



Digital Marketing Strategy on Vitamin C Products After the COVID 19 Pandemic

Praditya Fajar Nugroho, Agus Buono, Bagus Sartono

Institut Pertanian Bogor, Indonesia

Email: pradityafajar@apps.ipb.ac.id, agusbuono@apps.ipb.ac.id, bagusco@apps.ipb.ac.id

Abstract

The surge in digital transformation and increased health awareness during the COVID-19 pandemic has significantly influenced consumer behavior, particularly in the purchase of vitamin C through digital channels. This study aims to examine the impact of price, trust, service quality, and brand image on consumer purchase decisions for vitamin C products in online marketplaces. Employing a quantitative research approach, data was collected using an online survey distributed to 250 respondents in the Jabodetabek area, a region with the highest digital shopping activity in Indonesia. The analysis was conducted using multiple linear regression to determine the relationship between the independent variables and purchase decisions. The findings reveal that all four variables—price, trust, service quality, and brand image—positively and significantly influence consumer purchase decisions. Among these, trust and brand image emerged as the most dominant factors, especially for health-related products where safety and credibility are critical. This suggests that while competitive pricing and service reliability matter, consumer confidence in product claims and brand reputation strongly drive decision-making in the health supplement sector. The implications of this research highlight the importance for vitamin C manufacturers and marketers to not only optimize pricing and logistics but also to build trustworthy brand narratives and enhance consumer relationships through digital platforms. Future research may explore the role of user-generated content and peer reviews in reinforcing trust and influencing online health-related purchases.

Keywords: digital marketing, vitamin C, purchase decision, trust, brand image

INTRODUCTION

Rapid technological advances have led many products to compete by innovating to gain a competitive edge (Alfawaire & Atan, 2021; Olaleye et al., 2024). These innovations include changes in product composition, the mixing of superior ingredients, and the use of the latest technologies to become more advanced and trusted in marketing (Jain & Singh, 2018; Bhatia & Kumar, 2019). Ideally, product purchases should be based on need. Consumers play a crucial role in the buying and selling transaction process where the greater the volume of consumer purchases, the higher the potential profit for a company (Wang & Liu, 2021). Additionally, the more products successfully marketed, the stronger the branding of a product becomes (Khan & Rehman, 2020; Smith & Harris, 2022).

In today's digital age, the ability to access information from various media sources has become an essential part of modern life. There are different types of media that serve distinct purposes in communication. Traditional mass media, such as newspapers, television, and radio, remain effective for delivering messages to individual audiences (Sissors & Baron, 2010). These platforms have been used for decades to inform and influence the public. On the other hand, non-traditional media, which includes dynamic billboards, banners, and other public displays, are designed to capture attention in crowded areas, providing more dynamic ways to communicate (Chaffey, 2021). In contrast, online media, particularly social media, programmatic ads, and video-on-demand, allows messages to be delivered in digital spaces, offering the flexibility to reach large audiences globally at any time (Tuten & Solomon, 2021). Additionally, special media caters to

niche groups by providing tailored content, such as automotive, financial, or technology magazines, which address specific interests (Kotler & Keller, 2016). The rapid expansion of these media forms reflects the growing role of technology in shaping how we consume information and engage with brands.

Internet usage is steadily increasing due to the ease of accessing information by anyone, at any time, and from anywhere. The human desire to seek out new knowledge is becoming stronger, fueled by the abundance of information available online. This also leads to increased creativity among internet users, inspiring them to explore and develop future innovations. In Indonesia, the number of internet users has risen annually. In 2015, there were 110.2 million internet users; by 2019, this number had grown to 184.9 million a 67% increase. It is projected that by 2025, internet users in Indonesia will reach 256.37 million (Wolff, 2020).

In late 2019, a new case of pneumonia emerged in Wuhan, Hubei Province, People's Republic of China. This disease, named *Corona Virus Disease 2019 (COVID-19)*, is caused by *Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2)*. The outbreak's spread impacted all aspects of life, particularly health, social systems, and the economy. In Indonesia, the first COVID-19 cases were reported in the first quarter of 2020. On March 12, 2020, the *World Health Organization (WHO)* a United Nations-affiliated agency declared COVID-19 a *pandemic*, as it had spread to 190 countries and caused 33,106 deaths (Susilo *et al.*, 2020). Governments around the world responded by educating the public on clean and healthy living, promoting the *5M* campaign (*staying away from crowds, using masks, washing hands, limiting mobility, and maintaining distance*), and implementing lockdowns to curb the spread of the virus.

The implementation of lockdowns significantly limited daily mobility, as all activities had to be carried out from home working, studying, and even shopping. As a result, digital marketing strategies became essential for helping consumers meet their daily needs. Among the most critical needs during the COVID-19 pandemic was the consumption of supplements to boost the immune system. One such supplement is Vitamin C, which is believed to prevent and treat respiratory infections by enhancing the functions of various immune cells (Hidayah *et al.*, 2020).

Numerous supplements were frequently consumed during the COVID-19 pandemic to increase immunity. These include Vitamin C, multivitamins, Vitamin D, Vitamin B-12, calcium, zinc, probiotics, fish oil, magnesium, and iron.

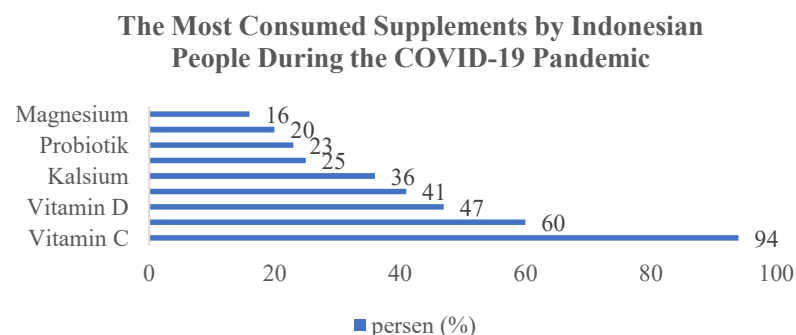


Figure 1. Supplements most consumed by Indonesians during the Covid-19 pandemic

As many as 73% of Indonesians consumed more supplements during the pandemic. The survey above was conducted using an online panel method with 500 respondents spread across Medan, Palembang, Jakarta, Surabaya, and Makassar. From the table above, 94% of people tended to consume vitamin C during the COVID-19 pandemic (Dhini, 2021).

Vitamin C manufacturers sought to approach consumers more practically by leveraging the pandemic situation—sending messages that emphasized the importance of maintaining immunity, providing health-related content, and so on. One strategy in digital marketing is building an online community on social media platforms, which can increase awareness and strengthen relationships with consumers (Rowley, 2004). In addition, one of the key advantages of digital marketing is reduced cost and wider reach, as the expenses are more affordable compared to direct selling or using third parties or distributors (Watson *et al.*, 2002).

In 2019, the average daily gadget use among Indonesians was 3 hours and 19 minutes. However, in 2020, this figure rose significantly to 4 hours and 58 minutes (Abrams, 2020). This change in daily device consumption time in 2020 projected an estimated 50% increase in digital ad spending over the next five years. The many benefits of marketing products through *marketplaces* and diverse social media advertising formats have encouraged vitamin C manufacturers to explore multiple channels to promote and sell their products amidst increasing brand competition.

Marketplaces or *e-commerce* platforms have developed rapidly and now effectively meet various shopping needs in an efficient, quick, easy, and practical manner. The integration between the internet and social networks simplifies the process for consumers to discover products from online stores. Online store owners can influence purchasing decisions through exclusive promotions. These promotions are often tailored for specific consumers, allowing them to view and choose products based on their needs before making a purchase. The internet, as a marketing medium, can thus improve consumer purchase decisions. In today's highly competitive online business environment, consumers have more references and options to select businesses that best meet their needs for both goods and services.

According to data from *Badan Pusat Statistik (BPS)* (2019), around 70% of Indonesian internet users who shop online reside in the Greater Jakarta area (Jakarta, Bogor, Depok, Tangerang, and Bekasi). This indicates that the majority of *e-commerce* users—both sellers and buyers—are located in areas surrounding the capital. Online transactions can occur between individuals, companies, governments, and private organizations.

Global *e-commerce* sales are projected to grow by 8.9% in 2023. After more than a decade of *e-commerce* growth far outpacing overall retail sales growth, the gap between the two is expected to narrow in the future. The number of *e-commerce* buyers in Indonesia continues to rise annually and is projected to keep increasing through 2024, alongside the population's growing purchasing power.

There are numerous digital marketing channels that can be leveraged to promote, sell, and buy products. These include META products such as carousel ads and collection ads designed to boost brand awareness and direct users toward purchasing. Additionally, Google can be used to increase brand visibility through *YouTube*, *programmatic video*, *programmatic display*, and *search engine marketing (SEM)*. By integrating technology across promotional and sales activities, businesses anticipate significant growth, while consumers are expected to become more discerning in making purchasing decisions. The channels mentioned above are some of the alternative options that businesses can use to better target and reach consumers effectively.

Search trends for the keyword “vitamin C” are closely linked to the search volume for “COVID-19” on the Google search engine. During the pandemic, there was a noticeable increase in keyword searches, with people actively seeking information about COVID-19 followed by a surge in searches for vitamin C as a preventive measure. A decline in searches for “vitamin C” became apparent in 2022, coinciding with a reduction in COVID-19 cases. This trend highlights

opportunities for developing new vitamin C-based products across industries, including *Fast Moving Consumer Goods (FMCG)*, pharmaceuticals, and beauty or cosmetics. As such, vitamin C remains a highly sought-after item, particularly across digital platforms.

With rapid technological advancement, product purchasing choices have become increasingly diverse. For instance, individuals unfamiliar with the internet may prefer to shop at nearby convenience stores. Conversely, those accustomed to using the internet are targeted by manufacturers through appealing online advertisements aimed at capturing their attention. The internet also aggregates vast information from various sources, including product prices, ingredients, and availability in *marketplaces*, all of which influence consumer purchasing decisions.

Two previous studies offer key insights into consumer purchasing decisions in digital environments but leave gaps when applied to health products like vitamin C. The first, by *Setyawan and Haryono* (2020), explored how trust, price, and service quality influence consumer purchasing behavior in online *marketplaces*. Their findings showed that trust and service quality significantly affect consumer decisions. However, the study focused on general consumer goods and did not account for product-specific issues such as health perception or urgency during a pandemic. The second study, by *Suryani* (2021), examined digital marketing strategies for health products during COVID-19, emphasizing the role of social media engagement and influencer credibility. While it addressed branding and awareness, it did not provide a comprehensive analysis of structural factors like price sensitivity and perceptions of product quality that shape consumer decisions in *e-commerce* settings.

This current study addresses these gaps by integrating multiple constructs price, trust, service quality, and brand image into a unified model specifically focused on vitamin C purchasing behavior during and after the COVID-19 pandemic in digital environments. This is particularly relevant in light of the marked increase in supplement consumption (*Dhini*, 2021) and the rise of *e-commerce* as the preferred shopping method during lockdowns. In doing so, the research contributes both to academic discourse and to practical marketing strategies. It seeks to provide a more comprehensive understanding of consumer decision-making in vitamin C purchases within digital channels and offers actionable insights for businesses in the health supplement industry to refine their digital marketing approaches and foster consumer trust and engagement.

METHOD

This research was conducted by taking samples from Indonesian people who live in Greater Jakarta and have purchased vitamin C on digital channels.



Figure 2. Research locations

The research was conducted from July to September 2023, with data processing carried out between September and October 2023. The writing of this thesis commenced after all data had been collected and the necessary criteria were met.

This study uses both qualitative and quantitative data to analyze vitamin C purchase decisions through digital channels after the *COVID-19* pandemic. Qualitative data includes information related to consumer behavior, while quantitative data was obtained through online questionnaires distributed to residents in the Greater Jakarta area, particularly those aged 20–35 years. According to *IDN Media*, this age group allocates 51.1% of its income to monthly shopping, and digital reports indicate that 89% of internet users aged 35–44 engage in online shopping. The research data sources consist of primary data collected through questionnaires and secondary data derived from relevant literature. The questionnaire utilized closed-ended questions on a *Likert* scale to measure respondents' perceptions.

The sample size was determined using the *Lemeshow* formula, resulting in a minimum required sample of 96 participants; however, the researchers opted for 100 samples to enhance accuracy. Data analysis was performed using the *Partial Least Squares (PLS)* method, which facilitates the examination of relationships between variables without assuming a specific data distribution. The analytical steps included data collection, model design, and parameter estimation. The study also incorporated validity and reliability testing, where the questionnaire was considered valid if the calculated *r* value exceeded the *r* table value, and reliable if the *Cronbach's Alpha* value was greater than 0.6.

Thus, this study aims to provide a comprehensive overview of the factors influencing the decision to purchase vitamin C online, as well as to explain the relationships between independent and dependent variables within this context.

RESULTS AND DISCUSSION

Consumer Perception of the Relationship of Each Factor

The relationship between price and service quality, brand image and trust has been processed and presented in Table 1 below

Table 1. Relationship between price and service quality, brand image and trust

Price		Percentage (%)					Mean	Ket
No	Statement	1	2	3	4	5		
1	Consumer perception of price versus service quality	1	8	23	51	18	3,77	Good
2	Consumer perception of price towards brand image	0	6	16	46	33	4,06	Excellent
3	Consumer perception of price versus trust	0	4	14	47	34	4,11	Excellent
Sum							11,9	
Average							3,98	Good

Based on table 1, it shows that the highest assessment is the consumer's perception of the price of trust with a value of 4.11 or an excellent indicator and the lowest is the consumer's perception of the price of the quality of service with a value of 3.77 or a good indicator.

In this questionnaire, respondents believed more in vitamin C products with clear and undeceiving offers with a score of 4.4 or a very good indicator where as many as 94 respondents filled in the values of 4 and 5 proportionally. As for consumer perception of the price of the brand

image where the price is reasonable and proportional to the benefits provided by vitamin C products can improve the brand image.

Customers often judge the quality of service based on the comparison between the price they pay and the benefits they receive from vitamin C products where 54% of people agree with this and the lowest value with 3.26 is on the question of expensive price making the quality of vitamin C product service on digital channels both this is in line with the research conducted by Riadi, Kamase and Mapparenta (2021) where high prices do not necessarily make the service better.

Consumer Perception of Service Quality on Price, Brand Image and Trust

The relationship between price and service quality, brand image and trust has been processed and presented in Table 2 below

Table 2. Relationship between service quality and price, brand image and trust

Quality of Service		Percentage (%)					Mean	Ket
No	Statement	1	2	3	4	5		
1	Consumer perception of service quality versus price	2	11	23	42	23	3,72	Good
2	Consumer perception of service quality against brand image	0	2	13	49	37	4,20	Excellent
3	Consumer perception of service quality versus trust	0	2	14	51	32	4,14	Excellent
Sum							12,06	
Average							4,02	Excellent

Based on table 2, it shows that the average highest value is the consumer's perception of service quality against the brand image with a value of 4.20 or an excellent indicator and the lowest is the consumer's perception of service quality against the price with a value of 3.72 or a good indicator.

In this questionnaire, respondents who were satisfied with the services of vitamin C manufacturers tended to give positive reviews and give a good reputation to the brand with a score of 4.25 or a very good indicator where as many as 37 respondents filled in a value of 5 and as many as 52 respondents filled in a value of 4. As for consumer perception of service quality to trust, customers who have strong trust in a vitamin C product tend to be more loyal and may make repeat purchases.

Customer feedback related to vitamin C is determined by the high price of a product where 30% of people answered neutral and as many as 5% of respondents disagreed with the statement with the lowest score of 3.18 while the high quality of service at vitamin C manufacturers can help build customer loyalty with an average score of 4.14 with excellent indicators.

Consumer Perception of Brand Image on Price, Service Quality and Trust

The relationship between brand image and price, quality of service and trust has been worked out and presented in Table 3 below

Table 3. Relationship of factors between brand image and price, quality of service and trust

Brand image				Mean	Ket
No	Statement	Percentage (%)			

		1	2	3	4	5		
1	Consumer perception of brand image towards price	1	6	25	53	15	3,75	Good
2	Consumer perception of brand image on service quality	0	0	19	56	24	4,05	Excellent
3	Consumer perception of brand image towards trust	0	2	13	58	27	4,11	Excellent
Sum							11,91	
Average							3,97	Good

Based on table 3, it shows that the average highest value is the consumer's perception of brand image towards trust with a value of 4.11 or a very good indicator and the lowest is the consumer perception of the brand image towards the price with a value of 3.75 or a good indicator.

In this questionnaire, respondents who had personal experience with vitamin C product brands also influenced their trust to get the highest score with a score of 4.25 or a very good indicator where as many as 53 respondents filled in a value of 4 and as many as 36 respondents filled in a value of 5. As for consumer perception of brand image on service quality, where the brand image of a good vitamin C product can build a good reputation for vitamin C producers as well. This is in line with research by Cretu and Brodie (2007) that a good reputation of a company or manufacturer can increase sales and expand the business market of the product.

The perception of brand image on price has not had a significant effect. Vitamin C products that have a strong and positive brand image should not be priced higher, but consumers who have had a positive experience with well-known vitamin C products tend to remain loyal and are more willing to pay a higher price than trying an unknown brand of vitamin C, as many as 54% of respondents filled in a value of 4 so that the average value is 3.87 or a good indicator.

Consumer Perception of Trust in Price, Quality of Service and Brand Image

The relationship between trust and price, service quality and brand image has been processed and presented in Table 4 below

Table 4. Relationship of factors between trust and price, service quality and brand image

No	Statement	Percentage (%)					Mean	Ket
		1	2	3	4	5		
1	Consumer perception of trust in price	2	12	27	42	18	3,62	Good
2	Consumer perception of trust in service quality	0	1	17	57	24	4,05	Excellent
3	Consumer perception of trust in brand image	0	1	18	58	23	4,03	Excellent
Sum							11,7	
Average							3,90	Good

Based on table 4, the results of data processing from a questionnaire on the relationship between trust and price, service quality and brand image show an average value of 3.90 with good indicators. The components are composed of various factors and the highest value is consumer perception of trust in service quality with a value of 4.05 where respondents agree that vitamin C which has a good reputation because customer trust will be easier to attract new customers and retain old customers with the highest score with 4.11 or can be called an excellent indicator.

The perception of confidence in prices got the lowest average value with 3.62 although it is still within good indicators. This is because consumers trust vitamin C products that have promos

or discounts with a value of 3.19 where as many as 38% answered neutrally and as many as 20% answered disagree on this questionnaire. In addition, as many as 30% of respondents also answered neutrally to consumer questions, believing that more expensive vitamin C products have good quality.

Consumer Perception Regarding Price, Service Quality, Brand Image and Vitamin C Purchase Decision on Digital Channels

The initial model in this study wants to know what factors affect the purchase decision of vitamin C after the Covid-19 pandemic. The variables used in this study consisted of 5 latent variables. 4 variable latent exogenous and 1 variable latent endogenic. The ecogenic latent variables are Price with 9 indicators, Service Quality with 12 indicators, Brand Image with 9 indicators, Trust with 11 indicators. The Endogenous variable is a Purchase Decision with 6 total indicators. The model formed wants to know the influence of the variables of Price, Service Quality, Brand Image and Trust

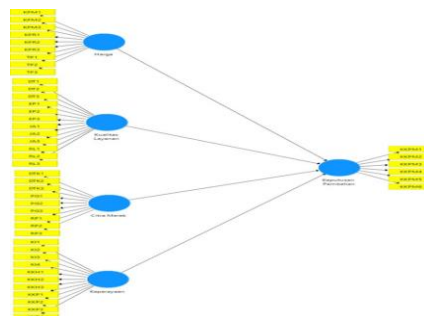


Figure 2. Initial model of the study

Evaluation of the Outer Model

The research model has indicators in the form of reflective. The convergent validity test was performed using AVE values and outer loading. In this study, an indicator is declared valid if it has an outer loading value of at least 0.7 and AVE of at least 0.5. Table 1 is the result of convergent validity testing.

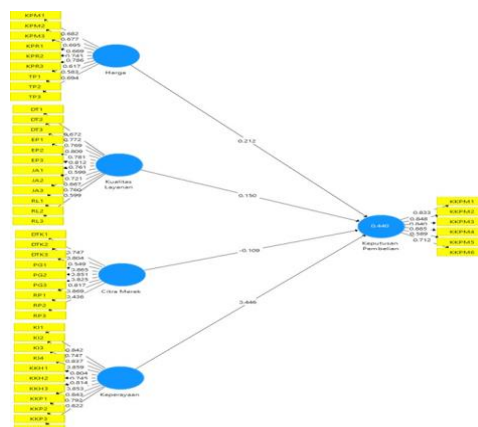


Figure 3. Results of path coefficients, outer loading, and R-Square in the early stages

Table 5. Outer Loading and AVE

Variable Latent	Indicator	Outer Loading	AVE
Price	KPM1	0,682	0,469

	KPM2	0,677	
	KPM3	0,695	
	KPR1	0,669	
	KPR2	0,743	
	KPR3	0,786	
	TP1	0,617	
	TP2	0,583	
	TP3	0,694	
Belief	KI1	0,842	0,664
	KI2	0,747	
	KI3	0,837	
	KI4	0,859	
	KKH1	0,804	
	KKH2	0,745	
	KKH3	0,814	
	CCP1	0,853	
	CCP2	0,843	
	CCP3	0,792	
	CCP4	0,822	
Quality of Service	DT1	0,672	0,533
	DT2	0,772	
	DT3	0,769	
	EP1	0,809	
	EP2	0,781	
	EP3	0,812	
	JA1	0,761	
	JA2	0,599	
	JA3	0,721	
	RL1	0,667	
	RL2	0,76	
	RL3	0,599	
Brand Image	DTK1	0,747	0,586
	DTK2	0,804	
	DTK3	0,549	
	PG1	0,865	
	PG2	0,851	
	PG3	0,825	
	RP1	0,817	
	RP2	0,869	
	RP3	0,436	
Purchase Decision	KKPM1	0,833	0,626
	KKPM2	0,848	
	KKPM3	0,84	
	KKPM4	0,885	
	KKPM5	0,589	
	KKPM6	0,712	

An indicator is declared to be valid convergently if the AVE value is more than 0.5 and the outer loading value is more than 0.7. Based on Table 1 above, it is known that there are several indicators that have an outer loading value of less than 0.7 and the price variable has an AVE value of less than 0.5, so the outer loading value must be re-estimated by reducing the outer loading

value that has a value of less than 0.7 by first reducing the smallest value until everything meets the set value limit.

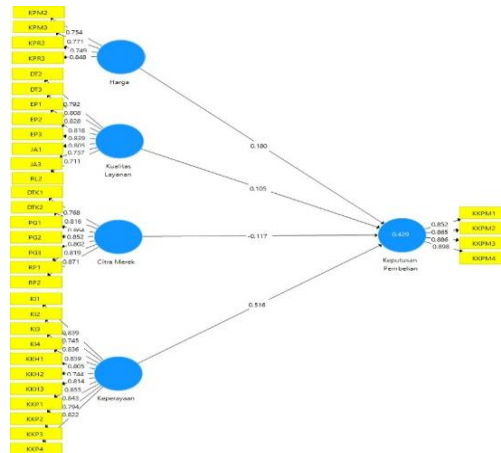


Figure 4. Re-estimate Results of path coefficients, outer loading, and R-Square

Table 6. Reestimation of the results of path coefficient, outer load and R-Square

Variable Latent	Indicator	Outer Loading	AVE
Price	KPM2	0,754	0,611
	KPM3	0,771	
	KPR2	0,749	
	KPR3	0,848	
Quality of Service	DT2	0,792	0,633
	DT3	0,808	
	EP1	0,828	
	EP2	0,818	
	EP3	0,839	
	JA1	0,805	
	JA3	0,757	
	RL2	0,711	
Brand Image	DTK1	0,768	0,686
	DTK2	0,816	
	PG1	0,864	
	PG2	0,852	
	PG3	0,802	
	RP1	0,819	
	RP2	0,871	
Belief	KI1	0,839	0,664
	KI2	0,745	
	KI3	0,836	
	KI4	0,859	
	KKH1	0,805	
	KKH2	0,744	
	KKH3	0,814	
	CCP1	0,855	
	CCP2	0,843	
	CCP3	0,794	
Purchase Decision	CCP4	0,822	0,766
	KKPM1	0,852	
	KKPM2	0,865	
	KKPM3	0,886	

KKPM4	0,898
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From the table above, it can be seen that all outer loading values in each indicator are greater than 0.7 after reestimating. Not only that, all variables have an AVE (*Average variance extracted*) value greater than 0.5 after reestimating. In other words, each indicator has been validated convergently in measuring each of its latent variables.

In addition to convergent validity, discriminatory validity is also carried out. The parameters of the discriminant validity test can be known from the Fornell-Larcker Criterion. Fornell-Larcker Criterion Table Results in the table below.

Tabel 7. Fornell-Larcker Criterion

	Brand Image	Price	Belief	Purchase Decision	Quality of Service
Brand Image	0,828				
Price	0,712	0,782			
Belief	0,798	0,742	0,815		
Purchase Decision	0,502	0,547	0,642	0,875	
Quality of Service	0,755	0,641	0,813	0,552	0,796

From table 7, it can be seen that the diagonal is the value of the root of the AVE, while the value that does not enter the diagonal is the correlation value between the latent variables. The root value of AVE on each latent variable is greater than its correlation with the other latent variable. If the root of AVE > a latent variable correlation then the validity of the discrimination is met. In other words, each indicator has been discriminatively valid in measuring each of its latent variables.

Next, a reliability test was carried out where the parameters used to assess reliability were *Cronbach alpha* and *composite reliability*. According to Jogiyanto and Abdillah (2009) based on Chin (1995) stated that a variable is said to be reliable if the Cronbach alpha value is more than 0.6 or the composite reliability is more than 0.7. The results of the reliability value are presented in Table 8, as follows:

Table 8. Reliability values

	Cronbach's Alpha	Composite Reliability
Brand Image	0,923	0,939
Price	0,788	0,862
Belief	0,949	0,956
Purchase Decision	0,898	0,929
Quality of Service	0,917	0,932

Based on Table 8 above, it is known that the variables used in this study all latent variables have an alpha Cronbach value of more than 0.6 and a composite reliability value of more than 0.7. So it can be concluded that the indicators that measure the variables used in this study are reliable.

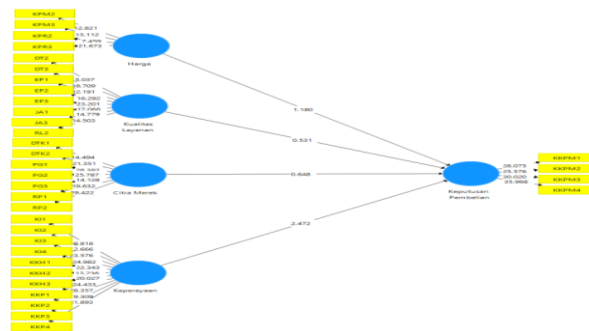
Inner Model Evaluation

After passing the validity and reliability test, the inner model is then evaluated. The parameters used for the evaluation of the inner model in smartPLS are the determinant coefficient (R² test) and the path coefficient or t-value. The R² value is used to measure the degree of variation of changes in independent variables to dependent variables. The value of R² is shown in Table 9.

Table 9. R-square Test

	<i>R-Square</i>	<i>R-Square Adjusted</i>
Purchase Decision	0,429	0,405

In this study, it consists of one endogenous latent variable so that the value of R^2 is used as a *Goodness of Fit* (GOF) value. Based on Table 5, the value of R^2 variable of the purchase decision variable was 0.429 or 42.9%. This means that all exogenous variables in the model are able to explain the diversity of the purchase decision variable by 42.9%. The remaining 57.1% is explained by other variables that are not included in the model. After calculating *the Goodness of Fit* (GOF), the next is the hypothesis test with the path coefficient. The path coefficient is a coefficient that indicates the magnitude of the influence that results in the t-calculated value. H_0 is rejected if the t-value is greater than 1.96 or *the p-value* is less than 0.05. Table 13 shows the results of the t-test and the magnitude of the direct effect. Figure 12 shows the magnitude of the t-statistic.

**Figure 5. t-statistics for each track**

Some of the hypotheses tested in this study include the following:

- 1) Price
 - a. H_0 : Price has no effect on the decision to purchase vitamin C on digital channels
 - b. H_1 : Price affects the purchase decision of vitamin C on digital channels
- 2) Belief
 - a. H_0 : Trust has no effect on the decision to purchase vitamin C on digital channels
 - b. H_1 : Trust influences vitamin C purchase decisions on digital channels
- 3) Quality of Service
 - a. H_0 : Quality of service has no effect on the purchase decision of vitamin C on digital channels
 - b. H_1 : Quality of service affects the purchase decision of vitamin C on digital channels
- 4) Brand Image
 - a. H_0 : Brand image has no effect on vitamin C purchase decisions on digital channels
 - b. H_1 : Brand image affects vitamin C purchase decisions on digital channels

Table 10. T-statistics, *P-value* and path coefficients

Variable	Koef Lane	Default deviation	t-count	<i>p-value</i>
Brand Image → Purchase decision	-0,117	0,180	0,648	0,517
Price → Purchase decision	0,180	0,152	1,180	0,239
Trust → Purchase decision	0,516	0,209	2,472	0,014
Quality of service → Purchase decision	0,105	0,197	0,531	0,596

Based on the results of the table above, it can be seen that:

- 1) H1: The price variable has no significant effect on the purchase decision at the alpha 5% level. Based on table 13, a calculated t-value of 1.18 was obtained, with a *p-value* of 0.23 the value is greater than the alpha 5% so that it fails to subtract H0. This means that there is no significant influence between price variables on the purchase decision of vitamin C.
- 2) H2: The Service Quality variable has no significant effect on purchasing decisions at the alpha level of 5%. Based on table 13, a calculated t-value of 0.531 was obtained, with a *p-value* of 0.596 the value is greater than the alpha 5% so that it fails to reject H0. This means that there is no significant influence between service quality variables on vitamin C purchase decisions.
- 3) H3: The brand image variable has no significant effect on the purchase decision at the alpha level of 5%. Based on table 13, a calculated t-value of 0.648 was obtained, with a *p-value* of 0.517 which is greater than alpha 5% so that it fails to subtract H0. This means that there is no significant influence between brand image variables on the purchase decision of vitamin C.
- 4) The trust variable has a significant effect on purchase decisions at the alpha level of 5%. Based on table 13, a calculated t-value of 2.472 was obtained, with a *p-value* of 0.014 the value is less than alpha 5% so that it subtracts H0. This means that there is a significant influence between the trust variable on the purchase decision of vitamin C. The value of the coefficient of influence of the trust variable is 0.516 with a positive relationship, meaning that with an increase in trust, it will affect the increase in the purchase decision.

Analysis of the Relationship between Latent Variables

To test the relationship between the variables of Price, Quality of Service, Brand Image, and Trust, Confirmatory Factor Analysis (CFA) was carried out to obtain a factor score that represented each latent variable. CFA is used to confirm the validity and reliability of constructs by testing whether the indicators used actually form hypothesized latent variables. After the factor score is obtained, the analysis is continued with a correlation test to determine the relationship between the latent variables, so as to provide a deeper understanding of the relationship between factors that affect consumer perception and confidence.

Confirmatory Factor Analysis (CFA) is a method in multivariate analysis used to test whether the developed measurement model matches the initial hypothesis. In CFA, there are latent variables and indicator variables. Latent variables are constructs that cannot be directly measured, while indicator variables are variables that can be observed and measured directly. An indicator is considered valid if it has a *standardized loading factor* of at least 0.5. Indicators with values below that limit will be eliminated because they are considered not strong enough to represent the latent variable being measured.

Price Indicator Validity Test

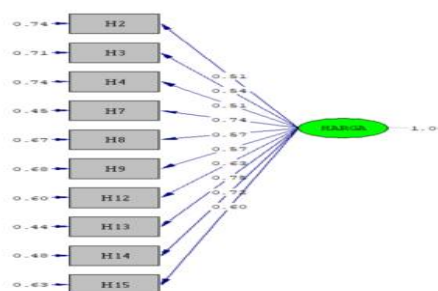


Figure 6. Price Indicator Validity Test

After the analysis was carried out, indicators on price variables that did not meet the minimum value of the 0.5 indicator were H1, H5, H6, H10, and H11, so that the indicator was reduced. Meanwhile, the other indicators were declared valid.

Test the Validity of Service Quality Indicators



Figure 7. Validity Test of Service Quality Indicators

After analyzing the variable factors of Service Quality, there were 2 indicators that did not meet the minimum limit of indicators of 0.5, namely KL1 and KL4, so the indicator was reduced. The above results have been reduced to indicators that do not meet, so that all indicators are feasible to measure the Service Quality variable.

Brand Image Indicator Validity Test

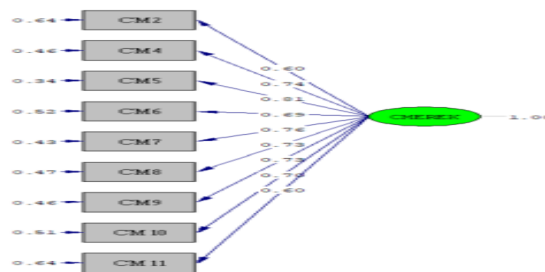


Figure 8. Validity Test of Brand Image Indicators

After the analysis of the Brand Image variable factors, there were 2 indicators that did not meet the minimum limit of indicator 0.5, namely CM1 and CM3, so the indicator was reduced. The above results have been reduced to indicators that do not meet, so that all indicators are feasible to measure the Brand Image variable.

Reliability Indicator Validity Test

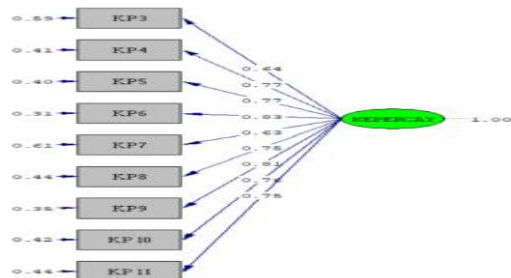


Figure 9. Validity Test of Trust Indicators

After the analysis of the Confidence variable factor, there were two indicators that did not meet the minimum limit of the 0.5 indicator, namely KP1 and KP2, so the indicator was reduced. The above results have been reduced to indicators that do not meet, so that all indicators are suitable for measuring the Trust variable.

Latent Variable Correlation Analysis

After obtaining all the factor score values of each latent variable whose indicators are valid, then a correlation analysis between each variable is carried out.

Table 11. Pearson Correlation Test for Latent Variables

		Price	Quality of Service	Brand Image	Belief
Price	Koef's value.	1	.869**	.760**	.804**
	<i>p-value</i>	0,000	0,000	0,000	0,000
Quality of Service	Koef's value.	.869**	1	.828**	.849**
	<i>p-value</i>	0,000	0,000	0,000	0,000
Brand Image	Koef's value.	.760**	.828**	1	.882**
	<i>p-value</i>	0,000	0,000	0,000	0,000
Belief	Koef's value.	.804**	.849**	.882**	1
	<i>p-value</i>	0,000	0,000	0,000	0,000

Hypothesis 1

H0: There is no relationship between Price and Quality of Service

H1: There is a relationship between Price and Quality of Service

From the results of the Pearson correlation Test Table, the results for the relationship between Price and Service Quality were obtained, $p\text{-value} = 0.000 < \alpha = 0.05$ then minus H0 so that it can be concluded that there is a relationship or correlation between Price and Service Quality. The output results show that price and service quality have a strong positive correlation with a correlation value of 0.869.

Hypothesis 2

H0: There is no relationship between Price and Brand Image

H1: There is a relationship between Price and Brand Image

From the results of the Pearson Correlation Test Table, the results for the relationship between Price and Brand Image were obtained, the value $p = 0.000 < \alpha = 0.05$ then minus H0 so that it can be concluded that there is a relationship or correlation between Price and Brand Image. The output results show that Price with Brand Image has a strong positive correlation with a correlation value of 0.76.

Hypothesis 3

H0: There is no relationship between Price and Trust

H1: There is a relationship between Price and Trust

From the results of the Pearson Correlation Test Table, the results were obtained for the relationship between price and trust, the value $p = 0.000 < \alpha = 0.05$ then minus H0 so that it can be concluded that there is a relationship between price and trust. The output results show that the price with confidence has a strong positive correlation with a correlation value of 0.804.

Hypothesis 4

H0: There is no relationship between Quality of Service and Brand Image

H1: There is a relationship between Quality of Service and Brand Image

From the results of the Pearson Correlation Test Table, the results were obtained for the relationship between service quality and brand image, the value $p = 0.000 < \alpha = 0.05$ then minus H0 so that it can be concluded that there is a relationship between service quality and brand

image. The output results showed that the quality of service with brand image had a strong positive correlation with a correlation value of 0.828.

Hypothesis 5

H0: There is no relationship between Quality of Service and Trust

H1: There is a relationship between Quality of Service and Trust

From the results of the Pearson Correlation Test Table, the results were obtained for the relationship between service quality and trust, the value $p = 0.000 < \alpha = 0.05$ then minus H0 so that it can be concluded that there is a relationship between service quality and trust. The output results showed that the quality of service with trust had a strong positive correlation with a correlation value of 0.849.

Hypothesis 6

H0: There is no relationship between Brand Image and Trust

H1: There is a relationship between Brand Image and Trust

From the results of the Pearson Correlation Test Table, the results were obtained for the relationship between brand image and trust, the value $p = 0.000 < \alpha = 0.05$ then minus H0 so that it can be concluded that there is a relationship between brand image and trust. The output results showed that brand image and trust had a strong positive correlation with a correlation value of 0.882.

Digital Marketing Strategy for Vitamin C Products after the Covid-19 Pandemic on Digital Channels

Based on the results of the data processing that has been carried out, there is a strategy that can be implemented by vitamin C producers in selling their products after the Covid-19 pandemic, especially on digital channels.

Marketing Strategies by Gender

Male respondents tend to be subjective from female respondents where the perception of vitamin C products at high prices on digital channels, consumers may tend to consider them as high-quality products, this is in line where male respondents tend to pay more for a vitamin C product in order to get a positive experience in purchasing vitamin C products. In addition, female respondents are more confident in the stable price of vitamin C products than in prices that fluctuate too often or inconsistently, consumers may feel uncomfortable and doubt the honesty of the vitamin C product.

Based on brand image, male respondents are more confident in a very good image of vitamin C products with a perception value in the range of 4.1-4.5. In addition, male respondents have a more positive response to clear brand communication in the promotion of vitamin C products.

Judging from trust, male respondents were more likely to trust the clear offer of a vitamin C product on digital channels with an average score of 4.1 and reputation with an average score of 4.0. Additionally, male respondents responded positively to feedback from customers. Meanwhile, female respondents were more affected by user testimonials with an average score of 4.1 and brand consistency with an average score of 4.0. Female respondents also appreciated honest communication from vitamin C producers.

In terms of service quality, male respondents tend to think that consistent and good service quality in vitamin C products can help create consumer loyalty (value of 4.3) as well as transparency of vitamin C products on digital channels. For female respondents, they consider that high quality of service at vitamin C manufacturers can help build customer loyalty (score 4.1).

Marketing Strategy based on Domicile

Respondents who live in the DKI Jakarta area tend to ignore the price offered by manufacturers to buy vitamin C products. For respondents who live in Bogor, they will choose vitamin C products with clear and non-deceptive offers. Meanwhile, respondents who live in Depok and Tangerang have almost similar shopping behaviors considering that high-priced vitamin C products are high-quality products.

Respondents who are domiciled in the DKI Jakarta area have a moderate response to the questions provided, but relatively agree that a positive brand image affects their confidence in buying vitamin C products on digital channels. Respondents who live in the Bekasi and Depok areas have almost a similar response in choosing vitamin C based on brand image where they highly value a strong brand image and believe that well-known brands are more worthy of being given high prices. Respondents who live in Tangerang focus more on personal experiences of vitamin C products sold on digital channels. For respondents who live in Bogor, they stated that agreeing that a good brand image can build a good reputation as a vitamin C producer with an average value of 4.25 categories of very good.

In the trust section, respondents who are domiciled in Depok strongly believe in brands with clear offers (value 4.5) and good reputation (value 4.2) to choose vitamin C products. For respondents who live in Tangerang, they consider brand consistency to be in line with trust (value of 3.9) and personal experience as an assumption for choosing vitamin C products on digital channels (value of 4.0). Respondents who live in Bekasi have a direct correlation with trust (a score of 4.2). Meanwhile, respondents domiciled in Bogor believe in vitamin C products tend to provide positive feedback.

Respondents who live in Bekasi agree that satisfied customer service quality is more likely to trust vitamin C products and recommend them to others (score 4.3). For respondents who live in DKI Jakarta, it is assumed that consumers who are satisfied with the services of vitamin C manufacturers tend to give positive reviews and give a good reputation to the brand. Respondents who live in Depok the quality of service depends on brand reputation and repeat purchases where respondents think that they are more confident when they have tried vitamins. Respondents domiciled in Bogor have a perception that satisfied consumers tend to have a positive view of certain vitamin C products.

Marketing Strategies by Age

Respondents aged 20-24 argue that while vitamin C products are priced high on digital channels, consumers may be more likely to perceive them as high-quality products. Meanwhile, respondents aged 25-29 believe that prices are directly proportional to the brand image and tend to trust products that have clear and not deceiving offers. Respondents aged 30-34 are more likely to buy vitamin C products from the benefits they get. Respondents in the 35-39 range were more likely to trust vitamin C products that did not commit price fraud or dubious sales practices. For respondents aged 40-44, they are less interested in the price of vitamin C products but rather prioritize the price stability of a product.

The brand image response of each age group also varied. Respondents who are 20-24 years old are very affected by brand image, for them the more famous the brand, the more trusted this age group is to be able to buy vitamin C products on digital channels. The age range of 25-34 years is more mature in responding to brands in choosing to buy vitamin C products on digital channels. Respondents aged 35-39 years are confident that vitamin C products are consistent in delivering value, quality, and positive experiences to consumers for a long time, which can strengthen consumer confidence in the vitamin C product. Respondents with a 40-44 breastfeeding tended to

be more cautious about brands of vitamin C that are sold over the counter on digital channels, but they tended to agree that consistency of a brand is very important.

Respondents in the 20-24 age group most trusted brands with clear offers and a strong reputation but were not affected by promos or discounts. Respondents aged 25-34 years liked brands with consistent service in buying vitamin C on digital channels, in addition to the fact that at 25-34 years old, they agreed that trust can reduce respondents' complaints. Respondents aged 35-39 are more confident in vitamin C products with clear offers. The 40-44 range is a little wary and tends to be cautious but appreciates the honesty of the brand (score 4.3).

The quality of service for the age group of 20-24 years will have an impact on respondents recommending products to others. Meanwhile, respondents 25-29 like responsive services that can increase trust in a vitamin C product on digital channels. Respondents aged 30-34 agreed that the high quality of service at vitamin C manufacturers can help build customer loyalty. Respondents in the 35-39 age group had little effect on customer feedback on service quality. Respondents aged 40-44 years have a perception that satisfied consumers tend to have a positive view of certain vitamin C products.

Revenue-based Marketing Strategies

In terms of income, the respondents who have an income of $\leq$ Rp. 2,500,000 agree that high prices will correlate with good service quality, besides that they believe that high prices can improve the brand image. Respondents with an income of IDR 2,500,000–IDR 5,000,000 were more confident in vitamin C products with clear and non-deceptive offers. Then respondents who have an income group of IDR 5,000,001–IDR 10,000,000 agree that an expensive price can create exclusivity, in addition to a stable price can create trust in vitamin C products. Respondents who have an income of $>$ Rp 15,000,000 have varied responses to the price factor but tend to agree that high prices affect the perception of quality, in addition to price changes are considered less comfortable in this segment of the group.

Judging from the monthly income, respondents with a $\leq$ income of Rp. 2,500,000 agree that a strong brand can differentiate products from their competitors, brand consistency is also one of the factors that can influence the selection of vitamin C products on digital channels. Furthermore, respondents with income in the range of IDR 2,500,001–IDR 5,000,000 think that a good brand image can build a good reputation for vitamin C producers. Respondents who have an income group of IDR 5,000,001–IDR 10,000,000 strongly believe that a unique and consistent brand can strengthen trust. Respondents with a monthly income of IDR 10,000,001–IDR 15,000,000 agreed that consumers' personal experience with vitamin C product brands also affects trust. As for the revenue $>$ Rp 15,000,000 tends to be more selective, but agrees that a good brand contributes to the increasing value of trust for the purchase of vitamin C products.

In terms of income, respondents who have an income of $\leq$ Rp. 2,500,000 highly appreciate clear offers (value 4.2) and good brand reputation (value 4.1) but tend to be less interested in promos. Respondents with an income of IDR 2,500,001–IDR 5,000,000 considered vitamin C brands that are known to have high trust from their consumers to have a competitive advantage in the market. Respondents with an income group of IDR 5,000,001–IDR 10,000,000 had a positive response to brand consistency (value 4.1) and customer feedback (value 4.2). Respondents with a monthly income of IDR 10,000,001–IDR 15,000,000 more trust vitamin C products with clear offers. Meanwhile, respondents with an income of $>$ IDR 15,000,000 were more selective, but agreed that trust reduced complaints (value of 4.0).

Respondents who have an income of $\leq$ Rp. 2,500,000 agree that good service quality increases consumer confidence and satisfied respondents are more likely to recommend products.

Satisfied consumers tend to have a positive view of certain vitamin C products on the counter with an income of IDR 2,500,001–IDR 5,000,000. Respondents with an income group of IDR 5,000,001–IDR 10,000,000 provide a response to the quality of service building long-term loyalty. Respondents with an income of > of IDR 15,000,000 prioritize transparency targeting consumers to be able to improve service quality.

CONCLUSION

Based on the results of this study, it can be concluded that the decision to purchase vitamin C through digital channels after the *COVID-19* pandemic is influenced by various factors, with consumer trust being the main factor that has a significant impact. Trust in vitamin C products is shaped by several elements, including information transparency, customer testimonials, and brand reputation. Consumers tend to be more loyal to brands that have consistently demonstrated benefits and quality. In contrast, the variables of price, service quality, and brand image do not have a significant direct influence on purchasing decisions, although they do contribute to shaping customer perceptions of a product. Analysis of the relationships between variables revealed a strong positive correlation among price, service quality, brand image, and trust. This indicates that although price may not directly affect purchasing decisions, a reasonable price that aligns with the perceived benefits can enhance brand image and reinforce customer trust. Likewise, good service quality not only elevates brand image but also contributes to customer loyalty and satisfaction. These findings align with previous research showing that consumers are more inclined to purchase products from brands with a positive reputation and a satisfying buying experience. Regarding the model's validity and reliability, the research met the established criteria after re-estimation. With an R^2 value of 42.9%, the model successfully explains the majority of factors influencing purchasing decisions, although 57.1% of influencing factors remain unidentified in this study. The results of the correlation test also demonstrated that brand image, service quality, and price have a close relationship with customer trust, which ultimately influences purchasing behavior. Therefore, building customer trust through effective marketing and communication strategies is the key to increasing sales conversions in digital channels.

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