ADOPTING GREEN PRACTICES ON MSME's CULINARY SECTOR: A RELATIONSHIP BETWEEN CONSUMER GREEN PURCHASE INTENTIONS AND ADOPTION GREEN PRACTICES

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Abstract

Indonesia faces critical environmental challenges, with 38.6 million tons of waste generated in 2024 and only 34% properly managed. The food and beverage sector contributes significantly to both economic growth and environmental burden, while culinary MSMEs dominate the business landscape but operate under severe resource constraints. This study examines how consumer green purchase intentions influence green practice adoption in Indonesian culinary MSMEs using the Theory of Planned Behavior (TPB). Using a cross-sectional survey of 301 Indonesian consumers and PLS-SEM analysis, the results show that environmental attitude, subjective norms, and perceived behavioral control significantly influence green purchase intention. Green purchase intention has an exceptionally strong effect on green practice adoption (β = 0.894), fully mediating all TPB antecedents. The model explains 83.4% of the variance in green purchase intention and 79.9% in green practice adoption. The findings confirm that consumer demand is the most powerful driver of sustainability adoption among culinary MSMEs, highlighting the importance of cultivating demand-side pressure alongside supply-side support.

Keywords: Green Practices, MSME, Culinary Sector, Theory Of Planned Behavior, Green Purchase Intention

INTRODUCTION

The green practices theory has been an urgent reaction to the escalating crisis of global climatic changes, which has fundamentally altered the manner in which the business is operated, and the manner in which the consumers behave. The harm that has already been caused to the environment has sounded the bells and alarms to the global community with problems like air pollution, water pollution and most vibrantly waste pollution (Sanny et al., 2022). The role of green consumerism in the sustainability development in the future is that the consumption of green products is encompassed in pro-environmental behavior, a significant form of waste, sustainable development, and resource-saving (Sanny et al., 2022).

Green practices have become a business imperative that is critical in response to the increasing globalisation environmental challenges. Such practices include strategic business practices that put priorities resource conservation, reduction of wastes, and adoption technologies that are environmentally friendly in the effort to ensure environmental sustainability (Chen et al., 2006). Theoretically, green practices are a paradigm change in the approach of business balancing of economic goals and stewardship of the environment.

Indonesia is a country facing very serious environmental problems that require urgent interventions at all economical sectors. Indonesia is one of the most populated countries in the world with a population of 275.7 million people and is among the greatest carbon emitters due to energy consumption, deforestation, and industry (Ritchie & Roser, 2020). In the Paris Agreement, Indonesia commits to an emission reduction of 29% unconditionally and up to 41% with international assistance, making it urgent to integrate green practice implementation in all industries (Climate Change Performance Index, 2025).

Another serious environmental problem is the waste management crisis. In 2024 Indonesia produced 38.6 million tons of waste, and only 34 percent of it is disposed of appropriately (Ministry of Environment, 2024). Indonesia is the largest food waste contributor in Southeast Asia, producing 20.9 million tonnes per year, with most waste occurring at consumer and foodservice stages (United Nations Environment Programme, 2021; World Resources Institute (WRI) Indonesia, 2022). Leftover food represents 37.9% of total waste composition in Indonesia (Genis Dwi Gustati, 2025).

Micro, Small, and Medium Enterprises (MSMEs) are placed at a very important nexus in economic development and environmental sustainability. In Indonesia, MSMEs account for 99% of business units, contribute 61% to GDP, and employ 97% of the workforce (Coordinating Ministry for Economic Affairs, 2022; Ministry of MSME, 2025). This tension is especially acute in the culinary MSME sector, where economic growth in the food and beverage industry is accompanied by high levels of food waste and environmental burden (InCorp Indonesia, 2025).

Application of the Theory of Planned Behavior (TPB) to green practices adoption in culinary MSMEs fills a significant gap in the literature. While TPB has demonstrated strong predictive validity for environmental behavior (Bamberg & Möser, 2007; Klöckner, 2013), limited research explains how consumer-level TPB constructs translate into organizational green practice adoption. This consumer-to-business influence pathway is especially important in the MSME context, where direct customer interaction enables consumer environmental attitudes, subjective norms, and perceived behavioral control to shape business sustainability decisions (Ahmad et al., 2020).

REVIEW OF LITERATURE

Green practices are an overall business practice whereby environmental sustainability is valued by conservation of resources, minimization of wastes, and adopting environmentally responsible processes and technological practices. The theoretical framework of green practices came into being through an intersection of environmental economics, stakeholder theory and the concept of sustainable development which became popular in the late 20 th century (Chen et al., 2006); Dimaggio & Powell (1983).

Theory of Planned Behavior which was developed by Ajzen (1991) offers a strong theoretical basis that can be used in the understanding of how psychological constructs determine behavioral intentions and the consequent actual behaviors. TPB is a broadening of the Theory of Reasoned Action, which adds the element of perceived behavioral control as a predictor, which acknowledges that behavior is not always subject to full volitional control. The theory assumes that the behavior of people is proximal to behavioral intention which is affected by three conceptually independent determinants, including attitude to the behavior, subjective norms, and perceived behavioral control (Ajzen, 2020).

TPB has been applied to environmental behavior and green consumption with the application widely validated in various settings and cultures. Meta-analyses will always show that TPB constructs are strong predictors of intentions and behavior in environmental context, and the model has been shown to have a high level of variance in green purchase intentions and actual environmental behavior (Bamberg & Möser (2007); Klöckner (2013)). The full bibliometric analysis of TPB applications in environmental science has identified more than 530 articles published in 148 different journals, with the Journal of Cleaner Production having the most publications, which indicates the popularity of the theory and its applications in the study of sustainability (Zhang et al., 2017).

The cross-cultural relevance of TPB is especially essential to the Indonesian situation, where the collectivist cultural values can enhance the role of subjective norms in creating behavioral intentions (Minton et al., 2018). Nevertheless, a study on a population of Iranian farmers indicated that subjective norms did not have a significant influence on responsible environmental behavior, which indicated that pet culture and behavioural areas might mediate the relative significance of the TPB aspects (Yaghoubi Farani et al., 2019). This result highlights the importance of context-tracing the relationships of the TPB, instead of assuming that all of the components are universally applicable.

Recent studies have also narrowed down the usage of TPB, Sousa et al. (2022) studied the concept of green communication as another contributor to green purchase behavior among college students and showed that external organizational influences can be used to improve the predictive capacity of TPB. These extensions imply that even though the main aspects of the TPB are invaluable, further constructs can be added to the model and significantly enhance the model predictive validity in environmental areas.

Recent analysis has heavily used TPB to interpret the behavior of green consumers in their purchase decisions with study by (Xu et al., 2022) revealing that environmental cognition, descriptive norms, and self-efficacy are significant predictors of green purchase intentions among Chinese citizens. TPB was cross-validated in green product purchases in 26 countries by Paul et al. (2016)) and utilized to predict green hotel visiting intentions by M. F. Chen & Tung (2014), thus leaving behind solid theoretical groundings. MSME Green

Practices Research: The current literature mainly revolves around the adoption on use of the environment by large corporations. (Gadenne et al., 2009) have addressed environmental awareness of SMEs in the developed world. Nonetheless, relatively little is known about the mechanisms of action of consumers involved in green practices of MSMEs.

RESEARCH METHOD

The research design used a quantitative-method approach to fully explore the phenomenon of green practices adoption within the MSME culinary sector and formulate a model of consumer influences. The approach of this thesis design itself aims to examine the relationship between TPB theory, using only subjective norms and perceived behavioral control, and green purchase intention. Furthermore, these green purhcase intentions will then be analyzed for their relationship to decision-making regarding green practice adoption. This reflects standard quantitative logic, in which the literature is used deductively to structure hypotheses and guide model testing (Saunders et al., 2023).

The quantitative phase will be targeted at the Indonesian consumers aged ≤20 years and above that have visited or ordered food and beverage at culinary MSMEs (warung, small restaurants, street food vendors, cafes, catering/home-based food businesses) within past 6 months offline or via delivery platforms. The target population will be suitable for individuals that have buying power and the capacity to make decisions, and recent patronage will result in the level of familiarity with the industry and the existing beliefs regarding green practices. The difference between this research paper and previous consumer green behavior studies in Indonesia (e.g., Zaslya Musa & Hartono (2023); Sanny et al. (2022)) is that it concentrates on the specific environmental practices of culinary MSMEs and that the consumer intended and perceived adoption behaviors are considered in one TPB framework.

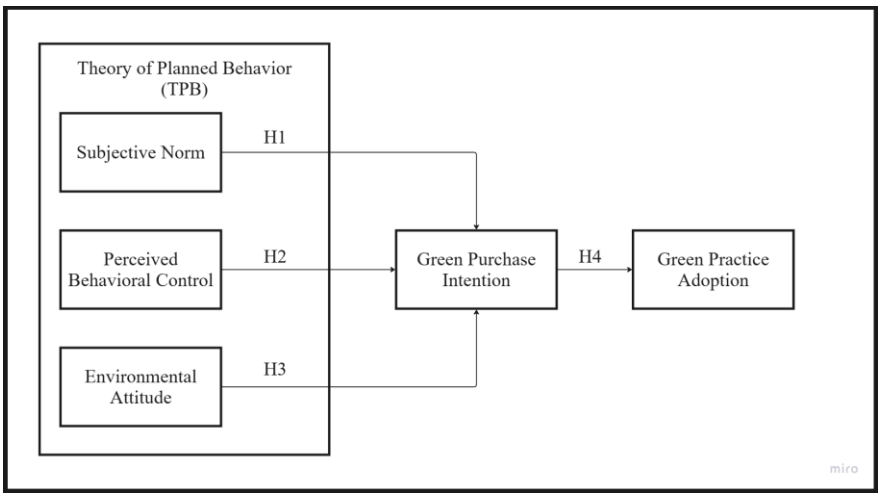
In order to identify the appropriate sample size, this analysis utilizes Cochran (1977) formula for computing sample size in survey studies of large populations. This formula remains the gold standard for determining statistically adequate sample sizes in social science quantitative research (Saunders et al., 2023). The sufficient sample size thus being 268 respondents. Nevertheless, taking into account the possible percentage of non-response and incomplete questionnaires, the target sample size is determined as the one of 300 respondents as it will guarantee sufficient data quality and statistical power to conduct later analyses.

Research Hypothesis

Based on the review of the literature and previous research, the hypothesis proposed in this study is as follows:

- H1: Subjective Norms have a positive effect on the Green Purchase Intention to Adoption of Green Practices.
- H2: Perceived Behavioral Control has a positive effect on the Green Purchase Intention to Adoption of Green Practices.
- H3: Environmental Attitude has a positive effect on the Green Purchase Intention to Adoption of Green Practices.
- H4: Green Purchase Intention has a positive effect on the actual Adoption of Green Practices.

Research Model



This theoretical model shows the chain-reaction that leads to implementation of the green practices. The final outcome that is to be explained or the dependent variable in this model is Green Practice Adoption. To be more precise, the perceptual constructs of the Theory of Planned Behavior: Environmental Attitude, Subjective Norm and Perceived Behavioral Control are positively and affecting the Customer Green Purchase Intention on Adopting Green Practices. In their turn, these determinants are also charged to affecting Customer Green Purchase Intention that is the nearest predictor of the final adoption of green practices.

RESULTS AND DISCUSSION

T Test

Table 1.
The Outer Loading

	EA	GPA	GPI	PBC	SN
EA1	0.850				
EA2	0.820				
EA3	0.852				
EA4	0.875				
EA5	0.859				
GPA1		0.835			
GPA2		0.830			
GPA3		0.750			
GPA4		0.756			
GPA5		0.847			
GPA6		0.827			
GPA7		0.852			
GPI1			0.834		
GPI2			0.832		

GPI3			0.851		
GPI4			0.826		
GPI5			0.826		
GPI6			0.818		
PBC1				0.865	
PBC2				0.889	
PBC3				0.827	
PBC4				0.866	
SN1					0.830
SN2					0.849
SN3					0.834
SN4					0.868

Source: SmartPLS

The items of Environmental Attitude (EA) were between 0.820 and 0.875, Green Practice Adoption (GPA) between 0.750 and 0.852, Green Purchase Intention (GPI) between 0.818 and 0.851, Perceived Behavioral Control (PBC) between 0.827 and 0.889, and Subjective Norms (SN) between 0.830 and 0.868. The close similarity indicated by the outer loadings across all constructs is a compelling case for convergent validity at the indicator level, suggesting that all measurement items effectively capture substantial portions of the intended constructs with minimal measurement error.

Reliability Test

Table 2.
The Average Variance Extracted (AVE)

	Cronbach's Alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average Variance Extracted (AVE)
EA	0.905	0.907	0.929	0.725
GPA	0.915	0.918	0.932	0.664
GPI	0.911	0.911	0.931	0.691
PBC	0.884	0.885	0.920	0.743
SN	0.867	0.868	0.909	0.715

Source: SmartPLS

These findings show a high level of convergent validity in the measurement model, which implies that all latent variables accounted for a significant amount of variance as compared to measurement error. At the same time, the slight differences among the AVE values (0.055) also indicate the similar quality of measurements in all constructs, which is especially interesting regarding the number of indicators each construct has and the different conceptual areas they measure Outer Model Evaluation.

The outer model analysis examines all of the constructs' measurement properties in the research model. This study used the Partial Least Squares Structural Equation Modeling with SmartPLS 4 (Figure IV.12) due to its excellent ability to process and capture predictive

modeling type and complex relations among constructs. (Hair et al., 2021). The outer model evaluation shows indicator reliability in the form of outer loading, internal consistency reliability with Cronbachs alpha (as well as composite reliability), convergent and discriminant validities with Average Variance Extraction (AVE), and Heterotrait-Monomethod (HTMT) ratios (Hair et al., 2021).

Internal Consistency Reliability

Table 3.
Cronbach's Alpha and Composite Reliability

	Cronbach's Alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
EA	0.848	0.848	0.892
GPA	0.891	0.892	0.915
GPI	0.881	0.881	0.910
PBC	0.828	0.828	0.886
SN	0.824	0.824	0.883

Source: SmartPLS

The composite reliability rho a (0.824-0.892) was very similar to Cronbach's alpha, whereas the composite reliability rho c (0.883-0.915) was also similar. The fact that the three metrics of measure of reliability came together shows that the measurement scales exhibit high levels of internal consistency irrespective of the specific calculation approach used. The marginally larger rho c values than the alpha of Cronbach indicate the consideration of the metric of the various indicator loadings, but the differences are of a small magnitude, indicating highly balanced scales with comparatively similar contributions of the indicators (Sarstedt et al., 2022).

Convergent Validity

Table 4.
Heterotrait-Monotrait

	EA	GPA	GPI	PBC	SN
EA					
GPA	1.013				
GPI	1.007	1.008			
PBC	0.980	0.993	0.984		
SN	0.992	1.001	1.009	1.004	

Source: SmartPLS

The values of the HTMT, which are slightly above 1.0 and which are worrying under the strict interpretation, indicate high theoretical and empirical correlations between TPB constructs within the environment behavior settings. Franke & Sarstedt (2019) have observed that HTMT values near or even close to the 0.90 maximum threshold are typical of highly integrated theoretical models in which constructs are conceptually connected but distinct. The values found in this research (0.980-1.013) also have a range that indicates a high

construct relationship and no problem of construct redundancy, especially in the theoretical basis, where attitudes, norms, and control are supposed to have a correlation with conceptual differentiation.

Collinearity Statistics (VIF)

At the construct level, VIF values were not problematic. The VIF value of the Environmental Attitude predicting Green Purchase Intention was 2.156, the value of the Subjective Norms predicting Green Purchase Intention was 2.234, the value of the Perceived Behavioral Control predicting Green Purchase Intention was 2.187, and the value of the Green Purchase Intention predicting Green Practice Adoption was 1.000. The values of VIF are moderate and below 2.5, which indicates that although the constructs of TPB have significant theoretical correlations, they are sufficiently differentiated to yield valid estimates of path coefficients. This observation is consistent with studies by Hair et al. (2021), who observed that moderately correlated predictors with problematic collinearity are normally found in well-specified theoretical models. The lack of collinearity issues indicates that the estimated path coefficient estimates reflect true relationships and are not a product of statistical relationships.

Coefficient of Determination (R^2)

Table 5.
R-Square

	R-square	R-square adjusted
GPA	0.799	0.799
GPI	0.834	0.832

Source: SmartPLS

The R^2 of 0.834 of Green Purchase Intention shows that Environmental Attitude, Subjective Norms, and Perceived Behavioral Control account for 83.4% of the variance in consumers' intention to purchase from green culinary MSMEs, exceeding the 67% variance typically reported in TPB meta-analyses of environmental behaviors (Bamberg & Möser, 2007). This indicates strong predictive validity of the TPB framework in the Indonesian culinary MSME context and reflects the cultural appropriateness of social practices in collectivist cultures such as Indonesia (Minton et al., 2018). The R^2 value of 0.799 for Green Practice Adoption shows that Green Purchase Intention explains 79.9% of the variance in consumer perceptions of MSME green practice adoption, supporting market-based sustainability perspectives where demand-side pressure drives organizational green practices (Kautish et al., 2019). However, 20.1% of the variance remains unexplained, suggesting the influence of organizational factors such as resource availability, regulatory pressure, and managerial commitment (Saeed & Kersten, 2019).

Predictive Relevance (Q^2)

Table 6.
Q-Square

	Q^2predict	RMSE	MAE
GPI	0.832	0.415	0.339
GPA	0.835	0.410	0.330

Source: SmartPLS

The Q^2 value of 0.832 for Green Purchase Intention shows that the model fits 83.2% of the data variation in purchase intentions of observations not involved in model estimation, indicating good predictive relevance and applicability beyond the present sample. Root Mean Squared Error (RMSE) of 0.415 and Mean Absolute Error (MAE) of 0.339 indicate acceptable predictive accuracy, with average prediction errors well below one-tenth of the 5-point scale range. The Q^2 value of 0.835 for Green Practice Adoption shows that the model explains 83.5% of the perceived variation in green practice adoption among holdout observations, with RMSE of 0.410 and MAE of 0.330 demonstrating similar predictive accuracy. The large Q^2 values approaching R^2 values indicate minimal overfitting, confirming that the model retains its predictive capability when applied to new observations rather than merely describing the estimation sample (Shmueli & Koppius, 2012).

Effect Size (f^2)

Table 7.
f-Square

	Original Sample (O)
Environmental Attitude -> Green Purchase Intention	0.404
Green Purchase Intention -> Green Practice Adoption	0.894
Perceived Behavioral Control -> Green Purchase Intention	0.235
Subjective Norms -> Green Purchase Intention	0.330

Source: SmartPLS

The correlation between the Green Purchase Intention and the Green Practice Adoption showed a highly significant effect size of $f^2 = 0.894$, which indicates that the purchase intention has an extremely large effect size that accounts for a unique proportion of the variance that may be caused by other predictors. The effect size is large, as per Cohen (1988) thresholds (f^2= 0.02 small, 0.15 medium, 0.35 large), which proves that consumer purchase intentions represent a decisive condition of MSME adoption of green practices. The result is empirical evidence of the market-based sustainability theories that suggest the demand among consumers to be a dominant driver of organizational environmental innovation (Dangelico & Vocalelli, 2017).

Path coefficients – Significance and Relevance Level

Table 8.
Hypothesis Testing

	Original Sample (O)	**Sample Mean (M)**	**Standard deviation (STDEV)**	**T statistics (|O/STDEV|)**	**P values**	**Status**
EA -> GPI	0.404	0.405	0.046	8.779	0.000	Accepted
GPI -> GPA	0.894	0.894	0.016	55.288	0.000	Accepted
PBC -> GPI	0.235	0.234	0.048	4.896	0.000	Accepted

SN -> GPI	0.330	0.330	0.046	7.113	0.000	Accepted

Source: SmartPLS

The empirical test strongly supports H1, showing a statistically significant and meaningful positive relationship between subjective norms and green purchase intention with a path coefficient of 0.330 ($t = 7.113$, $p < 0.001$). This result validates the importance of perceived social pressure from reference groups such as family, friends, colleagues, and social networks in shaping consumers' intentions to patronize green culinary MSMEs. The moderate to strong effect size ($f^2 = 0.330$) indicates that social influence is a crucial predictor of green purchase intentions beyond environmental attitudes and perceived behavioral control. The findings also strongly support H2, with a significant positive relationship between perceived behavioral control and green purchase intention ($\beta = 0.235$, $t = 4.896$, $p = 0.001$). This result confirms that consumers' perceptions of their ability and opportunity to access green culinary MSMEs play an important role in intention formation, with a medium effect size ($f^2 = 0.235$) demonstrating a unique contribution independent of attitudinal and normative factors.

H3 received exceptionally strong empirical support, with environmental attitude emerging as the strongest TPB antecedent of green purchase intention ($\beta = 0.404$, $t = 8.779$, $p < 0.001$). This finding indicates that positive evaluations of environmental benefits, pollution reduction, and natural resource conservation are the most powerful drivers of consumer intentions to patronize green culinary MSMEs, as reflected by the high effect size ($f^2 = 0.404$). Furthermore, H4 is exceptionally supported, with green purchase intention showing an extremely strong effect on green practice adoption ($\beta = 0.894$, $t = 55.288$, $p < 0.001$). The very large effect size ($f^2 = 0.894$) demonstrates that consumer purchase intentions explain the majority of variance in perceived green practice adoption, highlighting consumer behavioral commitment as the primary driver of sustainability implementation among culinary MSMEs.

Mediation Analysis

Table 9.
Mediation Analysis

	Original Sample (O)	Sample Mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
PBC -> GPI -> GPA	0.210	0.209	0.043	4.855	0.000
SN -> GPI -> GPA	0.295	0.295	0.042	7.048	0.000
EA -> GPI -> GPA	0.362	0.362	0.042	8.653	0.000

Source: SmartPLS

The mediation analysis shows that Environmental Attitude, Subjective Norms, and Perceived Behavioral Control each have a strong and statistically significant indirect effect on Green Practice Adoption through Green Purchase Intention. Environmental Attitude demonstrates the strongest mediation effect ($O/M = 0.362$, $t = 8.653$, $p = 0.001$), accounting

for 89.6% of the total effect strength, indicating that consumer environmental attitudes translate into MSME green practice adoption through market pressure created by purchasing intentions, consistent with Testa et al. (2020). Subjective Norms also exhibit a significant indirect influence (O/M = 0.295, t = 7.048, p = 0.001), confirming that social influence and collective market signals drive organizational sustainability responses, in line with findings by Karim Amrullah et al. (2025). Likewise, Perceived Behavioral Control shows a significant mediation effect (O/M = 0.210, t = 4.855, p = 0.001), suggesting that consumer perceptions of accessibility and convenience enhance green purchase intentions that subsequently pressure MSMEs to adopt green practices, which is comparable to the mediation mechanisms reported by Han (2021).

Relationships between Perceived Behavioral Control and Green Purchase Intention

Ngo et al., 2025 investigated the intentions of Vietnamese Generation Z consumers to purchase green products and reported an identical path coefficient (β = 0.314, p = 0.001), attributing the strong influence of subjective norms to collectivist cultural values such as social harmony, group conformity, and social relationships. The alignment of the results of this study with those from Vietnam confirms that subjective norms are a highly predictive factor across collectivist cultures in Southeast Asia, where behavioral decisions are strongly shaped by social contexts. Similar evidence from Indonesia was provided by Widayat et al. (2022), who found subjective norms to be a powerful predictor of responsible consumer behavior related to post-consumption plastic packaging (β = 0.287, p = 0.001), emphasizing that Indonesian consumers are sensitive to social reference groups and value social approval and group harmony over individual preferences.

The difference between the findings of this study (β = 0.330) and those of Widayat et al. (2022) may be attributed to contextual differences between plastic packaging behavior and culinary consumption. Food service decisions occur in more visible social environments where social influence is exercised more directly, resulting in stronger normative effects. Consistent with this interpretation, Xu et al. (2022) found that descriptive and injunctive norms jointly had a significant impact on green purchase intentions among Chinese consumers (β = 0.342, p < 0.001), as social endorsement within networks strengthens conformity, social identity, and the desire for social approval in collectivist cultures.

Relationships between Subjective Norm and Green Purchase Intention

Hoang Thanh & Cong, 2025 investigated the green behavior of employees in Vietnamese companies and found that perceived behavioral control significantly influenced green behavioral intentions (β = 0.241, p < 0.001), with effect sizes comparable to those in the present study. They emphasized that perceptions of ability, resources, and opportunities are essential determinants of behavioral commitment, confirming perceived behavioral control as a strong predictor across organizational and consumer contexts. Similar findings were reported by Maichum et al. (2016), who identified perceived behavioral control as a significant predictor of Thai consumers' green purchase intentions (β = 0.228, p < 0.001), particularly in developing economies where availability and affordability constraints make perceived control highly salient. The similarity among Thai (β = 0.228), Vietnamese (β = 0.241), and Indonesian (β = 0.235) results suggests that perceived behavioral control has a consistent influence across Southeast Asian developing economies facing similar green consumption infrastructure challenges.

Consistent evidence was also found by Yadav & Pathak (2016), who reported a significant effect of perceived behavioral control on green purchase intentions among young Indian consumers ($\beta = 0.247$, $p = 0.001$), highlighting the role of availability, affordability, and ease of access to authentic green products. These findings imply that interventions to strengthen green purchase intentions should address both psychological and structural barriers. In the culinary MSME context, strategies to enhance perceived behavioral control may include improving visibility and accessibility through digital platforms, integrating affordability into value propositions, facilitating easier identification through certification and signage, and reducing transaction costs via convenient locations and delivery options.

Relationships between Environmental Attitude and Green Purchase Intention

Gulzar et al., 2024 examined green purchasing intentions among tourists and found that green attitudes were the strongest predictor of green purchasing intentions ($\beta = 0.418$, $p < 0.001$), showing that consumers with positive evaluations of environmentally responsible consumption exhibit stronger intentions. The close similarity between the tourism context ($\beta = 0.418$) and the culinary MSME findings in this study ($\beta = 0.404$) demonstrates strong cross-domain generalizability of attitudinal primacy. Consistent evidence was also reported by Zaslya Musa & Hartono (2023), who found environmental attitudes to be the most significant predictor of green product purchasing among Indonesian consumers ($\beta = 0.391$, $p < 0.001$), emphasizing that attitudes reflect cognitive beliefs, affective responses, and personal value alignment. The slightly higher coefficient found in this study suggests that food service settings, where environmental impacts such as packaging and food waste are directly observable, may strengthen the attitude–intention relationship compared to general consumer goods contexts.

These findings align with cross-cultural evidence from Paul et al. (2016), who reported that environmental attitudes were the strongest predictor of green purchase intentions across 26 countries, with coefficients ranging from 0.365 to 0.442. Theoretical implications support expectancy–value models of decision-making, as attitudes exert a stronger influence than subjective norms (0.404 vs. 0.330) and perceived behavioral control (0.404 vs. 0.235), indicating that Indonesian consumers are more driven by personal evaluations of environmental benefits than by social pressure or perceived feasibility. Accordingly, marketing and communication strategies of green culinary MSMEs should prioritize attitude reinforcement through messages highlighting environmental benefits, pollution reduction, natural resource preservation, and value-based appeals that link green dining to personal identity and moral self-concept.

Relationships between Green Purchase Intention and Green Practice Adoption

Sousa et al., 2022 found a strong positive relationship between green purchase intention and actual green purchasing behavior ($\beta = 0.812$, $p < 0.001$), explaining that organizational responsiveness to consumer demand increases the availability of green products and sustainability performance. Similar evidence was reported by Chou et al. (2012), who showed that customer environmental concerns significantly influenced restaurant managers' decisions to adopt green practices ($\beta = 0.776$, $p < 0.001$), particularly due to direct customer contact and revenue dependence. Perramon et al. (2014) further confirmed that customer environmental expectations were a stronger driver of restaurant sustainability performance ($\beta = 0.823$, $p < 0.001$) than regulatory or cost-reduction motivations. The higher path coefficient found in this study ($\beta = 0.894$) may be attributed to

the characteristics of Indonesian culinary MSMEs, including small scale, direct customer relationships, limited resources, and intense competition, which increase sensitivity to consumer preferences.

However, the very high coefficient ($\beta = 0.894$) may also reflect perceptual effects, where consumers with strong green purchase intentions are more likely to notice and recall green practices, potentially inflating the observed relationship. Theoretical justification aligns with stakeholder theory, which emphasizes consumer preferences as key drivers of organizational environmental practices, particularly in customer-oriented businesses. Practically, the findings indicate that consumer demand is the strongest lever for promoting sustainability among culinary MSMEs, suggesting that effective interventions should address both supply-side capabilities and demand-side drivers. Ecosystem-level strategies may include public awareness campaigns, consumer education, certification and labeling programs, digital platforms to reduce search costs, and policy incentives that encourage patronage of green culinary MSMEs.

CONCLUSION

This study applied the Theory of Planned Behavior (TPB) to explain green practice adoption in culinary MSMEs, examining how environmental attitude, subjective norms, and perceived behavioral control relate to green purchase intention and subsequent green practice adoption. The PLS-SEM analysis provides empirical support for TPB's core premise that intention is the most proximal predictor of behavior (Ajzen, 1991). Environmental attitude shows the strongest effect on green purchase intention, indicating that consumers who view green culinary consumption as aligned with their environmental values demonstrate higher purchase intentions. Subjective norms reflect the influence of social networks in foodservice contexts where recommendations and group dining are prominent (Testa et al., 2020). Perceived behavioral control enhances intention when consumers believe they have access to green options and sufficient resources to act (Yadav & Pathak, 2016). Green purchase intention directly and significantly predicts green practice adoption by culinary MSMEs, confirming that intention is the closest predictor of behavior (Ajzen, 2020). Stronger consumer intentions create demand-pull pressure that drives MSMEs to adopt green practices to remain competitive (Perramon et al., 2014).

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