

ANALYSIS OF THE EFFECT OF ENVIRONMENTAL KNOWLEDGE AND SUBJECTIVE PRODUCT KNOWLEDGE ON WILLINGNESS TO PAY MORE WITH GREEN PRODUCT TRUST AS A MEDIATING VARIABLE IN THE FIRSTX GREEN FUEL PRODUCT

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Abstract.

This study aims to analyze the effect of Environmental Knowledge and Subjective Product Knowledge on Willingness To Pay with Green Product Trust as a mediating variable on Pertamina Green fuel products. This research was conducted in Jakarta using a quantitative approach and associative research type. The research population is Pertamina Green consumers at Jakarta and surrounding gas stations, with a sample of 130 respondents selected using purposive sampling method. The data analysis technique uses Structural Equation Modeling (SEM) with the help of Smart PLS 4 software. The results showed that Environmental Knowledge has a positive and significant effect on Willingness To Pay, Subjective Product Knowledge has a positive but insignificant effect on Willingness To Pay, Environmental Knowledge and Subjective Product Knowledge have a positive and significant effect on Green Product Trust, then Green Product Trust has a positive and significant effect on Willingness To Pay, then Green Product Trust positively and significantly mediates the influence of Environmental Knowledge and Subjective Product Knowledge on Willingness To Pay. This study shows the importance of environmental education and effective marketing strategies in increasing consumer confidence in green products, thereby encouraging consumers' willingness to pay more.

Keywords: Environmental Knowledge, Subjective Product Knowledge, Green Product Trust, Willingness To Pay, dan Pertamina Green

INTRODUCTION

Environmental issues have become an increasingly pressing global concern as the impacts of climate change and ecosystem degradation increase. Countries around the world are beginning to realize that human activities,

especially the use of fossil fuels, are the main drivers of global temperature rise (Poynting, 2024). Emissions from fossil fuels contribute significantly to global warming, while natural phenomena such as El Niño exacerbate the situation. If energy consumption patterns are not changed soon, global temperatures are expected to continue rising in the coming decades. This situation also has an impact on air quality, with Jakarta recorded as the city with the highest air pollution levels in the world (Dataindonesia.id, 2024).

In an effort to reduce environmental impacts, the Indonesian government has committed to achieving Net Zero Emission (NZE) by 2060. One of the main strategies in achieving this target is the development of renewable energy and more environmentally friendly fuels. The government continues to encourage innovation in alternative fuels, such as the development of bioethanol as a fuel oil mixture (BBM) (Setiawan, 2024). One concrete step in the implementation of clean energy is the launch of Pertamina Green RON 95 by Pertamina in 2023, which contains a 5% blend of sugarcane molasses-based bioethanol. This initiative aims to reduce dependence on fossil fuels as well as support NZE 2060 targets (Pertamina, 2023).

However, although Pertamina Green RON 95 is a more environmentally friendly product, its selling price is higher than conventional fuels such as Pertalite and Pertamina RON 92. Interestingly, despite its higher price, Pertamina Green sales data has shown a significant increase since its launch. This phenomenon indicates that there is a segment of consumers who are willing to pay more for more environmentally friendly products, known in the literature as “willingness to pay more” (WTPM). The factors that influence consumers' decision to pay more are a topic of interest.

Based on previous research, the main factors that influence WTPM include environmental knowledge (EK), subjective product knowledge (SPK), and green product trust (GPT). Environmental knowledge has been found to have a positive effect on WTPM in several studies, such as research by Firdaus (2023) and Gomes et al. (2023). However, this research is still limited to certain regions and has not examined specifically on environmentally friendly fuel products. The study of Vicente et al. (2021) also shows that behavioral control factors and environmental activism affect WTPM, but these findings still need to be tested in a broader context.

Subjective product knowledge (SPK) also plays a role in consumer purchasing decisions. Han & Stoel, (2019) found that consumers with higher levels of subjective knowledge are more likely to pay more for sustainable products. However, the results of research by Adekayanti et al. (2022) and Syahlani et al. (2023) show that SPK does not always have a significant effect on consumer purchase intention, so further research is needed to understand its role in WTPM.

Green product trust (GPT) or trust in environmentally friendly products is also believed to have an influence on consumer decisions to pay more for sustainable products. Wang et al. (2019) found that green trust acts as a significant mediating variable in the relationship between green product knowledge and purchase intention. However, Tarabieh's (2021) research shows that green trust does not always have a direct effect on purchase intention, so further research is needed to understand its role in the context of green fuel.

Based on the results of previous studies, there are still inconsistencies in the findings regarding the factors that influence WTPM, especially in the context of green fuel. Therefore, this study aims to analyze the effect of environmental knowledge and subjective product knowledge on willingness to pay more with green product trust as a mediating variable in Pertamina Green fuel products. This study is expected to contribute to the understanding of consumer behavior towards environmentally friendly fuels and provide recommendations for the energy industry in developing more effective marketing strategies.

LITERATURE REVIEW

Willingness to Pay (WTP) is the maximum amount that consumers are willing to pay to obtain a product or service (Kotler & Keller, 2016). WTP reflects consumer perceptions of the value offered by a product, including the benefits obtained from the product. According to Zeithaml (1988), WTP is influenced by perceived quality, product benefits, and prices that match consumer expectations. Schiffman & Kanuk (2014) add that WTP also depends on psychological and social factors that shape consumer preferences in buying a product. According to Fathullah et al. (2024) Willingness to Pay (WTP) is the maximum amount that consumers are willing to pay for a product or service, which is influenced by consumer perceptions of product value, including quality, environmental benefits, and social benefits. In green marketing, consumers who care about the environment tend to have a higher WTP for environmentally friendly products.

Environmental Knowledge is a person's understanding of concepts, facts, and relationships related to the environment and how human actions can affect environmental conditions (Luthans, 2011). According to Robbins & Judge (2013), environmental knowledge helps individuals make more environmentally responsible decisions, such as choosing environmentally friendly products and adopting a sustainable lifestyle. Ajzen (1991) states that the higher a person's level of knowledge about environmental issues, the more likely the individual is to have more pro-environmental attitudes and behaviors.

Subjective Product Knowledge is the level of individual understanding of a product based on personal experience and subjective perceptions, not from objective factual information (Alba et al. 1987). According to Peter & Olson (2010), subjective knowledge is closely related to individual confidence in

assessing a product, even though the information they have is not always accurate. Kotler & Keller (2016) state that subjective knowledge affects purchasing decisions, because consumers often rely on personal experience and opinions in evaluating a product.

Green Product Trust is consumer trust in an environmentally friendly product based on its credibility, benefits, and impact on the environment (Chen & Chang, 2012). According to Mayer et al. (1995), trust in a green product arises when consumers believe that the product has integrity and can fulfill the claims made by the manufacturer. Kotler & Armstrong (2018) state that trust in green products is strongly influenced by transparency factors, environmental certification, and consumers' previous experience in using green products.

Increased environmental awareness has driven significant changes in consumer behavior, especially in terms of interest in green products. This phenomenon is reflected in the increasing willingness of consumers to pay more to obtain more sustainable products. Research by Vicente et al. (2021) explains that willingness to pay more (WTP) is positively related to perceptions of behavioral control and environmental activism. On the other hand, research by Firdaus (2023) revealed that environmental knowledge (EK) has a positive and significant effect on WTP, which indicates that the higher consumers' knowledge of environmental issues, the more likely they are to pay more. In addition, Sara de Sio et al. (2022) also found that a better understanding of environmental issues can increase positive attitudes towards the environment, which in turn encourages the intention to buy environmentally friendly products. Based on these studies, environmental knowledge plays an important role in motivating consumers to choose products that are considered more environmentally friendly. Based on this review, the first hypothesis of this study is as follows:

H1: Environmental Knowledge has a positive and significant effect on Willingness to Pay

Subjective product knowledge (SPK) affects willingness to pay (WTP), as explained by Priscillia & Indriyani (2020), which states that the higher the subjective knowledge of consumers about a product, the more likely they are to pay more. Research by Perdanawati et al. (2018) also supports this finding, stating that there is a significant influence between SPK on WTP. Based on this study, the second hypothesis of this study is as follows:

H2: Subjective Product Knowledge has a positive and significant effect on Willingness to Pay

The development of global environmental awareness encourages consumers to consider sustainability in their purchasing decisions. One of the factors that influence consumer trust in green products is their environmental

knowledge. Songyue et al. (2023) argued that “Knowledge and trust drive green purchases: Individuals with a better understanding of environmental issues and trust in green products or companies are more likely to buy green products.” This research is in line with the findings of Rahayu et al. (2022) which states that green product trust has a positive and significant effect on environmental knowledge, which indicates that the higher the green product trust, the higher the environmental knowledge of consumers. Other studies, such as those conducted by Ali and Israr (2012), also show that knowledge of the environment has a positive and significant effect on the purchase intention of green products in Pakistan. Hadiwidjojo (2019) added that there is a significant effect of environmental knowledge on green product purchase intentions in Sabahan, Malaysia. Based on this study, the third hypothesis of this study is as follows:

H3: Environmental Knowledge has a positive and significant effect on Green Product Trust

Subjective product knowledge (SPK) has a positive effect on green product trust (GPT). Wang et al. (2019) in their research found that there is a positive influence between SPK and GPT, which indicates that consumers with better product knowledge tend to have higher trust in green products. Elbakidze (2023) also stated that there is a positive relationship between GPA and product trust, which further strengthens that deeper knowledge about the product can increase trust in the product. Li (2024) also revealed similar results, that GPA has a positive effect on GPT. Thus, the fourth hypothesis is as follows:

H4: Subjective Product Knowledge has a positive and significant effect on Green Product Trust

Green product trust (GPT) is an important factor that influences consumer purchasing decisions. Setyabudi & Adealita, (2020) examined the effect of green product knowledge on green purchase intention, which is mediated by green trust, with the role of perceived price as moderation between green trust and green purchase intention in Aqua brand bottled water with 100% recycled bottles. Akbar et al. (2014) state that green trust is a determining variable for consumers in increasing green purchase intention. A high level of green purchase intention is caused by the level of consumer trust in producers who produce environmentally friendly products. Based on these findings, the fifth hypothesis of this study is as follows:

H5: Green Product Trust has a positive and significant effect on Willingness to Pay

In previous research, it has been proven that green trust can function as a mediating variable that connects the independent variable and the dependent

variable. Mustofa et al. (2021) prove that green trust can increase consumer interest in buying environmentally friendly products (green purchase intention). Although the information received by consumers through green advertising can influence their perceptions, this information does not always guarantee the emergence of green trust in the product. Furthermore, Putu & Ketut (2019) show that green trust can mediate the effect of green perceived value positively and significantly on green purchase intention. Vinoth et al. (2024) further explained that green trust plays an important role in mediating the relationship between environmental concern and green purchase intention. The study shows that green product trust significantly influences consumers' decisions to make green purchase intention. This study also validates that environmental concern significantly influences individual decisions in choosing green products. Based on these findings, the sixth hypothesis of this study is as follows:

H6: Green Product Trust mediates the effect of Environmental Knowledge on Willingness to Pay

Sara de Sio et al. (2022) showed that green trust can mediate the relationship between green advertising and environmental knowledge with the intention to buy green products. The study revealed that green trust fully mediates the relationship between green advertising and green product purchase intention, while the relationship between environmental knowledge and purchase intention is only partially mediated. In addition, Setyabudi & Adealita, (2020) found that product knowledge has no direct effect on green purchase intention without the mediation of green trust. Chen & Chang's (2015) research also shows a positive influence on the willingness to pay premium prices for green products, which illustrates that the intention to buy green products increases with the increase in trust in these products. Thus, the seventh hypothesis of this study is as follows:

H7: Green Product Trust mediates the effect of Subjective Product Knowledge on Willingness to Pay

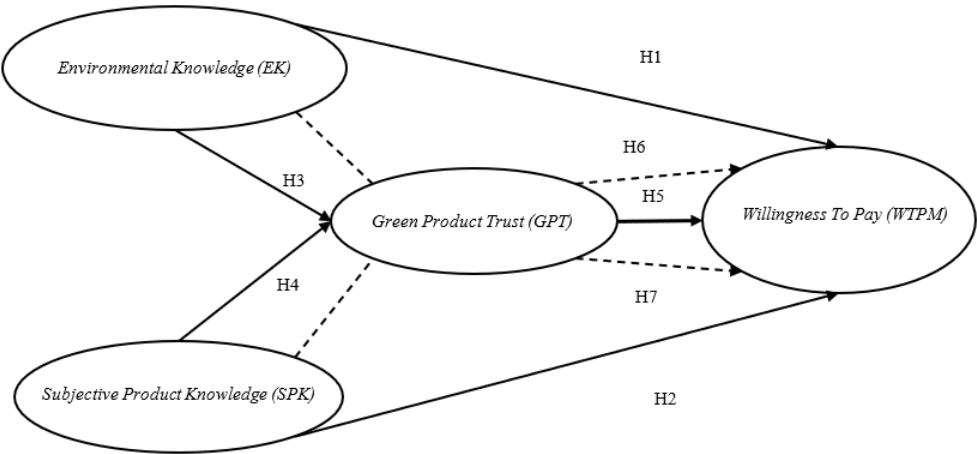


Figure 1. Conceptual Framework

METHODS OF RESEARCH

This study uses a quantitative approach with a causality associative type, namely research that examines the relationship of one or two other variables and the effect of mediation, focusing on the effect of environmental knowledge and subjective product knowledge on willingness to pay which is mediated by green product trust in consumers of Pertamina Green fuel products at gas stations in Jakarta and surrounding areas. Data collection method with non-probability sampling with incidental sampling method. Sample determination according to Solimun (2002), with a sample size of 130 people who use Pertamina type fuel products as respondents. The data collection technique used a questionnaire with a Likert scale. The collected data were analyzed using path analysis techniques with SmartPLS 4 software, which includes evaluating the measurement model (outer model) through loading factors (validity value > 0.500), convergent validity (AVE value > 0.500), discriminant validity, and composite reliability (value > 0.700), evaluating the structural model (inner model), and evaluating the quality and suitability of the model using R-Square (R^2).

RESULT AND DISCUSSION

Respondent Characteristics

Table 1. Characteristics of Respondents

Karakteristik	Frekuensi	Persentase %
Jenis Kelamin		
Laki- laki	97	74,62
Perempuan	33	25,38
Usia		
< 30 tahun	14	10,77
30 - 40 tahun	62	47,69
41 - 50 tahun	44	33,85
> 50 tahun	10	7,69
Pendidikan Terakhir		
SMA	5	3,85
D-III	27	20,77
D-IV/S1	74	56,92
S2	24	18,46
Gaji/Pendapatan		
< 5 juta	5	3,85
5 - 10 juta	18	13,85
11 - 15	45	34,62
> 15 juta	62	47,69
Jenis Pekerjaan		
ASN/PPPK	3	2,31
Karyawan Swasta	24	18,46
Wirausaha/Pengusaha	30	23,08
Pegawai BUMN	66	50,77
TNI/POLRI	7	5,38

Outer Model Evaluation

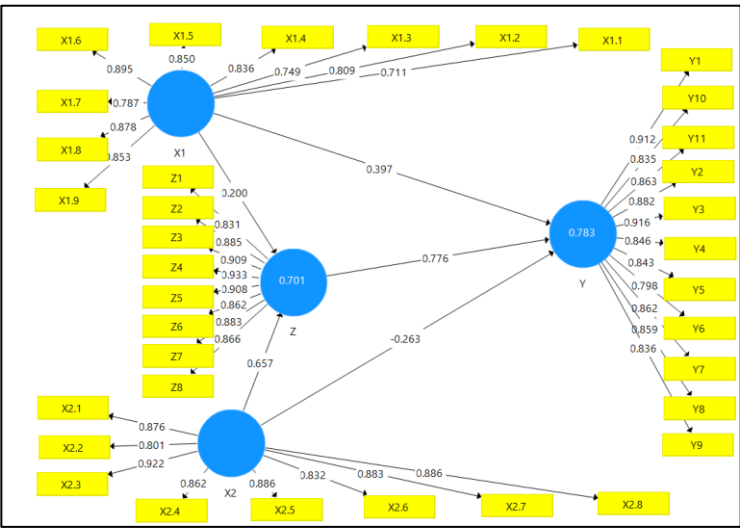


Figure 2. Outer Loading

Validity Testing
Convergent Validity

Based on the results of measuring the outer loading of environmental knowledge variables, subjective product knowledge, green product trust, and willingness to pay, it has met the criteria for use as a variable measurement because it has an outer loading value greater than 0.500 (outer loading> 0.500) (Chin, 1998), so that all variables are declared feasible or valid for further research analysis.

Discriminant Validity

Table 2. Average Variant Extracted (AVE)

Variable	Average Variance Extracted (AVE)
<i>Environmental Knowledge (X1)</i>	0.673
<i>Subjective Product Knowledge (X2)</i>	0.755
<i>Willingness To Pay (Y)</i>	0.739
<i>Green Product Trust (Z)</i>	0.783

The measured constructs are valid and reliable and the research results have good validity and can be relied upon for accurate conclusions.

Reliability Testing

A construct is said to be reliable if the composite reliability value is above 0.700 (Sekaran, 2014). The reliability test can be strengthened by using the Cronbach alpha value. A variable can be declared reliable or meet Cronbach alpha if it has a Cronbach alpha value > 0.700 (Sekaran, 2014).

Table 3. Composite Reliability and Cronbach Alpha

Variable	Cronbach's Alpha	Composite Reliability	Rule of Thumb	Model Evaluation
<i>Environmental Knowledge (X1)</i>	0.939	0.949	> 0.70	Reliabel
<i>Subjective Product Knowledge (X2)</i>	0.954	0.961		Reliabel
<i>Willingness To Pay More (Y)</i>	0.965	0.969		Reliabel
<i>Green Product Trust (Z)</i>	0.960	0.967		Reliabel

Based on the table above, these results show that the composite reliability and Cronbach alpha values on all variables are greater than 0.70. Thus these results can show that each research variable has met the requirements of the Cronbach alpha value, so it can be concluded that all variables have a high level of reliability.

Inner Model Evaluation

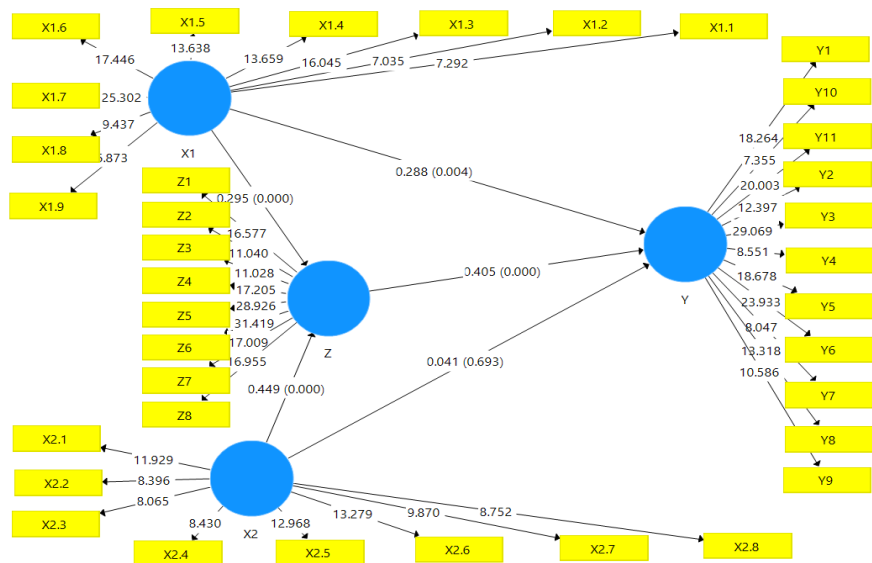


Figure 3. Original Sample and P-Value

Coefficient Path Test

Table 4. Path Coefficient

Relationship between Variables	Original Sample	Description
Environmental Knowledge ➔ Willingness To Pay	0.288	Positive
Subjective Product Knowledge ➔ Willingness To Pay	0.041	Positive
Environmental Knowledge ➔ Green Product Trust	0.295	Positive
Subjective Product Knowledge ➔ Green Product Trust	0.449	Positive
Green Product Trust ➔ Willingness To Pay	0.405	Positive
Environmental Knowledge ➔ Green Product Trust ➔ Willingness To Pay	0.120	Positive
Subjective Product Knowledge ➔ Green Product Trust ➔ Willingness To Pay	0.182	Positive

Based on the description of these results, it shows that the direction of the relationship is positive in all paths that have been tested.

Test Coefficient of Determination (R2)

Table 5. R Square Value

	R Square
Willingness to pay	0.783
Green product trust	0.701

Based on the data presentation in the table above, it can be seen that the R-Square value for the willingness to pay variable is 0.783. The acquisition of

this value explains that the percentage of environmental knowledge and subjective product knowledge in influencing or explaining the willingness to pay variable is 78.3%. Then for the R-Square value obtained by the green product trust variable is 0.701. This value explains that green product trust in consumers of Pertamina Green fuel products in Jakarta and surrounding areas can be explained by environmental knowledge and subjective product knowledge by 70.1%.

Hypothesis Test

Table 2. Hypothesis Test

Relationship between Variables	<i>T-Statistics</i>	<i>P-Values</i>
(H1) <i>Environmental Knowledge ➔ Willingness To Pay</i>	2.924	0.004
(H2) <i>Subjective Product Knowledge ➔ Willingness To Pay</i>	0.395	0.693
(H3) <i>Environmental Knowledge ➔ Green Product Trust</i>	3.556	0.000
(H4) <i>Subjective Product Knowledge ➔ Green Product Trust</i>	6.328	0.000
(H5) <i>Green Product Trust ➔ Willingness To Pay</i>	3.522	0.000
(H6) <i>Environmental Knowledge ➔ Green Product Trust ➔ Willingness To Pay</i>	2.470	0.014
(H7) <i>Subjective Product Knowledge ➔ Green Product Trust ➔ Willingness To Pay</i>	3.118	0.002

DISCUSSION

The Effect of Environmental Knowledge on Willingness to Pay

The results of this study indicate that there is a positive and significant influence between Environmental Knowledge and Willingness to Pay on consumers of environmentally friendly fuel products, such as Pertamina Green, in Jakarta and its surroundings. The higher the level of consumer knowledge about environmental issues, such as bioethanol and global warming, the greater their willingness to pay more for products that support sustainability.

The research found that respondents with high levels of Environmental Knowledge have a deep understanding of environmental impacts, including global warming, air pollution and the benefits of bioethanol fuel. This understanding influences their willingness to pay more to support the use of environmentally friendly products such as Pertamina Green. This is in line with the Theory of Planned Behavior (TPB) developed by Ajzen (1991), which states that human behavior is influenced by three main factors: attitude towards behavior, subjective norms, and perceived behavioral control.

Attitude towards behavior reflects how individuals assess their actions, whether they see them as positive or negative. In this context, consumers who have high environmental knowledge tend to have a positive attitude towards green products. Subjective norms refer to social influences that encourage individuals to act in a certain way. Consumers who understand environmental

issues will tend to perceive paying more for green products as right and socially valued. Meanwhile, perceived behavioral control describes the extent to which individuals feel they have control over their decisions in choosing green products, which are influenced by product availability and other economic and social factors.

The results of this study are also supported by previous research. Vicente et al. (2021) found that willingness to pay is positively correlated with perceived behavioral control and the level of individual environmental activism. Firdaus (2023) also confirmed that Environmental Knowledge has a significant impact on willingness to pay, indicating that increased environmental awareness can encourage more responsible consumptive behavior.

Thus, it can be concluded that Environmental Knowledge plays an important role in shaping more sustainable consumption patterns. Increased education on environmental issues can be an effective strategy in encouraging positive attitudes towards green products, strengthening social norms that support sustainable consumption, as well as increasing the perceived control of individuals in their consumption decision-making. Therefore, education campaigns and environmental awareness raising should continue to be developed to strengthen pro-environmental behavior in society.

The Effect of Subjective Product Knowledge on Willingness to Pay

The hypothesis test results indicate that Subjective Product Knowledge does not have a significant effect on Willingness to Pay for Pertamina Green products. This finding suggests that although consumers have a positive perception of the product, their subjective knowledge is not strong enough to drive a decision to pay a premium price.

The respondents' level of subjective knowledge is categorized as high. Consumers perceive Pertamina Green as a high-quality product, suitable for luxury vehicles, and modern. However, without supporting factual information, the impact of Subjective Product Knowledge (SPK) on Willingness to Pay (WTP) remains limited. Demographic factors such as education, income, and occupation also play a role. Highly educated respondents may understand the product specifications but may not fully recognize its environmental value. Meanwhile, high-income consumers tend to be more selective when deciding to pay a premium price.

These findings are consistent with the Consumer Behavior theory proposed by Blackwell et al. (2006), which explains that subjective product knowledge plays a role in the information search and alternative evaluation stages of the purchasing process. Consumers with high SPK tend to be more confident in assessing product quality, but external factors such as social norms, brand trust, and economic conditions still influence their willingness to pay more.

In the context of willingness to pay, an "attitude-behavior gap" exists, where a positive perception of a product does not always translate into a purchasing decision. Therefore, marketing strategies should focus on experience-based education and information transparency to enhance the impact of subjective product knowledge on willingness to pay.

The Effect of Environmental Knowledge on Green Product Trust

The hypothesis test results indicate that Environmental Knowledge has a positive and significant effect on Green Product Trust. This suggests that consumers with a high level of environmental knowledge tend to have greater trust in the benefits of eco-friendly products, such as pollution reduction and long-term sustainability.

Respondents with a high level of environmental knowledge demonstrate a strong understanding of environmental issues, including air pollution, global warming, and the benefits of bioethanol in reducing carbon emissions. This level of knowledge reinforces their belief that products like Pertamina Green genuinely offer ecological benefits and contribute to environmental sustainability.

These findings align with the theory proposed by Lau and Lee (1999) on consumer trust, which explains that trust is based on a product's credibility, integrity, and ability to meet consumer expectations. Consumers with a deep understanding of a product's technical aspects and environmental value are more likely to trust sustainability claims and innovations promoted by manufacturers.

Support for these results is also found in the study by Songyue et al. (2023), which states that individuals with strong environmental awareness and trust in green products are more likely to engage in eco-friendly purchasing behaviors. Similarly, Rahayu et al. (2022) affirm that green product trust has a positive and significant impact on environmental knowledge, further emphasizing the importance of environmental education in building trust in green products.

The Effect of Subjective Product Knowledge on Green Product Trust

The hypothesis test results indicate that Subjective Product Knowledge has a positive and significant effect on Green Product Trust. This finding suggests that consumers' confidence in a product, based on their experiences or subjective perceptions, plays a crucial role in shaping their trust in green products.

Respondents demonstrated a high level of subjective product knowledge, reflecting a strong understanding of product specifications, such as bioethanol content, high octane rating, and benefits for vehicle engine performance. This knowledge enhances trust in the credibility of Pertamina Green, both in terms of its environmental friendliness and technical advantages, such as emission reduction and improved fuel efficiency.

These findings align with the theory proposed by Schiffman and Kanuk (2010), which states that Subjective Product Knowledge refers to an individual's belief about how much they know about a product, even if this knowledge is not always based on objective facts. Subjective knowledge plays a significant role in building consumer trust, as consumers who perceive themselves as knowledgeable about the technical benefits and environmental value of green products are more likely to trust the manufacturer's integrity and the product's quality.

Previous research also supports these findings. Wang et al. (2019) found a positive relationship between subjective product knowledge and green product trust, while Elbakidze (2023) and Li (2024) further confirmed that trust in green products increases as consumers' Subjective Product Knowledge grows. Therefore, educational efforts aimed at strengthening consumers' subjective understanding of green product benefits can serve as an effective strategy to enhance trust in environmentally friendly products.

The Effect of Green Product Trust on Willingness to Pay

The hypothesis test results indicate that Green Product Trust has a positive and significant effect on Willingness to Pay More. This finding suggests that consumers' trust in green products plays a crucial role in driving their willingness to pay a premium-not only due to economic value but also based on moral and environmental considerations.

Respondents demonstrated a high level of green product trust, indicating their belief that Pertamina Green provides tangible benefits, such as reducing carbon emissions and improving air quality. This trust motivates consumers to pay a premium price as part of their commitment to environmental sustainability. Lau and Lee (1999) explain that trust is formed through three main dimensions: credibility (the belief that the product fulfills its claims), integrity (confidence that the manufacturer acts honestly and consistently), and capability (the product's ability to deliver promised benefits). In the context of green products, these aspects are particularly important, as eco-friendly products are often more expensive than conventional alternatives, requiring consumers to be convinced that they are making the right purchasing decision.

Furthermore, Lau and Lee (1999) emphasize that trust in green products significantly influences willingness to pay more. Consumers who believe that a green product genuinely fulfills its sustainability claims are more likely to accept higher prices. Akbar et al. (2014) also found that green trust serves as a key factor in increasing consumers' green purchase intention.

Additionally, Baron and Kenny's (1986) mediation theory suggests that Green Product Trust can act as an intermediary variable between factors such as environmental knowledge or subjective product knowledge and consumers'

willingness to pay more. Trust in green products strengthens the relationship between environmental knowledge and willingness to pay more by assuring consumers that the product truly delivers its promised benefits.

Thus, Green Product Trust is not merely a belief but a fundamental factor in shaping consumers' purchase intentions and behavior. Transparency in environmental claims, technical evidence, and consistent communication are essential in building this trust, ultimately increasing consumers' willingness to pay a premium for products perceived as environmentally friendly.

The Effect of Environmental Knowledge on Willingness to Pay Through the Mediation of Green Product Trust

The test results indicate that Green Product Trust positively and significantly mediates the effect of Environmental Knowledge on Willingness to Pay More. Consumers with high environmental knowledge tend to have greater trust in green products, such as Pertamina Green, which ultimately increases their willingness to pay a premium.

These findings reinforce the role of Green Product Trust as a bridge between Environmental Knowledge and Willingness to Pay. Consumers who understand environmental issues, such as the impact of carbon emissions and the benefits of bioethanol, are more likely to trust the credibility and integrity of green products. This trust, in turn, motivates them to view higher payments as an investment in environmental sustainability.

Ajzen's (1991) theory supports this finding by explaining that pro-environmental attitudes based on knowledge strengthen the intention to engage in behavior, including paying more for green products. Lau & Lee (1999) further argue that trust in green products is based on credibility and perceived benefits, which influence consumers' willingness to pay. Additionally, Chen & Chang (2013) highlight the critical role of Green Product Trust in shaping consumers' purchase intentions and willingness to pay a premium.

Previous studies by Songyue et al. (2023) and Rahayu et al. (2022) support these findings, stating that environmental knowledge and trust in green products significantly influence purchasing decisions. Therefore, marketing strategies that enhance environmental awareness and build trust in green products can be key to increasing consumers' willingness to pay.

The Effect of Subjective Product Knowledge on Willingness to Pay Through the Mediation of Green Product Trust

The test results indicate that Green Product Trust mediates the effect of Subjective Product Knowledge on Willingness to Pay More. This finding suggests that trust in green products serves as a bridge between consumers'

subjective perception of product quality and their decision to pay a premium price.

These findings highlight that Green Product Trust strengthens the influence of Subjective Product Knowledge on Willingness to Pay. Consumers with a positive perception of a product's technical attributes, such as RON 95 and bioethanol content, are more likely to trust its benefits and be willing to pay a premium price. A high level of Subjective Product Knowledge enhances confidence in the credibility and capability of green products, which in turn increases Willingness to Pay through Green Product Trust.

This study aligns with the theory of Schiffman & Kanuk (2010), which states that consumer decisions are influenced by subjective knowledge. Consumers who perceive themselves as knowledgeable about product attributes tend to have greater trust in the product, ultimately affecting their willingness to pay. Lau & Lee (1999) also assert that trust in green products, such as Pertamina Green, is reinforced by consumers' understanding of its attributes. Additionally, Bandura (1986) explains that consumer trust in green products is shaped by the interaction between personal factors (SPK), experiences, and environmental influences. Chen & Chang (2013) further support that Green Product Trust plays a key role in driving green purchasing behavior, particularly through factors such as SPK, which enhance consumer confidence.

Previous research by Perdanawati et al. (2018) supports these findings, demonstrating that SPK significantly influences Willingness to Pay More through increased trust in green products. Therefore, strengthening consumers' SPK can serve as an effective strategy for enhancing trust and willingness to pay for environmentally friendly products.

CONCLUSION

Based on the findings of this study, it can be concluded that environmental knowledge has a positive and significant effect on willingness to pay, while subjective product knowledge has a positive but not significant effect on willingness to pay. Additionally, environmental knowledge has a positive and significant effect on green product trust, and subjective product knowledge also has a positive and significant effect on green product trust. Furthermore, green product trust has a positive and significant effect on willingness to pay. Green product trust also mediates the influence of environmental knowledge and subjective product knowledge on willingness to pay among consumers of Pertamina Green fuel products at gas stations in Jakarta and surrounding areas.

This study highlights the crucial role of green product trust as a mediating variable in the relationship between environmental knowledge and subjective product knowledge on willingness to pay. The findings reveal that subjective product knowledge does not have a direct significant impact on willingness to

pay but contributes positively by enhancing green product trust. Meanwhile, environmental knowledge has a direct and significant effect on willingness to pay, indicating that a better understanding of environmental issues increases consumer trust in eco-friendly products, ultimately driving their willingness to pay a premium price. This reinforces the idea that green product trust plays a key role in connecting consumer knowledge with purchasing decisions for sustainable products.

From a managerial perspective, this study provides valuable insights for Pertamina in developing marketing strategies for Pertamax Green to enhance consumers' willingness to pay. Continuous education on the environmental benefits of the product should be reinforced through effective communication campaigns, including in-depth advertisements, social media engagement, and collaborations with educational institutions. Strong brand recognition is also a critical factor; thus, Pertamina should improve brand awareness through consistent promotions and detailed explanations of the product's technical advantages.

Furthermore, trust in Pertamax Green as an environmentally friendly fuel that reduces emissions and supports the local sugarcane farming economy should be strengthened through transparency in production processes, compliance with international standards, and recognized certifications. Communication strategies highlighting fuel efficiency and cost savings in vehicle maintenance can help consumers understand the added value of the product and justify the premium price.

Pertamina can also enhance customer experience by creating an exclusive perception, such as dedicated lanes at gas stations or a loyalty program with attractive rewards. Strengthening brand trust through certifications and customer testimonials will further solidify Pertamax Green's image as a high-value premium fuel, ultimately increasing consumers' willingness to pay more.

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