDU2	
		3. Competence	EDU3	
Psychographic	Health consciousness	1. Integration of health behaviors	HC1	(Hong, 2009)
		2. Psychological condition	HC2	
		3. Use of health information	HC3	
		4. Personal health responsibility	HC4	
		5. Health Motivation	HC5	
Product Attributes	Product Quality	1. Performance	PQ1	(Tjiptono, 2015)
		2. Features	PQ2	
		3. Reliability	PQ3	
		4. Conformity to specifications	PQ4	
		5. Durability	PQ5	
		6. Aesthetics	PQ6	
		7. Perceived quality	PQ7	
	Product packaging	1. Materials	PP1	(Dhurup, Mafini, & Dumasi, 2014)
		2. Logo and label	PP2	
		3. Color	PPP3	
		4. Size	PP4	
		5. Attractiveness and design	PP5	
	Product price	1. Price Affordability	PC1	(Kotler and Armstrong 2012)
		2. Price match with product quality	PC2	
		3. Price competitiveness	PC3	
		4. Price compatibility with benefits	PC4	
Willingness to pay		1. Willingness to purchase	WTP1	(Voon, Sing, & Agrawal, 2011)
		2. Expected benefits	WTP2	
		3. Confidence	WTP3	
		4. Sacrifice	WTP4	
		5. Loyalty	WTP5	

Source: Data Processed (2023)

4. RESULTS AND DISCUSSION

4. 1 RESULTS

4.1.1 Customer Clustering of Sugar-Free Instant Herbal Beverages

To determine the number of clusters, a validity test of the cluster analysis results is conducted with the ANOVA table to determine variable differences or significance. In principle, the greater the F-number of a variable and the significant number below 0.05, the greater the variable difference in each cluster formed. ANOVA analysis shows that all variables have a significance value > 0.05, indicating a significant difference for each variable, so all variables can be used to distinguish each cluster. The K-Means Cluster method used IBM SPSS Statistic 26 software to analyze or cluster through non-hierarchical clusters. Clustered variables include gender, age, marital status, occupation, average income, average expenditure, latest education, purchasing patterns, consumption patterns, purchase reasons, and purchase interest. Meanwhile, domicile variables were added when conducting the cross-tabulation process. The clustering results into three clusters are outlined in Table 3.

TABLE 3 | Customer Cluster of Sugar-Free Instant Herbal Beverages Products

Category	Variables	Cluster		
		1 (%)	**2 (%)**	**3 (%)**
Geographics	Domicile	Jakarta (41.3) Bandung (15.9) Depok (11.1)	Bekasi (19.6) Bogor (17.9) Bandung (17.9)	Bekasi (37.3) Jakarta (25.5) Bogor (15.7)
Demographics	Gender	Female (81)	Female (83,9)	Male (58,8)
	Age	17-25 Years (96.8) 26-35 Years (3.2)	26-35 Years (71.4) 17-25 years (12.5)	26-35 Years (43.1) 46-55 Years (25.5)
	Marriage status	Unmarried (96.8)	Unmarried (51.8)	Married (80,4)
	Jobs	Student (85.7)	Private Employee (48.2)	Private Employee (41.2)
	Average income	≤ IDR 3,000,000.00 (76,2)	> IDR 3,000,000.00 - IDR 6,000,001.00 (42.9)	> IDR 12,000,000.00 (37.3)
	Average spending	≤ IDR 1,000,000.00 (38,1)	IDR 2,000,001.00 - IDR 3,000,000.00 (30.4)	> IDR 7.500.000,00 (41,2)
	Last education	High school (92.1)	Bachelor's degree (53.6)	Bachelor's degree (66.7)
Behavior	Purchasing pattern	Erratic (58.7)	Erratic (69.6)	1-2 times/month (33.3)
	Consumption pattern	Erratic (54,0)	Erratic (67,9)	1-2 times/week (35.3)
Psychographics	Purchase reason	Health beverages (52.4)	Health beverages (58.9)	Daily beverages (51)
	Purchase intention	Quite Interested (50.8) Interested (30.2)	Interested (51.8) Quite Interested (32.1)	Interested (49) Very Interested (31.4)
Amount of members		63	56	51
Percentage of members		37,06 %	32,94 %	30,00 %

Source: Data Processed (2023)

Table 3 shows that three clusters have the potential to be used as the main market segmentation. The cluster analysis results identified three segment group profiles:

1. Cluster 1 (Teenage Student Cluster)

   Geographically, most cluster members reside in Jakarta, Bandung, and Depok. Based on demographic categories, Cluster 1 is dominated by unmarried female students who are in their late teens and have a secondary education. This cluster has low income and expenditure levels in the SES E category, so it can be classified as lower middle class. Behavioral segmentation shows that Cluster 3 members do not routinely buy and consume instant herbal drink products, but they do so only based on personal needs. The frequency of purchase and consumption tends to be erratic because psychographic segmentation shows that Cluster 2 members tend to consume instant herbal drink products only as health drinks to relieve certain diseases. Thus, Cluster 1 members have a lower interest in purchasing sugar-free instant herbal beverage products when compared to other clusters. Cluster 1 is dominated by female students who live in urban areas, are aged 17-25 years, are unmarried, come from the lower middle class, and do not regularly consume instant herbal beverages.

2. Cluster 2 (Early Adult Worker Cluster)

Geographically, most cluster members reside in Bekasi, Bogor and Bandung. Based on demographic categories, Cluster 2 is dominated by female workers who are in the early adult age classification, unmarried, and have a high level of education. Most members in this cluster work as private employees. This cluster has a high income level and an expenditure level in the SES C1 or medium category so it can be classified as upper middle class. Behavioral segmentation shows that Cluster 2 members do not routinely buy and consume instant herbal drink products, but they do so only based on personal needs. The frequency of purchase and consumption tends to be erratic because psychographic segmentation shows that Cluster 2 members tend to consume instant herbal drink products only as health drinks to relieve certain diseases. Cluster 2 members are more interested in purchasing sugar-free instant herbal drink products than Cluster 1 members because they have a fairly high level of economic stability and purchasing power. Cluster 2 is dominated by working women who live in urban areas, are 26-35 years old, are unmarried, come from the upper middle class, and do not regularly consume instant herbal drinks, only as health drinks.is dominated by working women who live in urban areas, are 26-35 years old, are unmarried, come from the upper middle class, and do not regularly consume instant herbal beverages, only as health beverages.

3. Cluster 3 (Late Adult Worker Cluster)

Geographically, most cluster members reside in Bekasi, Jakarta and Bogor. Based on demographic categories, Cluster 3 is dominated by workers who are in the early adult (26-35 years) and late adult (36-55 years) age classifications, are married, and have a high level of education. The gender proportion between men and women in this cluster is balanced but dominated by men. In addition, most members in this cluster work as private employees. This cluster has a very high income and expenditure levels in the SES A1 or very high category, so it can be classified as upper middle class. Behavioral segmentation shows that Cluster 3 members generally regularly buy and consume instant herbal drink products. This is supported through psychographic segmentation, which shows that Cluster 3 members tend to buy and consume instant herbal drink products as health drinks to relieve certain diseases and as daily drinks to maintain body immunity. Thus, Cluster 3 members have the highest purchase interest in sugar-free instant herbal drink products compared to other cluster members. Cluster 3 is dominated by working men who live in urban areas, are 26-55 years old, have families, come from the upper middle class, and regularly consume instant herbal drinks as daily drinks. Furthermore, the main market segmentation was selected based on market segmentation criteria, including measurable, accessible, substantial, differentiable, and actionable.

After knowing the market segmentation grouping, the selection of the main market segmentation of sugar-free instant herbal beverage products is based on market segmentation criteria (Kotler & Keller, 2012) presented in Table 4.

TABLE 4 | Selection of Main Market Segmentation

Selection Criteria	Indicator	Cluster			Results
		1 (%)	2 (%)	3 (%)	
Measurable	Selecting the cluster with the highest purchase interest	Quite Interested (50.8) Interested (30,2)	Interested (51,8) Quite Interested (32,1)	**Interested (49)** **Very Interested (31.4)**	Cluster 3
Accessible	Selecting the cluster with the highest average expenditure	≤ IDR 1,000,000 (38,1)	IDR 2,000,001 - IDR 3,000,000 (30.4)	**> IDR 7,500,000 (41,2)**	Cluster 3
Substantial	Selecting the cluster with the largest number of members	**63 (37,06)**	56 (32,94)	51 (30,00)	Cluster 1
Differentiable	Selecting the cluster with different purchasing reasons	Health beverages (52.4)	Health beverages (58.9)	**Daily beverages (51)**	Cluster 3
Actionable	Selecting the cluster with regular purchasing patterns	Erratic (58,7)	Erratic (69,6)	**1-2 times/month (33,3)**	Cluster 3
Measurable	Selecting the cluster with regular consumption patterns	Erratic (54,0)	Erratic (67,9)	**1-2 times/week (35.3)**	Cluster 3
Main Market Segmentation					Cluster 3

Source: Data Processed (2023)

Table 4 shows that Cluster 3 has advantages in most criteria, including measurable, accessible, differentiable, actionable, and measurable. The advantages of Cluster 3 make this cluster be used as the main market segmentation of sugar-free instant herbal beverages products. Based on this description, the analysis in this study will also focus on Cluster 3 as the main market segmentation of the product.

4.1.2 Factors Influencing Customer willingness to pay

Before SEM-PLS analysis is carried out to analyze the factors influencing customers' willingness to pay, the data is tested for validity and reliability using IBM SPSS Statistic 26 software. Validity testing is carried out with the criteria r-count> r-table with an r-table value of 0.361, a significance level of 5%, and degrees of freedom (df) n-2, indicating that 33 manifest variables are declared valid or suitable for use. Furthermore, reliability testing with Cronbach's alpha value criteria higher than 0.60 indicates that seven latent variables are declared reliable or reliable. Furthermore, the SEM-PLS analysis was carried out in two stages: the overall customer (170 respondents) and Cluster 3 (51 respondents), which are the main market segmentation. The study results of seven latent variables and 33 manifest variables are as follows:

4.1.2.1 Measurement Model Evaluation Results (Outer Model)

Evaluation of the measurement model was carried out by observing the convergent validity, discriminant validity, and composite reliability of the seven latent variables and 33 manifest variables, with the evaluation results in Table 5.

TABLE 5 | Outer Model Evaluation Results

Criteria	Terms	Overall Customer (170 samples)	Cluster 3 (51 Samples)	Results
		Convergent Validity		
Loading factor	> 0.700	Reduction of one manifest variable (EDU1)	Reduction of one manifest variable (EDU1)	Valid
Average variance extracted (AVE)	> 0.500	INC: 0.740	INC: 0.765	Valid
		EDU: 0.808	EDU: 0.777	Valid
		HC: 0.738	HC: 0.806	Valid
		PQ: 0.735	PQ: 0.814	Valid
		PP: 0.752	PP: 0.851	Valid
		PC: 0.823	PC: 0.861	Valid
		WTP: 0.838	WTP: 0.865	Valid
		Discriminant Validity		
Cross loadings	Manifest variable cross-loadings > other manifest variable cross-loadings	Qualified	Qualified	Valid
Fornell-larcker	Latent variables have the highest correlation value	Qualified	Qualified	Valid
		Composite Reliability		
Cronbach's alpha	> 0,600	INC: 0.825	INC: 0.851	Reliable
		EDU: 0.884	EDU: 0.866	Reliable
		HC: 0.911	HC: 0.940	Reliable
		PQ: 0.940	PQ: 0.962	Reliable
		PP: 0.918	PP: 0.956	Reliable
		PC: 0.929	PC: 0.946	Reliable
		WTP: 0.951	WTP: 0.961	Reliable

Source: Data Processed (2023)

The evaluation results show that the family burden received (INC4) is a manifest variable with a loading factor value of less than 0.700, so it has been deleted in the final measurement model. Meanwhile, the other 32 manifest variables have a loading factor value of more than 0.700, which meets the requirements, so it is stated that the 32 manifest variables in the research model have good convergent validity values. All variables have an average variance extracted (AVE) value of more than 0.05, meeting the requirements. This value indicates that the construct variance can capture greater than the variance generated, so it is stated that the seven variables in the research model have good convergent validity values. Furthermore, all manifest variable cross-loading values of a latent variable are more significant than the manifest variable

cross-loading values of other latent variables that have met the requirements, so it is stated that the 32 manifest variables in the research model have good discriminant validity values. The evaluation results also show that all latent variables have a correlation value that is higher than the correlation value of other latent variables that have met the requirements, so it is stated that the seven variables in the research model have good discriminant validity values. Lastly, the evaluation results show that all latent variables have a Cronbach's alpha value of more than 0.700, which meets the requirements. Thus, it is stated that the seven variables in the research model have an excellent composite reliability value.

Visualization of the outer model is presented in Figure 1 and Figure 2.

FIGURE 1 | Visualization of Overall Customer Outer Model

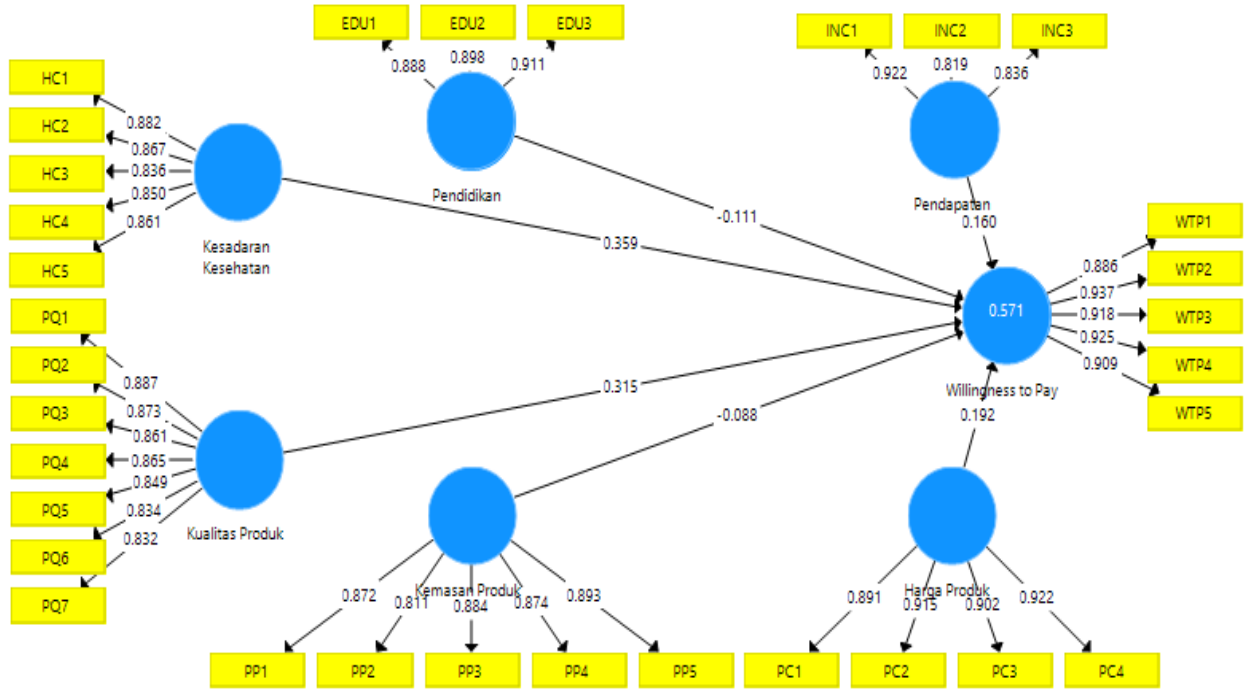
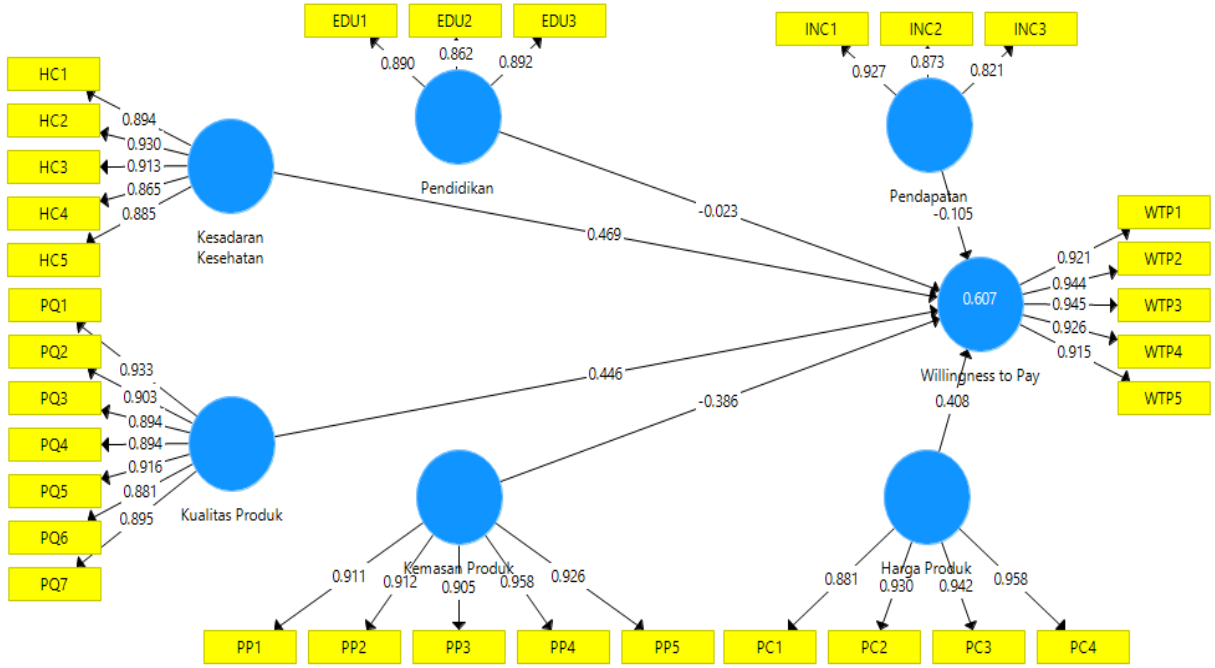


FIGURE 2 | Visualization of Cluster 3 Outer Model



The final model shows the correlation between the latent variables and the manifest variables of this research model.

4.1.2.2 Structural Model Evaluation (Inner Model)

Structural model evaluation is carried out by observing the coefficient of determination, effect size, predictive relevance, and path coefficient values with evaluation results in Table 6.

TABLE 6 | Inner Model Evaluation Results

Criteria	Terms	Overall Customer (170 samples)	Cluster 3 (51 Samples)	Results
Coefficient of determination				
Adjusted R-square	Good (0.670) Moderate (0.330) Weak (0.190)	0.555	0.554	Moderate
Effect size				
F-square	Small (0.02) Medium (0.15) Large (0.35)	INC: 0.026 EDU: 0,016 HC: 0.090 PQ: 0,044 PP: 0.004 PC: 0.033	INC: 0.008 EDU: 0,001 HC: 0.124 PQ: 0,083 PP: 0.052 PC: 0.144	Small Small Small Small Small Small
Predictive relevance				
Q-square	> 0,00	0.469	0.510	Acceptable observation value

Source: Data Processed (2023)

The coefficient of determination evaluation results show that the latent variable willingness to pay is influenced by the six manifest variables in the study by 55.4%-55.5%. Meanwhile, the other 44.5%-44.6% is influenced by other variables outside the research model. Evaluation of the effect size shows that all independent latent variables have a small influence on the latent dependent variable. Furthermore, the evaluation of predictive relevance shows that the research model has an acceptable observation value. Finally, the evaluation of the path coefficient shows that not all independent latent variables influence the latent dependent variable. The detailed path coefficient analysis is presented in Table 7 through the original sample (O), sample mean (M), standard deviation (STDEV), t-statistic (|O/STDEV|), and p-values.

TABLE 7 | Path Coefficient Results

	O	M	STDEV	|O/STDEV|	P-values	Results
Overall Customer						
Income (X_1) → willingness to pay (Y)	0.160	0.164	0.062	2.565	0.011	Positively significant
Education (X_2) → willingness to pay (Y)	-0.111	-0.111	0.068	1.626	0.105	Not significant
Health consciousness (X_3) → willingness to pay (Y)	0.359	0.347	0.081	4.426	0.000	Positively significant
Product quality (X_4) → willingness to pay (Y)	0.315	0.325	0.130	2.425	0.016	Positively significant
Product packaging (X_5) → willingness to pay (Y)	-0.088	-0.085	0.100	0.881	0.379	Not significant
Product price (X_6) → willingness to pay (Y)	0.192	0.190	0.086	2.227	0.026	Positively significant
Cluster 3						
Income (X_1) → willingness to pay (Y)	-0.105	-0.066	0.152	0.692	0.489	Not significant
Education (X_2) → willingness to pay (Y)	-0.023	0.006	0.133	0.173	0.862	Not significant
Health consciousness (X_3) → willingness to pay (Y)	0.469	0.458	0.187	2.510	0.012	Positively significant
Product quality (X_4) → willingness to pay (Y)	0.446	0.428	0.164	2.717	0.007	Positively significant
Product packaging (X_5) → willingness to pay (Y)	-0.386	-0.407	0.222	1.735	0.083	Not significant
Product price (X_6) → willingness to pay (Y)	0.408	0.415	0.174	2.350	0.019	Positively significant

Source: Data Processed (2023)

Visualization of the inner model is shown in Figure 3 and Figure 4.

FIGURE 3 | Visualization of Overall Customer Inner Model

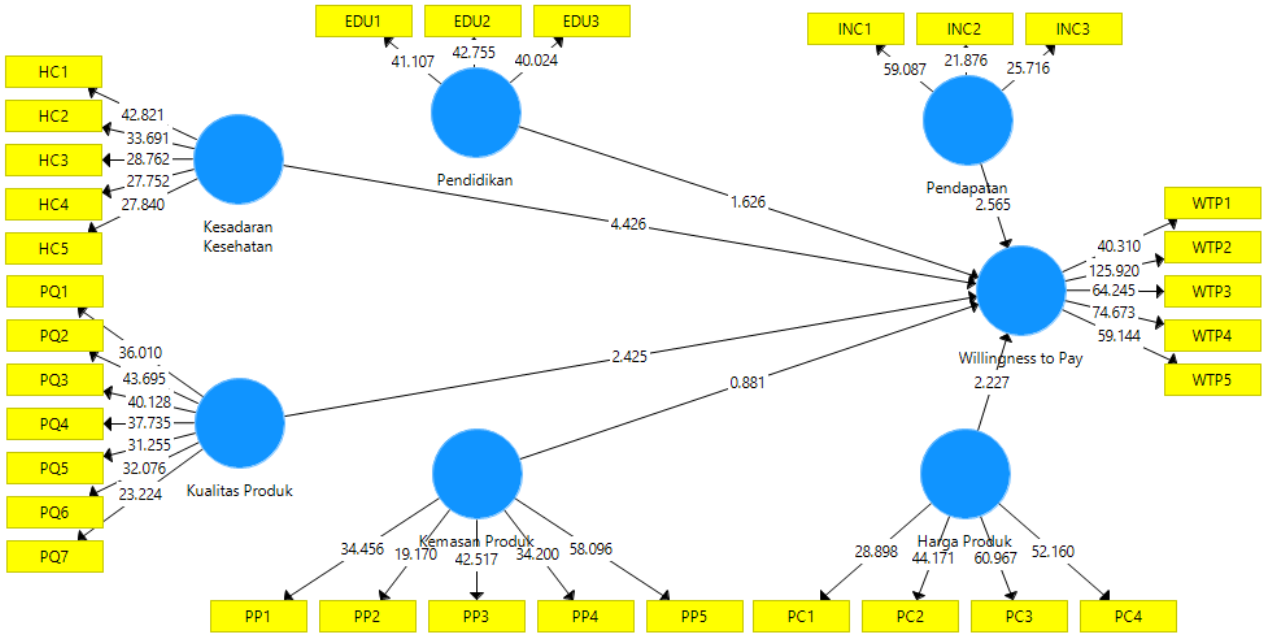
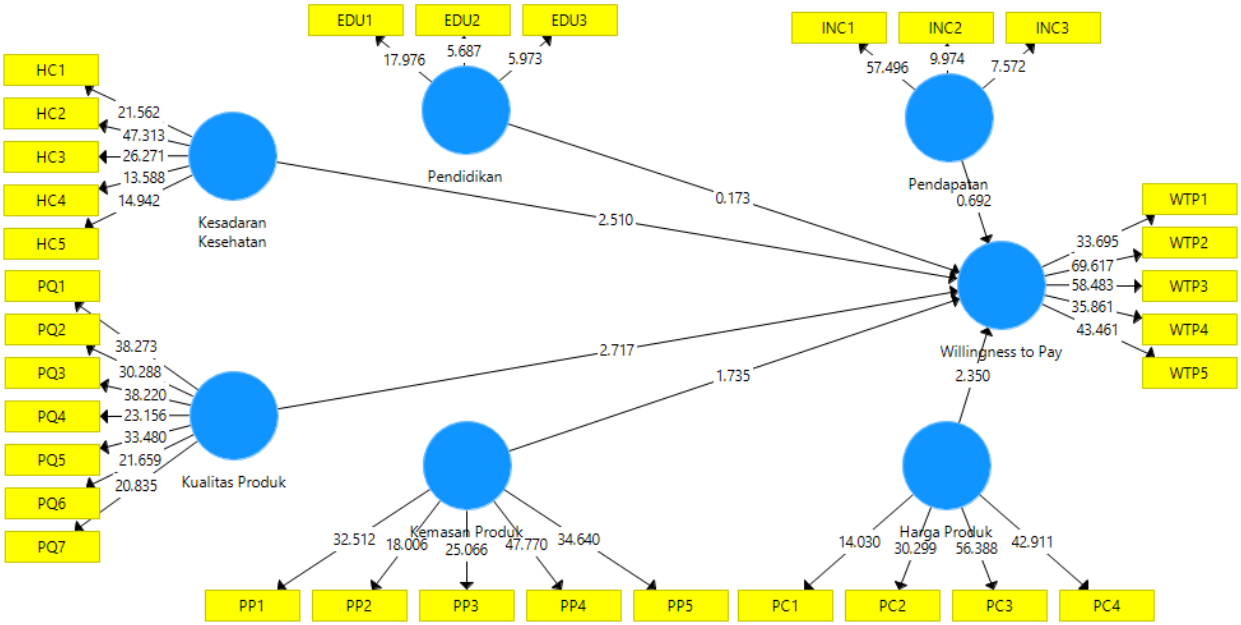


FIGURE 4 | Visualization of Cluster 3 Inner Model



The final model shows the correlation between latent and manifest variables in the research model. Based on the two stages of analyzing the factors that influence customers' willingness to pay, it is known that there are differences in results between the overall customer (170 respondents) and Cluster 3 (51 respondents). Factors that positively and significantly affect overall customer willingness to pay are income, health consciousness, product quality, and product price. Meanwhile, the factors that positively affect substantially willingness to pay Cluster 3 are health consciousness, product quality, and product price. The results of this study support the research of Ali & Ali (2020), namely, health consciousness, product quality, product packaging, and product price have a positive and significant effect on customer willingness to pay (WTP) for health products. The results of this study follow previous research that education (Sari, Ekowati, & Setiadi, 2020) and product packaging (Wulandari, Roessali, & Budiraharjo, 2020) do not have a significant effect on customer willingness to pay (WTP).

4.2 DISCUSSION

Strong differences are in the characteristics of gender, age, marital status, occupation, average income, average expenditure shape purchasing patterns, consumption patterns, reasons for purchase, and different purchase interests between clusters. The prevalence of diabetes in men is 9.65% greater than in women at 9% (International Diabetes Federation, 2019). On the other hand, older adults pay more attention to nutrition due to the health problems they experience (Szakos, Ózsvári, & Kasza, 2022). Marital status. Marital status positively affects individual health behaviors (Hilz & Wagner, 2018). Furthermore, socioeconomic status (SES) and years of education also positively and significantly affect individual health status (Rakasiwi & Kautsar, 2021). Customers' great need for the product shapes their regular consumption and purchase as a daily drink. This justifies the research results that Cluster 3, dominated by male workers in urban areas aged 26-55 years, married, and from the upper middle class, tends to have a greater purchasing interest in sugar-free instant herbal drinks when compared to Cluster 1 and Cluster 2.

Income positively and significantly influences the overall willingness of customers to pay. Besides, income does not positively and significantly influence the willingness to pay. In addition, the factor that most significantly influences the willingness to pay for Cluster 3 is product quality. This shows that Cluster 3's willingness to pay, dominated by upper-middle-class members (SES A category), is most influenced by product quality, health awareness, and product price. The results of this study are supported by the results of the Kantar World Panel study, which found that groups of people from the SES A and B categories have more income, so they tend to look for the best class of products (Fajriyani, 2023).

Practical implications can be formulated by formulating actionable Segmenting, Targeting, and Positioning (STP) strategies for manufacturers and marketers in the herbal drinks industry.

4.2.1 Segmenting

The segmenting analysis of sugar-free instant herbal drinks is based on the characteristics of Cluster 3 or the Late Adult Worker Cluster as the main market segmentation. Demographic segmentation is classified from gender (male), age (26-55 years), marital status (married), occupation (private employee), average income (very high category), average expenditure (SES A1 category), and last education (high category). Furthermore, behavioral segmentation is based on consumption patterns (1-2 times/week) and purchase patterns (1-2 times/month). Finally, psychographic segmentation is carried out based on the reason for purchase (as a daily drink) and purchase interest (high category).

4.2.2 Targeting

Based on the segmenting description of the main market segmentation, it is known that the target market for sugar-free instant herbal beverage products is male workers who live in urban areas, are aged 26-55 years, are married, come from the upper middle class, and regularly consume instant herbal beverages as daily beverages. The functional herbal beverages industry can carry out a concentrated strategy to reach a more focused target market group (niche market).

4.2.3 Positioning

The product positioning of sugar-free instant herbal drinks is compiled based on the survey results of the reasons for purchase interest and the analysis of factors affecting Willingness to Pay Cluster 3. Cluster 3 is interested in buying products because of the health benefits needed, delicious taste, and sugar-free content. Health Awareness, Product Quality, and Price are the factors that most influence Cluster 3's Willingness to Pay for sugar-free instant herbal drinks. Companies can position sugar-free instant herbal drinks as everyday instant herbal drinks that have real benefits for health, have delicious flavors, are made without sugar content, are made from premium raw materials, and have prices commensurate with product quality. The product tagline that might be suitable is "A cup of deliciousness for a thousand benefits".

5. CONCLUSION

Three clusters of sugar-free instant herbal beverage customer profiles are Cluster 1 (Teenage Student Cluster), Cluster 2 (Early Adult Worker Cluster), and Cluster 3 (Late Adult Worker Cluster), with Cluster 3 as the main market segmentation. Overall, the customer's willingness to pay is positively and significantly influenced by income, health awareness, product quality, and price. Meanwhile, Cluster 3 willingness to pay is positively and significantly influenced by product quality, health awareness, and product price. Income positively and significantly influences the overall willingness of customers to pay. Besides, income does not positively and significantly influence the willingness to pay. In addition, the factor that most significantly influences Cluster 3's willingness to pay is product quality.

6. LIMITATION AND IMPLICATION

This study has limitations on population coverage so generalization of the results needs further evaluation with a wider sample diversity. Researchers suggest conducting further research regarding the analysis of other independent variables that affect customers' willingness to pay, analysis of purchasing decisions based on the AIDA model, perceptual mapping analysis, and formulation of marketing strategies in different clusters and locations. In addition, the population coverage can also be expanded so that the research can represent Indonesian's overall customer.

ACKNOWLEDGEMENT

This research is supported by the Department of Management, Faculty of Economics and Management, IPB University.

REFERENCES

Ali, T., & Ali, J. (2020). Factors Affecting The Consumers' Willingness to Pay For Health and Wellness Food Products. *Journal of Agriculture and Food Research*, *2*, 100076. http://doi.org/10.1016/J.JAFR.2020.100076

Arimurti, N. H., Sularso, K. E., & Hartati, A. (2021). Kesediaan Membayar (Willingness To Pay) Beras Organik di Kabupaten Banyumas dan Faktor Yang Mempengaruhinya. *Jurnal Forum Agribisnis*, *11*(1), 75–89. http://doi.org/10.29244/FAGB.11.1.75-89

Bramastuti, N. (2009). Pengaruh Prestasi Sekolah dan Tingkat Pendapatan Keluarga Terhadap Motivasi Berwiraswasta Siswa SMK Bakti Oetama Gondangrejo Karanganyar.

Dhurup, M., Mafini, C., & Dumasi, T. (2014). The Impact of Packaging, Price and Brand Awareness on Brand Loyalty: Evidence From The Paint Retailing Industry. *Acta Commercii*, *14*(1). http://doi.org/10.4102/AC.V14I1.194

Fajria, F., Ethika, D., & Kusnaman, D. (2020). Analisis Kesediaan Membayar (Willingness to Pay) Konsumen Terhadap Sayuran Organik di Pasar Modern Purwokerto dan Faktor-Faktor yang Mempengaruhinya. *Jurnal Sosial Ekonomi Pertanian Dan Agribisnis*, *17*(1), 40–48. http://doi.org/10.20961/sepa.v17i1.39863

Fajriyani, C. (2023). *Indonesia FMCG Outlook 2023*. *Kantar World Panel*. Jakarta.

Global Industry Analysts. (2023). *Herbal Medicines: Global Strategic Business Report*. San Jose.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th ed.). United States: Pearson.

Hilz, R., & Wagner, M. (2018). Marital Status, Partnership and Health Behaviour: Findings from the German Ageing Survey (DEAS). *Comparative Population Studies*, *43*, 65–98. http://doi.org/10.12765/CPOS-2018-08

Hong, H. (2009). Scale Development for Measuring Health Consciousness: Re-conceptualization. In *12th Annual International Public Relations Research Conference*. Columbia: University of Miami Coral Gables.

Indonesia's Center for Research and Development of Medicinal Plants and Traditional Medicines. (2015). *Laporan Nasional Riset Khusus Eksplorasi Pengetahuan Lokal Etnomedisin dan Tumbuhan Obat Berbasis Komunitas di Indonesia Tahun 2015*. *Laporan Nasional Riset Khusus Eksplorasi Pengetahuan Lokal Etnomedisin dan Tumbuhan Obat*.

Indonesia's Central Bureau of Statistics. (2020). Perubahan Pola Konsumsi Masyarakat Selama Pandemi Covid-19, *9*(3), 2020.

Indonesia's Ministry of Health. Peraturan Menteri Kesehatan No. 30 Tahun 2013 tentang Pencantuman Informasi Kandungan Gula, Garam, dan Lemak Serta Pesan Kesehatan untuk Pangan Olahan dan Pangan Siap Saji, Peraturan Menteri Kesehatan Republik Indonesia (2013). Indonesia.

Indonesia's Ministry of Health. (2018). Efek Buruk Konsumsi Gula Berlebihan. *Kementerian Kesehatan Republik Indonesia*.

Indonesia's Ministry of Industry. (2020). *Peluang Industri Obat Herbal Indonesia di Pasar Internasional*. *Indonesia's Ministry of Industry*. Jakar.

International Diabetes Federation. (2019). *IDF Diabetes Atlas Ninth Edition*. *International Diabetes Federation* (Vol. 9). Brussels.

Jumalda, A. E., Suwarni, L., Marlenywati, M., Selviana, S., & Mawardi, M. (2021). Pola Makan Masyarakat di Kota Pontianak

Selama Pandemi Covid-19. *Jurnal Kesehatan Masyarakat Indonesia*, *16*(1), 1–6. http://doi.org/10.26714/JKMI.16.1.2021.1-6

Kotler, P., & Armstrong, G. (2012). *Principles Of Marketing*. *Principles of Marketing* (14th ed.). Harlow: Pearson.

Kotler, P., & Keller, K. L. (2012). *Marketing Management* (14th ed.). New Jersey: Pearson Prentice Hall.

Kotler, P., & Keller, K. lane. (2016). *A Framework for Marketing Management* (6th ed.). Essex: Pearson Education Limited.

Mabel, Y., Simbala, H., & Koneri, R. (2016). Identifikasi Dan Pemanfaatan Tumbuhan Obat Suku Dani Di Kabupaten Jayawijaya Papua. *Jurnal MIPA*, *5*(2), 103–107. http://doi.org/10.35799/JM.5.2.2016.13512

Mustakim, M., Efendi, R., & Sofiany, I. R. (2021). Pola Konsumsi Pangan Penduduk Usia Produktif Pada Masa Pandemi Covid-19. *Jurnal Ilmu Kesehatan Masyarakat*, *17*, 1–12. http://doi.org/10.19184/IKESMA.V0I0.27203

Priambodo, L. H., & Najib, M. (2014). Analisis Kesediaan Membayar (Willingness to Pay) Sayuran Organik dan Faktor-Faktor yang Mempengaruhinya. *Jurnal Manajemen Dan Organisasi*, *5*(1), 1–14. http://doi.org/10.29244/JMO.V5I1.12125

Rakasiwi, L. S., & Kautsar, A. (2021). Pengaruh Faktor Demografi dan Sosial Ekonomi terhadap Status Kesehatan Individu di Indonesia. *Kajian Ekonomi Dan Keuangan*, *5*(2), 146–157. http://doi.org/10.31685/KEK.V5I2.1008

Sari, D. K., Ekowati, T., & Setiadi, A. (2020). Analisis Kesediaan Konsumen untuk Membayar Produk Tempe Hygiene Rumah Kedelai Grobogan di Kabupaten Grobogan. *JSEP (Journal of Social and Agricultural Economics)*, *13*(2), 145–158. http://doi.org/10.19184/JSEP.V13I2.16905

Sugiyanthi, D., Nurmalina, R., Novianti, T.. (2020). Sikap Pelanggan dan Willingness to Pay (WTP) Pada Produk Buavita Royale. *Jurnal Aplikasi Bisnis dan Manajemen (JABM)*. 6(2):303–303. doi:10.17358/JABM.6.2.303

Szakos, D., Ózsvári, L., & Kasza, G. (2022). Health-Related Nutritional Preferences of Older Adults: A Segmentation Study for Functional Food Development. *Journal of Functional Foods*, *92*, 105065. http://doi.org/10.1016/J.JFF.2022.105065

Tirtarahardja, U. (2005). *Pengantar Pendidikan* (1st ed., Vol. 8). Jakarta: Rineka Cipta.

Tjiptono, F. (2015). *Strategi Pemasaran*. *Yogyakarta: Andi*. (4th ed., Vol. 18). Yogyakarta: Penerbit ANDI Yogyakarta.

Voon, J. P., Sing, N. K., & Agrawal, A. (2011). Determinants of Willingness to Purchase Organic Food: An Exploratory Study Using Structural Equation Modeling | Request PDF. *International Food and Agribusiness Management Association*, *14*(2).

Wei, S., Ang, T., Jancenelle, VE. (2018). Willingness to Pay More For Green Products: The Interplay of Customer Characteristics and Customer Participation. *Journal of Retailing and Customer Services*. 45:230–238. doi:10.1016/J.JRETCONSER.2018.08.015.

Wulandari, D., Roessali, W., & Budiraharjo, K. (2020). Willingness to pay of the native chicken eggs in urban supermarket: evidence from Semarang, Indonesia. *Journal of Socioeconomics and Development*, *3*(2), 79–88. http://doi.org/10.31328/jsed.v3i2.1418

Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.