

Theory of Planned Behavior and Green Buying Decisions: Mediating Effects of Emotional Intelligence and Moderating Effects of Consumer Knowledge

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Abstract

This study examines the influence of the Theory of Planned Behavior (TPB) on green buying decision among organic coffee consumers by incorporating emotional intelligence as a mediating variable and consumer knowledge as a moderating variable. A quantitative explanatory approach was employed using purposive sampling, resulting in 302 respondents in Pontianak, Indonesia. Data were collected through a structured questionnaire and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The results indicate that attitude, perceived behavioral control, and emotional intelligence significantly influence green buying decision, whereas subjective norm has no direct significant effect. Subjective norm and perceived behavioral control significantly affect emotional intelligence, which mediates their relationships with green buying decision. However, consumer knowledge does not moderate the relationships between the TPB constructs and green buying decision. These findings extend the Theory of Planned Behavior by demonstrating the role of emotional intelligence as an underlying psychological mechanism in green purchasing behavior while providing empirical evidence from the organic coffee market in Indonesia.

Kata Kunci:

Consumer Knowledge, Emotional Intelligence, Green Buying Decisions, TPB

Abstrak

Penelitian ini mengkaji pengaruh Teori Perilaku Terencana (TPB) terhadap keputusan pembelian hijau di kalangan konsumen kopi organik dengan memasukkan kecerdasan emosional sebagai variabel mediasi dan pengetahuan konsumen sebagai variabel moderasi. Pendekatan penjelasan kuantitatif digunakan dengan menggunakan pengambilan sampel bertujuan, menghasilkan 302 responden di Pontianak, Indonesia. Data dikumpulkan melalui kuesioner terstruktur dan dianalisis menggunakan Pemodelan Persamaan Struktural Kuadrat Terkecil Parsial (PLS-SEM) dengan SmartPLS 4. Hasil menunjukkan bahwa sikap, kontrol perilaku yang dirasakan, dan kecerdasan emosional secara signifikan memengaruhi keputusan pembelian hijau, sedangkan norma subjektif tidak memiliki pengaruh signifikan secara langsung. Norma subjektif dan kontrol perilaku yang dirasakan secara signifikan memengaruhi kecerdasan emosional, yang memediasi hubungan mereka dengan keputusan pembelian hijau. Namun, pengetahuan konsumen tidak memoderasi hubungan antara konstruk TPB dan keputusan pembelian hijau. Temuan ini memperluas Teori Perilaku Terencana dengan menunjukkan peran kecerdasan emosional sebagai mekanisme psikologis yang mendasari perilaku pembelian hijau sekaligus memberikan bukti empiris dari pasar kopi organik di Indonesia.

INTRODUCTION

Over the past two decades, environmental sustainability has become a key determinant of consumer purchasing behavior, giving rise to green consumption as a global trend (Borah et al., 2024; Shi & Jiang, 2023). This shift is increasingly evident in emerging markets such as Indonesia, where approximately 62.9% of consumers have purchased sustainable products, primarily motivated by environmental preservation (Ahdiat, 2024), with Millennial and Generation Z consumers driving much of this trend (Ardianto et al., 2025; Borah et al., 2024; Shi & Jiang, 2023).

Coffee exemplifies this transformation. Beyond being among the world's most widely consumed beverages, coffee has become closely tied to sustainability issues such as environmentally friendly cultivation and fair-trade sourcing (Dionysis et al., 2022), with organic coffee standing out for offering both health and environmental benefits (Gatti et al., 2022). In Pontianak, where coffee drinking (*ngopi*) is deeply embedded in local culture and coffee shops are growing rapidly, organic coffee purchasing has become an increasingly relevant yet complex behavior, involving functional, environmental, ethical, and personal considerations simultaneously (Ibrahim, 2025).

The Theory of Planned Behavior (TPB) remains a leading framework for explaining environmentally responsible consumer behavior, positing that behavioral intention is shaped by attitude, subjective norm, and perceived behavioral control (Hoang et al., 2026; Rakuša & Milfelner, 2025). Empirical evidence broadly supports TPB in green purchasing contexts, although the influence of subjective norm varies across cultural settings (Dorce et al., 2021), and all three TPB constructs significantly predict organic coffee purchase intention in Indonesia (Ratnawati et al., 2025; Wibowo et al., 2022). However, cognitive evaluation alone does not fully explain why favorable attitudes and intentions do not always translate into actual purchasing behavior, pointing to an intention-behavior gap.

To address this gap, the present study incorporates two additional variables. First, emotional intelligence, the ability to perceive, understand, regulate, and use emotion in decision-making (Seinauskiene et al., 2025) is proposed as a mediator, since emotionally intelligent consumers are better able to manage emotional conflict and align their values with actual behavior (Mishra & Farooqi, 2024; Seinauskiene et al., 2025). Second, consumer knowledge, understanding of a product's characteristics, production process, certification, and health and environmental benefits (Colling et al., 2025) is proposed as a moderator, as more knowledgeable consumers are better able to translate favorable attitudes and social influence into actual purchasing behavior, a role that has been underexamined relative to its use as a direct antecedent (Ratnawati et al., 2025; Simanjuntak et al., 2023; Zhang et al., 2024).

Prior research on green buying decisions has predominantly focused on broad categories such as green food, organic cosmetics, and sustainable fashion, leaving organic coffee, with its distinctive blend of health, ethical, and sensory dimensions, comparatively underexplored. Moreover, emotional intelligence and consumer knowledge have typically been examined in isolation; to the authors' knowledge, no study has simultaneously positioned emotional intelligence as a mediator and consumer knowledge as a moderator within an extended TPB framework, particularly in the context of organic coffee in a distinctive coffee-culture setting such as Pontianak.

This study therefore proposes an extended TPB framework integrating emotional intelligence as an internal psychological mechanism and consumer knowledge as an external cognitive boundary condition in explaining green buying decisions among organic coffee consumers in Pontianak. It contributes theoretically (extending TPB), methodologically (testing direct, indirect, and conditional relationships via PLS-SEM), and contextually (providing empirical evidence from Pontianak, Indonesia). Based on these gaps, the following hypotheses are proposed.

- H_{1a}: Attitude has a positive and significant effect on emotional intelligence among organic coffee consumers in Pontianak.
- H_{1b}: Attitude has a positive and significant effect on green buying decision among organic coffee consumers in Pontianak.
- H_{2a}: Subjective norm has a positive and significant effect on emotional intelligence among organic coffee consumers in Pontianak.

- H_{2b}: Subjective norm has a positive and significant effect on green buying decision among organic coffee consumers in Pontianak.
- H_{3a}: Perceived behavioral control has a positive and significant effect on emotional intelligence among organic coffee consumers in Pontianak.
- H_{3b}: Perceived behavioral control has a positive and significant effect on green buying decision among organic coffee consumers in Pontianak.
- H₄: Emotional intelligence has a positive and significant effect on green buying decision among organic coffee consumers in Pontianak.
- H_{5a-c}: Emotional intelligence mediates the effect of attitude, subjective norm, and perceived behavioral control on green buying decision among organic coffee consumers in Pontianak.
- H_{6a-c}: Consumer knowledge moderates the effect of attitude, subjective norm, and perceived behavioral control on green buying decision among organic coffee consumers in Pontianak.

METHODOLOGY

This study employed a quantitative, cross-sectional research approach using an explanatory research design to examine the influence of the Theory of Planned Behavior (TPB) on green buying decisions, with emotional intelligence serving as a mediating variable and consumer knowledge acting as a moderating variable. The research was conducted in Pontianak, Indonesia, with data collection carried out from March to July 2025. The target population comprised all individuals residing in Pontianak who had experience consuming coffee. Since this study specifically focused on organic coffee consumers, a purposive sampling technique was employed to select respondents who met the research objectives. The sampling criteria included: (1) respondents aged 17 years or older; (2) residing in Pontianak; (3) having purchased or consumed organic coffee at least once within the past six months; and (4) being willing to participate voluntarily in the study.

The minimum sample size was determined using the 10-times rule (Hair & Alamer, 2022), which requires a minimum sample of ten times the largest number of indicators associated with any single construct in the model. In this study, the constructs with the largest number of indicators—attitude, emotional intelligence, consumer knowledge, and green buying decision—each comprised four items; therefore, the minimum required sample size was $10 \times 4 = 40$ respondents. The actual sample obtained in this study ($n = 302$) substantially exceeded this minimum threshold, indicating that the sample size was more than adequate to achieve sufficient statistical power for PLS-SEM estimation (Hair et al., 1998).

Primary data were collected entirely online through a structured questionnaire distributed via Google Forms, disseminated through social media platforms. Prior to completing the questionnaire, respondents were informed of the purpose of the study, and participation was entirely voluntary. All responses were collected anonymously and treated confidentially to ensure ethical compliance and minimize response bias. The questionnaire employed a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). All constructs were specified as reflective measurement models, and the measurement items were adapted from previously validated instruments. Specifically, attitude, subjective norm, and perceived behavioral control were adapted from Li and Shan (2025); emotional intelligence was adapted from Wong and Law (2002); and consumer knowledge and green buying decision were adapted from Kamalanon et al. (2022). The complete list of measurement items, together with their operational definitions and sources, is presented in Table 1.

The research model consisted of six latent variables: attitude, subjective norm, perceived behavioral control, emotional intelligence, consumer knowledge, and green buying decision. Operationally, attitude refers to consumers' positive or negative evaluations toward purchasing organic coffee; subjective norm reflects perceived social pressure to engage in green purchasing; perceived behavioral control represents consumers' perceived capability to purchase organic coffee; emotional intelligence refers to consumers' ability to recognize, understand, and regulate emotions when making purchasing decisions; consumer knowledge reflects consumers' understanding of organic coffee, including its characteristics, environmental benefits, and production practices; and green buying decision refers to consumers' actual purchasing decisions regarding environmentally friendly coffee products.

Data were analyzed using SmartPLS 4 by applying the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. The analysis was conducted in two stages: evaluation of the measurement model (outer model) and evaluation of the structural model (inner model). The measurement model was assessed through outer loadings (threshold > 0.708), internal consistency reliability using Cronbach's alpha and Composite Reliability (CR; both thresholds > 0.70), convergent validity using Average Variance Extracted (AVE; threshold > 0.50), and discriminant validity using both the Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio (HTMT; threshold < 0.90). The structural model was evaluated through path coefficients, coefficient of determination (R^2), predictive relevance (Q^2), and effect size (f^2). Furthermore, mediation analysis was performed by assessing the significance of the indirect effects of emotional intelligence, while moderation analysis employed the product indicator approach to examine the moderating effect of consumer knowledge on the relationships between the TPB constructs and green buying decision. The use of PLS-SEM was considered appropriate because it enables the simultaneous estimation of complex direct, indirect, and moderating relationships, accommodates prediction-oriented research, and performs well when analyzing complex structural models with multiple latent variables (Hair & Alamer, 2022).

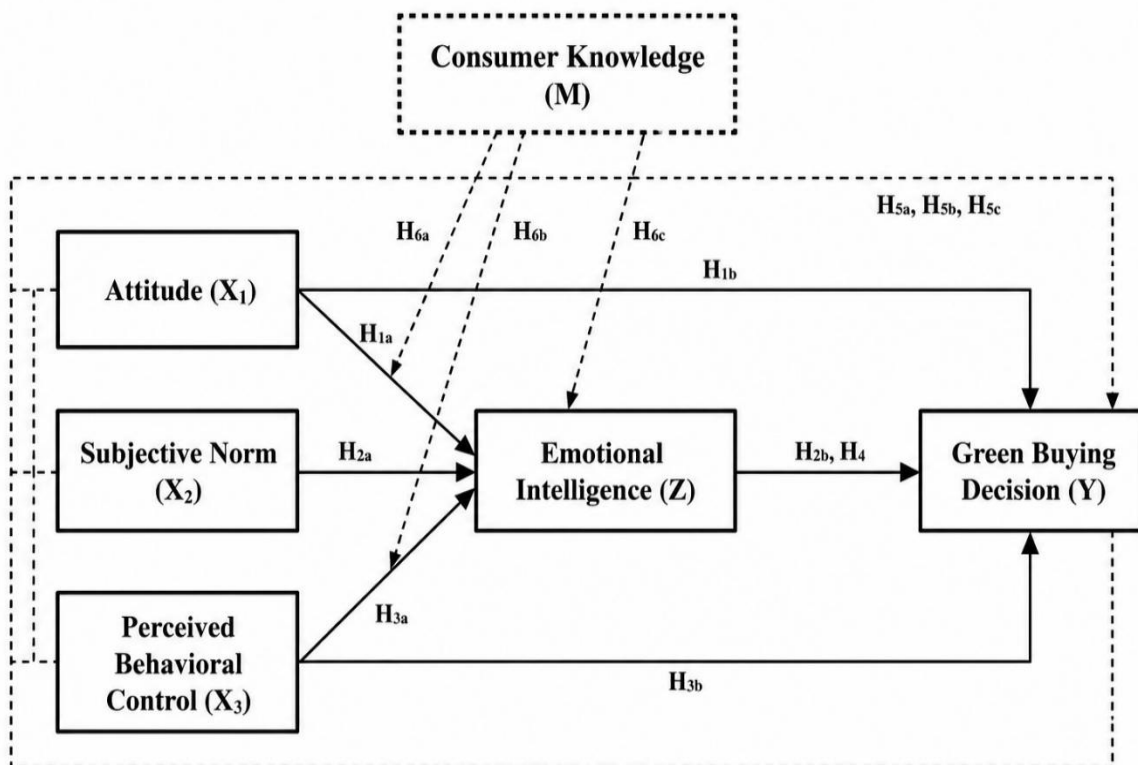


Figure 1. Research Model

Table 1: Variable Operationalization

No	Construct	Operational Definition	Code	Indicator	Source
1	Attitude	Consumers' positive or negative evaluation toward purchasing organic coffee	ATT	1. I think purchasing organic coffee is a good idea. 2. I believe purchasing organic coffee is a wise choice. 3. I like the idea of buying organic coffee. 4. It would be enjoyable to buy organic coffee.	(Li & Shan, 2025)
2	Subjective Norm	Perceived social pressure to engage in green purchasing	SN	1. My family supports my purchase of organic coffee. 2. My friends support my purchase of organic coffee. 3. In my social circle, buying organic coffee is encouraged.	(Li & Shan, 2025)
3	Perceived Behavioral Control	Consumers' perceived capability to purchase organic coffee	PBC	1. I have the resources and time to purchase organic coffee. 2. If I want, I can buy organic coffee. 3. Whether to purchase organic coffee is entirely up to me.	(Li & Shan, 2025)
4	Emotional Intelligence	Consumers' ability to recognize, understand, and regulate emotions in purchasing decisions	EI	1. I have a good sense of why I have certain feelings most of the time. 2. I always know my friends' emotions from their behaviour. 3. I always set goals for myself and then try my best to achieve them. 4. I am able to control my temper so that I can handle difficulties rationally.	(Wong & Law, 2002)
5	Consumer Knowledge	Consumers' understanding of organic coffee's characteristics, environmental benefits, and production practices	CK	1. I am very knowledgeable about organic coffee and its environmental benefits. 2. I know more about organic coffee than the average person. 3. I know how to select organic coffee products that are environmentally friendly. 4. I know that the organic coffee I buy is environmentally safe.	(Kamalanon et al., 2022)
6	Green Buying Decision	Consumers' actual purchasing decisions regarding environmentally friendly coffee products	GBD	1. I try to buy organic coffee. 2. I have switched to buying organic coffee because of its environmental benefits. 3. When I choose between the same types of coffee products, I purchase the one that is less harmful to the environment. 4. I buy organic coffee even if it is more expensive than non-organic coffee.	(Kamalanon et al., 2022)

Source: Author's data analysis.

RESULTS

Table 2: Demographic Characteristics

Profile	n	%
Gender		
Male	128	42,38
Female	174	57,62
Age		
18-20	67	22,19
31-34	109	36,09
35-38	78	25,83
39-41	39	12,91
>41	9	2,98
Duration of Organic Coffee Consumption		
1-3 months	127	42,05
4-6 months	45	14,90
7-9 months	28	9,27
10-12 months	48	15,89
> 12 months	54	17,88

Source: Author's data analysis.

Table 1 presents the demographic characteristics of the respondents involved in this study. Of the 302 respondents, the majority were female (57.62%), while male respondents accounted for 42.38%, indicating a relatively higher participation of women in organic coffee consumption. In terms of age, most respondents were between 31–34 years old (36.09%), followed by those aged 35–38 years (25.83%) and 18–20 years (22.19%). Smaller proportions were observed among respondents aged 39–41 years (12.91%) and above 41 years (2.98%). Regarding the duration of organic coffee consumption, the largest group of respondents had consumed organic coffee for 1–3 months (42.05%), followed by those who had consumed it for more than 12 months (17.88%), 10–12 months (15.89%), 4–6 months (14.90%), and 7–9 months (9.27%). These findings suggest that the sample was dominated by relatively young adult consumers, with a considerable proportion of new organic coffee consumers, reflecting the growing interest and expanding market for organic coffee in Pontianak.

Table : 2
Validity and Reliability

Variables	CA	CR	AVE	Decision
Attitude	0,758	0,860	0,672	Valid & Reliable
Subjective Norm	0,725	0,845	0,645	Valid & Reliable
Perceived Behavioral Control	0,729	0,847	0,650	Valid & Reliable
Emotional Intelligence	0,832	0,888	0,666	Valid & Reliable
Consumer Knowledge	0,832	0,887	0,664	Valid & Reliable
Green Buying Decision	0,583	0,827	0,706	Valid & Reliable

Source: Author's data analysis.

Table 2 presents the results of the validity and reliability assessment for all latent constructs. The findings indicate that all constructs demonstrate satisfactory internal consistency reliability, as evidenced by Cronbach's alpha values ranging from 0.583 to 0.832 and Composite Reliability (CR) values ranging from 0.827 to 0.888. Although the Cronbach's alpha value for Green Buying Decision (0.583) is slightly below the conventional threshold of 0.70, it remains acceptable because the construct exhibits a high Composite Reliability value (0.827), which is considered a more appropriate reliability measure in PLS-SEM, particularly for constructs with a limited number of indicators (J. Hair & Alamer, 2022). Furthermore, all Average Variance Extracted (AVE) values range from 0.645 to 0.706, exceeding the recommended threshold of 0.50, thereby confirming adequate convergent validity. Overall, these results indicate that all measurement constructs satisfy the recommended criteria for reliability and convergent validity and are therefore appropriate for subsequent structural model analysis.

Table: 3
Discriminant Validity

Construct	Attitude	Subjective Norm	Perceived Behavioral Control	Emotional Intelligence	Consumer Knowledge	Green Buying Decision
Fornell Lacker Criterion						
Attitude	0,820					
Subjective Norm	0,729	0,805				
Perceived Behavioral Control	0,666	0,693	0,806			
Emotional Intelligence	0,565	0,635	0,696	0,816		
Consumer Knowledge	0,701	0,610	0,509	0,424	0,815	
Green Buying Decision	0,641	0,639	0,635	0,608	0,539	0,840
Heterotrait-Monotrait Ratio (HTMT)						
Attitude						
Subjective Norm	0,986					
Perceived Behavioral Control	0,895	0,917				
Emotional Intelligence	0,710	0,817	0,893			
Consumer Knowledge	0,889	0,785	0,651	0,506		
Green Buying Decision	0,966	0,983	0,970	0,872	0,774	

Source: Author's data analysis.

Table 3 presents the results of the discriminant validity assessment using the Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT). Based on the Fornell-Larcker criterion, the square root of the Average Variance Extracted (AVE) for each construct is greater than its correlations with other constructs, indicating that all latent variables possess satisfactory discriminant validity according to this criterion. However, the HTMT assessment reveals mixed results. While several construct pairs exhibit HTMT values below the recommended threshold, indicating adequate discriminant validity, several relationships exceed the recommended cut-off value of 0.90, particularly between Attitude and Subjective Norm, Attitude and Green Buying Decision, Subjective Norm and Perceived Behavioral Control, Subjective Norm and Green Buying Decision, and Perceived Behavioral Control and Green Buying Decision. These findings suggest that although the measurement model satisfies the Fornell-Larcker criterion, discriminant validity based on HTMT should be interpreted with caution due to the high conceptual similarity among several constructs. Nevertheless, considering the satisfactory reliability, convergent validity, and theoretical distinctiveness of the constructs, the measurement model was considered adequate for subsequent structural model evaluation.

Table: 4
Path Coefficient

Hypothesis	Relationship	Beta	t	p	Decision
H _{1a}	Attitude → Emotional Intelligence	0,013	0,192	0,848	Rejected
H _{1b}	Attitude → Green Buying Decision	0,152	0,199	0,047	Accepted
H _{2a}	Subjective Norm → Emotional Intelligence	0,314	4,228	0,001	Accepted
H _{2b}	Subjective Norm → Green Buying Decision	0,167	1,783	0,075	Rejected
H _{3a}	Perceived Behavioral Control → Emotional Intelligence	0,486	7,372	0,001	Accepted
H _{3b}	Perceived Behavioral Control → Green Buying Decision	0,174	2,359	0,019	Accepted
H ₄	Emotional Intelligence → Green Buying Decision	0,176	2,439	0,015	Accepted

Source: Author's data analysis.

Table 4 presents the results of the structural model evaluation based on the path coefficient analysis. The findings indicate that five of the seven proposed direct relationships are statistically significant. Specifically, subjective norm ($\beta = 0.314$, $t = 4.228$, $p < 0.001$) and perceived behavioral control ($\beta = 0.486$, $t = 7.372$, $p < 0.001$) exert significant positive effects on emotional intelligence, whereas the effect of attitude on emotional intelligence is not significant ($\beta = 0.013$, $t = 0.192$, $p = 0.848$). Regarding green buying decision, attitude ($\beta = 0.152$, $t = 1.99$, $p = 0.047$), perceived behavioral control ($\beta = 0.174$, $t = 2.359$, $p = 0.019$), and emotional intelligence ($\beta = 0.176$, $t = 2.439$, $p = 0.015$) have significant positive effects, supporting hypotheses H1b, H3b, and H4. In contrast, the influence of subjective norm on green buying decision is not statistically significant ($\beta = 0.167$, $t = 1.783$, $p = 0.075$), leading to the rejection of H2b. Overall, these findings suggest that perceived behavioral control is the strongest predictor of emotional intelligence, while emotional intelligence, attitude, and perceived behavioral control play significant roles in explaining consumers' green buying decisions for organic coffee.

Table: 5
Mediating Effect

Hypothesis	Indirect Relationship	Indirect Effect (Beta)	t	p	Decision
H5a	Attitude → Emotional Intelligence → Green Buying Decision	0,002	0,176	0,860	Rejected
H5b	Subjective Norm → Emotional Intelligence → Green Buying Decision	0,055	2,100	0,036	Accepted
H5c	Perceived Behavioral Control → Emotional Intelligence → Green Buying Decision	0,086	2,290	0,022	Accepted

Source: Author's data analysis.

Table 5 presents the results of the mediation analysis examining the indirect effect of emotional intelligence on the relationships between the Theory of Planned Behavior (TPB) constructs and green buying decision. The findings reveal that emotional intelligence significantly mediates the effects of subjective norm ($\beta = 0.055$, $t = 2.100$, $p = 0.036$) and perceived behavioral control ($\beta = 0.086$, $t = 2.290$, $p = 0.022$) on green buying decision, thereby supporting hypotheses H5b and H5c. These results suggest that consumers who experience stronger social influence and perceive greater control over purchasing organic coffee are more likely to develop higher emotional intelligence, which subsequently encourages environmentally responsible purchasing decisions. In contrast, the indirect effect of attitude on green buying decision through emotional intelligence is not statistically significant ($\beta = 0.002$, $t = 0.176$, $p = 0.860$), leading to the rejection of H5a. This finding indicates that emotional intelligence does not serve as a mediating mechanism between attitude and green buying decision. Overall, the mediation analysis demonstrates that emotional intelligence partially explains how certain TPB constructs—particularly subjective norm and perceived behavioral control—are translated into green buying decisions, highlighting the importance of emotional capability as an underlying psychological mechanism in sustainable consumer behavior.

Table: 6
Moderating Effect

Hypothesis	Moderating Effect	Beta	t	p	Decision
H6a	Consumer Knowledge × Attitude → Green Buying Decision	-0,076	1,111	0,267	Rejected
H6b	Consumer Knowledge × Subjective Norm → Green Buying Decision	-0,079	1,091	0,276	Rejected
H6c	Consumer Knowledge × Perceived Behavioral Control → Green Buying Decision	0,049	0,852	0,394	Rejected

Source: Author's data analysis.

Table 6 presents the results of the moderation analysis examining the role of consumer knowledge in moderating the relationships between the Theory of Planned Behavior (TPB) constructs and green buying decision. The findings indicate that none of the proposed moderating effects are statistically

significant. Specifically, the interaction between consumer knowledge and attitude has no significant effect on green buying decision ($\beta = -0.076$, $t = 1.111$, $p = 0.267$), leading to the rejection of H6a. Similarly, the interaction between consumer knowledge and subjective norm is not significant ($\beta = -0.079$, $t = 1.091$, $p = 0.276$), resulting in the rejection of H6b. Furthermore, the moderating effect of consumer knowledge on the relationship between perceived behavioral control and green buying decision is also insignificant ($\beta = 0.049$, $t = 0.852$, $p = 0.394$), leading to the rejection of H6c. Overall, these findings suggest that consumer knowledge does not strengthen or weaken the influence of attitude, subjective norm, or perceived behavioral control on green buying decision among organic coffee consumers in Pontianak. This implies that the effects of the TPB constructs on green buying decision remain relatively consistent regardless of consumers' level of knowledge about organic coffee and its environmental benefits.

Table: 7
Coefficient of Determination (R^2) and Predictive Relevance (Q^2)

Endogenous Construct	R^2	Adjusted R^2	Q^2	Interpretation
Emotional Intelligence	0,544	0,540	0,352	Moderate explanatory power and good predictive relevance
Green Buying Decision	0,569	0,557	0,365	Moderate explanatory power and good predictive relevance

Source: Author's data analysis.

Table 7 presents the coefficient of determination (R^2) and predictive relevance (Q^2) of the structural model. The results indicate that the model explains 54.4% of the variance in emotional intelligence and 56.9% of the variance in green buying decision, suggesting a moderate level of explanatory power. In addition, the Q^2 values for both endogenous constructs are greater than zero, indicating that the proposed model has satisfactory predictive relevance and is capable of predicting the endogenous variables effectively.

Table: 8
Effect Size (f^2)

Relationship	f^2	Effect Size
Attitude → Emotional Intelligence	0,000	No effect
Attitude → Green Buying Decision	0,017	Small
Subjective Norm → Emotional Intelligence	0,092	Small
Subjective Norm → Green Buying Decision	0,024	Small
Perceived Behavioral Control → Emotional Intelligence	0,262	Medium
Perceived Behavioral Control → Green Buying Decision	0,028	Small
Emotional Intelligence → Green Buying Decision	0,032	Small
Consumer Knowledge → Green Buying Decision	0,001	No effect
Consumer Knowledge × Attitude → Green Buying Decision	0,005	No effect
Consumer Knowledge × Subjective Norm → Green Buying Decision	0,005	No effect
Consumer Knowledge × Perceived Behavioral Control → Green Buying Decision	0,005	No effect

Source: Author's data analysis.

Table 8 reports the effect size (f^2) of each structural relationship. The findings show that perceived behavioral control has a medium effect on emotional intelligence ($f^2 = 0.262$), representing the strongest contribution among the predictors. Meanwhile, attitude, subjective norm, and emotional intelligence exhibit only small effect sizes on their respective endogenous variables. The interaction effects involving consumer knowledge show negligible effect sizes, further confirming that consumer knowledge does not substantially strengthen or weaken the relationships between the TPB constructs and green buying decision.

Table: 9
Model Fit

Model Fit Index	Saturated Model	Estimated Model	Recommended Value	Decision
SRMR	0,070	0,073	<0,08	Good Fit

Source: Author's data analysis.

Table 9 presents the model fit assessment using the Standardized Root Mean Square Residual (SRMR). The results show SRMR values of 0.070 for the saturated model and 0.073 for the estimated model, both of which are below the recommended threshold of 0.08. These findings indicate that the proposed PLS-SEM model demonstrates an acceptable level of model fit and adequately represents the observed data.

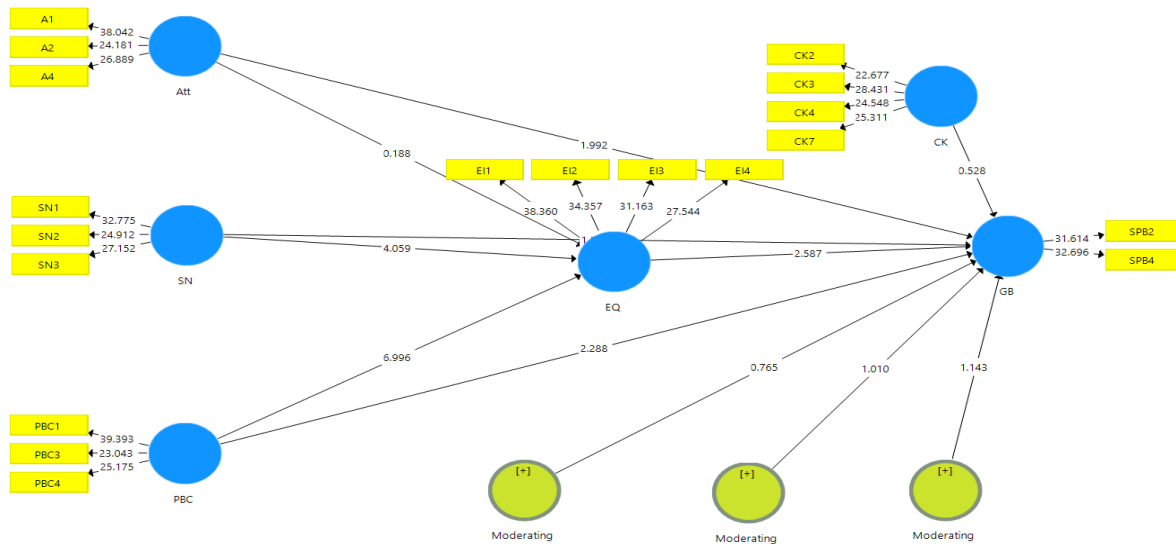


Figure 2. SmartPLS Output

DISCUSSION:

Contrary to expectations, consumer knowledge does not moderate any of the three hypothesized relationships between attitude, subjective norm, perceived behavioral control, and green buying decision. This uniform non-significance across all three paths carries theoretical weight beyond a single failed hypothesis, as it challenges the common assumption in TPB literature that consumer knowledge functions as a universal boundary condition strengthening cognitive-behavioral linkages. One theoretical explanation lies in the sample's inherent characteristics: because respondents were purposively selected for having purchased organic coffee within the past six months, they likely already possess a relatively homogeneous and elevated baseline of product knowledge. This restricted range in the moderator variable would compress the variance needed to detect interaction effects, meaning the null result may partly reflect the boundary condition of self-selection rather than the true absence of a moderating mechanism in the broader population of coffee consumers. A second theoretical explanation concerns construct overlap: because emotional intelligence already functions as a significant mediating mechanism in this model, consumer knowledge's boundary-condition role may be functionally absorbed or overshadowed by the emotional pathway, suggesting that once affective regulation is accounted for, cognitive knowledge adds little incremental explanatory power to the attitude–behavior or control–behavior linkages.

This pattern also diverges from, and thereby extends, the broader literature. Most prior studies examining consumer knowledge in green consumption contexts have treated it as a direct antecedent of attitude or purchase intention (Ratnawati et al., 2025; Simanjuntak et al., 2023; Zhang et al., 2024) rather than as a moderator, meaning empirical precedent for its interaction effects remains genuinely scarce and inconsistent. The consistent non-significance found here across all three TPB paths therefore does not necessarily refute consumer knowledge's relevance to green purchasing altogether; rather, it suggests its role may be more accurately specified as a direct or parallel predictor of green buying decision rather than as a variable that conditions the strength of other psychological pathways. Methodologically, this also raises the possibility that the product-indicator approach used to test moderation while standard in PLS-SEM, may be less sensitive to detecting interaction effects when the moderator is measured reflectively via self-report rather than through objective knowledge assessments (e.g., factual quizzes),

since subjective knowledge ratings are prone to overconfidence bias and may not accurately capture true variation in product understanding.

From a practical standpoint, these findings imply that marketing strategies built primarily around consumer education nutrition labels, certification information, or informational campaigns about organic farming practices may be insufficient on their own to amplify the effect of favorable attitudes or perceived capability into actual purchasing behavior. Instead, businesses and policymakers seeking to strengthen the translation of psychological readiness into green buying decisions may achieve greater returns by investing in strategies that engage consumers' emotional connection to sustainability, consistent with the significant mediating role of emotional intelligence identified elsewhere in this study. For future research, scholars are encouraged to reexamine consumer knowledge's structural position within extended TPB models testing it as a parallel antecedent or mediator rather than a moderator and to employ objective knowledge measures or multi-group analysis across knowledge tiers to determine whether the boundary condition emerges more clearly when measurement addresses the range-restriction and self-report limitations identified in this study.

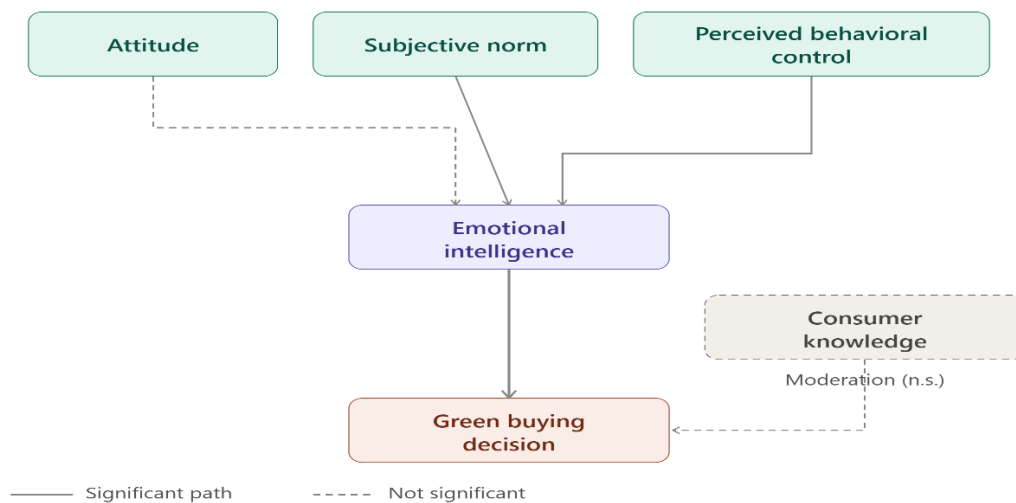


Figure 3. Hypothesis Results

CONCLUSION:

This study extends the Theory of Planned Behavior (TPB) by incorporating emotional intelligence as a mediating variable and consumer knowledge as a moderating variable to explain green buying decisions among organic coffee consumers in Pontianak. The findings indicate that attitude, perceived behavioral control, and emotional intelligence significantly influence green buying decision, whereas subjective norm has no direct effect. In addition, subjective norm and perceived behavioral control significantly enhance emotional intelligence, while attitude does not. The mediation analysis further demonstrates that emotional intelligence mediates the effects of subjective norm and perceived behavioral control on green buying decision but does not mediate the relationship between attitude and green buying decision.

Contrary to expectations, consumer knowledge does not moderate the relationships between the TPB constructs and green buying decision. These findings suggest that consumers' environmentally responsible purchasing behavior is driven more by cognitive evaluations, perceived behavioral capability, and emotional regulation than by differences in product knowledge. Overall, this study contributes to the literature by extending TPB through the integration of emotional intelligence as an underlying psychological mechanism, while providing new empirical evidence regarding the limited moderating role of consumer knowledge in the context of organic coffee consumption.

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