
Green Digital Marketing and Sustainable Consumer Behavior in ASEAN Economies: The Mediating Role of Consumer Trust and The Moderating Effect of Eco-Label Counterfeiting

Norzieiriani bt. Ahmad¹, Farah Zainab²

¹ School of Business Management, Universiti Utara Malaysia, Kedah, Malaysia
E-mail: norzie@uum.edu.my

^{2,3} School of Business Management, Universiti Utara Malaysia, Kedah, Malaysia
E-mail: farahzainab0601@gmail.com

Abstract

Within the digital economy, green marketing has increasingly shifted beyond symbolic environmental messaging toward a more data-driven and transparency-based approach capable of influencing sustainable consumer behaviour. This conceptual paper explores how green digital marketing shapes sustainable consumption behaviour in ASEAN economies, emphasizing the mediating role of consumer trust and the moderating influence of eco-label counterfeiting in digitally diverse markets. As consumers increasingly depend on social media platforms, mobile applications, and algorithm-driven recommendations when making purchasing decisions, scepticism toward environmental claims has also intensified. This concern is particularly evident in emerging Southeast Asian markets where regulatory enforcement varies and digital literacy levels differ across populations. Drawing upon the Theory of Planned Behaviour together with trust-based consumer behaviour perspectives, this study proposes an integrative conceptual framework that conceptualizes green digital marketing as an interactive ecosystem that combines persuasive communication with digital transparency tools. These tools include QR-code traceability, blockchain-enabled product authentication, and real-time supply chain information disclosure. The framework illustrates how such transparency mechanisms may mitigate the negative consequences of eco-label counterfeiting, improve consumers perceived behavioural control, strengthen trust toward environmental claims, and ultimately encourage sustainable purchasing intentions. By integrating insights from digital marketing, sustainability governance, and behavioural science, this paper contributes to the advancement of green marketing theory by reframing digital marketing not merely as a promotional channel but as a mechanism for building trust and enhancing transparency. The proposed framework also offers strategic implications for businesses, digital platforms, and policymakers seeking to foster responsible consumption and production (SDG 12) and advance sustainable development within ASEAN economies.

Keywords: Green Digital Marketing, Sustainable Consumer Behaviour, Consumer Trust, Eco-Label Counterfeiting, Sustainable Development Goal 12

I. INTRODUCTION

Sustainable consumption has become an important priority within global development agendas, particularly under the United Nations Sustainable Development Goals. Sustainable Development Goal 12 focuses on responsible consumption and production and emphasizes the need to encourage consumers to adopt environmentally responsible purchasing behaviors. In response to growing environmental concerns such as climate change, resource depletion, and waste generation, businesses increasingly employ green marketing strategies to communicate the environmental benefits of products and services and encourage sustainable consumption

patterns (Kadam, 2024). The rapid development of digital technologies has significantly transformed the way firms communicate with consumers. Digital platforms such as social media, e-commerce marketplaces, and mobile applications enable organizations to disseminate environmental information more efficiently and interactively than traditional marketing channels. As a result, green marketing practices have evolved into what is increasingly referred to as green digital marketing. This approach integrates sustainability communication with digital tools that allow firms to deliver personalized environmental messages, engage consumers through interactive content, and provide detailed information about sustainable products (Kumar et al., 2025).

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Digital marketing channels also enable consumers to access sustainability related information quickly, compare product attributes, and evaluate environmental claims prior to making purchasing decisions. Despite these developments, consumer skepticism toward environmental claims have grown significantly in recent years. Many companies have been criticized for engaging in greenwashing, a practice in which firms exaggerate or falsely communicate the environmental benefits of their products. Such practices undermine the credibility of green marketing and reduce consumer confidence in sustainability claims. One of the most visible manifestations of this problem is the increasing presence of counterfeit eco labels and misleading environmental certifications in the marketplace. These counterfeit labels create confusion for consumers and weaken the credibility of legitimate sustainability certification schemes (Xia, 2026).

The issue of credibility is particularly relevant in the context of ASEAN economies. Southeast Asia has experienced rapid growth in digital connectivity, online commerce, and social media use. This expansion of the digital ecosystem has created new opportunities for firms to promote environmentally friendly products and communicate sustainability initiatives. However, the region is characterized by diverse regulatory frameworks, varying levels of institutional enforcement, and uneven levels of digital literacy among consumers. These differences can increase the risk of misinformation and make it more difficult for consumers to evaluate the authenticity of environmental claims (Maduwinarti et al., 2025). Within this context, consumer trust plays a critical role in shaping responses to green marketing communication. Consumers often lack the technical knowledge required to verify the environmental attributes of products independently. Consequently, they rely on signals such as eco labels, certifications, and brand reputation when making purchasing decisions. When environmental claims are perceived as credible and trustworthy, consumers are more likely to develop positive attitudes toward sustainable products and demonstrate stronger purchase intentions (Hong et al., 2024).

Recent technological developments have introduced new opportunities to enhance transparency in sustainability communication. Technologies such as QR code based traceability systems, blockchain authentication, and digital supply chain disclosure allow firms to provide verifiable information regarding the origin, production processes, and environmental performance of products. These technologies can reduce information asymmetry between producers and consumers while strengthening trust in sustainability claims (Luo et

al., 2026). As a result, green digital marketing is increasingly evolving from a purely promotional approach into a transparency-oriented system that combines persuasive communication with verifiable sustainability information. Although the literature on green marketing and sustainable consumption has grown substantially, relatively limited research has examined the interaction between digital marketing technologies, consumer trust, and eco label credibility in emerging markets such as ASEAN. In particular, the role of eco label counterfeiting in shaping consumer responses to green digital marketing remains insufficiently explored. Understanding this relationship is important because the presence of counterfeit labels may weaken the effectiveness of sustainability communication and reduce consumer trust in environmentally responsible products.

To address this gap, the present conceptual study proposes an integrative framework that examines the relationship between green digital marketing and sustainable consumer behaviour in ASEAN economies. The framework highlights the mediating role of consumer trust and the moderating influence of eco label counterfeiting. By integrating perspectives from digital marketing, sustainability governance, and behavioural science, the study conceptualizes green digital marketing as a mechanism that not only promotes sustainable products but also facilitates transparency and trust in sustainability communication. The study contributes to the literature in several ways. First, it extends existing green marketing research by incorporating digital transparency technologies into the analysis of sustainable consumption behaviour. Second, it emphasizes the importance of consumer trust as a key mechanism linking digital sustainability communication to consumer decision making. Third, it provides contextual insights into ASEAN markets, where rapid digital transformation intersects with ongoing challenges related to sustainability governance and regulatory enforcement. Overall, the conceptual framework proposed in this study offers valuable insights for businesses, policymakers, and digital platforms seeking to enhance the credibility of sustainability communication and promote responsible consumption practices in the rapidly evolving digital economy.

II. LITERATURE REVIEW

The literature on sustainable consumption and environmental marketing has expanded significantly in recent years, particularly as digital technologies transform how firms communicate sustainability information to consumers. This section reviews the key scholarly discussions surrounding green digital marketing, sustainable consumer behavior,

consumer trust in environmental communication, and the growing challenge of eco label counterfeiting. By synthesizing these strands of literature, the section establishes the theoretical foundation for the proposed conceptual framework.

A. *Green Digital Marketing*

Green marketing has traditionally been defined as the process of promoting products and services based on their environmental attributes, including reduced environmental impact, sustainable production methods, and eco-friendly packaging. Over the past decade, however, the rapid development of digital technologies has fundamentally transformed the way environmental information is communicated. As firms increasingly rely on online platforms, social media channels, and e-commerce systems to reach consumers, the concept of green marketing has evolved into what scholars describe as green digital marketing. In addition, green digital marketing refers to the integration of environmental marketing strategies with digital communication technologies that allow firms to promote sustainability initiatives through interactive and data driven platforms. Digital tools such as social media advertising, influencer marketing, mobile applications, and online marketplaces provide new opportunities for firms to communicate environmental information more transparently and efficiently. Kumar et al. (2025) argue that digital technologies enable firms to combine sustainability messaging with real time data and personalized marketing strategies, thereby enhancing consumer engagement with environmentally responsible products.

Recent research highlights the increasing role of digital marketing channels in shaping sustainable consumption decisions. Social media platforms in particular have become powerful tools for disseminating sustainability related information, influencing consumer attitudes, and promoting green purchasing behaviour. Studies indicate that digital marketing content emphasizing environmental responsibility, corporate sustainability initiatives, and eco-friendly product attributes can positively influence consumer perceptions and purchase intentions (Tiwari et al., 2025). In addition, digital marketing allows firms to communicate detailed product information, including sustainability certifications and supply chain transparency, which can enhance consumer confidence in environmental claims. In the context of emerging economies, digital marketing plays an especially important role because online platforms often serve as the primary source of product information for consumers. In Southeast Asia, the rapid growth of digital commerce and mobile

internet use has created an environment where consumers increasingly rely on digital channels when evaluating sustainability claims (Maduwinarti et al., 2025). Consequently, green digital marketing has become a critical mechanism for promoting environmentally responsible consumption in the region.

B. *Sustainable Consumer Behavior*

Sustainable consumer behavior refers to consumption patterns that consider the environmental and social impacts of purchasing decisions. These behaviors include the preference for environmentally friendly products, reduced consumption of resource intensive goods, and the adoption of sustainable lifestyles. Scholars generally agree that sustainable consumption is influenced by a combination of psychological, social, and informational factors. Environmental awareness and ecological concern are frequently identified as key drivers of sustainable consumer behavior. Individuals who possess strong environmental values are more likely to consider the environmental consequences of their consumption decisions and actively seek eco-friendly alternatives. However, awareness alone is often insufficient to translate into actual purchasing behavior. Research has shown that consumers frequently experience an attitude behavior gap, in which positive environmental attitudes do not necessarily result in sustainable purchasing decisions (Ali et al., 2023).

Information availability and credibility therefore play a critical role in bridging this gap. Consumers often rely on environmental signals such as eco labels, certifications, and sustainability claims when evaluating products. These signals simplify complex environmental information and allow consumers to make more informed purchasing decisions. Empirical studies have demonstrated that eco labels can significantly influence consumer purchase intentions when they are perceived as credible indicators of environmental performance (Nguyen Viet, 2022). However, recent research in Asian markets further indicates that digital marketing and online sustainability communication can influence sustainable consumption by shaping consumer perceptions and environmental attitudes. According to Vironika and Maulida (2025) green marketing communication combined with consumer environmental knowledge significantly increases green purchase behaviour. These findings suggest that sustainability communication strategies must not only raise awareness but also provide credible and accessible environmental information.

C. Consumer Trust in Green Marketing

Consumer trust represents one of the most critical determinants of sustainable consumption behavior. Because environmental attributes such as carbon emissions, ecological impact, and resource efficiency are often difficult for consumers to verify independently, purchasing decisions frequently depend on the credibility of information provided by firms. In this context, trust functions as a mechanism that reduces uncertainty and facilitates decision making. In addition, scholars widely recognize that trust plays a mediating role between green marketing communication and consumer purchase intentions. When consumers perceive environmental claims as credible and reliable, they are more likely to develop positive attitudes toward environmentally friendly products and demonstrate stronger intentions to purchase them. Conversely, skepticism toward environmental claims can weaken the effectiveness of green marketing initiatives.

Eco labels and environmental certifications are commonly used as trust signals in green marketing. These labels provide standardized information regarding the environmental performance of products and help consumers identify sustainable alternatives in the marketplace. Research indicates that credible eco labelling systems can significantly enhance consumer trust and strengthen the relationship between environmental marketing and purchasing behaviour (Mume and Sun, 2026). Moreover, in digital environments, trust becomes even more critical because consumers are exposed to large volumes of information from diverse sources. Online product reviews, social media discussions, and digital advertisements can influence consumer perceptions of sustainability claims. Consequently, firms must adopt transparent communication strategies that provide verifiable sustainability information. Digital technologies such as blockchain based traceability systems and QR code authentication are increasingly being explored as tools for strengthening consumer trust by enabling consumers to verify the authenticity of environmental claims.

D. Eco Label Counterfeiting and Greenwashing

Despite the growing use of eco labels in sustainability communication, the credibility of environmental claims remains a major challenge. Greenwashing refers to the practice in which firms misrepresent or exaggerate the environmental benefits of their products in order to appeal to environmentally conscious consumers. This practice undermines the effectiveness of green marketing and contributes to increasing consumer skepticism toward sustainability claims (Kumar et al., 2025). In addition, one of the most problematic forms of greenwashing is the proliferation of counterfeit eco labels. These labels imitate legitimate environmental certifications but lack official verification or regulatory oversight. As a result, consumers may find it difficult to distinguish authentic sustainability labels from fraudulent ones. When consumers encounter misleading eco labels, their trust in environmental marketing may decline significantly.

Research in emerging markets indicates that the risk of eco label counterfeiting is particularly high in contexts where regulatory frameworks are still developing. In Southeast Asia, rapid digitalization and the expansion of online marketplaces have increased the visibility of eco labeled products, but they have also created opportunities for misleading sustainability claims to circulate online (Uikey et al., 2025). Without effective verification mechanisms, counterfeit labels may weaken consumer trust and reduce the effectiveness of sustainability communication. Furthermore, recent studies emphasize the importance of technological solutions in addressing this challenge. Digital authentication systems, blockchain traceability platforms, and QR code verification tools allow consumers to access detailed information about product origins and certification status. These technologies can reduce information asymmetry and help restore trust in eco labelling systems by enabling consumers to verify environmental claims independently.

E. Summary of Key Studies

Table 1

Author(s)	Year	Context	Methodology	Key Variables	Key Findings
Ali et al.	2023	Developing economies	Quantitative survey	Green consumption behavior, purchase intention	Environmental awareness and perceived benefits significantly influence green purchase intentions among millennials.

Author(s)	Year	Context	Methodology	Key Variables	Key Findings
Chen & Chang	2021	Taiwan	Structural equation modelling	Green perceived value, green trust, perceived risk	Green trust mediates the relationship between perceived environmental value and green purchase intention.
Delmas & Burbano	2021	Global corporate sector	Conceptual analysis	Greenwashing, corporate environmental claims	Firms engage in greenwashing due to institutional pressure and market incentives, which can undermine consumer trust.
Goh et al.	2023	Online retail markets	Quantitative study	Social media marketing, sustainability attitudes	Social media marketing significantly influences sustainable consumption behavior through consumer engagement.
Hong et al.	2024	China	Empirical survey	Sustainable consumption practices	Environmental awareness and social influence shape sustainable purchasing behavior among young consumers.
Kumar et al.	2025	Global digital markets	Conceptual and empirical analysis	Digital marketing transformation, green marketing	Digital technologies enhance sustainability communication and improve the effectiveness of green marketing strategies.
Luo et al.	2024	Global markets	Empirical study	Digital eco-labels, sustainability communication	Digital eco-labels increase transparency and strengthen consumer trust in sustainable products.
Maduwinarti et al.	2025	Southeast Asia	Bibliometric analysis	Green marketing, social media	Social media platforms play a critical role in promoting sustainable consumption behavior in ASEAN markets.
Mume & Sun	2024	Online commerce environments	Structural equation modelling	Green digital marketing, digital literacy	Green digital marketing positively influences sustainable consumption behavior through consumer trust.
Nguyen-Viet	2022	Vietnam	Survey-based research	Eco-labels, green advertising	Eco-label credibility significantly increases green purchase intention.
Rahman et al.	2022	Hospitality industry	Structural equation modelling	Greenwashing, consumer perception	Greenwashing reduces consumer trust and negatively affects sustainable purchase behavior.
Sharma	2023	Global consumer markets	Conceptual analysis	Eco-label credibility, consumer perception	Fake eco-labels weaken consumer confidence in environmental certifications.
Testa et al.	2021	European markets	Empirical research	Eco-labels, environmental awareness	Credible eco-labels significantly improve consumer trust and sustainable purchasing behavior.

Author(s)	Year	Context	Methodology	Key Variables	Key Findings
Tiwari et al.	2025	Digital advertising environment	Quantitative survey	Social media advertising, sustainability perception	Social media advertising increases consumer awareness and sustainable purchase intention.
Uikey et al.	2025	Asian markets	Literature review	Green marketing strategies	Green marketing strategies significantly influence sustainable consumer behavior in emerging economies.
Wu et al.	2021	Global food systems	Literature review	Sustainability labels, consumer trust	Consumer trust in sustainability labels is essential for promoting sustainable consumption.
Zhang et al.	2022	China	Quantitative research	Digital technologies, sustainability transparency	Digital technologies improve information transparency and increase consumer trust in sustainability claims.
Chen et al.	2021	Emerging economies	Empirical research	Green consumer behavior	Environmental awareness and product knowledge influence sustainable purchasing behavior.
Yadav & Pathak	2022	India	Survey research	Environmental concern, green purchase behavior	Environmental concern and social influence significantly affect green purchasing decisions among young consumers.
Joshi & Rahman	2022	Global consumers	Literature review	Green purchase behavior	Consumer attitudes, environmental awareness, and perceived value influence green purchasing behavior.
Peattie & Peattie	2021	Global sustainability marketing	Conceptual analysis	Social marketing, sustainability transitions	Marketing strategies can influence consumer behavior toward sustainable lifestyles.
Papadas et al.	2022	European firms	Empirical analysis	Green marketing orientation	Firms with strong green marketing orientation demonstrate higher sustainability performance.
Dangelico & Vocalelli	2021	Global markets	Literature review	Green marketing strategies	Green marketing tools play a crucial role in promoting environmentally responsible consumption.
Li et al.	2023	Digital marketplace	Quantitative research	Digital transparency, consumer trust	Digital transparency mechanisms increase consumer trust in sustainability claims.
Han et al.	2022	Hospitality sector	Empirical research	Environmental responsibility, consumer behavior	Environmental responsibility initiatives positively influence consumer attitudes and behavior.

F. Research Gap and Comparative Analysis of Previous Studies

The existing literature provides substantial insights into green marketing, sustainable consumer behavior, and eco-label credibility. However, the comparative review of previous studies reveals several important research limitations. Prior research has primarily focused on understanding the determinants of green purchasing behavior through variables such as environmental awareness, perceived value, and eco-label credibility. For instance, Ali et al. (2023) and Yadav and Pathak (2022) emphasize the role of environmental concern and awareness in influencing green purchasing intentions, while Chen and Chang (2021) highlight the mediating role of green trust between perceived environmental value and consumer purchase intentions. Several studies have also examined the influence of eco-labels and sustainability certifications on consumer trust and purchasing decisions. Testa et al. (2021) and Nguyen-Viet (2022) demonstrate that credible eco-labels significantly increase consumer confidence and green purchase intentions. Similarly, Wu et al. (2021) emphasize that consumer trust in sustainability labels is essential for encouraging sustainable consumption. However, emerging research has identified increasing concerns related to greenwashing and misleading environmental claims. Delmas and Burbano (2021) and Rahman et al. (2022) argue that greenwashing practices can significantly undermine consumer trust and weaken the effectiveness of sustainability marketing strategies.

More recent studies have started to explore the role of digital technologies in sustainability communication. For example, Zhang et al. (2022) and Li et al. (2023) suggest that digital transparency technologies improve consumer confidence by providing verifiable sustainability information. Likewise, Luo et al. (2024) highlight the potential of digital eco-labels to enhance transparency and strengthen consumer trust in environmentally responsible products. Research focusing on digital marketing channels also indicates that social media marketing and digital advertising can positively influence sustainable consumption behavior (Goh et al., 2023; Tiwari et al., 2025). Despite these contributions, several important gaps remain in the literature. First, while many studies examine green marketing or digital marketing separately, relatively few studies have integrated the concept of green digital marketing as a comprehensive framework that combines sustainability communication with digital transparency technologies. Second, although consumer trust has been widely recognized as an important determinant of green purchasing behavior, limited research has examined its mediating role within digital marketing environments. Third, while greenwashing has been discussed extensively, the specific issue of eco-label counterfeiting as a

moderating factor influencing consumer trust has received limited empirical and conceptual attention.

Another limitation in the existing literature relates to the geographical focus of prior research. Many studies have been conducted in developed markets such as Europe, Taiwan, or global contexts (Testa et al., 2021; Chen & Chang, 2021), while fewer studies focus specifically on ASEAN economies, where digital transformation and sustainability governance challenges coexist. As highlighted by Maduwinarti et al. (2025), Southeast Asia represents a rapidly expanding digital marketplace where consumers increasingly rely on online platforms for purchasing decisions. However, institutional differences, regulatory inconsistencies, and varying levels of digital literacy may affect how consumers interpret sustainability information in these markets. Furthermore, existing studies tend to examine either consumer behavior factors or marketing communication strategies independently. Few studies adopt an integrated perspective that simultaneously considers digital marketing strategies, trust mechanisms, and institutional challenges such as eco-label counterfeiting. Consequently, there remains a need for a comprehensive conceptual framework that explains how digital sustainability communication influences consumer behavior while accounting for trust-building mechanisms and credibility challenges.

To address these gaps, the present study proposes a conceptual framework that examines the relationship between green digital marketing and sustainable consumer behaviour in ASEAN economies. The framework highlights the mediating role of consumer trust and the moderating influence of eco-label counterfeiting. By integrating insights from digital marketing, sustainability governance, and behavioral theory, this study contributes to the literature by conceptualizing green digital marketing as a trust-building and transparency-enabling mechanism capable of promoting responsible consumption and supporting Sustainable Development Goal 12.

III. THEORETICAL FRAMEWORK

Understanding sustainable consumer behavior requires a strong theoretical foundation that explains how individuals process information, form attitudes, and make purchasing decisions related to environmentally responsible products. This study draws primarily on the Theory of Planned Behavior and trust based consumer behavior perspectives to explain how green digital marketing may influence sustainable consumption in ASEAN markets. These theoretical perspectives provide a useful framework for understanding the mechanisms through which

digital sustainability communication can shape consumer attitudes, trust, and behavioral intentions.

A. *Theory of Planned Behaviour*

The Theory of Planned Behavior, originally developed by Ajzen (1991), is one of the most widely applied theoretical frameworks for explaining consumer decision making and behavioral intentions. According to this theory, an individual's behavioral intention is influenced by three key determinants: attitude toward the behavior, subjective norms, and perceived behavioral control. These components collectively influence whether an individual intends to perform a particular behavior. Attitude toward behavior refers to the degree to which a person evaluates a behavior positively or negatively. In the context of sustainable consumption, consumer attitudes toward environmentally friendly products are shaped by perceptions of environmental benefits, product quality, and personal values related to sustainability. Research has consistently shown that positive environmental attitudes are associated with stronger intentions to purchase green products (Ali et al., 2023).

Subjective norms refer to the perceived social pressure to engage in or avoid a particular behavior. In many cases, social influences such as peer opinions, social media discussions, and cultural expectations play an important role in shaping sustainable consumption behavior. In digital environments, social media platforms can amplify subjective norms by exposing consumers to sustainability related discussions, influencer endorsements, and environmental advocacy campaigns (Tiwari et al., 2025). Perceived behavioral control refers to an individual's perception of their ability to perform a particular behavior. When consumers believe that they have sufficient information, resources, and opportunities to purchase environmentally responsible products, they are more likely to engage in sustainable consumption. Digital technologies can enhance perceived behavioral control by providing accessible product information, sustainability certifications, and price comparisons that help consumers make informed purchasing decisions.

The Theory of Planned Behavior has been widely applied in studies examining green purchasing behavior and sustainable consumption. Scholars have used the framework to explain how environmental attitudes, social influence, and information availability influence consumer intentions to purchase eco-friendly products (Zahro et al., 2025). Within the context of green digital marketing, digital communication strategies can

influence all three components of the theory by shaping environmental attitudes, strengthening social influence through online communities, and providing transparent product information that enhances perceived behavioral control.

B. *Trust Based Consumer Behaviour Perspective*

While the Theory of Planned Behavior explains how attitudes and social factors shape behavioral intentions, trust based consumer behavior models highlight the importance of credibility and reliability in consumer decision making. In markets where product attributes are difficult to verify directly, trust functions as a key mechanism that reduces uncertainty and facilitates purchasing decisions. Environmental product attributes often fall into the category of credence attributes, meaning that consumers cannot easily evaluate their environmental performance even after purchase. For example, claims regarding carbon neutrality, sustainable sourcing, or environmentally responsible manufacturing processes cannot be easily verified by consumers without access to reliable information. Consequently, consumers rely on external signals such as eco labels, certifications, and corporate reputation when evaluating green products (Nguyen Viet, 2022).

Consumer trust is therefore essential for the success of green marketing initiatives. When environmental claims are perceived as credible, consumers are more likely to accept sustainability information and develop positive attitudes toward environmentally friendly products. Conversely, when consumers perceive environmental claims as misleading or exaggerated, skepticism may emerge, reducing the effectiveness of green marketing communication. In digital environments, the role of trust becomes even more significant because consumers are exposed to a large volume of information from diverse online sources. Digital platforms allow firms to disseminate sustainability information quickly, but they also increase the risk of misinformation and greenwashing. As a result, establishing trust through transparent communication and credible verification mechanisms is critical for influencing sustainable purchasing behavior.

Recent research emphasizes that digital transparency mechanisms such as QR code traceability, blockchain authentication, and supply chain disclosure can enhance consumer trust by allowing individuals to verify sustainability claims independently (Mume & Sun, 2026). These technologies reduce information asymmetry between producers and consumers and strengthen the credibility of environmental marketing communication.

C. *Integrating Behavioural and Trust Perspectives in Green Digital Marketing*

Incorporating the Theory of Planned Behavior with trust based consumer behavior perspectives provides a comprehensive explanation of how green digital marketing may influence sustainable consumption behavior. Digital marketing strategies can shape consumer attitudes toward environmentally friendly products by emphasizing sustainability benefits and corporate environmental responsibility. At the same time, social media communication and online communities can strengthen subjective norms by promoting environmental awareness and sustainable lifestyle practices. Digital transparency mechanisms can further enhance perceived behavioral control by providing consumers with accessible and verifiable sustainability information. For example, QR code systems allow consumers to access detailed information about product origins, production methods, and environmental certifications through mobile devices. This information empowers consumers to evaluate sustainability claims more confidently and make informed purchasing decisions.

Moreover, consumer trust plays a mediating role within this process. When green digital marketing strategies successfully communicate credible and transparent sustainability information, consumer trust increases. Higher levels of trust subsequently strengthen the relationship between sustainability communication and consumer purchase intentions. However, the effectiveness of this relationship may be weakened by the presence of eco label counterfeiting and misleading environmental claims. When consumers encounter counterfeit eco labels or unreliable sustainability information, their trust in environmental marketing may decline, reducing the influence of green digital marketing on sustainable consumption behavior. By integrating behavioral and trust based theoretical perspectives, the present study proposes that green digital marketing can influence sustainable consumer behavior through the mediating role of consumer trust, while eco label counterfeiting may moderate this relationship. This theoretical integration provides the foundation for the conceptual framework and hypotheses developed in the following section.

IV. CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Building on the theoretical foundations discussed in the previous section, this study develops a conceptual framework that explains how green digital marketing influences sustainable consumer

behavior in ASEAN economies. The framework integrates insights from green marketing literature, behavioral theories, and trust based consumer behavior perspectives. Specifically, the model proposes that green digital marketing influences sustainable consumer behavior through the mediating role of consumer trust, while the presence of eco label counterfeiting moderates the relationship between green digital marketing and consumer trust. The proposed framework reflects the increasing role of digital technologies in sustainability communication. In digital environments, consumers are frequently exposed to environmental information through social media platforms, online marketplaces, and mobile applications. While these platforms allow firms to communicate sustainability initiatives more effectively, they also introduce challenges related to information credibility and trust. Consequently, understanding the mechanisms through which digital sustainability communication influences consumer decision making is essential.

A. *Green Digital Marketing and Consumer Trust*

Green digital marketing refers to the use of digital technologies and online communication platforms to promote environmentally responsible products and corporate sustainability initiatives. Through digital channels such as social media marketing, online advertising, and interactive content, firms can communicate environmental attributes, sustainability certifications, and responsible production practices to consumers. One of the most significant advantages of digital marketing is the ability to provide detailed and transparent information about product sustainability. For example, companies can use QR codes, blockchain based traceability systems, and digital supply chain disclosures to enable consumers to verify environmental claims and access information about product origins and production processes. These transparency mechanisms help reduce information asymmetry between producers and consumers, thereby strengthening the credibility of sustainability communication (Kumar et al., 2025).

Previous research indicates that transparent and credible environmental communication can enhance consumer trust in green marketing initiatives. When consumers perceive sustainability claims as authentic and verifiable, they are more likely to develop trust in environmentally responsible brands (Mume & Sun, 2026). Digital platforms also facilitate two-way communication between firms and consumers, allowing organizations to respond to consumer concerns, clarify sustainability claims, and reinforce brand credibility. In contrast, when

environmental claims are vague or unsupported by evidence, consumers may develop skepticism toward green marketing communication. Therefore, digital transparency mechanisms and credible sustainability messaging are essential for building trust in environmentally responsible products. Hence, the following hypothesis is proposed:

H1: Green digital marketing positively influences consumer trust in environmentally friendly products.

B. Consumer Trust and Sustainable Consumer Behaviour

Consumer trust plays a critical role in shaping purchasing decisions related to environmentally responsible products. Because many environmental attributes cannot be easily verified by consumers, trust becomes a key factor that influences whether consumers accept sustainability claims and act upon them. Trust reduces uncertainty and perceived risk in purchasing decisions. When consumers trust that a product genuinely meets environmental standards, they are more likely to develop favorable attitudes toward the product and demonstrate stronger purchase intentions. Empirical studies have consistently shown that consumer trust significantly influences green purchasing behavior and sustainable consumption decisions (Vironika & Maulida, 2025).

In digital marketplaces, the importance of trust becomes even more pronounced. Online shopping environments often involve limited physical interaction with products, meaning that consumers must rely heavily on digital information and brand credibility when evaluating sustainability claims. Consequently, trust in environmental communication becomes a crucial factor that determines whether consumers are willing to purchase eco-friendly products. When trust is established through credible eco labels, transparent sustainability communication, and reliable product information, consumers are more likely to adopt sustainable consumption behaviors. Therefore, the following hypothesis is proposed:

H2: Consumer trust positively influences sustainable consumer behavior.

C. Mediating Role of Consumer Trust

In the context of green digital marketing, consumer trust functions as an important psychological mechanism that links sustainability communication to purchasing behavior. While digital marketing strategies can raise awareness about environmental issues and promote sustainable products, their

effectiveness ultimately depends on whether consumers perceive the information as credible. The mediation perspective suggests that green digital marketing does not directly influence sustainable consumer behavior without first influencing consumer perceptions of credibility and trust. When digital sustainability communication provides transparent, verifiable, and consistent environmental information, consumers are more likely to trust the environmental claims associated with the product. This trust subsequently increases the likelihood that consumers will engage in sustainable purchasing behavior.

Previous studies have highlighted the mediating role of trust in the relationship between environmental communication and green purchase intentions. Research indicates that consumers who trust sustainability claims are more likely to convert positive environmental attitudes into actual purchasing behavior (Nguyen Viet, 2022). In digital environments, the ability to verify environmental claims through technologies such as blockchain authentication and QR code traceability further strengthens the mediating role of trust. These mechanisms allow consumers to validate sustainability information independently, thereby increasing confidence in green marketing communication. Based on this reasoning, the following hypothesis is proposed:

H3: Consumer trust mediates the relationship between green digital marketing and sustainable consumer behaviour.

D. Moderating Role of Eco Label Counterfeiting

Despite the growing use of eco labels and sustainability certifications in green marketing, the credibility of environmental claims remains a major concern. Eco label counterfeiting refers to the unauthorized or misleading use of environmental labels that falsely signal sustainability credentials. This phenomenon represents a significant challenge for both consumers and policymakers because it undermines trust in environmental certifications and creates confusion in the marketplace. When counterfeit eco labels are prevalent, consumers may become skeptical about the authenticity of sustainability claims. Even when legitimate eco labels are used, the presence of counterfeit labels can reduce overall consumer confidence in environmental certification systems. As a result, the effectiveness of green marketing strategies may be weakened.

Research on greenwashing suggests that misleading environmental communication can significantly reduce consumer trust and weaken the relationship

between green marketing and consumer purchasing behaviour (Uikey et al., 2025). In digital marketplaces where information spreads rapidly and regulatory oversight may be limited, counterfeit eco labels can become particularly problematic. Eco label counterfeiting therefore acts as a moderating factor that influences how consumers interpret sustainability communication. When counterfeit labels are perceived as common in the market, the positive effect of green digital marketing on consumer trust may be reduced. Based on this literature, the following hypothesis is proposed:

H4: Eco label counterfeiting negatively moderates the relationship between green digital marketing and consumer trust.

V. METHODOLOGY

This study used a conceptual research design to develop a framework explaining the relationship between green digital marketing and sustainable consumer behavior in ASEAN economies. The methodology is based on a review and synthesis of existing literature on green marketing, digital marketing, consumer trust, eco-label credibility, greenwashing, and sustainable consumption. The conceptual framework was developed by integrating the Theory of Planned Behavior with trust-based consumer behavior perspectives. Based on this review, green digital marketing is positioned as the independent variable, consumer trust as the mediating variable, eco-label counterfeiting as the moderating variable, and sustainable consumer behavior as the outcome variable.

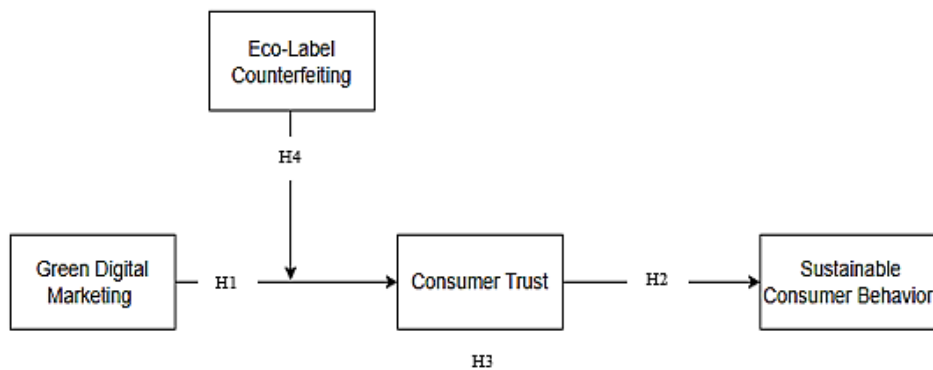


Figure 1 Research Framework

VI. RESULT AND DISCUSSION

The proposed conceptual framework highlights the growing importance of green digital marketing as a strategic mechanism for promoting sustainable consumption in digitally connected markets. By integrating behavioral theory with trust based consumer behavior perspectives, the framework explains how digital sustainability communication can influence consumer decision making through the development of trust while acknowledging the potential challenges created by eco label counterfeiting. This section discusses the theoretical, managerial, and policy implications of the proposed framework, particularly within the context of ASEAN economies.

A. Theoretical Implications

The present study contributes to the existing literature on green marketing and sustainable consumption in several important ways. First, the study extends traditional green marketing research by incorporating the role of digital marketing technologies in sustainability communication. Earlier research on green marketing primarily focused on conventional promotional tools such as eco labels, environmental advertising, and corporate sustainability messaging. However, the increasing reliance on digital platforms has transformed the nature of marketing communication, requiring new theoretical perspectives that integrate digital technologies with sustainability communication strategies (Kumar et al., 2025).

Second, the proposed framework highlights the critical role of consumer trust as a mediating mechanism linking green digital marketing and

sustainable consumer behavior. While previous studies have recognized the importance of trust in environmentally responsible consumption, relatively limited research has examined how trust functions within digital marketing environments. By emphasizing the mediating role of trust, the framework provides a deeper understanding of how digital sustainability communication can translate into actual purchasing behavior.

Third, the study introduces eco label counterfeiting as a moderating factor within the relationship between green digital marketing and consumer trust. Existing research on greenwashing has primarily examined the effects of misleading environmental claims on consumer attitudes. However, the moderating influence of counterfeit eco labels in digital marketplaces has received limited attention. By incorporating eco label counterfeiting into the conceptual framework, the study expands current understanding of the institutional and informational challenges that affect the effectiveness of sustainability communication.

Finally, the study contributes to the emerging literature on sustainable consumption in developing and emerging markets, particularly within ASEAN economies. Much of the existing research on green consumer behavior has focused on developed markets where environmental regulations and certification systems are relatively strong. In contrast, ASEAN markets present unique challenges related to regulatory diversity, digital transformation, and varying levels of consumer environmental awareness (Maduwinarti et al., 2025). The proposed framework therefore provides a contextual perspective that highlights the importance of trust and information credibility in shaping sustainable consumption behavior in rapidly digitalizing economies.

B. Managerial Implications

The findings of this conceptual study provide several important implications for businesses and marketing practitioners seeking to promote sustainable products in digital marketplaces. First, firms should recognize that green digital marketing must go beyond traditional promotional messaging. Simply communicating environmental claims through digital advertising may not be sufficient to influence consumer behavior if consumers question the credibility of the information. Instead, firms should integrate transparency mechanisms into their digital marketing strategies. One effective approach involves the use of digital verification technologies such as QR code traceability systems. These systems allow consumers to access detailed information about product origins, production processes, and

sustainability certifications through mobile devices. By providing transparent and verifiable information, companies can strengthen consumer trust and enhance the credibility of their environmental claims.

Second, firms should actively engage with consumers through interactive digital platforms. Social media channels, online communities, and digital storytelling tools allow organizations to communicate sustainability initiatives more effectively and build stronger relationships with consumers. Transparent communication regarding corporate sustainability goals, environmental performance, and supply chain practices can help reinforce consumer confidence in green products. Third, companies should ensure that eco labels and sustainability certifications used in marketing communication are legitimate, recognizable, and supported by credible certification bodies. Collaborating with reputable certification organizations can strengthen brand credibility and reduce the risk of consumer skepticism. Firms should also consider integrating digital authentication systems that allow consumers to verify the authenticity of eco labels.

C. Policy Implications

In addition to managerial implications, the proposed framework highlights several policy considerations for governments and regulatory institutions in ASEAN economies. One of the most pressing challenges identified in the literature is the increasing prevalence of greenwashing and counterfeit eco labels in digital marketplaces. Without adequate regulatory oversight, misleading environmental claims can undermine consumer trust and reduce the effectiveness of sustainability initiatives. Policymakers should therefore strengthen regulatory frameworks related to environmental certification and eco labeling systems. Establishing standardized sustainability certification schemes and clear guidelines for environmental claims can help ensure that eco labels used in marketing communication are credible and reliable. Regulatory authorities should also implement monitoring mechanisms to detect and prevent fraudulent sustainability claims.

Another important policy consideration involves the promotion of digital transparency technologies in supply chains. Governments can encourage firms to adopt traceability technologies such as blockchain systems and digital certification platforms that provide verifiable information about product sustainability. These technologies can help improve transparency and reduce the risk of counterfeit eco labels. Consumer education also plays a critical role

in promoting sustainable consumption. Public awareness campaigns that educate consumers about environmental labels, sustainability certifications, and responsible purchasing practices can enhance consumer understanding of sustainability information. Improved consumer knowledge can strengthen the effectiveness of green digital marketing initiatives and encourage more responsible consumption patterns.

By addressing these regulatory and educational challenges, policymakers can support the development of a more transparent and trustworthy marketplace for sustainable products. Such efforts contribute directly to the achievement of Sustainable Development Goal 12, which emphasizes responsible consumption and production.

VII. CONCLUSION

Sustainable consumption has become an essential component of global sustainability efforts, particularly within the framework of Sustainable Development Goal 12, which emphasizes responsible consumption and production. As environmental concerns intensify and digital technologies continue to reshape consumer markets, businesses increasingly rely on digital platforms to communicate sustainability initiatives and promote environmentally responsible products. In this context, green digital marketing has emerged as an important strategic approach that integrates sustainability communication with digital transparency mechanisms.

This conceptual study examined the role of green digital marketing in influencing sustainable consumer behaviour in ASEAN economies. By integrating insights from green marketing literature, behavioural theory, and trust based consumer behaviour perspectives, the study proposed a conceptual framework that highlights the mediating role of consumer trust and the moderating influence of eco label counterfeiting. The framework suggests that green digital marketing can positively influence sustainable consumer behaviour when it enhances the credibility and transparency of sustainability communication. Consumer trust serves as a key psychological mechanism that translates digital sustainability messaging into environmentally responsible purchasing decisions. The study also highlights the challenges associated with eco label counterfeiting and misleading environmental claims in digital marketplaces. The presence of counterfeit eco labels may weaken consumer trust in environmental certification systems and reduce the effectiveness of green marketing initiatives. This issue is particularly relevant in ASEAN markets, where rapid digital transformation is accompanied

by varying levels of regulatory enforcement and consumer awareness regarding sustainability certifications.

From a theoretical perspective, the study contributes to the literature by integrating the Theory of Planned Behaviour with trust based consumer behaviour models in the context of digital sustainability communication. While previous research has explored green marketing and sustainable consumption separately, the proposed framework emphasizes the importance of trust and transparency in digital marketing environments. By incorporating eco label counterfeiting as a moderating factor, the study also extends existing research on greenwashing and environmental communication. The study further contributes to the sustainable consumer behaviour in emerging markets. ASEAN economies represent a dynamic context characterized by rapid digital adoption, expanding e-commerce platforms, and increasing consumer interest in sustainable products. However, institutional differences and varying levels of environmental awareness create challenges for the credibility of sustainability communication. The conceptual framework developed in this study provides a foundation for future research examining how digital marketing strategies and transparency technologies influence sustainable consumption in the region.

Despite these contributions, the present study is conceptual in nature and therefore provides several opportunities for future empirical research. Future studies may empirically test the proposed framework using quantitative research methods such as structural equation modelling to examine the relationships between green digital marketing, consumer trust, eco label credibility, and sustainable consumer behaviour. Cross country comparative studies within ASEAN economies may also provide valuable insights into how institutional environments and digital literacy levels influence consumer responses to sustainability communication. In addition, future research may explore the role of emerging technologies such as blockchain based supply chain transparency, artificial intelligence driven sustainability verification systems, and digital product passports in strengthening the credibility of environmental claims. These technologies may offer new opportunities to address challenges related to greenwashing and counterfeit eco labels.

In conclusion, the transition toward sustainable consumption requires not only effective marketing strategies but also credible and transparent communication systems that build consumer trust. Green digital marketing has the potential to play a

transformative role in promoting sustainable consumer behaviour when supported by reliable certification systems, transparent supply chain information, and strong regulatory frameworks. By enhancing trust and transparency in sustainability communication, businesses, policymakers, and digital platforms can contribute to the advancement of responsible consumption and sustainable development across ASEAN economies.

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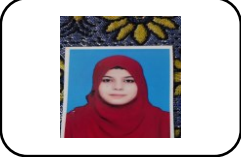
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AUTHOR'S INFORMATION

<p>First Author: Norzieiriani bt. Ahmad</p> 	<p>School of Business Management, Universiti Utara Malaysia, Kedah, Malaysia E-mail: norzie@uum.edu.my</p>
<p>Second Author: Farah Zainab</p> 	<p>School of Business Management, Universiti Utara Malaysia, Kedah, Malaysia E-mail: farahzainab0601@gmail.com</p>