GREEN PURCHASING BEHAVIOR ON SOLAR PHOTOVOLTAIC POWER AMONG GENERATION Z FOR SUSTAINABLE ENERGY

Widyana Verawaty Siregar[1*], Arnawan Hasibuan[2], Rahmaniar[3], Razif[4], Hilmi[5], Ferdy Hidayatullah[6], Reza Al Farizi[7]

[1*,3,4,5,7]Faculty of Economics and Business, Universitas Malikussaleh, Indonesia.
(widyana.verawaty@unimal.ac.id)
[2,6]Faculty of Engineering, Universitas Malikussaleh, Indonesia.

ABSTRACT

Indonesia's energy consumption increases annually, with a significant portion generated from fossil fuels. The environmental damage caused by fossil fuels, which has positioned Indonesia as the fourth-largest emitter of carbon, necessitates a transition towards renewable energy sources such as solar panels. Despite growing awareness of the benefits of solar panels, adoption rates among the general public remain relatively low. To address this, the government has mandated the implementation of renewable energy sources in various regions, including solar photovoltaic systems, which are well-suited to Indonesia's abundant solar radiation. However, the low uptake of solar panels suggests significant barriers to changing consumer behavior towards green purchasing. This study focuses on educated young people as a primary target group, given their potential to drive shifts towards more sustainable consumption practices. By exploring the purchasing behavior of university students across Indonesia, the study aims to identify factors influencing green purchasing decisions. Multiple regression analysis was employed to analyze data collected from students. Findings indicate that environmental concern and media exposure, mediated by price sensitivity, significantly influence green purchasing behavior. Conversely, environmental knowledge, epistemic value, social influence, and social support were found to have no significant impact. While curiosity about green energy information is increasing, it is often manifested as anthropocentrism, which leads to environmental degradation. Information technology, as a tool for green energy campaigns, has not yet been fully effective in driving the transition towards solar panel adoption. Participation in environmentally conscious communities can enhance awareness and concern, but the relationship between social support and purchasing behavior is complex and contradictory. This study aims to raise awareness among young consumers about their green purchasing behavior and provide insights for policymakers to develop effective strategies for promoting renewable energy adoption in Indonesia.

Keywords: Green Purchase Behavior, Attitude, Solar Photovoltaic, Consumer Perceived, Green Energy

1. INTRODUCTION

Energy consumption in Indonesia increases by 6.5% annually, with the majority of electricity generation dominated by fossil fuels at 85%, and renewable energy sources only making up 15% (Merdeka, 2021). The dominance of fossil energy has led to environmental damage and increased carbon emissions from societal and industrial activities. Fossil fuel-related environmental damage has now positioned Indonesia as the fourth-largest carbon emitter globally, necessitating a transition to renewable energy (Databoks, 2022). The energy transition strategy is enforced through mandatory implementation of renewable energy, based on regional resources such as solar photovoltaic (PV) technology, which benefits from Indonesia's stable solar radiation (KESDM, 2021). However, only

30% of consumers are interested in purchasing and using solar panels, with the rest being reluctant due to the relatively high cost and low public knowledge of rooftop solar power. This highlights barriers to changing consumer behavior towards purchasing green products (VOA, 2018).

The current access to information and digitalization has raised environmental awareness among consumers of all demographics, alerting them to the dangers of continued fossil fuel use. Studies show that younger generations tend to support the creation of green energy landscapes based on renewable energy to tackle the climate crisis, with 61% recognizing solar energy as the best sustainable alternative (Indikator, 2021). The high interest among young people could contribute through academic sectors by exploring domestic research and innovation potential to maximize the use of renewable energy like PV. In universities and research institutions, young people play an active role in the research and development of new energy technologies (Aprobi, 2023). As of 2022, 70% of Indonesia's population is categorized as productive age, marking the peak of the demographic bonus. This demographic segment holds great potential to actively contribute to the renewable energy movement in Indonesia (Liputan6, 2023).

Today, young generations and consumers express their support for an environmentally friendly energy transition from solar power, with 23.8% of them supporting it. Additionally, 36.5% are willing to pay more for electricity if it comes from clean energy sources. Among them, 82.8% actively implement the knowledge gained from their studies, focusing on innovation and academic development in clean energy (Siregar et al., 2021). Furthermore, young people acknowledge that social media accelerates the dissemination of renewable energy roadmaps in Indonesia, with 23.5% reporting its influence. However, the actual implementation of PV remains a challenge and is not a government priority, with weak social support (Indonesia, 2019).

Consumerist practices that tend toward impulsiveness, leading to environmental damage, are believed to be the main trigger for the younger generation to transform their mindset and behavior based on sustainability (Marketeers, 2022). Today's youth are leading the clean energy revolution with innovative ideas and environmental awareness. They are changing the paradigm of energy use by adopting solutions like solar panels, which are not only eco-friendly but also efficient and free from carbon emissions (Energi, 2024). The increasing clean energy purchasing behavior among young people positions them as valuable assets for the country's progress (Antara, 2020).

Green purchase decision refers to the selective purchasing of products by consumers aimed at meeting needs while minimizing environmental pollution by choosing green products (Zahan et al., 2020). Green Purchase Intention in photovoltaic panels (PV) refers to the intention of consumers to purchase solar panels based on environmental and sustainability considerations. Consumers with high environmental awareness are more likely to consider photovoltaic panels. They understand the benefits of solar energy in reducing carbon emissions and other negative impacts of fossil fuel use (Grębosz-Krawczyk et al., 2021). Clear and accurate information about the benefits, costs, and efficiency of

photovoltaic panels can enhance purchase intention. Education on how these panels can reduce energy bills and contribute to sustainability often influences purchasing decisions (Soomro, Mirani, et al., 2020). Consumers with high epistemic value seek knowledge and new experiences. They may be attracted to photovoltaic panels not only for environmental benefits but also out of a desire to adopt new or innovative technologies (Sivapalan et al., 2021). The influence of family, friends, and community also plays a significant role. If consumers see those around them supporting the use of renewable energy or already using photovoltaic panels, they may be more inclined to follow suit (Zhou, 2019).

Research on green purchase intention has been widely conducted, such as the intention to purchase environmentally friendly cosmetics in Asian cultures (Quoquab et al., 2020), the increased consumer interest in electric vehicles in Korea (S. Kim et al., 2022), contemplation of eco-labeling on household products in Japan (Nakaishi & Chapman, 2024), the creation of a healthy living culture through environmentally friendly food products for consumers in Germany (Qi et al., 2020) and the prevention of environmental damage through the transition to eco-friendly clothing among millennials in the USA (Chi et al., 2021). Although much research focuses on primary and secondary green products in developed countries, only a few studies have explored green purchase intention in the renewable energy sector, particularly solar power generation systems, and rooftop photovoltaic systems among young consumers in developing countries like Indonesia.

This study can provide comprehensive information on the predicted consumer tendencies to purchase environmentally friendly photovoltaic systems. This information can also be used to develop policies for related institutions, such as the Ministry of Energy and Mineral Resources, regarding regulations on renewable energy transitions. Furthermore, this research aims to explore young consumers' behavior in purchasing rooftop solar panel systems. The goal is to raise consumer awareness about transitioning to environmentally friendly energy, reducing monthly electricity bills and carbon emissions, and fostering national energy independence.

2. LITERATURE REVIEW

2.1 Environmental concern and green purchasing behavior

Environmental concern (EC) refers to an individual's awareness of environmental issues and their commitment to supporting environmentally safe practices (Trudel, 2019). Broadly, EC encompasses a person's awareness of environmental challenges and their willingness to contribute to solutions (Witek & Kuźniar, 2020). In green marketing literature, EC is considered a crucial factor in analyzing eco-friendly consumer behavior. Research indicates that consumers who are environmentally conscious and believe their ecological actions can improve the environment are more inclined to engage in Green Purchasing Behavior (GPB) (Naz et al., 2020). These individuals, known as green consumers, are characterized by their awareness and concern for environmental issues. Pham et al. (2019) found that consumers are increasingly aware of the environmental impacts of their consumption patterns.

However, there is debate among researchers regarding the direct relationship between EC and GPB. Some studies suggest that EC does not significantly impact GPB (Xu et al., 2020), while others affirm a positive and direct relationship (Naz et al., 2020). Additionally, some research posits that environmental concern positively affects attitudes towards eco-friendly products, which in turn influences purchasing decisions, suggesting an indirect relationship between EC and GPB (Ogiemwonyi et al., 2023).

2.2 Environmental knowledge and green purchasing behavior

Environmental knowledge (EK) is crucial in shaping consumer behavior towards green products. emphasize that EK encompasses understanding product production processes, environmental impacts, and the importance of shared responsibility. Consumers with a deeper awareness of these factors are more likely to adopt environmentally friendly behaviors (Lee & Kim, 2022). According to Kamalanon et al. (2022) reinforces this link between EK and green consumerism. While EK can influence attitudes towards green products, highlight its role in guiding consumer actions (Grebosz-Krawczyk et al., 2021). Further suggest that EK can impact consumers' willingness to pay a premium for eco-friendly products. However, the relationship between EK and attitudes towards green products is not universally consistent (Xu et al., 2020).

2.3 Epistemic value and green purchasing behavior

Epistemic Value (EV) is associated with consumers who are eager to explore new experiences or try novel products (Sheth et al., 1991). Research has shown a positive link between the epistemic value of green products and consumer behavior (Gonçalves et al., 2016). Sivapalan et al. (2021) found that key factors driving consumer behavior towards green products include a desire for knowledge and novelty. Consumers often choose green products out of curiosity or a wish to learn about something new. Studies by (Luan et al., 2020) and (Rahnama & Rajabpour, 2017) have also confirmed the positive influence of epistemic value on the purchase of various green products. The role of retailers in promoting environmentally conscious consumption is significant. According to Lozano & Taboada (2021) demonstrated that retailers can foster eco-friendly consumption by adopting sustainable practices. Promoting green consumption helps reduce environmental impact and enhances sustainability, as consumers can be motivated to alter their behavior towards sustainability with appropriate encouragement. In the context of photovoltaic panels, the role of retailers is particularly important, as they not only supply the panels but also handle their installation (Grębosz-Krawczyk et al., 2021). According to Ali et al. (2019) noted that providing targeted information on key factors influencing the intention to purchase green energy significantly boosted the market share of green electricity in Pakistan.

2.4 Media exposure and green purchasing behavior

Media Exposure (ME) plays a crucial role in promoting green purchasing behavior among young consumers. Media influences young people's preferences and perceptions of various products.

According to Soomro et al. (2020), environmental messages disseminated through media can shape customers' purchasing decisions towards sustainable products. This suggests that media exposure to environmental messages positively impacts consumers' environmental concerns. Green promotion influences how environmental issues are communicated and aims to foster a positive attitude towards eco-friendly practices (Liu et al., 2018). The media's significant influence can highlight major environmental issues and affect consumer thought processes. Additionally, media has the ability to shape social norms by rapidly disseminating important environmental information to the public. Green products can be effectively promoted through TV commercials, while print advertisements can provide detailed information and enhance brand recognition among consumers (Jaini et al., 2020).

2.5 Social influence and green purchasing behavior

When considering the purchase of high-involvement solar PV panels, individuals' intentions are significantly impacted by the influence of important peers (Aggarwal et al., 2019). On one hand, Social Influence (SI) with peers can provide valuable information about solar PV panels, aiding individuals in gaining more knowledge. Informational social influence occurs when individuals regard peer-provided information as credible evidence (Mundaca & Samahita, 2020). A lack of knowledge about PV panels can hinder adoption (Liang et al., 2021), but when information from peers aligns with an individual's values, it can enhance their willingness to purchase solar PV panels through an internalization process. Consequently, informational social influence can boost purchase intention (Fu et al., 2020). On the other hand, peer norms also affect an individual's purchasing intentions (Huang, 2019). Individuals may face normative pressures from peers, where not buying the panels might be seen as unethical. This pressure can lead individuals to align their behavior with their peers to avoid negative consequences (compliance process). Additionally, normative pressures can motivate individuals to purchase solar PV panels to gain social identity and maintain peer relationships (Amoako et al., 2020) (identification process). The desire for social identity, which encompasses feelings of belonging and attachment, further enhances the willingness to buy solar PV panels (Zhou, 2019). Therefore, normative social influence also plays a key role in motivating purchase intention (Panda et al., 2020).

2.6 Social support and green purchasing behavior

Social Support (SS) encompasses the information and actions that make individuals feel cared for, loved, esteemed, and valued by their peers (Zhou, 2019). Research has classified social support into two types: informational and emotional (Chen et al., 2020). Informational social support involves providing advice, plans, interpretations, or knowledge to address problems directly (Panda et al., 2020). For high-involvement products like solar PV panels, when individuals receive useful information from peers, they are more likely to adopt or accept these opinions and advice, leading to informational social influence and influencing their willingness to purchase solar PV panels (Liu, 2018). Additionally, informational social support facilitates the exchange of information, enhances relationships between individuals and peers, and helps solidify shared values and understand

ding of social norms (Zhou, 2019). To maintain these peer relationships, individuals often conform to social norms, leading to normative social influence and affecting their willingness to buy solar PV panels (Liang et al., 2021). Emotional social support involves expressions of care, concern, and empathy, providing indirect help with problem-solving (Hu et al., 2019; Liang et al., 2021). Support from peers that offers warmth and meets emotional needs can strengthen relationships and build trust. As a result, individuals are more likely to trust and accept the suggestions and opinions of their peers, leading to informational social influence and positively impacting their intention to purchase green products. Furthermore, receiving emotional support may create a sense of obligation to follow peers' recommendations and act accordingly (Huang, 2020; Zhou, 2019).

2.7 Moderating role of price sensitivity

Product data, such as cost and quality, plays a key role in influencing shoppers' green buying behavior Cheung & To (2019). When choosing organic food, consumers prioritize price as a crucial factor Lavuri (2022). According to Ghali-Zinoubi (2020) describe price transparency as clear communication of the current price, and past studies have shown that it is an important aspect of price satisfaction. Price transparency allows buyers to evaluate and compare the overall value of a product in relation to other market options (Hanna et al., 2019). It is defined as providing customers with detailed, clear, and accurate information about a product's price (Sheikh et al., 2023). Moreover, price transparency can indirectly affect customer satisfaction, as positive evaluations can boost satisfaction and loyalty towards a product (Ghali-Zinoubi, 2020). Conversely, limited economic resources can increase the perception of price as a barrier to purchasing green products. However, low price sensitivity can positively influence green product buying behavior (Soomro, Mirani, et al., 2020). Thus, high price sensitivity generally has a negative impact on consumers' green purchasing behavior for photovoltaic (Bhutto et al., 2022).

3. METHODOLOGY

3.1 Research Design

This research will take a social approach to explore consumer environmental attitudes toward green purchase behavior of photovoltaic systems to reduce the amount of carbon emissions generated from daily activities. This study will employ a quantitative method, enabling the researcher to test variables to determine the relationships between phenomena and the issues at hand. Quantitative studies can also be applied to large populations, making it possible to generalize the findings to the entire population of Indonesia. However, this research will focus on young consumers' green purchase behavior for solar photovoltaic systems. The main objective of this study is to identify the extent to which environmental and social factors, as well as the use of the Theory of Consumption Values, influence Green Purchase Behavior (GPB) of solar photovoltaic systems through Attitude toward Green

Products (AGP), which is mediated by Price Sensitivity (PS). The research framework of this study is presented in Figure 1, as follows:

Figure 1.

Conseptual Framework
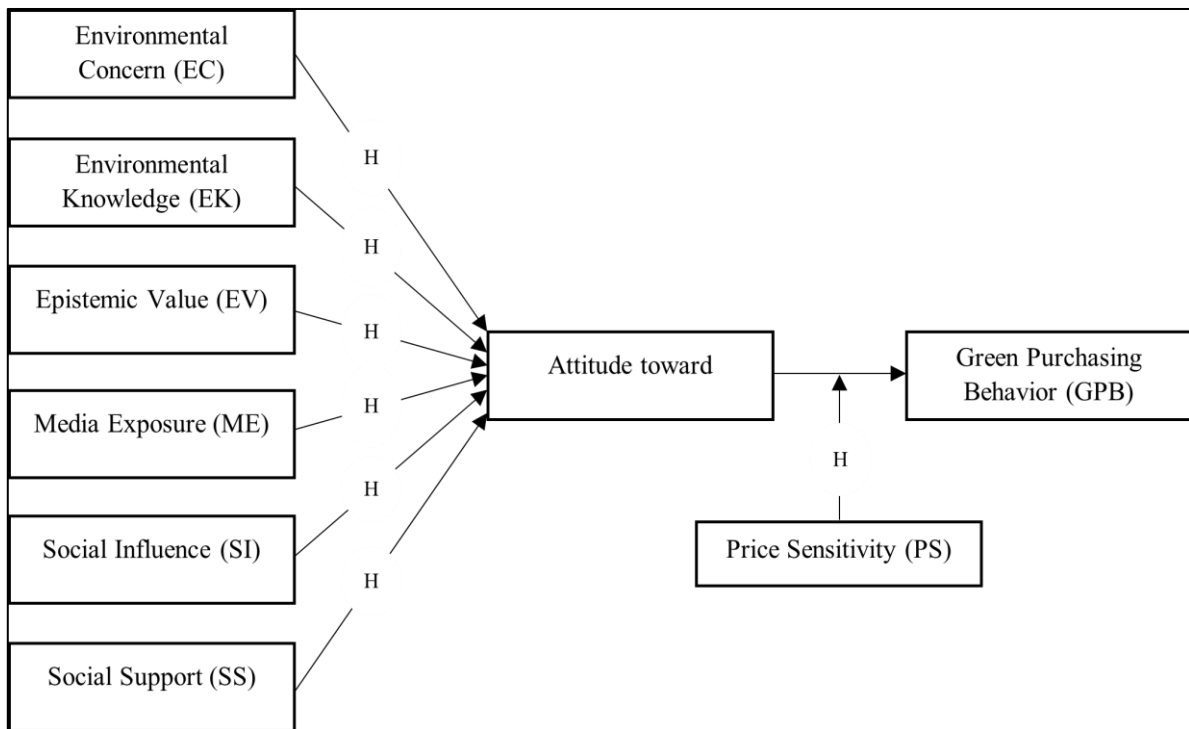
Based on Figure 1, there are two paths used in the analysis of this study. Path 1 examines the relationship between independent variables, namely environmental concern, environmental knowledge, epistemic value, media exposure, social influence, and social support, with the dependent variable, green purchasing behavior. Path 2 examines the relationship between the independent variables and green purchasing behavior through attitude toward green products, which is mediated by price sensitivity.

3.2 Sample

The survey, consisting only of questionnaire items, was distributed online to young consumers in Indonesia. The population of this study includes all young people in Indonesia. The sample was determined using the measurement scale from Hair et al., (2010) which is nx50 (n = variables), resulting in 450 respondents. The respondents sampled are those who are aware of photovoltaic solar systems and have an understanding of clean energy. A total of 450 survey questionnaires were distributed online to young respondents. The respondents were divided into two categories: Generation Y (200 respondents) and Generation Z (250 respondents). Data collection was conducted over two months for the entire distribution of the questionnaires, which would then be used for further analysis. Of the 450 respondents, 67.5% were male and 32.5% were female. The largest age group was 20-25 years old

(48.4%), followed by those aged over 35 (36.7%). The majority of respondents held a bachelor's degree (52.3%), and the most common occupations were in the business sector (32.7%) and students (29.1%).

3.3 Data Collection

In this study, seven constructs were measured. The environmental factor construct consists of two factors: environmental concern, with questionnaire items adapted from Bamberg & Möser (2007) (3 item) and environmental knowledge from Chen (2010) (7 item). Second, the social factors, namely social influence (8 items) and social support (6 items), with indicators adapted from Hu et al. (2019). Third, the Theory of Consumption Values, which includes epistemic value, with indicators adapted from Sheth et al. (1991) (3 item). Fourth, media exposure, with indicators adapted from Soomro, Ali, et al. (2020) (4 item). Fifth, attitude toward green products, with indicators adapted from Taylor & Todd (1995) (3 item). Sixth, price sensitivity, with indicators adapted from Mohr et al. (1998) (5 item). Lastly, the seventh construct is green purchasing behavior, with indicators adapted from Chen (2010) (7 item). All items were rated using a five-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree).

3.4 Data Analysis

The analysis used in this research is multiple linear regression analysis, which is a model used to analyze or measure the strength of the relationship between two or more variables, and also shows the direction of the relationship between the dependent variable and the independent variable (Sugiyono, 2016). This model is used to test whether there is a causal relationship between variables and to examine how much influence the independent variables have on the dependent variable. This model is used to test the existence of causal relationships between variables and to examine the extent to which independent variables influence the dependent variable. This technique is applied to evaluate the relationship between independent variables (EC, EK, EV, ME, SI, and SS) and the dependent variable (GPB), as well as the moderating variable (AGP) and the mediating variable (PS). Additionally, the t-test is used to assess the significance of the regression coefficients for each independent variable. The analysis results will be interpreted to provide deeper insights into the factors influencing green purchase behavior of solar photovoltaic systems among young consumers.

SEM model was used to test two linear regression models and results are shown in Table 1. Model 1 regressed the dependent variable (GPB) on the independent variables (EC, EK, EV, ME, SI and SS). Model 2 regressed the dependent variable (GPB) on the independent variables (EC, EK, EV, ME, SI and SS), and also on the interaction's terms between attitude toward green product and price sensitivity (PS) to test the mediation effects.

4. RESULTS AND DISCUSSION

4.1 Results

The multiple linear regression analysis method intends to predict how the dependent variable will be, if two or more independent variables as prediator factors are manipulated (Sugiyono, 2016). This model is used to test whether there is a causal relationship between variables and to examine how much influence there is between the dependent variables (EC, EK, EV, ME, SI and SS) with the dependent variable (GPB), moderating veriable (AGP) and mediation variable (PS) on solar PV. Based on the results of multiple linear regression analysis, the following results were found:

Table 1

Regression Analysis

Variable	B	Model 1 p-Values	Sig.	B	Model 2 p-Values	Sig.	Result
EC	0.35	0.001	0.001	0.25	0.020	0.000	Supported
EK	0.05	0.450	0.231	0.20	0.015	0.178	Unsupported
EV	-0.02	0.780	0.132	0.15	0.03	0.088	Unsupported
ME	0.27	0.010	0.037	0.28	0.45	0.011	Supported
SI	0.03	0.600	0.301	0.22	0.04	0.222	Unsupported
SS	-0.04	0.700	0.608	0.18	0.35	0.384	Unsupported
Interaction (PSxAGP*)				0.115	0.029	0.000	High Normative

Variable dependend: GPB (Green Purchasing Behavior)

Notes: *Environmental attitude was computed by taking an average of all VIs. EC: Environmental Concern; EK: Environmental Knowledge; EV: Epistemic Value; ME: Media Exposure; SI: Social Influence; SS: Social Support toward GPB: Green Purchasing Behavior mediated by PS: Price Sensitivity

Figure 2

Research Model Diagram
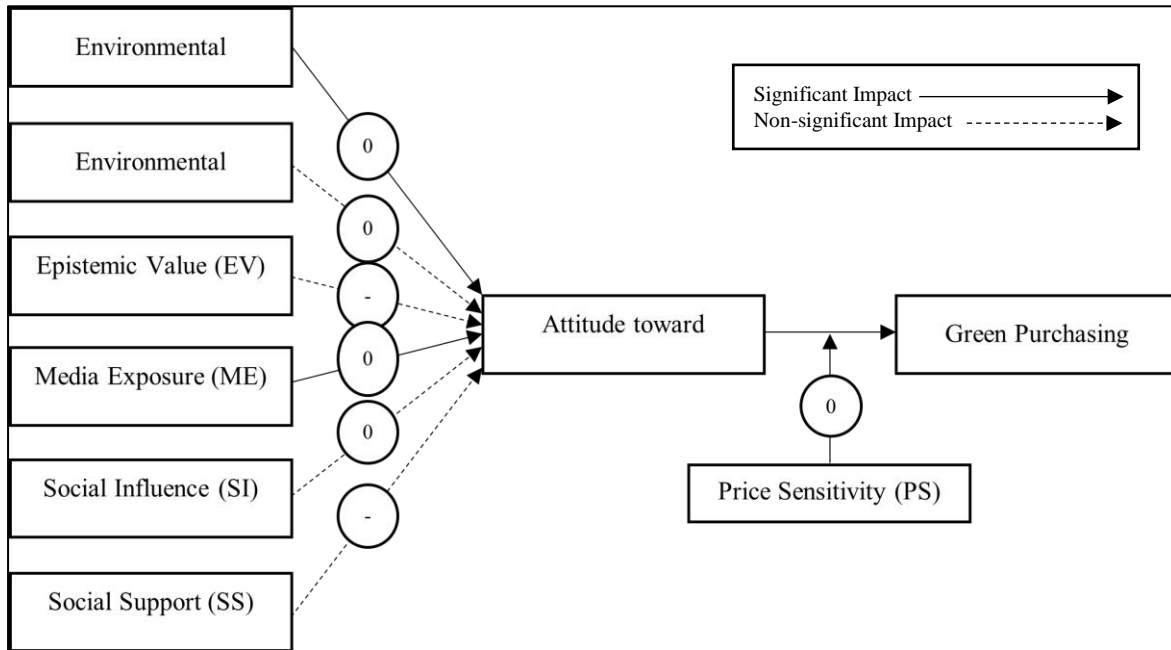
The results of the regression analysis and figure 2 for Path 1 found H1, EC on GPB: supported. A high and significant regression coefficient indicates that environmental concern has a very strong influence on green purchase behavior. The higher an individual's concern for the environment, the more likely they are to choose environmentally friendly products. H4: ME on GPB: Accepted. Media exposure has a highly significant impact on GPB. This indicates that information obtained from the media plays a key role in shaping consumer behavior. Meanwhile, H2, H3, H5, and H6: unsupported. Although these variables have a positive relationship with GPB, the relationships are not statistically significant. This suggests that environmental knowledge, epistemic value, social influence, and social support, while important, are not direct determinants of green purchase decisions.

For Path 2, H7 was found: High Normative. Both Attitude toward Green Product (AGP) and Price Sensitivity (PS) have a high normative influence on GPB. This indicates that a positive attitude toward green products and price sensitivity play important roles in explaining why individuals choose green products. The results of this study show that efforts to promote green product consumption not only involve environmental aspects but also social, economic, and psychological aspects. By understanding the factors influencing green purchase decisions, we can develop more effective strategies to achieve sustainable development goals.

4.2 Discussion

Based on the results of the multiple linear regression analysis using two path analyses, the findings on Path 1 show that the first hypothesis (H_1) indicates that Environmental Concern (EC) has a significant influence on attitude toward Green Products (GPB). This positive attitude toward green products, in turn, acts as a strong mediator in influencing green Purchasing Behavior (GPB). This means that the more concerned consumers are about the environment, the more likely they are to adopt a

positive attitude toward green products, ultimately leading to purchases of products like solar PV. This suggests that consumers who care about environmental issues are more motivated to contribute through the purchase of environmentally friendly products. A recent study by A. Ali et al. (2018), found that EC plays a crucial role in shaping green product purchasing behavior, particularly among young consumers who are more aware of the environmental impact of their consumption choices. In the context of solar PV, consumers with high environmental concern are more likely to switch to renewable energy products due to their awareness of the positive environmental impact (Naz et al., 2020).

Similarly, the fourth hypothesis (H4) shows that Media Exposure (ME) has a significant influence on GPB. This means that media campaigns or advertisements about environmentally friendly products, such as solar PV, can shape consumers' positive attitudes toward these products, thereby increasing the likelihood of purchase. Among young consumers in Indonesia, the media plays a key role in shaping their perceptions and knowledge of eco-friendly products like solar PV. In the context of solar PV, Agag & El-Masry (2017) stated that campaigns highlighting the environmental impact of conventional energy and the benefits of renewable energy can influence consumers' decisions to switch to green products. Through media exposure, young consumers learn about the long-term benefits of solar PV—such as reduced electricity costs and contributions to reducing carbon emissions. Advertisements that educate about the use and benefits of solar energy, as well as environmental sustainability, help build positive attitudes toward these products. In society, especially among the youth, media plays a significant role in shaping social norms and consumption trends. For example, if solar PV is widely promoted through the media as a new, eco-friendly, and cost-efficient trend, young consumers are more likely to see it as a positive and desirable consumption choice (Sun & Xing, 2022).

Meanwhile, the second hypothesis (H_2) indicates that Environmental Knowledge (EK) has a positive influence on GPB but with an insignificant coefficient. This shows that while environmental knowledge can influence attitudes toward green products, its influence is not strong enough to directly impact purchasing behavior. However, for young consumers, EK serves as a foundation as it shapes their ability to differentiate between conventional and green technologies. In the context of solar panels, knowledge about how these systems can reduce energy costs, lower carbon footprints, and contribute to long-term sustainability is crucial in influencing purchasing decisions. Consumers with higher levels of EK tend to consider the long-term benefits of solar energy, such as reduced dependence on non-renewable resources and potential financial savings, which subsequently drive green purchasing behavior. Recent research emphasizes the importance of EK in promoting environmentally responsible consumption. For example Asif et al. (2023) found that individuals with greater environmental knowledge are more likely to engage in environmentally responsible purchases, including the adoption of renewable energy technologies. Similarly, the study by Indrajaya et al. (2024) found that increased awareness of the environmental and economic benefits of solar panels significantly increases the likelihood of their adoption, particularly among younger, environmentally conscious demographics.

The third hypothesis (H$_3$) evaluates the influence of Epistemic Value (EV) on GPB, but with an insignificant coefficient. This suggests that curiosity and the search for new information do not significantly contribute to shaping attitudes toward green products like solar PV. Although individuals may be interested in seeking new information about green products, this does not directly change their attitudes toward these products. EV tends to be more influential for highly innovative and unusual products. However, in the case of solar PV, although it is a green technology, it may no longer be perceived as a new innovation by most consumers (Grębosz-Krawczyk et al., 2021). Research by Liobikienė & Bernatonienė (2017) suggests that epistemic value is typically more significant for products that are truly novel and experimental, but its effect can weaken if the technology has become established.

The fifth hypothesis (H$_5$) found that Social Influence (SI) does not have a significant influence on GPB. This indicates that opinions from friends, family, or social groups do not play a major role in shaping attitudes toward green products, although they may be relevant in other contexts. In Indonesia, there may be a lack of knowledge or awareness about the benefits and importance of solar PV among the general public. If young consumers do not receive adequate information or do not understand the environmental and economic benefits of solar PV, social influence may not be effective in driving the adoption of this technology. While social influence can play a key role in everyday consumption or status products, products like solar PV tend to be more influenced by personal considerations such as cost efficiency and long-term benefits (Shah & Asghar, 2023). A study by Wang et al. (2018), found that social influence is more significant for products visible to others, but for utilitarian products like solar PV, this influence becomes weaker.

Similarly, the sixth hypothesis (H$_6$) shows that Social Support (SS) also does not have a significant influence on attitudes toward GPB. This suggests that social support from the surrounding environment does not influence attitudes toward green products like solar PV. Consumers are more influenced by personal factors such as their beliefs and environmental concern rather than social support. Social support may not be significant if it is not accompanied by adequate information and education about the benefits and usage of solar PV. If consumers do not receive clear explanations of how this technology works and its environmental and economic advantages, social support may not be effective enough. In the context of purchasing decisions involving significant investments and personal use, such as solar PV, social support may not be as strong as in more social or community-based decisions (Maciaszczyk et al., 2022). Research by Trong et al. (2023) shows that social support is more relevant in the context of collective environmental action but less significant in individual purchases (Trong et al., 2023).

Then, in Path 2, the seventh hypothesis (H$_7$) explains that PS can mediate the relationship between AGP and GPB of solar PV for young consumers in Indonesia, with a high normative value. Although young consumers may have positive attitudes toward environmentally friendly products such

as solar PV and feel pressured by social norms to engage in green behavior, high price sensitivity can prevent them from purchasing solar panels if the costs are perceived as too high. The high influence of social norms increases the motivation to buy green products, but if price barriers remain significant, their positive attitudes may not translate into real actions. Therefore, to increase solar PV adoption, it is important to address price barriers through subsidies or incentives, which can help bridge the gap between positive attitudes toward green purchasing and actual buying behavior. Consumers are often reluctant to purchase green products that are more expensive than conventional products, even if they have positive attitudes toward them (Sheikh et al., 2023). According to Soomro, Mirani, et al. (2020), price sensitivity is a crucial factor mediating the relationship between attitude and green purchasing behavior, especially in the renewable energy market. In the case of solar PV, although consumers recognize the environmental benefits, the high initial installation cost can be a major barrier.

5. CONCLUSION

Based on the results of multiple linear regression analysis with two path analyses, this study found that Environmental Concern (EC) has a significant influence on positive attitudes toward GPB (green purchasing behavior), which then serves as a strong mediator in influencing green product purchasing behavior, such as solar PV. Consumers who are concerned about the environment tend to be more motivated to purchase environmentally friendly products. In addition, media exposure) also plays a significant role in shaping positive attitudes toward green products, which increases the likelihood of purchase, especially among young consumers. However, Environmental Knowledge (EK) and Epistemic Value (EV) do not show significant effects on purchasing behavior, indicating that while knowledge and curiosity are important, they are not strong enough to directly influence purchasing decisions. Social Influence (SI) and Social Support (SS) also do not have significant impacts, suggesting that personal factors such as beliefs and environmental concern are more influential than social influence from the surrounding environment. Furthermore, Price Sensitivity (PS) can mediate the relationship between positive attitudes toward green products and purchasing behavior, indicating that even if consumers have positive attitudes, high price barriers can hinder purchasing decisions. To increase the adoption of products like solar PV, it is important to address price barriers through subsidies or incentives to bridge the gap between positive attitudes and real actions. In conclusion, environmental concern and media exposure are the key factors in influencing attitudes and green product purchasing behavior, while knowledge, epistemic value, social influence, and social support require different approaches for their effectiveness.

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