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Article

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The power of social media: Exploring online member groups and psychological factors to support responsible consumption

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ABSTRACT

Consumer behavior in purchasing green products, especially food and cosmetics, is influenced by many factors. However, the role of online member group support in supporting the purchase of green products has received less attention despite the increase in the number of social media users. With the support of the norm activation model and social learning theory, this study unveils the purchase behavior of green products with the critical factors of social media use, online member group support, and psychological factors. Using a sample of 323 respondents who are experienced in purchasing green products and belong to green communities on social media, structural equation modeling revealed that social media usage and online member group support have a significant influence. Both constructs significantly influence green purchasing behavior. In addition, social media usage significantly influences subjective norms and green knowledge, whereas subjective norms also support green purchasing behavior. Green knowledge contributes to social responsibility, and social responsibility supports green purchasing behavior. This research provides valuable insights for companies on the importance of sustainability innovation for green food and cosmetic products.

1. Introduction

There has been substantial growth in the market for green products worldwide. This is due to high consumer awareness and encouragement from government regulations. Deloitte reports that around 46 % of consumers in 23 countries purchased green products or services in April 2023 (Pieters et al., 2023). While this is a decrease compared to 2021, when the percentage reached 61 %, this trend still indicates strong consumer motivation to consume green products (Pieters et al., 2023). Based on demand, climate activists purchase green products from the public community (Pieters et al., 2023). With the growing vogue of green product purchases, consumer expectations of green products ripen across different categories. As many as 27 % of consumers are willing to pay more for green brands (Pieters et al., 2023). Furthermore, Pieters et al. (2023) also explained that almost half of consumers buy green products, about 35 % purchase products for the green food category, and 5 % purchase care and beauty products.

Furthermore, Martins (2024) revealed that there has been a 71 % increase in online searches for green products globally in the last five years. This means that social media is still a mainstay for consumers who

want to find more information about green products. Concerning online inquiries, a study by Hasan et al. (2024) explains that social support from others in the consumer community (online and offline) plays a vital role in purchasing green products. They often seek online reviews and more information from other consumers before purchasing (Hasan et al., 2024; Ikhsan et al., 2024).

Consumers no longer use social media to share photos, stories, and experiences in the digital age. More than that, social media has become an essential source of information for consumers when making attitudes and purchasing decisions. Statistical numbers: 62.6 % of the world's population uses social media (Devgan, 2024), and most of them shape their lifestyles and have the potential to purchase green products (Zafar, Shen, Shahzad, & Islam, 2021). For consumers who care about and support a healthy environment, communities on social media serve as a bridge to gain knowledge and support in purchasing green products (Khare et al., 2022). In addition, the decision to purchase green products is also influenced by reference groups, such as family, role models, and leaders. Therefore, producers have both opportunities and challenges to utilize social media, given that consumer purchasing decisions often depend on the results of interactions with peers (Hasan & Sohail, 2021;

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Hutter et al., 2013) and online communities (Khare et al., 2022).

Statistics show that 51 % of consumers in Asia Pacific choose to consume green products due to their awareness and concern for their own and their family's health (Lightowler et al., 2022). In addition, according to the Rakuten Insight 2023 survey, 63 % of respondents in Indonesia stated that buying green products is very important (Statista, 2023). Specifically, the study by Ikhsan et al. (2024) on green product purchasing behavior in Indonesia found that 34.45 % of consumers buy green food and 24.01 % buy green cosmetics. In addition, 40.08 % of consumers buy green products because they are concerned about the environment. Therefore, consumers' attention to switching to green products, both cosmetics and food, is driven by their awareness of the negative impact of chemical use on the body and environmental damage. Consuming green products is also considered a form of responsible behavior.

Online purchase behavior in the context of conventional products has been extensively studied by previous researchers (Chidambaram et al., 2024; Harrigan et al., 2021; Liao et al., 2021; Peña-García et al., 2020; Song et al., 2023; Zhu et al., 2023). However, green product purchasing behavior in an online environment is still a dilemma (Zhang et al., 2024) as there is still limited understanding of how consumers understand green purchasing decisions online (Al-Swidi & Saleh, 2021). The study by Liao et al. (2021) explains that consumers who have experience purchasing conventional products online may help others make purchasing decisions. Furthermore, the study by Ikhsan et al. (2024), in the context of green products, confirmed that consumers will ask people with fine experience with green products as references that they consider trustworthy when buying them online. These people come from offline communities (subjective norm) (Hasan & Sohail, 2021) and online community groups (Khare et al., 2022). Both groups play an important role in green product purchase decisions. Through social media, consumers freely review positive experiences in consuming green products (Ikhsan et al., 2024) and give high ratings. In addition, in the social environment, consumers share good stories about the green products they consume and influence others who share the same views on environmental stewardship (Van Tonder et al., 2023). related to knowledge about green products, consumers evaluate alternative information (e.g., quality of reviews) before making a decision (Ikhsan et al., 2024). Therefore, consumers need comprehensive knowledge about the environmental impact of their products, thus converting them into actual purchasing behavior (Tehreem et al., 2021).

Regarding the involvement of conventional product purchase decisions, consumers believe that purchase decisions have a close affinity with product involvement (Ramadan et al., 2019). Meanwhile, online engagement level affects purchase intentions and behavior (Liao et al., 2021). In contrast to mass-produced conventional products, although consumers feel concerned about the environment and are committed to protecting the environment by buying green products, there is a concern that consumers do not consistently buy green products due to limited product supply (Tan et al., 2019). Furthermore, online engagement occurs when a product is associated with a self-concept consumers strongly believe in (Van den Broeck et al., 2018). When consumers realize that green products are highly relevant to themselves (e.g., environmental concerns and social responsibility), they will be highly engaged. A state of high engagement will lead consumers to actively search for online information related to the product, including brand and price (Ballon et al., 2018).

This study aims to address some of the research gaps related to the factors that drive green product purchasing behavior in the context of social media use and online communities. In addition, this study examines psychological factors such as knowledge, subjective norms, and consumer social responsibility that serve as mechanisms for behavior formation. The theoretical foundations are the norm activation model (Schwartz, 1977) and social learning theory (Bandura, 1977). The norm activation model explains how consumers are willing to sacrifice themselves for the welfare of others through altruistic intentions and

behaviors (Meng et al., 2020) that benefit others. Furthermore, social learning theory is the process consumers go through to gain knowledge through observation and imitation of the actions of others (Smith, 2021). In the context of social media, this theory emphasizes that consumers can learn something not only from direct experience but also from the experiences of others in the online community. Discussions and reviews about green products on social media are more effective in providing valuable knowledge about the benefits of green products because people in the online community share a common goal of caring about the environment. All the knowledge from social media can help consumers make better decisions. The norm activation model and social learning theory are relevant to consumers' desire to gain knowledge and environmentally responsible attitudes. Based on this theory, this study reveals that information companies post through social media can increase consumers' knowledge, attention, and engagement with environmental issues. In addition, consumers are also influenced by communities on social media that share similar green lifestyles, which in turn shapes the drive to be environmentally responsible and leads to green product purchasing behavior.

Based on the literature review results, several researchers have examined purchasing behavior that impacts the environment in online and offline contexts, such as purchases in the online environment (Palalic et al., 2021; Zafar, Shen, Shahzad, & Islam, 2021), Gen-Z behavior in purchasing footwear products (Borah et al., 2024), consumerable and durable consumer goods (Ikhsan et al., 2024), green energy products (Ruiz-Alba et al., 2022), food (Armutcu et al., 2024; Mazhar et al., 2022), and cosmetics (Dlamini & Mahowa, 2024; Shimul et al., 2022). However, studies on online member group support in the context of social media use and green product purchases have received less attention from researchers. Therefore, there is a need for more in-depth investigation to address this phenomenon and provide more comprehensive insights to support the transformation of green product innovation. The proposed framework to investigate the relationship between online member group support and green product purchase behavior in the context of social media use is a new contribution and extension of the norm activation model.

This study offers significant practical and theoretical implications by investigating several key factors that influence the purchase of green products. Companies producing green cosmetics and foods can leverage the findings of this study to gain a deeper understanding of how consumers perceive green products in the context of social media and support from online member groups. Furthermore, this study is structured in a logical sequence, starting with a literature review and hypothesis development, followed by research methods, results and discussion, implications, and conclusions.

2. Literature review and hypotheses development

2.1. Norm activation model

This research is based on the norm activation model to explain consumers' altruistic behavior in consuming green products (Schwartz, 1977). This model explains that awareness of consequences, responsibilities, and needs can shape consumers' norms (Schwartz, 1977; Schwartz & Howard, 1984). In addition, awareness of consequences and responsibility attributes also reflect consumers' beliefs that irresponsible actions can have adverse effects (Xie & Xu, 2024). In conclusion, consumers' moral obligation driven by awareness of consequences and responsibility can influence their behavior in supporting a green environment (Kim & Hwang, 2020).

In implementing the norm activation model in this study, when consumers use social media with the same intent, they join the green community as a form of concern and responsibility for the environment. Interactions in online communities (social media) encourage consumers to feel morally obligated to protect the environment by consuming green products. In addition, social media can educate consumers, increase

knowledge, and inspire behavior that cares about the environment (Zhao et al., 2019). Consumer posts on social media often provide information about environmentally conscious activities, such as reducing, reusing, and recycling useless materials (Pourabbasi & Shokouhyar, 2022). Environmental actions triggered by activities on social media receive positive support from consumers’ social groups.

2.2. Social learning theory

Social learning theory, as proposed by Bandura (1977), is a key concept in understanding consumer behavior. It refers to the process of gaining knowledge through observing the actions of others. This process involves external interactions with culture, environment, or society, triggering internal psychological processes that aid in decision-making (Illeris, 2003). Observation and imitation are key in understanding consumer behavior, where behaviors are often repeated and spread, influencing attitudes and values (O’Fallon & Butterfield, 2012). Social media, a modern platform for social learning, allows consumers to learn from the experiences and knowledge of others, including in the context of eco-friendliness (Chung et al., 2020).

Referring to social learning theory, the study of Chen et al. (2017) es for posts from friends, community activities, and recommendations that influence their internal cognitive and affective processes and ultimately form purchase preferences when using social media. Social learning theory has been applied in various fields, including social and behavioral sciences, as an approach that focuses on understanding various human behavioral and developmental issues (Akram et al., 2021; Chen et al., 2017; Shahzad et al., 2024). In line with some previous researchers, this study proposes a framework (Fig. 1) to predict green product purchase behavior for food and cosmetics. This study explains that the use of social media may play an essential role in shaping the desire to join the green community due to the similarity of goals, gaining knowledge about green products, and subjective norm encouragement. In addition, knowledge gained from social media about green products can foster a sense of social responsibility. The definitions and interrelationships of the various constructs in the framework will be discussed further.

2.3. Green purchase behavior

Green purchase behavior is the behavior of consumers responsible for the environment by choosing environmentally friendly products to

reduce the negative impact on nature (Han, 2020). This behavior involves avoiding purchasing and using environmentally harmful products (Amoako et al., 2020). Study Soomro et al. (2020) explained that green purchase behavior includes avoiding products that can damage the environment, meeting life needs without damaging the ecosystem, choosing products with low environmental impact, and excelling in sustainability. Meanwhile, Otto et al. (2021) added that green products usually use environmentally safe materials, can be recycled, and require less packaging. This study operationalizes green purchase behavior as consumer actions to buy green products (such as food and cosmetics) influenced by social media, online community support, knowledge, environmental and social responsibility, and exposure to subjective norms.

In consumer goods, green food and cosmetics are eco-friendly products produced for environmental sustainability (Suphasomboon & Vassanadumrongdee, 2022; Tan et al., 2022) and innovation for corporate sustainability. Green cosmetics, as a practice, prioritize the well-being of animals by not using them for experiments, use pure ingredients from nature without any artificial chemical elements as the main content, are packaged with recyclable materials, and reduce the carbon footprint in the distribution process. On the other hand, green food emphasizes the use of sustainable ingredients (local and organic) and a production process that does not negatively impact the environment. Green cosmetics and food products are widely considered safer and healthier than their non-green counterparts, offering added value to consumer.

2.4. Social media usage

Internet technology has revolutionized the way consumers and companies communicate and changed social behavior (Dwivedi et al., 2023; Shihab & Wangsa, 2024). Social media is one of the main communication channels that support this change (Melović et al., 2020). From a marketing perspective, social media is a technological aspect of business communication, transaction, and relationship-building activities, utilizing a network of potential customers and clients to drive shared value creation (Andzulis et al., 2012).

In the social context, this research views social media as a new channel to communicate with friends in the community, aiming to share information and support green product consumption behavior. Researchers agree that the use of social media has a vital role in influencing green product purchasing behavior (Nekmahmud et al., 2022),

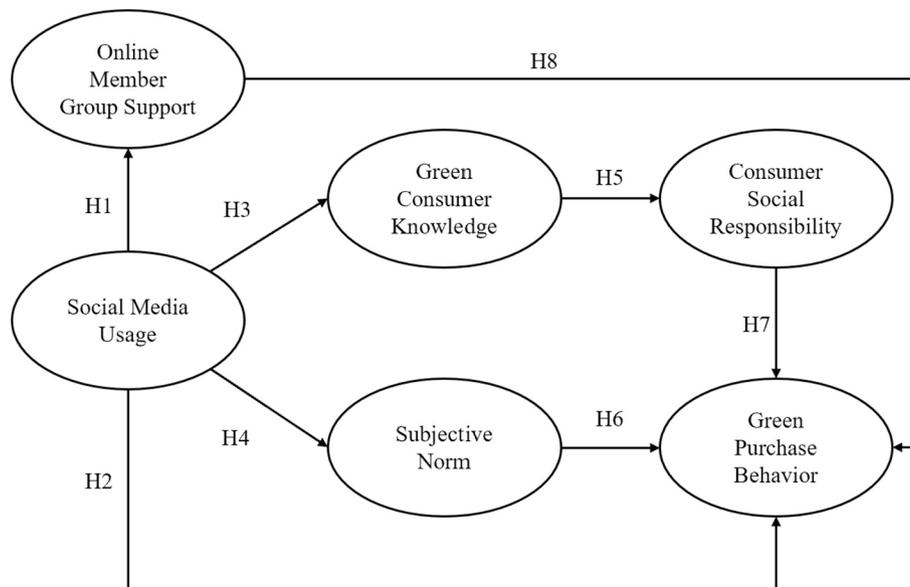


Fig. 1. Theoretical Framework

subjective norms (Nekmahmud et al., 2022; Sun & Xing, 2022), and consumer knowledge (Sun & Wang, 2020). It happens because social media is a platform for disseminating information about environmental issues, sustainable practices, and green products (Zhao et al., 2019). In addition, the study of Vyas and Pandey (2021) explained that social media usage increases employee knowledge from information-sharing activities.

Based on the results of previous studies, this research argues that social media can shape consumers' subjective norms as they tend to pay attention to what their peers in the community and people who are considered influential in supporting attitudes are doing. It can create social pressure to adopt similar practices, thus strengthening the desire to purchase green products. In addition, social media provides consumers with easy access to information about green products (Chi, 2021). It helps them make choices and prioritize the purchase of green products. Social media also fosters a community with the same environmental values, where members support and motivate each other to make sustainable choices. Therefore, this study proposes the following hypothesis:

- H1. Social media usage positively affects the online member group support.
- H2. Social media usage positively affects green purchase behavior.
- H3. Social media usage positively affects the green consumer's knowledge.
- H4. Social media usage positively affects the subjective norm.

2.5. Green consumer knowledge

Knowledge and awareness of environmental issues can encourage consumer attitudes to be more sensitive and engage in environmentally and socially responsible behavior (Borah et al., 2024; Chaihanchai & Anantachart, 2023). This behavior is reflected in the consumption of green products. This research interprets green knowledge as consumer awareness to make informed choices that are aligned with the values of sustainability and environmental responsibility. This argument is supported by the study of Dhir et al. (2021), which shows that knowledge can change consumer attitudes when they are aware of environmental issues. In addition, the study of Hosta and Zabkar (2021) also emphasizes that the availability of information is very important for consumers in consuming green products. Therefore, companies must provide valid information about green products (Schrader, 2007) as a form of accountability. Ultimately, it is the individual consumer's knowledge that forms the basis for increasing social responsibility, highlighting the importance of each person's actions in the larger context of sustainability.

The study of Mansoor and Wijaksana (2023) show that consumer knowledge about the environment positively influences behavior that supports the environment. This finding suggests that knowledge about green products can also encourage socially responsible consumer behavior. In addition, the study of Borah et al. (2024) also proved that consumer social responsibility mediates the relationship between consumer knowledge and green product purchasing behavior. This finding indicates that consumer knowledge directly impacts their social responsibility. It is consistent with Hosta and Zabkar (2021) study, which proves that the availability of information about the environment as a form of consumer knowledge can increase environmentally and socially responsible behavior. Based on this, this study proposes the following hypothesis:

- H5. Green consumer knowledge positively affects the consumer social responsibility.

2.6. Subjective norms

Subjective norms are closely related to social pressure and expectations from people who expect individuals to participate in specific actions (Ajzen, 1991; Van Tonder et al., 2023). Adherence to subjective norms depends on social pressure or direction from social groups to behave beneficially (Wang, 2014). In addition, consumers often seek input from group members when uncertain about the outcome of their behavior, such as opinions on the benefits and availability of green products in the market (Sreen et al., 2018). This social pressure can come from friends, family, or other community members (Setiawan et al., 2021).

In the norm activation model, subjective norms differ from personal norms (Van Tonder et al., 2023). Personal norms emphasize individual morals that lead to specific behaviors (Moser, 2015), while subjective norms concern the actions that other people expect consumers to do (Paul et al., 2016). Therefore, this study interprets subjective norms as the support and expectations from social members that consumers should voluntarily act to help others and the environment by purchasing green products.

Several previous researchers agree that subjective norms have a positive impact on green product purchasing behavior (Li et al., 2020; Ling et al., 2024; Liu et al., 2020; Roh et al., 2022; Synodinos et al., 2023; Taufique & Islam, 2021; Van Tonder et al., 2023). Based on this, this study proposes the following hypothesis:

- H6. Subjective norm positively affects green purchase behavior.

2.7. Consumer social responsibility

Conceptually, consumer social responsibility extends corporate social responsibility towards its consumers. Consumer social responsibility emphasizes consumption behavior that contributes to sustainable, fair, and ethical practices (Pawaskar et al., 2018) and maximizing long-term beneficial impacts on society (Mohr et al., 2001). Roberts (1995) has defined consumer social responsibility as an attitude towards purchasing, consuming, and disposing of products that are believed not to damage the environment. Thus, consuming green products shows consumers' social concern for environmental protection (Borah et al., 2024).

Furthermore, socially responsible consumers ensure that product purchase, use, and disposal do not negatively impact others or the environment (Fazal, 2011). Evidence of consumers who care about social and environmental responsibility can be seen from their tendency to buy green products and choose distribution channels that apply sustainability principles (Joshi & Rahman, 2015). This statement is supported by the findings of Dabija and Bejan (2018), which show that the higher the level of consumer social responsibility, the greater the positive influence on purchasing green products.

Consumer social responsibility is significantly influenced by consumers' knowledge about environmental issues. For instance, a study by Mansoor and Wijaksana (2023) demonstrated that knowledge about green products can stimulate socially responsible consumer behavior. This concept not only has a sustainable effect on consumers but also on business actors such as retailers, distributors, and manufacturers (Quazi et al., 2016). Their actions, which support socially responsible and safe business entities, are crucial in promoting consumer social responsibility:

- H7. Consumer social responsibility positively affects green purchase behavior.

2.8. Online member group support

Research on online member group support in the context of green purchase behavior has received less attention, even though the presence of social media has changed the mindset of consumers to be more

concerned about the environment (Horrich & Bekir, 2024; Teufer & Grabner-Kräuter, 2023) and social. For example, Nick et al. (2018) clearly state that the Internet affects the development and maintenance of social relationships. In addition, online social media can create new social spaces similar to offline ones (Gonçalves et al., 2011). The study by Zhang, Tang, and Liu (2023) conceptualizes online social support as emotional, informational, and practical help provided by others via the Internet and a sense of connectedness and acceptance from friends, family, and other social network members. This concept provides insight into how group members in online communities support consumers' decisions to consume green products (Nick et al., 2018; Zhao et al., 2021).

Online communities on social media focused on green practices provide a platform to share knowledge, offer support, and influence behavior (Ali et al., 2023; Kim et al., 2020). Members of these communities provide information on green products and emotional encouragement to be committed and environmentally responsible. Therefore, support from fellow online community members plays a vital role in shaping green product purchase behavior. Previous research has proven that using social media can strengthen consumers' relationships with others and increase willingness to provide support (Salem & Alanadoly, 2021), encouraging green product purchasing behavior. In addition, the study of Gilmour et al. (2020) confirmed that using social media (Facebook) for social support impacts overall consumer well-being. Based on this, this study proposes the following hypothesis:

H8. Online member group support positively affects green purchase behavior.

3. Methods

3.1. Measurements and social disability bias

This study aims to discuss purchase behavior towards green food and cosmetic products by identifying five exogenous variables: social media usage, online member group support, subjective norms, consumer green knowledge, and consumer social responsibility. Each variable is measured reflectively, by referring and adapting from several previous researchers. For example, green purchasing behavior (Ikhsan et al., 2024) and online member group support (Nick et al., 2018), each measured with four items. While social media usage was measured with three items, and subjective norms were measured with two items (Armutcu et al., 2024). Green consumer knowledge and consumer social responsibility were each measured with five items (Borah et al., 2024). This research model, which has been developed with thoroughness, uses 23 question items (Table 1).

The structured questionnaire consists of several sections. The first section informed respondents about the purpose of the survey and motivated them to answer according to actual conditions, stating that there were no right or wrong answers. The second section contained questions to ensure that respondents met the sample criteria. The criteria include (1) knowing about green products, (2) belonging to communities on social media such as Instagram, Facebook, WhatsApp, and others, and (3) having purchased and used green products in the food and cosmetics categories. Respondents who do not meet the criteria will be automatically eliminated.

The third section of the questionnaire is dedicated to gathering demographic information. This includes age, gender, occupation, education level, average monthly spending on green products (food or cosmetics), and frequently used social media platforms. To ensure that respondents feel comfortable providing this information, the questionnaire does not ask for personal data such as name, email, or mobile phone number (Fisman et al., 2020; Ikhsan et al., 2024). This approach helps to avoid unintended social bias and ensures that the data collected is accurate and unbiased.

The questionnaire consisted of questions regarding the independent

Table 1
Variable Measurement

Variable	Code	Questionnaire Items
Online member group support	OMGS1	In general, my friends on social media care about me.
	OMGS2	My friends on social media tell me about green products that I want to know about.
	OMGS3	When asking for advice on green products (food and cosmetics), my friends on social media gave useful advice.
	OMGS4	I always get responses (such as: Like, Comment, Share) when posting green products (food and cosmetics) that I use.
Social media usage	SMU1	My engagement on social media influences the purchase of green products (food and cosmetics).
	SMU2	Social media content about green products (food and cosmetics) is trustworthy.
	SMU3	Social media content about green products (food and cosmetics) is reliable.
Green consumer knowledge	PK1	I understand the environmental symbols on the packaging of green products (food and cosmetics).
	PK2	I know that consuming non-green products can damage the environment.
	PK3	I am knowledgeable about environmental issues.
	PK4	I know the environmental laws and regulations in Indonesia.
	PK5	I know the various ways to minimize pollution for the better health of living beings.
Subjective norms	SN1	People who are important to me think that I should buy green products (food and cosmetics).
	SN2	Most people I care about buy green products (food and cosmetics).
Consumer social responsibility	CSR1	I am concerned about the environment and believe I am responsible for improving the situation.
	CSR2	I believe everyone should be responsible when they enjoy the benefits of nature.
	CSR3	I believe that if consumers communicate their responsibility to the environment, companies will act responsibly.
	CSR4	My responsible actions towards environmental protection will help preserve natural resources.
	CSR5	I believe that humans must live in harmony with nature in order to survive.
Green purchase behavior	PB1	I intentionally buy green products (food and cosmetics).
	PB2	I always buy green products (food and cosmetics) for environmental reasons.
	PB3	When I choose two products (green and nongreen), I choose the one that is less harmful to humans and the environment.
	PB4	I strive to avoid purchasing products (food and cosmetics) that could harm the environment.

and dependent variables. Since the variables are measured simultaneously, it is essential to identify common method bias (CMB) (Kock et al., 2021). CMB testing uses the complete collinearity method based on each variable's latent variable score (LVS) value. The random value of the LVS is then regressed on the random value to get the variance inflation factor (VIF) value. If the VIF value is <3.3 (Diamantopoulos & Siguaw, 2006), the data is considered free from collinearity problems. A summary of CMB testing with SmartPLS 4.1.0.6 software is presented in

Table 2
CMB

	Random
LV scores – Consumer social responsibility	2.320
LV scores – Green consumer knowledge	2.948
LV scores – Online member group support	2.512
LV scores – Green purchase behavior	3.115
LV scores – Social media usage	2.267
LV scores – Subjective norms	2.527

Table 2.

Based on Table 2, the VIF value for each variable measured is highest at 3.115 for the green purchase behavior variable and lowest at 2.267 for the social media usage variable. Since the highest VIF value is less than 3.3, it can be concluded that the research data does not have collinearity problems.

The fourth section contains a list of questions with response options that use a semantic differential scale (1 = strongly disagree to 5 = strongly agree). A linguist and two members of the green community on social media checked all question items to ensure language appropriateness and measurement accuracy. Finally, the questionnaire was distributed online through social media (WhatsApp, Instagram and others online platforms).

3.2. Sampling strategy

The population in this study is an infinite number of Indonesian consumers who have purchased and used green products in the food and cosmetics category. The sample size was determined using the 10-time rule (Hair Jr et al., 2022), resulting in a research sample of 230 respondents. The sampling strategy, a meticulously planned approach, was carried out using a purposive sampling method, as it focused on predetermined criteria.

3.3. Normality

Statistical hypothesis testing with partial least square-structural equation modeling (PLS-SEM) uses bootstrapping techniques (Hair Jr et al., 2022). Therefore, it is free from normal distribution problems. However, using PLS-SEM on highly abnormal data can lead to unsatisfactory results, especially in terms of the statistical significance of the parameters (Guenther et al., 2023; Hair Jr et al., 2022). Consequently, it is vital to check the normality of the data when using PLS-SEM (Sarstedt et al., 2022). To increase the meaningfulness of the indicator residual variances within each model construct (Guenther et al., 2023) and because the research objectives are predictive (Hair et al., 2019; Ringle et al., 2023), the data normality evaluation uses the skewness and excess kurtosis values with a value limit of -2 to +2. The summary of the data normality test is presented in Table 3.

Based on Table 3, the excess kurtosis value for each variable item is in the range of -2 to +2, except for the CSR2-CSR5 item, which exceeds +2. At the same time, all skewness values are in the range of -2 to +2.

Table 3
Normality Distribution Level of Data

Variable	Item	Excess kurtosis	Skewness
Online member group support	OMGS1	0.533	-0.527
	OMGS2	-0.116	-0.520
	OMGS3	0.792	-0.841
	OMGS4	-0.322	-0.420
Social media usage	SMU1	-0.168	-0.484
	SMU2	0.446	-0.540
	SMU3	-0.102	-0.411
Green consumer knowledge	GCK1	0.576	-0.799
	GCK2	0.836	-1.078
	GCK3	0.367	-0.648
Subjective norms	GCK4	-0.517	-0.290
	GCK5	0.315	-0.663
	SN1	0.339	-0.697
Consumer social responsibility	SN2	-0.102	-0.452
	CSR1	1.218	-1.075
	CSR2	2.283	-1.339
	CSR3	3.860	-1.732
	CSR4	2.794	-1.418
Green purchase behavior	CSR5	3.641	-1.670
	PB1	-0.260	-0.493
	PB2	0.229	-0.660
	PB3	1.146	-1.036
	PB4	0.298	-0.842

These results indicate that the research data is not entirely normal, but there is no indication of normality-related severe problems. Therefore, using the PLS-SEM technique for structural model testing is considered appropriate.

3.4. Data analysis

As discussed in the data normality section, this study used the PLS-SEM technique with SmartPLS 4.1.0.6 software to answer the research hypothesis. The PLS-SEM analysis technique includes a measurement model (outer model) and a structural model (inner model) (Hair Jr et al., 2022). The measurement model aims to evaluate the validity and reliability of questionnaire items. Validity is tested through two methods: convergent and discriminant validity. Convergent validity is determined by the outer loading (OL) value >0.70 and the average variance extracted (AVE) value >0.50 (Hair Jr et al., 2022), while discriminant validity is measured using the heterotrait-monotrait correlation ratio (HTMT) and Fornell-Larcker criteria (Henseler et al., 2015). The reliability of the questionnaire was tested using Cronbach Alpha (CA) and Composite Reliability (CR), with the CA and CR value limits for each variable being >0.70 (Hair Jr et al., 2022).

The next step is structural model assessment. This research refers to the stages of structural model assessment suggested by Hair Jr et al. (2022). The first stage assesses collinearity problems in the structural model, the second tests the significance of the relationship between variables, the third assesses the explanatory power (R² dan f²), and the fourth assesses the structural model's predictive power.

4. Results

4.1. Respondent profiles

Based on the sampling procedure, the study initially targeted data collection from 230 respondents. However, during the questionnaire distribution period (June to July 2024), 497 responses were collected. After data cleaning and adjustment to the sample criteria, the final number of data met the criteria was 323. Demographic information of the respondents was obtained from the questionnaire and analyzed using cross-tabulation with SPSS software (Table 4).

Referring to Table 4, the younger age group (17–28 years) showed a higher preference for green products, especially green cosmetics, than the older age group. Female respondents tend to prefer green cosmetics, while males prefer green food. By occupation, university students and private employees are the most prominent groups, with university students more likely to prefer green food and private employees more likely to prefer green cosmetics. Respondents with undergraduate education are dominant in choosing green cosmetics, while high school graduates are likelier to choose green food. In the IDR 100.000–500.000 per month spending category for green products, preferences are almost balanced between green cosmetics and green food, but at higher spending, green cosmetics are more dominant. Respondents who use Instagram social media are the primary users when choosing green products, followed by WhatsApp and TikTok.

Furthermore, Levene's test and t-test were used to evaluate the mean differences between the two green product categories (cosmetics and food) on several variables: social media use, online group member support, subjective norms, green consumer knowledge, consumer social responsibility, and green purchasing behavior.

Based on the Levene test for equality of variances (Table 5), the value of F = 0.173 and Sig = 0.678 > 0.05 for the online member group support variable, indicating homogeneous variance, while the t-test value = 1.737 and Sig = 0.083 > 0.05 indicates no statistically significant difference between the means of purchasing green products (cosmetics and food). This result also applies to social media usage, consumer social responsibility, and green purchasing behavior. However, the t-test values for green consumer knowledge and subjective

Table 4
Cross Tabulation of Respondents' Demographics

		Green Product		Total	
		Cosmetic	Food		
Age	17–22	Count	33	42	75
		%	10.2 %	13.0 %	23.2 %
	23–28	Count	59	44	103
		%	18.3 %	13.6 %	31.9 %
	29–34	Count	38	26	64
		%	11.8 %	8.0 %	19.8 %
	35–40	Count	36	20	56
%		11.1 %	6.2 %	17.3 %	
41–46	Count	9	11	20	
	%	2.8 %	3.4 %	6.2 %	
> 46	Count	2	3	5	
	%	0.6 %	0.9 %	1.5 %	
Gender	Female	Count	118	80	198
		%	36.5 %	24.8 %	61.3 %
	Male	Count	59	66	125
		%	18.3 %	20.4 %	38.7 %
Job	Student	Count	45	54	99
		%	13.9 %	16.7 %	30.7 %
	Government Employee	Count	23	26	49
		%	7.1 %	8.0 %	15.2 %
	Private Employee	Count	87	49	136
		%	26.9 %	15.2 %	42.1 %
	Professional	Count	8	8	16
%		2.5 %	2.5 %	5.0 %	
Entrepreneur	Count	12	7	19	
	%	3.7 %	2.2 %	5.9 %	
Others	Count	2	2	4	
	%	0.6 %	0.6 %	1.2 %	
Education	High School	Count	41	50	91
		%	12.7 %	15.5 %	28.2 %
	Diploma	Count	21	17	38
		%	6.5 %	5.3 %	11.8 %
	Undergraduate	Count	89	62	151
		%	27.6 %	19.2 %	46.7 %
	Graduate	Count	23	15	38
%		7.1 %	4.6 %	11.8 %	
Doctoral	Count	3	2	5	
	%	0.9 %	0.6 %	1.5 %	
Expenditure (IDR)/mount	100.000–500.000	Count	70	67	137
		%	21.7 %	20.7 %	42.4 %
	500.001–1.000.000	Count	39	29	68
		%	12.1 %	9.0 %	21.1 %
	1.000.001–1.500.000	Count	26	17	43
		%	8.0 %	5.3 %	13.3 %
1.500.000–2.000.000	Count	15	13	28	
	%	4.6 %	4.0 %	8.7 %	
> 2.000.000	Count	27	20	47	
	%	8.4 %	6.2 %	14.6 %	
Social Media	Instagram	Count	109	77	186
		%	33.7 %	23.8 %	57.6 %
	TikTok	Count	26	29	55
		%	8.0 %	9.0 %	17.0 %
	Facebook	Count	2	6	8
		%	0.6 %	1.9 %	2.5 %

Table 4 (continued)

		Green Product		Total
		Cosmetic	Food	
Twitter	Count	5	2	7
	%	1.5 %	0.6 %	2.2 %
WhatsApp	Count	35	32	67
	%	10.8 %	9.9 %	20.7 %

norms indicate a statistically significant difference between the means of green product purchases (cosmetics and food) as their respective Sig values are $0.043 < 0.05$. The mean difference for green consumer knowledge was 0.921 with a non-zero 95 % confidence interval (0.035 to 1.806), while the mean difference for subjective norms was 0.371 with a non-zero 95 % confidence interval (0.012 to 0.730).

Levene's test and t-test results imply that companies need to develop more specific educational strategies since there are significant differences in consumers' knowledge of green products (cosmetics and food). For example, marketing campaigns on social media can be conducted to increase consumer knowledge about the benefits of green products, with customized content for each type of product (cosmetics and food). In addition, subjective norms showing significant differences indicate that social factors or perceptions of others may influence consumers' choices differently between green cosmetics and green food. Companies can utilize influencers or testimonials from influential figures to influence consumer perceptions, especially among those who strongly prefer one of the green products.

4.2. Measurement model evaluation

The results of the convergent validity analysis (Table 6) show that all items on the variables of social media usage, online member group support, green consumer knowledge, subjective norms, consumer social responsibility, and green purchase behavior produce $OL > 0.70$ and $AVE > 0.50$ values. These results indicate that each item reflects each variable measured, so it can be stated that convergent validity is met. Furthermore, the CA and CR values for each measured variable are > 0.70 and do not exceed 0.95 (Hair Jr et al., 2022), so the questionnaire is declared reliable.

Discriminant validity testing refers to the HTMT and Fornell Lacker criteria (Table 7 and Table 8). Table 7 presents the HTMT assessment results, which indicate good discriminant validity with the highest correlation value of 0.836 and less than the threshold value of 0.90 (Hair Jr et al., 2022). Overall, the HTMT values indicate that each construct in the research model is distinct, so discriminant validity is met according to the HTMT criteria.

On other criteria, Table 8 provides information about discriminant validity using the Fornell-Lacker criterion. The results are also declared good because of the root AVE value (0.881). For example, the consumer social responsibility variable is greater than the correlation value between other variables. Likewise, the root AVE value for other variables is also more excellent.

4.3. Evaluation of the structural model

This study aims to explain the theoretical model by following several stages of testing. The first stage is to check for collinearity issues. Collinearity detection is done by referring to the VIF value < 3.3 . Based on Table 9 and Fig. 2, all relationships between variables show VIF values in the range of 1–2.460, so the model is declared free from collinearity problems.

The next stage assesses the estimated relationship between variables using the p-value to determine the acceptance or rejection of the hypothesis (Table 9). Social media usage positively and significantly affects online member group support with $\beta_1 = 0.678$ and p -value < 0.001 ,

Table 5
Independent Samples Test–Green Cosmetic (n = 177), Green Food (n = 146).

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig.	Mean Difference	SE Difference	95 % C-I of the Difference	
									Lower	Upper
OMGS	Equal variances assumed	0.173	0.678	1.737	321	0.083	0.611	0.352	-0.081	1.304
SMU	Equal variances assumed	0.080	0.777	1.491	321	0.137	0.379	0.254	-0.121	0.879
GCK	Equal variances assumed	0.446	0.505	2.045	321	0.042	0.921	0.450	0.035	1.806
SN	Equal variances assumed	1.554	0.213	2.031	321	0.043	0.371	0.183	0.012	0.730
CSR	Equal variances assumed	1.561	0.212	1.250	321	0.212	0.477	0.382	-0.274	1.228
GPB	Equal variances assumed	1.475	0.225	0.761	321	0.447	0.244	0.321	-0.387	0.875

Noted: OMGS: Online Member Group Support; SMU: Social Media Usage; GCK: Green Consumer Knowledge; SN: Subjective Norms; CSR: Consumer Social Responsibility; GPB: Green purchase behavior; df: degree of freedom; SE: Standar Error; C-I: Confidence Interval; Sig: Significance.

Table 6
Validity and Reliability

Construct	Item	OL	AVE	CA	CR
Consumer social responsibility	CSR1	0.856	0.777	0.928	0.928
	CSR2	0.904			
	CSR3	0.923			
	CSR4	0.857			
	CSR5	0.865			
Online member group support	OMGS1	0.789	0.715	0.867	0.868
	OMGS2	0.874			
	OMGS3	0.864			
	OMGS4	0.853			
	GCK1	0.736			
Green consumer knowledge	GCK2	0.772	0.642	0.859	0.864
	GCK3	0.848			
	GCK4	0.780			
	GCK5	0.862			
	SMU1	0.748			
Social media usage	SMU2	0.887	0.718	0.800	0.805
	SMU3	0.900			
	SN1	0.898			
Subjective norms	SN2	0.898	0.807	0.760	0.760
	PB1	0.838			
Green purchase behavior	PB2	0.853	0.737	0.881	0.882
	PB3	0.860			
	PB4	0.881			

Table 7
Discriminant Validity – HTMT

	CSR	GCK	OMGS	GPB	SMU	SN
Consumer social responsibility						
Green consumer knowledge	0.769					
Online member group support	0.601	0.715				
Green purchase behavior	0.747	0.832	0.756			
Social media usage	0.610	0.764	0.816	0.764		
Subjective norms	0.532	0.804	0.836	0.834	0.791	

Table 8
Discriminant Validity – Fornell Lacker Criterion

	CSR	GCK	OMGS	GPB	SMU	SN
Consumer social responsibility	0.881					
Green consumer knowledge	0.694	0.801				
Online member group support	0.539	0.617	0.846			
Green purchase behavior	0.678	0.723	0.660	0.859		
Social media usage	0.529	0.633	0.678	0.642	0.847	
Subjective norms	0.448	0.649	0.679	0.682	0.615	0.898

Table 9
Structural Model

Path	VIF-Inner	Std	Stdev	T statistics	p values
H1. Social media usage→Online member group support	1.000	0.678	0.040	16.956	<0.001
H2. Social media usage→Green purchase behavior	2.136	0.150	0.057	2.623	0.009
H3. Social media usage→Green consumer knowledge	1.000	0.633	0.043	14.571	<0.001
H4. Social media usage→Subjective norms	1.000	0.615	0.041	15.059	<0.001
H5. Green consumer knowledge→Consumer social responsibility	1.000	0.694	0.040	17.301	<0.001
H6. Subjective norms→Green purchase behavior	2.030	0.332	0.061	5.470	<0.001
H7. Consumer social responsibility→Green purchase behavior	1.521	0.381	0.049	7.701	<0.001
H8. Online member group support→Green purchase behavior	2.460	0.128	0.061	2.090	0.037

so the first hypothesis is accepted. Social media usage also positively and significantly affects purchase behavior with a β_2 value = 0.150 and p-value = 0.009, so the second hypothesis is accepted. Furthermore, this study proves that social media usage positively and significantly affects green consumer knowledge with a β_3 value = 0.633 and p-value <0.001, so the third hypothesis is accepted. Social media usage positively and significantly affects subjective norm with a β_4 value = 0.615 and p-value <0.001, so the fourth hypothesis is accepted. Green consumer knowledge positively and significantly affects consumer social responsibility with a β_5 value = 0.649 and p-value <0.001, so the fifth hypothesis is accepted. Subjective norm positively and significantly affects purchase behavior with a β_6 value = 0.332 and p-value <0.001, so the sixth hypothesis is accepted. Consumer social responsibility has a positive and significant effect on purchase behavior with a β_7 value = 0.381 and p-value <0.001, so the seventh hypothesis is accepted. Finally, online member group support positively and significantly affects purchase behavior with a β_8 value = 0.128 and p-value <0.037, so the eighth hypothesis is accepted.

Furthermore, referring to the beta coefficient value, this study provides information that the effect of media use on online member group support and consumer knowledge on consumer social responsibility are the two most dominant and significant directions in explaining green product purchasing behavior in the structural model.

The next step is to evaluate the strength of the structural model described in Table 10. Green consumer knowledge showed a 48.1 % contribution to consumer social responsibility ($R^2 = 0.481$), and in the

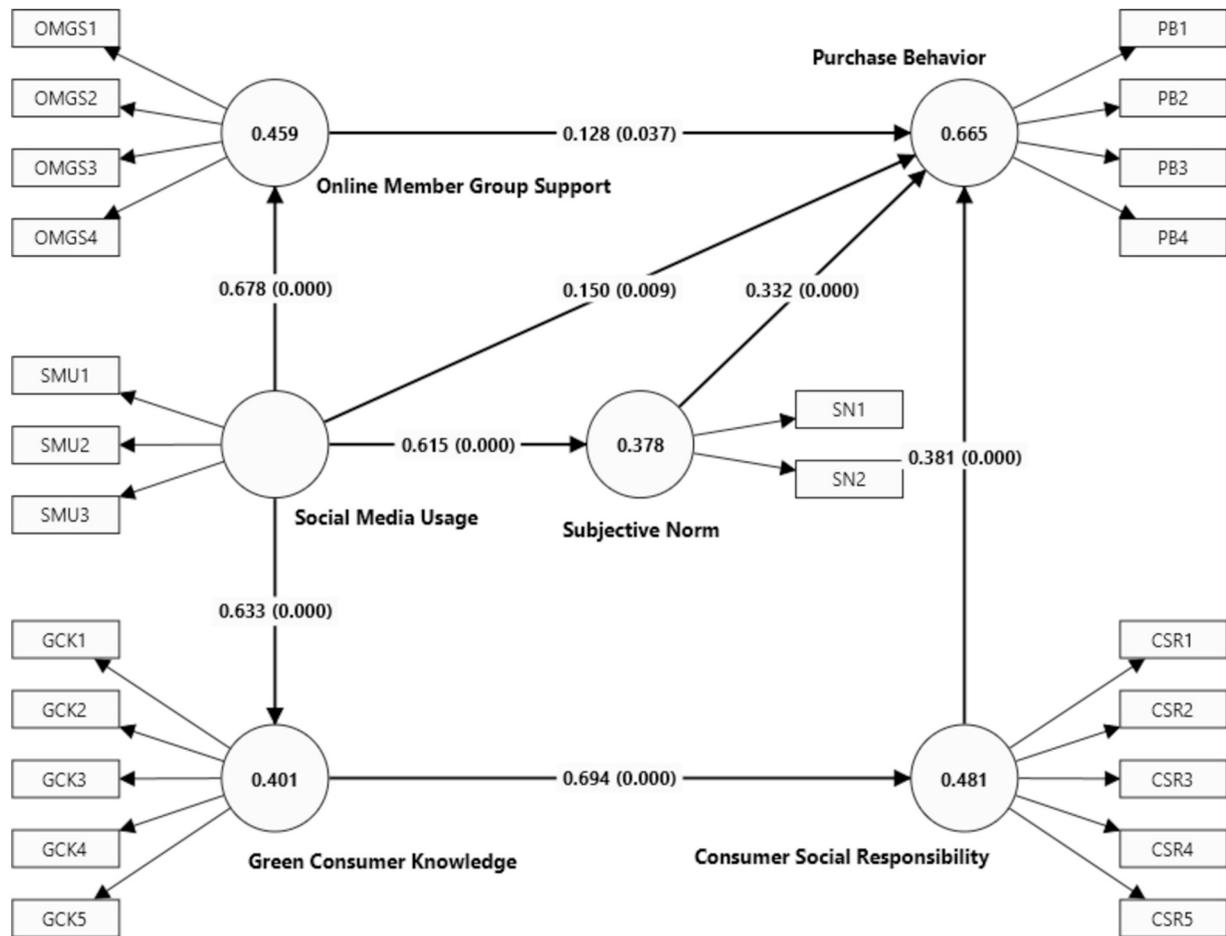


Fig. 2. Inner Model.

Table 10
The Model’s Explanatory Power

	R ²	f ²	Decision
Green consumer knowledge→Consumer social responsibility	0.481	0.928	Strong
Social media usage→Green consumer knowledge	0.401	0.670	Strong
Social media usage→Online member group support	0.459	0.849	Strong
Social media usage→Subjective norms	0.378	0.608	Strong
Social media usage→Green purchase behavior		0.031	Weak
Consumer social responsibility→Green purchase behavior		0.285	Moderate
Online member group support→Green purchase behavior	0.665	0.020	Weak
Subjective norms→Green purchase behavior		0.162	Lemah

structural model, this relationship has a strong influence ($f^2 = 0.928$). Green consumer knowledge and online member group support are determined by social media usage with $R^2 = 0.401$ and $R^2 = 0.459$, respectively. Both relationships strongly influence the structural model, with f^2 values of 0.670 and 0.849, respectively. Similarly, subjective norms are influenced by social media usage by 37.8 % ($R^2 = 0.378$), but their influence in the structural model is significant ($f^2 = 0.609 > 0.350$).

Some variables, such as social media usage, consumer social responsibility, online member group support, and subjective norms, contribute to shaping green purchase behavior by 66.5 % ($R^2 = 0.665$). However, the contribution of social media usage ($f^2 = 0.031$), online member group support ($f^2 = 0.020$), and subjective norms ($f^2 = 0.162$) to green purchase behavior is relatively weak. In contrast, consumer

social responsibility strongly influences green purchase behavior with a value of $f^2 = 0.285$.

The last test in the structural model is to assess the model’s predictive power using the PLS-predict method. This method aims to evaluate the ability of the PLS model to predict new values of the dependent variable (predicted variable) based on the value of the independent variable (predicting variable) (Shmueli et al., 2019). In addition, PLS-predict can also be used to predict models both in and out of the sample (Hair Jr, 2021). The smaller the root mean squared error (RMSE) value in the PLS-SEM model compared to the RMSE value in the linear model (LM), the better the model’s predictive ability. Table 11 summarizes the PLS-predict results using the RMSE approach, which includes predictions for 20 indicators.

5. Discussions

This study predicts consumer behavior in purchasing green products (especially cosmetics and food), which is influenced by social media usage, online member group support, and psychological factors (green consumer knowledge, subjective norms, consumer social responsibility). Eight hypotheses were tested and statistically resulted in positive and significant coefficient estimates. Social media usage influences online member group support (H1), and online member group support influences green purchase behavior (H8). Together, these new hypotheses contribute to the norm activation model and social learning theory in the context of social media usage and green purchase behavior. In addition, this study also proves that social media usage has a positive impact on green purchasing behavior (H2). Concerning these findings (H1 and H8), consumers use social media to interact, learn about the

Table 11
Predictive Power - PLSpredict

Item	Q ² predict	RMSE		
		PLS-SEM	LM	PLS-SEM vs LM
CSR1	0.244	0.700	0.697	0.003
CSR2	0.219	0.671	0.668	0.003
CSR3	0.155	0.701	0.703	-0.002
CSR4	0.205	0.721	0.716	0.005
CSR5	0.190	0.679	0.676	0.003
GCK1	0.247	0.814	0.822	-0.008
GCK2	0.189	0.779	0.782	-0.003
GCK3	0.251	0.687	0.690	-0.003
GCK4	0.265	0.812	0.805	0.007
GCK5	0.315	0.689	0.686	0.003
OMGS1	0.277	0.689	0.693	-0.004
OMGS2	0.317	0.822	0.814	0.008
OMGS3	0.316	0.750	0.753	-0.003
OMGS4	0.381	0.805	0.786	0.019
PB1	0.259	0.671	0.679	-0.008
PB2	0.323	0.729	0.734	-0.005
PB3	0.336	0.678	0.682	-0.004
PB4	0.275	0.721	0.721	0.000
SN1	0.290	0.741	0.742	-0.001
SN2	0.307	0.790	0.794	-0.004

behavior of others, and seek all information related to green products through the online communities they join (Zhang, Tang, & Liu, 2023). Following its function, social media acts as a new information and learning media for consumers to determine attitudes and behave environmentally friendly (Horrich & Bekir, 2024; Nekomahmud et al., 2022; Teufer & Grabner-Kräuter, 2023). Therefore, previous researchers' statements about the function of social media have supported the hypothesis statement: social media affects green purchase behavior (H2). Social media is also a new space for consumers to get the support of community members when they want to make green product purchase decisions (Nick et al., 2018; Zhao et al., 2021). This argument is based on the study of Salem and Alanadoly (2021), which explains that social media facilitates the support of fellow members in shaping certain behaviors.

The social media usage hypothesis affects subjective norms (H4), which is in line with the study of Nekomahmud et al. (2022) and Pop et al. (2020). Meanwhile, the hypothesis that social media usage affects green consumer knowledge (H3) supports the statement of Vyas and Pandey (2021) that social media usage is positively correlated with information-sharing activities. It means that social media has become a source of information due to the availability of sharing features that encourage the dissemination of ideas, responses, perceptions, and other user-generated content to be accepted as consumer knowledge (Kim et al., 2015; Vyas & Pandey, 2021). In addition, the findings of this study support social learning theory (Bandura, 1977), which explains that consumers learn and understand green products by observing and imitating the behavior of social media users (including community members). Therefore, social media has become a bridge for conveying knowledge about norms, values, and ethics.

This study explains that green consumer knowledge affects consumer social responsibility (H5), and consumer social responsibility affects green purchase behavior (H7). The findings of these two hypotheses support the study of Borah et al. (2024). Furthermore, this study explains that consumers have the right to get the correct information regarding green products to support them in being socially responsible, environmentally and in purchasing behavior. Study Shaw and Shiu (2003) also emphasize the importance of information availability for consumers to be willing to consume green products. In addition, some previous researchers have also signaled that information limitations can reduce green product purchases (Chang et al., 2021). The study findings of Ikhsan et al. (2024) provide a controversial statement that information limitations can increase green product purchases because consumers pay attention to a company's reputation. Furthermore, the study

of Tanveer et al. (2024) and Dabija and Bejan (2018) reinforce the study findings that consumers with a high sense of social responsibility tend to choose to consume green products. Thus, this study supports the norm activation model.

5.1. Implications for theory

This study has proven that green consumer purchase behavior can be well predicted by social media usage, online member group support, subjective norms, and consumer social responsibility. Meanwhile, green consumer knowledge predicts consumer social responsibility. Therefore, this research framework model contributes theoretically to expanding the norm activation model and social learning theory literature. According to Gutierrez et al. (2023), using social media can encourage human interaction by exchanging ideas with fellow users, communities, companies, and governments to establish informal communication. Therefore, the conceptual model has been statistically proven by correlating the constructs of social media use and online member group support with green purchase behavior to expand the study of social learning theory.

Meanwhile, correlating subjective norms and consumer social responsibility with green purchase behavior supports the norm activation model. In addition, correlating green knowledge with consumer social responsibility supports the norm activation model. This model also provides insight into environmental, social, and technological changes. The results of this study prove that combining theories has the opportunity to assess and explain green purchase behavior for cosmetics and food products on social media.

5.2. Practical implications

The findings of this study not only enrich the literature on the norm activation model and social learning theory implemented in green purchasing behavior, particularly green cosmetics and food products but also provide some practical implications for innovative businesses seeking to increase purchasing value.

Community management is essential (Aquino et al., 2024). Consumer decisions to consume green products (green food and cosmetics) are often driven by the support of group members in online communities (Nick et al., 2018; Zhao et al., 2021). Therefore, companies can use social media to increase group support and strengthen online communities. With a community management approach, companies can encourage and facilitate interactions on social media platforms by creating engaging content, organizing discussions, and holding interaction campaigns that motivate members to participate actively.

Social media can maintain relationships, share ideas, and promote businesses. Effective use of social media can encourage consumers to choose green products (Jain et al., 2020; Lee et al., 2021), specifically green food and cosmetic products. Therefore, companies can focus on campaigning their products on social media to encourage behavior change towards green purchasing. In addition, companies can increase consumer engagement (Pop et al., 2020) through various activities, such as live chat, content competitions, sharing success stories, and testimonials. Companies can also run educational campaigns on social media about the positive impacts of green purchasing behavior. In addition, companies can consider triggering feelings of shame in consumers who do not take environmental sustainability seriously (Tandon et al., 2020).

Companies need to utilize social media to increase consumer knowledge about environmental sustainability and encourage the use of green products. For this reason, companies can continue to develop innovative green food and cosmetics products that meet consumer needs and expectations. Huang et al. (2024) showed how companies can optimize green innovation and exploit the label-based marketing environment. In addition, companies must also provide clear and transparent information regarding environmental issues, which helps build trust and commitment to their sustainability programs.

Subjective norms are a person's beliefs regarding how essential individuals around them support or do not support a behavior or decision. Strategic use of social media can shape and influence consumers' subjective norms, influencing their purchasing behavior towards green food and cosmetics brands. To reinforce these subjective norms, companies can create content that features testimonials from respected influencers or endorsers, which can change consumers' views towards green products. Engaging influencers (Singh & Aggarwal, 2023) or figures they respect is another strategy that can encourage consumers to follow this trend.

Consumers' knowledge of green food and cosmetic products helps them make purchasing decisions and strengthens their commitment to social responsibility. By capitalizing on this knowledge, companies can build stronger consumer relationships, increase brand value, and contribute to sustainability goals. Furthermore, companies can use consumers' knowledge of green products to encourage more responsible social actions, such as getting them involved in social and environmental activities that support the company's commitment to social responsibility. Macca et al. (2024) showed that participation in sustainability initiatives can increase the sense of social responsibility. In addition, companies can integrate ethical and social responsibility practices into their entire business chain, from upstream to downstream.

The influence of subjective norms on green product purchase behavior suggests that pressure from people around consumers can influence the decision to purchase green food and cosmetic products. Caniels et al. (2021) explain that social value can increase the likelihood of consumers choosing green products to strengthen their social perceptions. Therefore, companies can expand consumers' access to social value creation, for example, by highlighting how people in social groups or communities choose green products and displaying information about the company's green practices that conform to social norms. It can encourage consumers to follow the same behavior.

The results of this study show that the higher consumers' sense of social responsibility, the more likely they are to purchase green food and cosmetics products. Companies need to leverage this sense of social responsibility to encourage more sustainable purchasing behavior. Lee et al. (2021) revealed that interactivity (two-way engagement between companies and consumers) in social responsibility campaigns can increase consumer engagement. They feel more connected and motivated to participate when they actively participate in the campaign. Therefore, companies can design more effective strategies to attract and retain consumers who care about sustainability, for example, through interactive campaigns that provide opportunities to provide feedback and rewards to those who participate. In addition, companies need to not only develop green products but also support broader social causes.

Online communities' support can help companies promote green food and cosmetics products. Zhang, Hassan, and Migin (2023) pointed out that consumers use community group buying platforms to improve shopping efficiency without having to leave home. Therefore, companies can encourage the purchase of green products by designing simpler and easier-to-use operating systems in popular languages (Zhang, Hassan, & Migin, 2023). In addition, managing online communities such as discussion forums that focus on green purchasing behavior can provide a platform for people to share positive experiences.

6. Conclusions

This research has found several findings that can contribute to understanding and assessing green purchase behavior in the context of social media usage and psychological factors. Therefore, this study concludes that social media usage affects online member group support, green consumer knowledge, subjective norms, and green purchase behavior in green food and cosmetic products. Social media usage, online member group support, subjective norms, and consumer social responsibility influence green purchase behavior. Finally, green consumer knowledge affects consumer social responsibility. This research opens

up opportunities to examine green purchase behavior in the same or different product categories by adding online review constructs (Ikhsan et al., 2024), trust in social media (Zafar, Shen, Ashfaq, & Shahzad, 2021) and personal norms (Han, 2020). Methodologically, this study did not specifically examine the indirect relationship between variables, which is one of the study's limitations. Therefore, future researchers can conduct indirect testing in our proposed model by differentiating one of the green product categories in a sample of developing and developed countries to gain greater insight into understanding consumer behavior. In addition, this research has been comprehensively designed to answer the research objectives but still has limitations, such as the frequency of social media use. Future researchers can add the frequency of social media use as a moderating relationship between social media usage, green purchase behavior, and green consumer knowledge.

CRedit authorship contribution statement

Muchsinn Saggaff Shihab: Writing – review & editing, Data curation, Conceptualization. **Ridho Bramulya Ikhsan:** Validation, Software, Methodology, Formal analysis, Data curation. **Ahmad Fakhrorazi:** Validation, Software, Methodology.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

I have shared the link to my data

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Akram, U., Junaid, M., Zafar, A. U., Li, Z., & Fan, M. (2021). Online purchase intention in Chinese social commerce platforms: Being emotional or rational? *Journal of Retailing and Consumer Services*, 63, Article 102669. <https://doi.org/10.1016/j.jretconser.2021.102669>
- Ali, M., Ullah, S., Ahmad, M. S., Cheok, M. Y., & Alenezi, H. (2023). Assessing the impact of green consumption behavior and green purchase intention among millennials toward sustainable environment. *Environmental Science and Pollution Research*, 30(9), 23335–23347. <https://doi.org/10.1007/s11356-022-23811-1>
- Al-Swidi, A., & Saleh, R. M. (2021). How green our future would be? An investigation of the determinants of green purchasing behavior of young citizens in a developing country. *Environment, Development and Sustainability*, 23(9), 13436–13468. <https://doi.org/10.1007/s10668-020-01220-z>
- Amoako, G. K., Dzogbenuku, R. K., & Abubakari, A. (2020). Do green knowledge and attitude influence the youth's green purchasing? Theory of planned behavior. *International Journal of Productivity and Performance Management*, 69(8), 1609–1626. <https://doi.org/10.1108/IJPPM-12-2019-0595>
- Andzulis, J. M., Panagopoulos, N. G., & Rapp, A. (2012). A review of social media and implications for the sales process. *Journal of Personal Selling & Sales Management*, 32(3), 305–316. <https://doi.org/10.2753/PSS0885-3134320302>
- Aquino, J., Falter, M., & Fusté-Forné, F. (2024). A community development approach for regenerative tourism in the Nordics: Lifestyle entrepreneurs towards a placed-based research agenda. *Journal of Tourism Futures*. <https://doi.org/10.1108/JTF-06-2023-0148>. ahead-of-print (ahead-of-print).
- Armutcu, B., Ramadani, V., Zeqiri, J., & Dana, L.-P. (2024). The role of social media in consumers' intentions to buy green food: Evidence from Türkiye. *British Food Journal*, 126(5), 1923–1940. <https://doi.org/10.1108/BFJ-11-2022-0988>
- Ballon, P., Van Hoed, M., & Schuurman, D. (2018). The effectiveness of involving users in digital innovation: Measuring the impact of living labs. *Telematics and Informatics*, 35(5), 1201–1214. <https://doi.org/10.1016/j.tele.2018.02.003>
- Bandura, A. (1977). *Social learning theory*. Prentice Hall: University of Michigan.
- Borah, P. S., Dogbe, C. S. K., & Marwa, N. (2024). Generation Z's green purchase behavior: Do green consumer knowledge, consumer social responsibility, green advertising, and green consumer trust matter for sustainable development? *Business Strategy and the Environment*, 33(5), 4530–4546. <https://doi.org/10.1002/bse.3714>
- Caniels, M. C. J., Lambrechts, W., Platje, J., Motylska-Kuźma, A., & Fortuński, B. (2021). Impressing my friends: The role of social value in green purchasing attitude for youthful consumers. *Journal of Cleaner Production*, 303, Article 126993. <https://doi.org/10.1016/j.jclepro.2021.126993>
- Chaihananchai, P., & Anantachart, S. (2023). Encouraging green product purchase: Green value and environmental knowledge as moderators of attitude and behavior

- relationship. *Business Strategy and the Environment*, 32(1), 289–303. <https://doi.org/10.1002/bse.3130>
- Chang, T.-W., Chen, Y.-S., Yeh, Y.-L., & Li, H.-X. (2021). Sustainable consumption models for customers: Investigating the significant antecedents of green purchase behavior from the perspective of information asymmetry. *Journal of Environmental Planning and Management*, 64(9), 1668–1688. <https://doi.org/10.1080/09640568.2020.1837087>
- Chen, A., Lu, Y., & Wang, B. (2017). Customers' purchase decision-making process in social commerce: A social learning perspective. *International Journal of Information Management*, 37(6), 627–638. <https://doi.org/10.1016/j.ijinfomgt.2017.05.001>
- Chi, N. T. K. (2021). Understanding the effects of eco-label, eco-brand, and social media on green consumption intention in ecotourism destinations. *Journal of Cleaner Production*, 321, 1–17. <https://doi.org/10.1016/j.jclepro.2021.128995>
- Chidambaram, V., Rana, N. P., & Parayitam, S. (2024). Antecedents of consumers' online apparel purchase intention through virtual try on technology: A moderated moderated-mediation model. *Journal of Consumer Behaviour*, 23(1), 107–125. <https://doi.org/10.1002/cb.2158>
- Chung, C.-H., Chiu, D. K. W., Ho, K. K. W., & Au, C. H. (2020). Applying social media to environmental education: Is it more impactful than traditional media? *Information Discovery and Delivery*, 48(4), 255–266. <https://doi.org/10.1108/IDD-04-2020-0047>
- Dabija, D.-C., & Bejan, B. M. (2018). Green DIY store choice among socially responsible consumer generations. *International Journal of Corporate Social Responsibility*, 3(1), 13. <https://doi.org/10.1186/s40991-018-0037-0>
- Devgan, S. (2024). 100+ social media statistics you need to know in 2024 [All networks]. Statusbrew. Retrieved May 30, 2024 from <https://statusbrew.com/insights/social-media-statistics/#social-media-usage-statistics>.
- Dhir, A., Sadiq, M., Talwar, S., Sakashita, M., & Kaur, P. (2021). Why do retail consumers buy green apparel? A knowledge-attitude-behaviour-context perspective. *Journal of Retailing and Consumer Services*, 59, Article 102398. <https://doi.org/10.1016/j.jretconser.2020.102398>
- Diamantopoulos, A., & Sigauw, J. A. (2006). Formative versus reflective indicators in organizational measure development: A comparison and empirical illustration. *British Journal of Management*, 17(4), 263–282. <https://doi.org/10.1111/j.1467-8551.2006.00500.x>
- Dlamini, S., & Mahowa, V. (2024). Investigating factors that influence the purchase behaviour of green cosmetic products. *Cleaner and Responsible Consumption*, 13, Article 100190. <https://doi.org/10.1016/j.clrc.2024.100190>
- Dwivedi, Y. K., Ismagillova, E., Rana, N. P., & Raman, R. (2023). Social media adoption, usage and impact in business-to-business (B2B) context: A state-of-the-art literature review. *Information Systems Frontiers*, 25(3), 971–993. <https://doi.org/10.1007/s10796-021-10106-y>
- Fazal, A. (2011). *Consumer power anywhere, anytime, anyone* (1 ed.). Neo Sentuhan.
- Fisman, R., Gladstone, K., Kuziemko, I., & Naidu, S. (2020). Do Americans want to tax wealth? Evidence from online surveys. *Journal of Public Economics*, 188, 1–64. <https://doi.org/10.1016/j.jpubeco.2020.104207>
- Gilmour, J., Machin, T., Brownlow, C., & Jeffries, C. (2020). Facebook-based social support and health: A systematic review. *Psychology of Popular Media*, 9(3), 328–346. <https://doi.org/10.1037/ppm0000246>
- Gonçalves, B., Perra, N., & Vespignani, A. (2011). Modeling users' activity on twitter networks: Validation of Dunbar's number. *PLoS One*, 6(8), Article e22656. <https://doi.org/10.1371/journal.pone.0022656>
- Guenther, P., Guenther, M., Ringle, C. M., Zaefarian, G., & Cartwright, S. (2023). Improving PLS-SEM use for business marketing research. *Industrial Marketing Management*, 111, 127–142. <https://doi.org/10.1016/j.indmarman.2023.03.010>
- Gutierrez, A., Punjaisri, K., Desai, B., Syed Alwi, S. F., O'Leary, S., Chaiyasoonthorn, W., & Chaveesuk, S. (2023). Retailers, don't ignore me on social media! The importance of consumer-brand interactions in raising purchase intention - privacy the Achilles heel. *Journal of Retailing and Consumer Services*, 72, Article 103272. <https://doi.org/10.1016/j.jretconser.2023.103272>
- Hair, J. F., Sarstedt, M., & Ringle, C. M. (2019). Rethinking some of the rethinking of partial least squares. *European Journal of Marketing*, 53(4), 566–584. <https://doi.org/10.1108/EJM-10-2018-0665>
- Hair, J. F., Jr. (2021). Next-generation prediction metrics for composite-based PLS-SEM. *Industrial Management & Data Systems*, 121(1), 5–11. <https://doi.org/10.1108/IMDS-08-2020-0505>
- Hair, J. F., Jr., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3 ed.). Thousand Oaks: Sage.
- Han, H. (2020). Theory of green purchase behavior (TGPB): A new theory for sustainable consumption of green hotel and green restaurant products [doi: 10.1002/bse.2545]. *Business Strategy and the Environment*, 29(6), 2815–2828. <https://doi.org/10.1002/bse.2545>
- Harrigan, M., Feddema, K., Wang, S., Harrigan, P., & Diot, E. (2021). How trust leads to online purchase intention founded in perceived usefulness and peer communication. *Journal of Consumer Behaviour*, 20(5), 1297–1312. <https://doi.org/10.1002/cb.1936>
- Hasan, M., & Sohail, M. S. (2021). The influence of social media marketing on consumers' purchase decision: Investigating the effects of local and nonlocal brands. *Journal of International Consumer Marketing*, 33(3), 350–367. <https://doi.org/10.1080/08961530.2020.1795043>
- Hasan, M. M., Al Amin, M., Arefin, M. S., & Mostafa, T. (2024). Green consumers' behavioral intention and loyalty to use mobile organic food delivery applications: The role of social supports, sustainability perceptions, and religious consciousness. *Environment, Development and Sustainability*, 26(6), 15953–16003. <https://doi.org/10.1007/s10668-023-03284-z>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Horrlich, A., & Bekir, I. (2024). Impact of social media information on the adoption of sustainable behavior: A gender perspective. In M. Ertz, U. Tandon, S. Sun, J. Torrent-Sellens, & E. Sarigöllü (Eds.), *The Palgrave handbook of sustainable digitalization for business, industry, and society* (pp. 283–308). Springer International Publishing. https://doi.org/10.1007/978-3-031-58795-5_13
- Hosta, M., & Zabkar, V. (2021). Antecedents of environmentally and socially responsible sustainable consumer behavior. *Journal of Business Ethics*, 171(2), 273–293. <https://doi.org/10.1007/s10551-019-04416-0>
- Huang, L., Solangi, Y. A., Magazzino, C., & Solangi, S. A. (2024). Evaluating the efficiency of green innovation and marketing strategies for long-term sustainability in the context of environmental labeling. *Journal of Cleaner Production*, 450, Article 141870. <https://doi.org/10.1016/j.jclepro.2024.141870>
- Hutter, K., Hautz, J., Dennhardt, S., & Fuller, J. (2013). The impact of user interactions in social media on brand awareness and purchase intention: The case of MINI on Facebook. *The Journal of Product and Brand Management*, 22(5/6), 342–351. <https://doi.org/10.1108/JPBMM-05-2013-0299>
- Ikhsan, R. B., Fernando, Y., Gui, A., & Fernando, E. (2024). The power of online reviews: Exploring information asymmetry and its impact on green product purchasing behavior. *International Journal of Consumer Studies*, 48(3), 1–19. <https://doi.org/10.1111/ijcs.13050>
- Illeris, K. (2003). Towards a contemporary and comprehensive theory of learning [article]. *International Journal of Lifelong Education*, 22(4), 396–406. <https://doi.org/10.1080/02601370304837>
- Jain, V. K., Gupta, A., Tyagi, V., & Verma, H. (2020). Social media and green consumption behavior of millennials. *Journal of Content, Community and Communication*, 10(6), 221–230. <https://doi.org/10.31620/JCCC.06.20/16>
- Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, 3(1), 128–143. <https://doi.org/10.1016/j.ism.2015.04.001>
- Khare, A., Sadachar, A., & Chakraborty, S. (2022). Influence of celebrities and online communities on Indian consumers' green clothing involvement and purchase behavior. *Journal of Fashion Marketing and Management: An International Journal*, 26(4), 676–699. <https://doi.org/10.1108/JFMM-02-2021-0033>
- Kim, H., Lee, J., & Oh, S. E. (2020). Individual characteristics influencing the sharing of knowledge on social networking services: Online identity, self-efficacy, and knowledge sharing intentions. *Behaviour & Information Technology*, 39(4), 379–390. <https://doi.org/10.1080/0144929X.2019.1598494>
- Kim, J., Lee, C., & Elias, T. (2015). Factors affecting information sharing in social networking sites amongst university students. *Online Information Review*, 39(3), 290–309. <https://doi.org/10.1108/OIR-01-2015-0022>
- Kim, J. J., & Hwang, J. (2020). Merging the norm activation model and the theory of planned behavior in the context of drone food delivery services: Does the level of product knowledge really matter? *Journal of Hospitality and Tourism Management*, 42, 1–11. <https://doi.org/10.1016/j.jhtm.2019.11.002>
- Kock, F., Berbekova, A., & Assaf, A. G. (2021). Understanding and managing the threat of common method bias: Detection, prevention and control. *Tourism Management*, 86, Article 104330. <https://doi.org/10.1016/j.tourman.2021.104330>
- Lee, S. Y., Kim, Y., & Kim, Y. (2021). Engaging consumers with corporate social responsibility campaigns: The roles of interactivity, psychological empowerment, and identification. *Journal of Business Research*, 134, 507–517. <https://doi.org/10.1016/j.jbusres.2021.05.062>
- Li, L., Long, X., Laubayeva, A., Cai, X., & Zhu, B. (2020). Behavioral intention of environmentally friendly agricultural food: The role of policy, perceived value, subjective norm. *Environmental Science and Pollution Research*, 27(15), 18949–18961. <https://doi.org/10.1007/s11356-020-08261-x>
- Liao, S.-H., Hu, D.-C., Chung, Y.-C., & Huang, A.-P. (2021). Risk and opportunity for online purchase intention – A moderated mediation model investigation. *Telematics and Informatics*, 62, Article 101621. <https://doi.org/10.1016/j.tele.2021.101621>
- Lightowler, Z., Mattios, G., Yang, J., & Zehner, D. (2022). *Unpacking Asia-Pacific Consumers' new love affair with sustainability*. B. Company. https://www.bain.com/globalassets/noindex/2022/bain_brief_unpacking_asia_pacific_consumers_new-love-affair-with-sustainability.pdf.
- Ling, P.-S., Chin, C.-H., Yi, J., & Wong, W. P. M. (2024). Green consumption behaviour among generation Z college students in China: The moderating role of government support. *Young Consumers*, 25(4), 507–527. <https://doi.org/10.1108/YC-01-2022-1443>
- Liu, M. T., Liu, Y., & Mo, Z. (2020). Moral norm is the key: An extension of the theory of planned behaviour (TPB) on Chinese consumers' green purchase intention. *Asia Pacific Journal of Marketing and Logistics*, 32(8), 1823–1841. <https://doi.org/10.1108/APJML-05-2019-0285>
- Macca, L. S., Ballerini, J., Santoro, G., & Dabić, M. (2024). Consumer engagement through corporate social responsibility communication on social media: Evidence from Facebook and Instagram Bank accounts. *Journal of Business Research*, 172, Article 114433. <https://doi.org/10.1016/j.jbusres.2023.114433>
- Mansoor, M., & Wijaksana, T. I. (2023). Predictors of pro-environmental behavior: Moderating role of knowledge sharing and mediatory role of perceived environmental responsibility. *Journal of Environmental Planning and Management*, 66(5), 1089–1107. <https://doi.org/10.1080/09640568.2021.2016380>
- Martins, A. (2024). *Most consumers want sustainable products and packaging: A study says consumers in North America, Asia and Europe want eco-friendly packaging*. Business News Daily. Retrieved Oct 31, 2024 from <https://www.businessnewsdaily.com/15087-consumers-want-sustainable-products.html>.
- Mazhar, W., Jalees, T., Asim, M., Alam, S. H., & Zaman, S. I. (2022). Psychological consumer behavior and sustainable green food purchase. *Asia Pacific Journal of*

- Marketing and Logistics*, 34(10), 2350–2369. <https://doi.org/10.1108/APJML-05-2021-0317>
- Melović, B., Jocović, M., Dabić, M., Vulić, T. B., & Dudic, B. (2020). The impact of digital transformation and digital marketing on the brand promotion, positioning and electronic business in Montenegro. *Technology in Society*, 63, Article 101425. <https://doi.org/10.1016/j.techsoc.2020.101425>
- Meng, B., Chua, B.-L., Ryu, H. B., & Han, H. (2020). Volunteer tourism (VT) traveler behavior: Merging norm activation model and theory of planned behavior. *Journal of Sustainable Tourism*, 28(12), 1947–1969. <https://doi.org/10.1080/09669582.2020.1778010>
- Mohr, L. A., Webb, D. J., & Harris, K. E. (2001). Do consumers expect companies to be socially responsible? The impact of corporate social responsibility on buying behavior. *Journal of Consumer Affairs*, 35(1), 45–72. <https://doi.org/10.1111/j.1745-6606.2001.tb00102.x>
- Moser, A. K. (2015). Thinking green, buying green? Drivers of pro-environmental purchasing behavior. *Journal of Consumer Marketing*, 32(3), 167–175. <https://doi.org/10.1108/JCM-10-2014-1179>
- Nekmahmud, M., Naz, F., Ramkissoon, H., & Fekete-Farkas, M. (2022). Transforming consumers' intention to purchase green products: Role of social media. *Technological Forecasting and Social Change*, 185, Article 122067. <https://doi.org/10.1016/j.techfore.2022.122067>
- Nick, E. A., Cole, D. A., Cho, S.-J., Smith, D. K., Carter, T. G., & Zelkowitz, R. L. (2018). The online social support scale: Measure development and validation. *Psychological Assessment*, 30(9), 1127–1143. <https://doi.org/10.1037/pas0000558>
- O'Fallon, M. J., & Butterfield, K. D. (2012). The influence of unethical peer behavior on observers' unethical behavior: A social cognitive perspective. *Journal of Business Ethics*, 109(2), 117–131. <https://doi.org/10.1007/s10551-011-1111-7>
- Otto, S., Strenger, M., Maier-Nöth, A., & Schmid, M. (2021). Food packaging and sustainability – Consumer perception vs. correlated scientific facts: A review. *Journal of Cleaner Production*, 298, Article 126733. <https://doi.org/10.1016/j.jclepro.2021.126733>
- Palalic, R., Ramadani, V., Mariam Gilani, S., Gërguri-Rashiti, S., & Dana, L. P. (2021). Social media and consumer buying behavior decision: What entrepreneurs should know? *Management Decision*, 59(6), 1249–1270. <https://doi.org/10.1108/MD-10-2019-1461>
- Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services*, 29, 123–134. <https://doi.org/10.1016/j.jretconser.2015.11.006>
- Pawaskar, U. S., Raut, R. D., & Gardas, B. B. (2018). Assessment of consumer behavior towards environmental responsibility: A structural equations modeling approach. *Business Strategy and the Environment*, 27(4), 560–571. <https://doi.org/10.1002/bse.2020>
- Peña-García, N., Gil-Saura, I., Rodríguez-Orejuela, A., & Siqueira-Junior, J. R. (2020). Purchase intention and purchase behavior online: A cross-cultural approach. *Heliyon*, 6(6), Article e04284. <https://doi.org/10.1016/j.heliyon.2020.e04284>
- Pieters, L., Cascone, J., Rogers, S., & Pankratz, D. (2023). *Green products come of age: Expectations of sustainable products are rising, but consumers are likely to reward brands that deliver*. Deloitte Insights. Retrieved Oct 31, 2024 from <https://www2.deloitte.com/us/en/insights/industry/retail-distribution/consumer-behavior-trends-state-of-the-consumer-tracker/sustainable-products-customer-expectations.html>
- Pop, R.-A., Saplačan, Z., & Alt, M.-A. (2020). Social media goes green—The impact of social media on green cosmetics purchase motivation and intention. *Information*, 11(9). <https://doi.org/10.3390/info11090447>
- Pourabbasi, M., & Shokouhyar, S. (2022). Unveiling a novel model for promoting mobile phone waste management with a social media data analytical approach. *Sustainable Production and Consumption*, 29, 546–563. <https://doi.org/10.1016/j.spc.2021.11.003>
- Quazi, A., Amran, A., & Nejati, M. (2016). Conceptualizing and measuring consumer social responsibility: A neglected aspect of consumer research. *International Journal of Consumer Studies*, 40(1), 48–56. <https://doi.org/10.1111/ijcs.12211>
- Ramadan, Z. B., Farah, M. F., & Kassab, D. (2019). Amazon's approach to consumers' usage of the dash button and its effect on purchase decision involvement in the U.S. market. *Journal of Retailing and Consumer Services*, 47, 133–139. <https://doi.org/10.1016/j.jretconser.2018.11.018>
- Ringle, C. M., Sarstedt, M., Sinkovics, N., & Sinkovics, R. R. (2023). A perspective on using partial least squares structural equation modelling in data articles. *Data in Brief*, 48, Article 109074. <https://doi.org/10.1016/j.dib.2023.109074>
- Roberts, J. A. (1995). Profiling levels of socially responsible consumer behavior: A cluster analytic approach and its implications for marketing. *Journal of Marketing Theory and Practice*, 3(4), 97–117. <https://doi.org/10.1080/10696679.1995.11501709>
- Roh, T., Seok, J., & Kim, Y. (2022). Unveiling ways to reach organic purchase: Green perceived value, perceived knowledge, attitude, subjective norm, and trust. *Journal of Retailing and Consumer Services*, 67, Article 102988. <https://doi.org/10.1016/j.jretconser.2022.102988>
- Ruiz-Alba, J. L., Abou-Foul, M., Nazarian, A., & Foroudi, P. (2022). Digital platforms: Customer satisfaction, eWOM and the moderating role of perceived technological innovativeness. *Information Technology & People*, 35(7), 2470–2499. <https://doi.org/10.1108/ITP-07-2021-0572>
- Salem, S. F., & Alanadoly, A. B. (2021). Personality traits and social media as drivers of word-of-mouth towards sustainable fashion. *Journal of Fashion Marketing and Management: An International Journal*, 25(1), 24–44. <https://doi.org/10.1108/JFMM-08-2019-0162>
- Sarstedt, M., Hair, J. F., Pick, M., Liengaard, B. D., Radomir, L., & Ringle, C. M. (2022). Progress in partial least squares structural equation modeling use in marketing research in the last decade. *Psychology & Marketing*, 39(5), 1035–1064. <https://doi.org/10.1002/mar.21640>
- Schrader, U. (2007). The moral responsibility of consumers as citizens. *International Journal of Innovation and Sustainable Development*, 2(1), 79–96. <https://doi.org/10.1504/IJISD.2007.016059>
- Schwartz, S. H. (1977). Normative influences on altruism. In L. Berkowitz (Ed.), *Vol. 10. Advances in experimental social psychology* (pp. 221–279). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60358-5](https://doi.org/10.1016/S0065-2601(08)60358-5)
- Schwartz, S. H., & Howard, J. A. (1984). Internalized values as motivators of altruism. In E. Staub, D. Bar-Tal, J. Karylowski, & J. Reykowski (Eds.), *Development and maintenance of prosocial behavior: International perspectives on positive morality* (pp. 229–255). Springer US. https://doi.org/10.1007/978-1-4613-2645-8_14
- Setiawan, B., Afiff, A. Z., & Heruwasto, I. (2021). The role of norms in predicting waste sorting behavior. *Journal of Social Marketing*, 11(3), 224–239. <https://doi.org/10.1108/JSOCM-05-2020-0088>
- Shahzad, M. F., Xu, S., Lim, W. M., Yang, X., & Khan, Q. R. (2024). Artificial intelligence and social media on academic performance and mental well-being: Student perceptions of positive impact in the age of smart learning. *Heliyon*, 10(8). <https://doi.org/10.1016/j.heliyon.2024.e29523>
- Shaw, D., & Shiu, E. (2003). Ethics in consumer choice: A multivariate modelling approach. *European Journal of Marketing*, 37(10), 1485–1498. <https://doi.org/10.1108/03090560310487202>
- Shihab, M. S., & Wangsa, I. H. S. (2024). SME's go green: The moderating role of social media marketing. *International Journal of Religion*, 5(10), 3621–3634. <https://doi.org/10.61707/k9efyv71>
- Shimul, A. S., Cheah, I., & Khan, B. B. (2022). Investigating female shoppers' attitude and purchase intention toward green cosmetics in South Africa. *Journal of Global Marketing*, 35(1), 37–56. <https://doi.org/10.1080/08911762.2021.1934770>
- Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J.-H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: Guidelines for using PLSpredict. *European Journal of Marketing*, 53(11), 2322–2347. <https://doi.org/10.1108/EJM-02-2019-0189>
- Singh, A., & Aggarwal, M. (2023). Influencer marketing: An impact of online fashion influencers on consumer's purchase intentions. *Educational Administration: Theory and Practice*, 29(4), 2184–2196. <https://doi.org/10.53555/kuey.v30i6.5313>
- Smith, M. A. (2021). Social learning and addiction. *Behavioural Brain Research*, 398, Article 112954. <https://doi.org/10.1016/j.bbr.2020.112954>
- Song, Y., Wang, L., Zhang, Z., & Hikkerova, L. (2023). Do fake reviews promote consumers' purchase intention? *Journal of Business Research*, 164, Article 113971. <https://doi.org/10.1016/j.jbusres.2023.113971>
- Soomro, R. B., Mirani, I. A., Sajid Ali, M., & Marvi, S. (2020). Exploring the green purchasing behavior of young generation in Pakistan: Opportunities for green entrepreneurship. *Asia Pacific Journal of Innovation and Entrepreneurship*, 14(3), 289–302. <https://doi.org/10.1108/APJIE-12-2019-0093>
- Sreen, N., Purbey, S., & Sadarangani, P. (2018). Impact of culture, behavior and gender on green purchase intention. *Journal of Retailing and Consumer Services*, 41, 177–189. <https://doi.org/10.1016/j.jretconser.2017.12.002>
- Statista. (2023). Importance of purchasing sustainable and environmentally-friendly products among consumers in Indonesia as of December 2023. Retrieved May 21, 2024 from <https://www.statista.com/statistics/1320347/indonesia-importance-of-purchasing-environmentally-friendly-products/>
- Sun, Y., & Wang, S. (2020). Understanding consumers' intentions to purchase green products in the social media marketing context. *Asia Pacific Journal of Marketing and Logistics*, 32(4), 860–878. <https://doi.org/10.1108/APJML-03-2019-0178>
- Sun, Y., & Xing, J. (2022). The impact of social media information sharing on the green purchase intention among generation Z. *Sustainability*, 14(11), 6879. <https://doi.org/10.3390/su14116879>
- Suphasomboon, T., & Vassanadumrongdee, S. (2022). Toward sustainable consumption of green cosmetics and personal care products: The role of perceived value and ethical concern. *Sustainable Production and Consumption*, 33, 230–243. <https://doi.org/10.1016/j.spc.2022.07.004>
- Synodinos, C., Moraes, G. H. S. M. D., & Prado, N. B. D. (2023). Green food purchasing behaviour: A multi-method approach of generation Y in a developing country. *British Food Journal*, 125(9), 3234–3248. <https://doi.org/10.1108/BFJ-09-2022-0769>
- Tan, B. C., Lau, T. C., Sarwar, A., & Khan, N. (2022). The effects of consumer consciousness, food safety concern and healthy lifestyle on attitudes toward eating “green”. *British Food Journal*, 124(4), 1187–1203. <https://doi.org/10.1108/BFJ-01-2021-0005>
- Tan, C. N. L., Ojo, A. O., & Thurasamy, R. (2019). Determinants of green product buying decision among young consumers in Malaysia. *Young Consumers*, 20(2), 1–17. <https://doi.org/10.1108/YC-12-2018-0898>
- Tandon, A., Dhir, A., Kaur, P., Kushwah, S., & Salo, J. (2020). Why do people buy organic food? The moderating role of environmental concerns and trust. *Journal of Retailing and Consumer Services*, 57, Article 102247. <https://doi.org/10.1016/j.jretconser.2020.102247>
- Tanveer, M., Din, M., Khan, M., Mohamad Almurad, H., Abdel, E., & Hasnin, H. (2024). Shaping consumer choices: The power of green brand knowledge, trust, and social responsibility. *Journal of Infrastructure Policy and Development*, 8, 1–17. <https://doi.org/10.24294/jipd.v8i8.5380>
- Taufique, K. M. R., & Islam, S. (2021). Green marketing in emerging Asia: Antecedents of green consumer behavior among younger millennials. *Journal of Asia Business Studies*, 15(4), 541–558. <https://doi.org/10.1108/JABS-03-2020-0094>
- Tehreem, R. C., Awan, T. M., Malik, H. A., & Fatima, T. (2021). Unboxing the green box: An empirical assessment of buying behavior of green products. *World Journal of Entrepreneurship, Management and Sustainable Development*, 17(4), 690–710. <https://doi.org/10.1108/WJEMSD-12-2020-0169>

- Teufer, B., & Grabner-Kräuter, S. (2023). How consumer networks contribute to sustainable mindful consumption and well-being. *Journal of Consumer Affairs*, 57(2), 757–784. <https://doi.org/10.1111/joca.12536>
- Van den Broeck, E., Poels, K., & Walrave, M. (2018). An experimental study on the effect of ad placement, product involvement and motives on Facebook ad avoidance. *Telematics and Informatics*, 35(2), 470–479. <https://doi.org/10.1016/j.tele.2018.01.006>
- Van Tonder, E., Fullerton, S., De Beer, L. T., & Saunders, S. G. (2023). Social and personal factors influencing green customer citizenship behaviours: The role of subjective norm, internal values and attitudes. *Journal of Retailing and Consumer Services*, 71, Article 103190. <https://doi.org/10.1016/j.jretconser.2022.103190>
- Vyas, P. G., & Pandey, S. (2021). The effect of social networking sites use on employees' knowledge sharing. *European Journal of Training and Development*, 45(2/3), 218–240. <https://doi.org/10.1108/EJTD-02-2020-0027>
- Wang, S.-T. (2014). Consumer characteristics and social influence factors on green purchasing intentions. *Marketing Intelligence & Planning*, 32(7), 738–753. <https://doi.org/10.1108/MIP-12-2012-0146>
- Xie, T., & Xu, A. (2024). Exploring the norm-activation model-based mechanisms influencing the willingness of environmentally friendly behavior of backpackers. *Journal of Resources and Ecology*, 15(3), 650–662. <https://doi.org/10.5814/j.issn.1674-764x.2024.03.012>
- Zafar, A. U., Shen, J., Ashfaq, M., & Shahzad, M. (2021). Social media and sustainable purchasing attitude: Role of trust in social media and environmental effectiveness. *Journal of Retailing and Consumer Services*, 63, Article 102751. <https://doi.org/10.1016/j.jretconser.2021.102751>
- Zafar, A. U., Shen, J., Shahzad, M., & Islam, T. (2021). Relation of impulsive urges and sustainable purchase decisions in the personalized environment of social media. *Sustainable Production and Consumption*, 25, 591–603. <https://doi.org/10.1016/j.spc.2020.11.020>
- Zhang, C., Tang, L., & Liu, Z. (2023). How social media usage affects psychological and subjective well-being: Testing a moderated mediation model. *BMC Psychology*, 11(1), 286. <https://doi.org/10.1186/s40359-023-01311-2>
- Zhang, M., Hassan, H., & Migin, M. W. (2023). Exploring the consumers' purchase intention on online community group buying platform during pandemic. *Sustainability*, 15(3). <https://doi.org/10.3390/su15032433>
- Zhang, Y., Hassan, N. M., & Sheikh, A. A. (2024). Unboxing the dilemma associated with online shopping and purchase behavior for remanufactured products: A smart strategy for waste management. *Journal of Environmental Management*, 351, Article 119790. <https://doi.org/10.1016/j.jenvman.2023.119790>
- Zhao, C., Ding, N., Yang, X., Xu, H., Lai, X., Tu, X., ... Zhang, G. (2021). Longitudinal effects of stressful life events on problematic smartphone use and the mediating roles of mental health problems in Chinese undergraduate students [original research]. *Frontiers in Public Health*, 9. <https://doi.org/10.3389/fpubh.2021.752210>
- Zhao, L., Lee, S. H., & Copeland, L. R. (2019). Social media and Chinese consumers' environmentally sustainable apparel purchase intentions. *Asia Pacific Journal of Marketing and Logistics*, 31(4), 855–874. <https://doi.org/10.1108/APJML-08-2017-0183>
- Zhu, P., Liu, Z., Li, X., Jiang, X., & Zhu, M. X. (2023). The influences of livestreaming on online purchase intention: Examining platform characteristics and consumer psychology. *Industrial Management & Data Systems*, 123(3), 862–885. <https://doi.org/10.1108/IMDS-07-2022-0430>