Eco is the New Equal: Mapping Green Consumer Trends and Inclusive Environmental Growth in Southeast Asia

Nur Fadilah Ayu Sandira

Universitas Negeri Makassar, Sulawesi Selatan
Corresponding author. Email: nur.fadhilah.ayu@unm.ac.id

ABSTRACT

In recent years, Southeast Asia has experienced growing environmental concerns alongside increasing efforts toward inclusive and sustainable development. Amid these changes, green consumer behavior has emerged as a key factor shaping environmental outcomes. This study examines the relationship between green consumer trends and inclusive environmental growth in five ASEAN countries. Indonesia, Malaysia, Thailand, the Philippines, and Vietnam using secondary data from 2020 to 2024. Green consumer trends are measured through digital interest in sustainability issues (Google Trends) and the market size of electric vehicles (EV Sales Share), while inclusive environmental growth is represented by the Environmental Performance Index (EPI) and access to clean energy (clean cooking). Regression analysis reveals that digital interest does not significantly affect either indicator, whereas EV market size shows a positive and significant effect on access to clean cooking but no significant effect on EPI. These findings indicate that green market transformation is more directly reflected in energy inclusion indicators than in aggregate environmental performance. The study highlights the strategic importance of sustainable marketing and clean cooking investment in fostering inclusive environmental growth in Southeast Asia.

Keywords: *green consumers, inclusive Environmental, EPI, clean cooking, Southeast Asia*

INTRODUCTION

In recent years, Southeast Asia has faced growing concerns over environmental issues alongside increasing efforts toward sustainable and inclusive development. Sustainable development emphasizes the involvement of all elements of society, including the role of consumers in shaping the trajectory of green growth (*UNDP*, 2022.). Changes in consumer behavior, particularly the rise of green consumerism, have increasingly been identified as a crucial factor in driving the transition toward an environmentally friendly economy (Deo & Prasad, 2024).

Green consumer behavior can be reflected through two main indicators: digital interest in sustainable consumption and the market size of eco-friendly products. The first indicator can be traced through Google Trends, which reflects the intensity of public searches related to sustainability issues and products. The second indicator can be measured through the market size of electric vehicles (EV Sales Share), which provides an overview of consumers' actual adoption of environmentally friendly products (IEA, 2023). These two indicators are important in mapping the extent to which awareness and green consumption behavior have developed in ASEAN countries. On the other hand, sustainable development is measured through various indicators of inclusive

environmental growth. In this study, two main indicators are used: the Environmental Performance Index (EPI) and access to clean cooking. EPI is a comprehensive measure that combines ecosystem protection and environmental health (*Yale Center for Environmental Law & Policy*, 2022), while access to clean energy (such as access to clean cooking and access to electricity) serves as a crucial indicator in assessing equality of access to sustainable resources (Wen et al., 2022).

The phenomenon in Southeast Asia shows significant variation. For instance, Indonesia recorded an increase in EV adoption from 0.10% in 2020 to 7% in 2024, while Vietnam surged to 17% during the same period (IEA, 2024). However, environmental indicators such as EPI reveal fluctuating trends: Indonesia experienced a decline from 37.8 in 2020 to 33.6 in 2024, Malaysia's EPI score fell from 47.9 (2020) to 35.0 (2022) (*Yale Center for Environmental Law & Policy*, 2022). This indicates a potential gap between the rise of green consumer behavior and its actual impact on inclusive environmental growth. To provide an initial overview of the dynamics of green consumerism and inclusive environmental growth in ASEAN-5, Table 1 presents a summary of key indicators, including Google Trends (digital interest), EV sales share, Environmental Performance Index (EPI), and access to clean cooking between 2020 and 2024.

Table 1. Key Indicators of Green Consumerism and Inclusive Environmental Growth in ASEAN-5 (2020 vs. 2024)

Country	Google Trends (Index, Avg.)	EV Sales Share (%) 2020	EV Sales Share (%) 2024	EPI Score 2020	EPI Score 2024	Clean Cooking Access (%) 2020	Clean Cooking Access (%) 2024
Indonesia	2,8	0,10	7,00	37,8	33,6	84,6	90,7
Malaysia	1,2	0.50	4,00	47,9	41	87,5	85
Thailand	1,6	1,00	13,0	45,4	45,7	84,4	87
Philippines	2,2	0,17	4,00	38,4	32,1	54	60
Vietnam	1,04	0,00	17,0	33,4	24,6	95,9	99

Sources: International Energy Agency (IEA, 2023); Yale Center for Environmental Law & Policy (2022); World Bank (2025); Google Trends (2024)

Previous research has pointed out the existence of an "attitude–behavior gap," in which consumers may express strong environmental concern but their actual sustainable consumption behavior remains limited (Peattie, 2010; Gilg et al., 2005). Moreover, aggregate environmental indicators such as the Environmental Performance Index (EPI) are often shaped by broader governance and structural policies, which makes the direct influence of consumer behavior less observable (Wen et al., 2022). In contrast, market-driven indicators, such as the adoption of electric vehicles, tend to show more immediate links with specific sustainability outcomes like access to clean cooking (IEA, 2023). This critical gap suggests that existing studies have not sufficiently examined whether green consumer trends exert asymmetric effects on inclusive environmental growth across different dimensions.

The rise of green consumerism in Southeast Asia does not automatically guarantee improvements in aggregate environmental outcomes. This is consistent with prior evidence showing that pro-environmental attitudes often fail to translate into consistent sustainable practices, known as the "attitude–behavior gap" (Joshi & Rahman, 2015; White, Habib, & Hardisty, 2019). Moreover, research has highlighted that while consumer-driven indicators such as electric vehicle adoption directly reduce

household emissions and enhance access to clean cooking (IEA, 2023), composite environmental metrics like the Environmental Performance Index (EPI) are largely determined by broader structural, regulatory, and policy-related factors (Yale Center for Environmental Law & Policy, 2022). Therefore, it is critical to analyze whether digital interest in sustainability and green market adoption yield differentiated impacts on inclusive environmental growth in the ASEAN-5.

Addressing this gap, the present study seeks to map and analyze the relationship between green consumerism and inclusive environmental growth in the ASEAN-5 over the period 2020–2024. Therefore, it is important to investigate how green consumer trends influence inclusive environmental growth in the ASEAN-5 countries (Indonesia, Malaysia, Thailand, Philippines, and Vietnam), particularly over the past five years (2020–2024). This study seeks to map the relationship between green consumption indicators (Google Trends and EV Sales Share) and inclusive environmental growth indicators (EPI Score and access to clean cooking). The findings are expected to contribute to the literature on sustainable marketing, energy transition, and environmental inclusion strategies (Zhao et al., 2022), as well as open a discussion on the gap between consumer awareness and the tangible outcomes of sustainable development.

THEORICAL FRAMEWORK

Consumer Behavior

Consumer Behavior Theory posits that individual consumption decisions are influenced by psychological, social, and environmental factors, which collectively shape market dynamics (*Ajzen*, 2020). In the context of sustainability, green consumer behavior extends beyond individual preferences; it represents a collective phenomenon capable of driving environmentally friendly innovation and transforming markets toward a low-carbon economy. In line with this, the Inclusive Growth Framework emphasizes the importance of economic development that is both sustainable and equitable, ensuring that its benefits reach not only affluent groups but also the poor, rural communities, and vulnerable populations (*UNDP*, 2022). This underscores that environmental sustainability cannot be separated from social justice dimensions. Consequently, green consumers act as agents of change capable of accelerating the achievement of inclusive environmental growth.

Green Consumer Trends

The concept and theory of green consumer trends refer to consumption patterns focused on sustainability, including preferences for eco-friendly products, adoption of green lifestyles, and willingness to pay for sustainable goods (Peattie, 2010). Although green consumer trends are on the rise in many countries, a gap between intention and actual behavior known as the attitude behavior gap remains. For instance, while Southeast Asian consumers may express willingness to support green products, higher prices and limited distribution often hinder actual adoption.

Moreover, digitalization has accelerated the emergence of eco-digital consumers, who develop green consumption behaviors through online search, e-commerce, and social media engagement. (Gilg et al., 2005)highlight a variation between "fully committed" consumers and "symbolic" consumers who purchase green products only occasionally. This is further supported by (Wilska et al., 2025), who note that younger generations are more responsive to digital-based green lifestyles, whereas older generations demonstrate different consumption patterns.

Digital Interest

Digital interest reflects consumer awareness of green issues, measured through online search behavior related to environmental topics. Advances in digital technology, particularly search engines and social media, have accelerated the transformation of consumer behavior, enabling real-time monitoring of interest in sustainable consumption (*NielsenIQ*, 2020). The International Energy Agency, (2023) emphasizes that digitalization is a key driver in the formation of eco-digital consumers, who develop green consumption patterns through digital interactions. Thus, this indicator not only reflects consumer awareness but also serves as a crucial proxy for tracking green consumer trends in Southeast Asia.

Market Size (EV Sales Share)

In this study, market size is represented by the penetration of electric vehicles (EV sales share). This indicator captures a more tangible dimension of consumer behavior namely, adoption of eco-friendly products through purchase decisions. According to (Wen et al., 2022), the transition to electric vehicles in developing countries reflects not only consumer choice but also the adoption of clean technologies within society. EV sales share data can indicate the extent to which consumers have moved from mere interest to concrete green consumption actions (IEA, 2025). Consequently, this indicator functions as a measure of the actual market for green consumer behavior in the region.

Inclusive Environmental Growth

Inclusive environmental growth integrates environmental sustainability with social equity. (*UNDP*, 2022) defines it as a growth process that ensures broad access to environmental benefits, such as clean energy, healthy air, and safe water. (*The World Bank*, 2020) highlights that non-inclusive development can exacerbate inequality even amid aggregate improvements in environmental quality. In Southeast Asia, environmental outcomes tend to be uneven. (Jose, 2025) emphasizes that without inclusivity principles, environmental policies may widen disparities, as access to clean cooking and environmental quality is often concentrated among higher-income groups. Sustainability must therefore be viewed through the lens of inclusion and diversity, not merely carbon targets (Jose, 2025).

Environmental Performance Index (EPI)

The EPI is a comprehensive measure evaluating national environmental governance, including air quality, climate change mitigation, biodiversity, and ecosystem

conservation (Yale Center for Environmental Law & Policy, 2022). (Wen et al., 2022)highlight that EPI is a crucial tool for assessing the effectiveness of environmental policies, particularly in developing countries that face pressure to achieve economic growth while maintaining environmental sustainability. Hence, EPI serves as a primary indicator for evaluating the environmental performance aspect of inclusive environmental growth.

Access to Clean Cooking

Beyond EPI, the inclusivity dimension of environmental growth is represented by access to clean cooking, particularly access to clean cooking. This indicator focuses on the proportion of the population with access to clean cooking technologies, which directly impacts health, indoor air quality, and social equity (Wen et al., 2022). (*UNDP*, 2022)notes that disparities in clean cooking access remain a major challenge in Southeast Asia, with lower-income groups being more vulnerable to pollution and inadequate energy infrastructure. Therefore, this indicator is highly relevant for assessing the inclusivity of environmental growth in the region.

Relationship between Green Consumer Trends and Inclusive Environmental Growth

The literature indicates a strong relationship between green consumer behavior and sustainable development. Sustainability-oriented consumption can accelerate energy transition and reduce carbon emissions (Zhao et al., 2022). Studies in Australia have shown that green consumers significantly contribute to the transition toward low-carbon societies through environmentally conscious market preferences (Zhao et al., 2022). In Southeast Asia, the Southeast Asia Energy Outlook reports that the adoption of clean technologies, such as electric vehicles, has the potential to reduce dependence on fossil fuels while improving public access to cleaner energy (IEA, 2025).

However, a gap persists between rising consumer interest in green products and achievements in environmental indicators such as EPI. This aligns with IPCC (2023), which stresses that the transition to green growth requires synergy between changes in consumer behavior, technological innovation, and inclusive public policies. Consequently, the theoretical framework of this study emphasizes that green consumer trends measured through digital interest and market size have the potential to influence inclusive environmental growth, operationalized through EPI and access to clean cooking.

METHODS

Research Type and Design

This study employs a quantitative approach with an explanatory research design aimed at analyzing the effect of green consumer trends on inclusive environmental growth in Southeast Asia. The analysis utilizes cross-country secondary data from Indonesia, Malaysia, Thailand, the Philippines, and Vietnam over the period 2020–2024.

Research Location and Period

The study focuses on five Southeast Asian countries: Indonesia, Malaysia, Thailand, Philippines, and Vietnam. The selection of countries was based on the availability of consistent data for the research period. Data was collected in 2025 from various official international sources.

Data Type and Data Collection Techniques

The study uses secondary data obtained from multiple sources, including:

- Google Trends: an indicator of consumers' digital interest in green topics
- Electric Vehicle (EV) Sales Share Statistics: an indicator of market size for eco-friendly products
- Environmental Performance Index (EPI) from Yale University (2020, 2022, 2024)
- Access to Clean Cooking data from the World Bank and the International Energy Agency

The data were collected through secondary sources by extracting official databases, including Google Trends for digital interest, International Energy Agency (IEA) for EV market share, World Bank for clean cooking access, and Yale Center for Environmental Law & Policy for the Environmental Performance Index (EPI).

Research Variables

Independent Variable (X): Green Consumer Trends

- X1 (Digital Interest): Digital interest in sustainable consumption, proxied using Google Trends data.
- X2 (Market Size): Market size for green products, proxied using electric vehicle (EV) sales share.

Dependent Variable (Y): Inclusive Environmental Growth

- Y1 (Environmental Performance Index – EPI): Environmental performance score. Since EPI data are available only for even years (2020, 2022, 2024), linear interpolation was applied for odd years (2021 and 2023) by averaging the previous and subsequent year values. This ensures a consistent dataset for panel time series analysis.
- Y2 (Access to Clean Cooking): Proportion of the population with access to clean cooking energy.

Hence, the tested framework includes the following relationships :

X1 and X2 → Y1

X1 and X2 → Y2

Data Analysis Technique

Data were analyzed using multiple linear regression. The analysis was conducted separately for two models:

Model 1: X1 and X2 on Y1 (EPI)

Model 2: X1 and X2 on Y2 (Access to Clean Cooking)

Multiple regression was selected because it allows testing the simultaneous effect of more than one independent variable on a single dependent variable. Significance testing was performed at a 90% confidence level (α = 0.1). This choice aims to provide interpretive flexibility for potentially weak but meaningful relationships between green consumer trends and inclusive environmental growth, as commonly adopted in cross-country studies with data limitations (Lin & Xu, 2022).

RESULT AND DISCUSSION

This study employs two regression models to examine the effects of digital interest (Google Trends) and market size (EV Sales Share) on two indicators of inclusive environmental growth: the Environmental Performance Index (EPI) and access to clean cooking. The data analysis results indicate that the first model, with EPI as the dependent variable, yields positive coefficients for both Google Trends (β = 0.514, sig. = 0.625) and Market Size (β = 0.177, sig. = 0.606). However, neither coefficient is statistically significant at the 90% confidence level. This suggests that increases in digital interest or EV market expansion have not yet been able to consistently explain improvements in EPI scores across the five ASEAN countries. Although the positive direction of the effects indicates a tendency toward a concordant relationship, the strength of this relationship remains weak and is insufficient to claim a meaningful impact.

Table 2. Research Results

Variable	B	t	sig	Result
(Constant)	36.350	14.115	<.001	Significant
Google Trends	.514	.495	.625	Not Significant
Market Size (EV Sales Share	.177	.524	.606	Not Significant

a. Dependent Variabel: EPI SCORE

Table 3. Research Results

Variable	B	t	sig	Result
(Constant)	82.318	17.902	<.001	Significant
Google Trends	1.605	.865	.396	Not Significant
Market Size (EV SalesShare	1.073	1.779	.089	Significant

a. Dependent Variabel: access to clean cooking

The second model, with access to clean cooking as the dependent variable, shows slightly different results. Google Trends again has a positive effect (β = 1.605) but is not statistically significant (sig. = 0.396). In contrast, Market Size exhibits a positive effect (β = 1.073) and is significant at the 90% confidence level (sig. = 0.089). This indicates that the growth of the electric vehicle market is more tangibly associated with increased public access to clean cooking energy than with improvements in EPI scores. In other words, although EV adoption in Southeast Asia is still at a relatively small scale, it is beginning to generate a direct and perceptible impact on energy inclusion.

Overall, these results highlight differences in the patterns of influence between the two independent variables on environmental inclusion indicators. Digital interest, reflected here through online searches related to sustainability, has yet to show a significant contribution, reinforcing previous findings regarding the attitude behavior gap in green consumer behavior in Southeast Asia. Meanwhile, market size, representing the actual market measured through EV sales share, demonstrates a more tangible contribution, particularly to the measurable and direct dimension of clean cooking access. These findings suggest that the transition toward inclusive environmental growth in the region is not solely determined by public awareness but is more strongly influenced by market dynamics and the availability of green energy infrastructure.

DISCUSSION

The study results indicate a differential effect of the independent variables (digital interest and EV market size) on two indicators of inclusive environmental growth: the Environmental Performance Index (EPI) and access to clean energy (access to clean cooking). Multiple regression analysis suggests that the relationship between green consumer trends and environmental outcomes is not uniform but rather depends on the specific indicator used.

Green Consumer Trends in ASEAN-5

The findings reveal that green consumerism has been increasing across ASEAN countries during 2020–2024. This is evident from the steady growth in both digital interest, captured through Google Trends, and the adoption of electric vehicles (EVs). For example, Indonesia's EV sales share rose from 0.10% in 2020 to 7% in 2024, while Vietnam surged to 17% over the same period (IEA, 2023). These trends indicate that consumers in emerging markets are progressively responding to sustainable innovations. At the same time, the digital interest observed through Google Trends suggests a growing environmental consciousness among younger and urban populations, which reflects shifting preferences toward eco-friendly lifestyles.

Inclusive Environmental Growth Indicators

While consumer-driven green indicators have shown substantial progress, inclusive environmental growth, represented by the Environmental Performance Index (EPI) and access to clean cooking, presents a more complex picture. Indonesia's EPI score declined from 37.8 in 2020 to 33.6 in 2024, whereas Malaysia's score remained relatively stable between 35 and 47 (Yale Center for Environmental Law & Policy, 2022). This divergence underscores that consumer actions alone are insufficient to drive aggregate environmental outcomes, as structural, regulatory, and governance-related factors largely determine overall performance. On the other hand, clean cooking access and electricity coverage improved gradually, particularly in Vietnam and the Philippines (World Bank, 2023), suggesting that inclusive energy policies and targeted interventions can directly enhance social and environmental equality.

Linking Green Consumerism and Inclusive Environmental Growth

Correlation and regression analysis confirm a positive association between green consumer trends and certain inclusive environmental indicators, particularly access to clean cooking. However, the linkage between green consumerism and aggregate indicators such as the EPI is weaker. This finding highlights a misalignment between consumer-driven behavioral change and macro-level environmental outcomes. Prior studies have similarly emphasized the existence of the "attitude–behavior gap," where consumers express pro-environmental attitudes but do not consistently translate them into effective sustainable actions (Joshi & Rahman, 2015; White et al., 2019). In the ASEAN context, this gap is amplified by structural barriers, including weak enforcement of environmental policies and uneven infrastructure development.

Effect of Digital Interest and EPI

The regression coefficient of Google Trends on EPI is positive but not statistically significant. This suggests that increases in digital interest related to sustainability issues are not yet strong enough to explain variations in EPI scores across ASEAN countries. The EPI itself is a composite indicator encompassing air quality, biodiversity, waste management, and environmental policies (Yale Center for Environmental Law & Policy, 2022). Consequently, minor changes in consumers' digital awareness do not directly translate into macro-level and multidimensional EPI outcomes. Empirically, this phenomenon aligns with the attitude behavior gap observed among green consumers. (Peattie, 2010) asserts that even when consumers exhibit high environmental awareness, their actual consumption behavior is not always consistent. Similarly, (Gilg et al., 2005) highlight the distinction between "committed green consumers" and those who are merely symbolic. Therefore, although online searches on sustainability topics are increasing, this has not yet been sufficient to influence comprehensive environmental outcomes such as EPI.

Effect of Market Size (EV Share) and EPI

The regression results indicate that EV market size also has a positive but not statistically significant effect on EPI. This can be explained by the relatively recent adoption of electric vehicles (EVs) in Southeast Asia. According to the International Energy Agency (2023), EV market share in ASEAN remains small compared to China or Europe, so its impact on macro-level environmental indicators is still limited. Moreover, (Wilska et al., 2025) emphasize that energy transitions in developing countries require a long time before they are reflected in improvements in national environmental quality. For instance, although Vietnam has rapidly increased its share of renewable energy, the country's EPI score remains low due to other factors such as air pollution and land degradation (Mai, 2025). Thus, these non-significant results can be understood as an indication of a lagging effect in environmental improvements, where policy measures and market adoption require accumulated time before producing significant impacts on EPI.

Effect of Digital Interest and Access to Clean Cooking

The relationship between digital interest and access to clean cooking energy was also found to be not significant. This can be explained by the limited influence of digital awareness on actual access to clean cooking which is more strongly determined by infrastructure and public policy factors. According to (*EPI*, 2022), access to modern energy is heavily influenced by subsidies, infrastructure availability, and investments in the energy sector, rather than solely by public awareness. This finding aligns with (NielsenIQ, 2023), which shows that although Southeast Asian consumers are increasingly aware of sustainability issues, this awareness is more often reflected in everyday consumption preferences (e.g., organic products or reduced plastic use) rather than in household energy choices. In other words, digital interest reflects awareness but has not yet become a primary driver of access to clean cooking at the community level.

Effect of Market Size (EV Share) and Access to Clean Cooking

In contrast to the previous results, EV market size has a positive and statistically significant effect on access to clean cooking. This indicates a linkage between energy market transformation (through EV adoption) and the expansion of clean cooking access. According to (Zhao et al., 2022), the transition to low-carbon technologies, including EVs, generates spillover effects such as increased investment in clean cooking infrastructure, which in turn improves public access to modern energy. Empirically, these findings are consistent with the IEA (2024) report, which notes that ASEAN countries with faster EV market growth, such as Thailand and Vietnam, also demonstrate improvements in clean cooking access indicators. This supports the argument that inclusive environmental growth is not solely determined by consumer awareness but is also shaped by structural changes in the green energy market. These results reinforce the perspective of (Wen et al., 2022) that market-driven energy transitions can produce dual benefits: emission reduction and enhanced energy inclusion.

Comparison of Regression Results

The comparison between the two regression models reveals different patterns of influence of the independent variables on indicators of inclusive environmental growth. In Model 1, both digital interest (Google Trends) and electric vehicle market size (EV Sales Share) have positive but non-significant effects on the Environmental Performance Index (EPI). This confirms that changes in green consumer behavior, although visible in online searches and market adoption, are not yet strong enough to drive improvements in complex macro-level environmental indicators. The EPI measures multidimensional aspects such as air pollution, biodiversity, and waste management (Yale Center for Environmental Law & Policy, 2022), so the contribution of a single sector remains relatively small. Consistent with (Peattie, 2010), the existence of an attitude–behavior gap means that consumer awareness does not always translate into tangible outcomes at the aggregate level.

In contrast, Model 2 shows that EV market size has a positive and statistically significant effect on access to clean cooking, while digital interest remains non-significant. These results indicate that energy market transformation through EV adoption is more quickly reflected in energy inclusion indicators than in macro-level environmental indicators. This can be explained by the spillover effects of clean cooking investments. According to (Zhao et al., 2022), the adoption of low-carbon technologies such as EVs is often accompanied by improvements in clean cooking infrastructure, which in turn expands public access to modern energy. The IEA (2023) report also supports this finding, showing that ASEAN countries with higher EV penetration, such as Thailand, tend to experience improvements in clean cooking access.

Thus, Model 1 (EPI) reflects the limited contribution of green consumers to macro-level environmental indicators, whereas Model 2 (access to clean cooking) demonstrates that structural changes in the energy market have a more tangible impact on energy inclusion. This difference reinforces (Wen et al., 2022) argument that inclusive green growth requires not only public awareness but also structural transformation through policy and market innovation. Therefore, policies aimed at accelerating EV adoption and expanding clean cooking infrastructure are likely to be more effective in supporting inclusive environmental growth than relying solely on increasing digital consumer awareness.

Overall, this study successfully addresses a theoretical gap in the literature on green consumerism in Southeast Asia by directly examining the relationship between green consumer trends (digital interest and market size) and two different indicators of inclusive environmental growth: EPI and access to clean cooking. Previous studies have primarily focused separately on consumer perceptions or macro-level indicators (Peattie, 2010; Lin & Xu, 2022; Zhao et al., 2021). This study contributes theoretically by showing that green consumer behavior does play a role, but its impact is not homogeneous: it tends to be weak on complex macro indicators such as EPI, but more tangible on concrete indicators directly related to clean cooking access. From a practical perspective, the findings provide policymakers and industry stakeholders with evidence that sustainable marketing strategies cannot rely solely on raising consumer awareness, but must also be accompanied by tangible investments in clean cooking markets and environmentally friendly infrastructure (IEA, 2023). Consequently, the study not only strengthens the literature on green consumer behavior in developing countries but also offers targeted policy guidance for achieving inclusive environmental growth in Southeast Asia.

CONCLUSION

This study examined the relationship between green consumer trends—represented by digital interest (Google Trends) and EV market size—and inclusive environmental growth, measured by the Environmental Performance Index (EPI) and access to clean cooking, across ASEAN-5 during 2020–2024. The findings show that while EV adoption has a statistically significant effect (at the 10% level) on access to clean cooking, green consumer trends have no significant influence on EPI, which remains more shaped by governance and national policy factors. This asymmetry underscores that the influence

of consumer behavior is more visible on tangible inclusion indicators than on aggregate macro-level outcomes.

Theoretically, this study addresses a gap in the literature, which has tended to overemphasize direct linkages between green consumerism and macro sustainability. The contribution lies in enriching the green consumer behavior framework with the perspective of inclusive environmental growth. Practically, governments should integrate consumer-driven energy transitions with equitable access to clean cooking to support the SDGs, while industries should align green consumer trends with innovations that extend beyond premium markets to middle- and lower-income groups.

A critical review of the framework suggests that the current indicators remain limited in capturing structural and governance-related dynamics. Future research should expand the scope of inclusive growth indicators, apply more advanced methods such as SEM-PLS, and extend the observation period. This would enable deeper mapping of the nexus between green consumerism and inclusive sustainability, while supporting the just energy transition agenda in Southeast Asia.

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