

# **ANALYZING THE ROLE OF ENVIRONMENTAL KNOWLEDGE AS A MODERATOR OF THE GREEN MARKETING MIX ON PURCHASE INTENTION**

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## **Abstrak**

Tujuan dari penelitian ini adalah untuk mengeksplorasi bagaimana elemen bauran pemasaran ramah lingkungan seperti produk, harga, distribusi, dan promosi mempengaruhi niat Gen Z Indonesia dan generasi milenial untuk membeli furnitur ramah lingkungan dari Ace Hardware, IKEA, Informa, KANA Furniture, dan Uwitan. Studi ini juga menilai peran pengetahuan lingkungan sebagai moderator. Penelitian ini melibatkan 256 partisipan yang menyelesaikan survei deskriptif dan kuantitatif. Temuan menunjukkan bahwa harga ramah lingkungan, tempat ramah lingkungan, dan promosi ramah lingkungan merupakan faktor signifikan yang mempengaruhi niat pembelian pelanggan, sebagaimana diungkapkan oleh analisis regresi berganda. Namun, produk ramah lingkungan tampaknya tidak memiliki dampak yang signifikan terhadap niat membeli. Pengetahuan lingkungan memoderasi hubungan antara produk ramah lingkungan, tempat ramah lingkungan terhadap niat pembelian, dan promosi ramah lingkungan.

Kata Kunci: Produk Hijau, Harga Hijau, Tempat Hijau, Promosi Hijau, Pengetahuan Lingkungan, Niat Membeli.

## **Abstract**

The purpose of this study is to explore how the green marketing mix elements such as product, price, distribution, and promotion influence the intention of Indonesian Gen Z and millennials to buy green furniture from Ace Hardware, IKEA, Informa, KANA Furniture, and Uwitan. The study also assesses the role of environmental knowledge as a moderator. The research involved 256 participants who completed a descriptive and quantitative survey. The findings indicate that green price, green place, and green promotion are significant factors that influence customer purchase intentions, as revealed by multiple regression analysis. However, green products do not seem to have a significant impact on purchase intentions. Environmental knowledge moderates the relationship between green products and green places on purchase intentions.

Keywords: Green Product, Green Price, Green Place, Green Promotion, Environmental Knowledge, Purchase Intention.

## **1. INTRODUCTION**

In the context of uncertain economic conditions, businesses need new methods to reach customers. Businesses must remain resilient in facing world conditions that are recovering after the coronavirus pandemic. The industry that was quite hard hit by the pandemic was retail. In Indonesia, there has been a decrease in the number of retail stores by 11.85 percent in 2021 (Monavia Ayu Rizaty, 2022). Retailers who are unable to adapt to economic conditions and changes in people's consumption habits will slowly start to lose customers. Therefore, marketing is crucial to maintaining business relevance in society. Implementation of green

marketing can increase customer reach by improving customer perceptions of the business and thereby influencing their purchasing decisions (Suprpto & Hartono, 2020).

Implementing green marketing methods not only has a good impact on business but also on the environment. Environmental problems such as the climate crisis have become a serious problem facing the world. The UN reports that 11 of the last 12 years were ranked as the hottest years in terms of Earth's surface temperature (Dahlstrom, 2011). If we refer to current trends, the IPCC reports that the average increase in temperature on earth is predicted to be between 1.8C and 4.0C (Grant, 2007). Successive environmental degradation results in more serious disasters. This not only threatens health but also the survival of humanity. If the world is encouraged to use environmentally friendly products, it is considered that the risk of environmental damage can be reduced.

On the other hand, consumers in Indonesia are starting to realize the importance of environmental conservation. Support for the environmental conservation movement is translated through the action of purchasing environmentally friendly products. Consumers are starting to become familiar with the terms eco-friendly, recycle materials, and organic products. According to the World Economic Forum's Global Shapers Survey (2017), it turns out that the millennial generation cares more about environmental issues such as climate change than other world issues. Therefore, currently many millennial generations are moving as pioneers in preventing and handling environmental issues such as anti-single-use plastic bags, using stainless steel straws, environmentally friendly fashion trends, and energy-saving properties. They have various interesting ways to learn while protecting the environment.

The Indonesian government also shows support through its pro- environment policies. This commitment is contained in Minister of Environment and Forestry Regulation No. 75 of 2019 concerning the ban on the use of single-use plastic (Ditjen PP, 2019). By 2030, Indonesia is targeted to be free of single-use plastic, including plastic sachets, plastic straws, plastic bags, containers and single-use cutlery. It doesn't stop there the government is also encouraging the acceleration of the energy transition towards net zero emissions through Presidential Decree Number 112 of 2022 (Ditjen PP, 2022). These commitments will increase people's sensitivity to sustainable living which is in line with the spirit of Green Marketing.

This phenomenon is often known as green consumerism, which is predicted to grow in the future (Haba & Bredillet, 2022). Thus, companies must be able to read this trend and start implementing environmental issues as one of their marketing strategies. The concept of marketing products that are safe for the environment is often referred to as Green Marketing (Polonsky, 1994).

The table above shows that in Indonesia there are actually many companies that have implemented green marketing, especially in the furniture sector. However, the development of green marketing has not been exploited optimally, even though the potential it has is quite large. More specifically, previous research offers very little discussion in the context of the green marketing mix and its consequences (Khan et al., 2019). Therefore, individuals may not see any meaningful contribution in this field. Several research articles, including (Awan, 2011; Devi Juwaheer et al., 2012; Hayat et al., 2019; Solvalier, 2010), have discussed the topic of the marketing mix approach. Other research has discussed the relationship between environmentally friendly goods and customer purchasing decisions (Paul & Rana, 2012). Meanwhile, a number of studies have investigated the impact of the marketing mix on consumers' intention to make purchases (Ansar, 2013; Hayat et al., 2019).

Based on the description above, the author is interested in conducting research entitled "Analyzing the Role of Environmental Knowledge as a Moderator of the Green Marketing Mix on Purchase Intention"

## **2. METHOD**

The research design is a blueprint for carrying out data acquisition, measurement and analysis (Cooper & Schindler, 2014). This study is formal research, starting with a hypothesis or research question designed to be tested. Based on the research objectives that have been developed, this research will be classified into a type of descriptive research. The aim of descriptive research is to provide a comprehensive picture of a social context or to investigate a phenomenon or social reality. This is achieved by describing various variables related to the problem at hand and the unit being investigated or the phenomenon being researched (Creswell & Creswell, 2018). Researchers refer to the cross-sectional time dimension which is carried out at one particular point in time to collect data from various subjects or participants. This research aims to understand the relationship or differences between certain variables at the same time.

This research utilizes primary data collected through distributing surveys or questionnaires. Primary data according to Sekaran & Bougie (2016) is data that researchers collect directly for specific research purposes. The collection can be done in various ways, including through questionnaires, observation, experiments and interviews. Because the primary data source is the subject under study, it has advantages in terms of accuracy and relevance of information. This primary data will offer precise and in-depth details regarding the topic being researched. Primary data is always the most authoritative source because the

information they provide has not been filtered or interpreted by a second party (Cooper & Schindler, 2014).

This research uses a questionnaire to obtain data. A questionnaire is a series of pre-formulated written questions in which respondents record their responses (Sekaran & Bougie, 2016). There are several different ways to distribute a questionnaire: in person, by mail to respondents, or online. Obtaining a large amount of information from a large sample can be done quickly and effectively with this strategy. Because the researcher is not required to be present while completing the questionnaire, the process is fast and effective. To measure responses to the questionnaire, an interval scale or Likert scale is used. According to Sugiyono (2019), The Likert scale is a scale used to measure people's opinions, perspectives and attitudes in relation to social phenomena. This questionnaire includes a scale that ranges from 1 to 5 to express the respondent's thoughts and feelings

The individuals from the population that form the sample are selected at random, and a portion of the population is used to provide respondents for the survey. Because it is impossible to collect data from an entire population, research must rely on data collected from samples when studying large communities. Apart from that, there are a number of limitations, such as limited resources, energy and time. As a result, data from a population can be used as a sample in an investigation.

Sampling in this study refers to Hair's statement because the population size cannot be known with certainty. Hair et al., (2020) stated that if the sample size is too large, it is thought that it will be difficult to obtain a good measure of goodness of fit. So it is recommended that the minimum sample size is 5-10 observations for each parameter being estimated. This research uses a scale of 10 because this research is large-scale social in nature. So the number of statements in this research (24) is multiplied by 10 to produce a sample size of 240 respondents with a margin of error of 5% (5% error rate and 95% truth rate). According to (Hair et al., 2020) a good sample size ranges from 120-240 respondents.

The sampling technique in this research used non-probability sampling, namely side purposive sampling.

### **3. RESULT AND DISCUSSION**

#### **3.1 The Effect of Green Products on Purchase Intentions**

The discussion regarding the influence of green products on purchase intentions is to answer the problem formulation and hypothesis which states that green products have a direct effect on purchase intentions.

Based on the results of the inner model path analysis, it shows that green products have a positive but not significant effect on purchase intention. This can be seen from the path coefficient value of 0.064 and the p-value of 0.355. A positive path coefficient value indicates that the influence is positive. However, because the p-value is greater than 0.05, it can be interpreted that the effect is not significant. This means that this relationship does exist, but is not strong enough to conclude that green products cause changes in purchasing interest.

This phenomenon can occur because consumers, especially in the field of purchasing furniture, sometimes lack confidence in the availability of furniture products that are truly guaranteed to be environmentally friendly. Consistent with previous research Cai et al., (2017), This research shows that challenges in choosing environmentally friendly furniture contribute to individuals' hesitation in purchasing such furniture in the future. If we look closely at the raw materials for furniture offered on the market, it can be seen that each type of raw material has a different effect on the environment. For example, plastic furniture exhibits poor biodegradability, plywood furniture has a shorter lifespan and is therefore discarded more quickly, wooden furniture is a threat to forests, and aluminum furniture comes from non-renewable materials extracted through intensive mining practices. This causes decreased confidence in the accuracy of environmentally friendly furniture products.

In addition, the more consumers are attached to the individual consequences of purchasing environmentally friendly furniture such as the extra effort to search for information about the product, the perceived limitations when choosing a furniture model, and the additional costs incurred, the less willing they are to purchase these products. Cai et al., (2017) adding that design and style are the second most important criteria influencing buyers' preferences for conventional goods over environmentally friendly furniture products. Based on previous research (Follows & Jobber, 2000; Ramayah et al., n.d.), It was found that environmental friendliness alone is not enough to stimulate consumer interest in making purchases.

Different from previous research conducted by (Karunarathna et al., 2020; Kaur et al., 2022; Mahmoud et al., 2017; Omer Mahmoud, 2018) In general, research shows that while environmentally friendly products may have an impact on purchase intentions, they are not a guaranteed solution to success. To achieve success, marketers of environmentally friendly products must carefully analyze target demographics, product characteristics, and marketing communications.

### **3.2 The Effect of Green Prices on Purchase Intentions**

The discussion regarding the influence of green prices on purchase intentions is to answer the problem formulation and hypothesis which states that green prices have a direct effect on purchase intentions.

Based on the results of the inner model path analysis, it shows that the green price has a significant positive effect on purchase intention. This can be seen from the path coefficient value of 0.175 and the p-value of 0.003. A positive path coefficient value indicates that the influence is positive, while the p-value is smaller than 0.05. So it can be interpreted that the effect is significant. This means that it can be concluded that there is a significant positive relationship between the independent and dependent variables.

Green pricing is the concept that environmentally friendly products are often priced higher than non-environmentally friendly products (Chekima et al., 2016). However, several studies show similar results that green prices can have a significant influence on consumer purchase intentions (Karunarathna et al., 2020; Kaur et al., 2022; Mahmoud et al.,

2017; Munamba & Nuangjamnong, 2021). Research shows that green pricing can have a positive effect on consumer purchase intentions when consumers believe that green products can provide higher value than conventional products (Chekima et al., 2016). Consumers who buy green products because they believe that these products are of higher quality and have higher value than conventional products will tend to have higher purchase intentions.

Therefore, green pricing can be an important factor in influencing consumer purchasing intentions and manufacturers can consider appropriate pricing strategies to increase demand for green products.

### **3.3 The Effect of Green Place on Purchase Intentions**

The discussion regarding the influence of green place on purchase intention is to answer the problem formulation and hypothesis which states that green place has a direct effect on purchase intention.

Based on the results of the inner model path analysis, it shows that the green place has a significant positive effect on purchase intention. This can be seen from the path coefficient value of 0.117 and the p-value of 0.041. A positive path coefficient value indicates that the influence is positive, while the p-value is smaller than 0.05. So, it can be interpreted that the effect is significant. This means that it can be concluded that there is a significant positive relationship between the independent and dependent variables.

Green places are concerned with managing logistics to reduce transportation emissions, thereby aiming to reduce the carbon footprint (Shil, 2012). Consumers who care about

environmental issues tend to prefer products from places that have sustainable and environmentally friendly business practices. Several studies show similar results that green places can have a significant influence on consumer purchase intentions (Karunarathna et al., 2020; Kaur et al., 2022; Mahmoud et al., 2017; Munamba & Nuangjammong, 2021).

Research shows that green spaces can help build consumer trust and increase their purchase intent (Omer Mahmoud, 2018). Consumers tend to trust brands or companies that have a good reputation for environmentally friendly and sustainable business practices (Kang & Hur, 2012). In addition, environmentally friendly locations can provide a positive shopping experience for consumers and increase their loyalty to a brand or company (Bashir et al., 2020).

Therefore, manufacturers may consider strategies aimed at improving the sustainability of their business and integrating environmentally friendly business practices in their operations to attract consumers who care about the environment.

### **3.4 The Effect of Green Promotion on Purchase Intentions**

The discussion regarding the influence of green promotion on purchase intention is to answer the problem formulation and hypothesis which states that green promotion has a direct effect on purchase intention.

Based on the results of the inner model path analysis, it shows that green promotion has a significant positive effect on purchase intention. This can be seen from the path coefficient value of 0.184 and the p-value of 0.008. A positive path coefficient value indicates that the influence is positive, while the p-value is smaller than 0.05. So, it can be interpreted that the effect is significant. This means that it can be concluded that there is a significant positive relationship between the independent and dependent variables.

Green promotion is a marketing strategy that aims to increase consumer awareness about environmentally friendly products and business practices. In several studies, green promotions have been proven to have a significant influence on consumer purchase intentions (Ahmed et al., 2022; Karunarathna et al., 2020; Kaur et al., 2022; Mahmoud et al., 2017). Green promotions can help increase consumer awareness about green products and encourage consumers to consider green products as their purchasing option. Research shows that effective green promotions can help increase consumer purchase intentions (Omer Mahmoud, 2018).

Effective green promotion must be able to provide clear information about the benefits and advantages of green products, as well as convince consumers that green products are the right choice for the environment and society as a whole. In addition, green promotions can be used to build a brand or company image that cares about the environment and strengthen brand awareness among consumers who care about environmental issues.

### **3.5 The Moderating Effect of Environmental Knowledge Between Green Products on Purchase Intentions**

The discussion regarding the moderating influence of environmental knowledge between green products on purchase intentions is to answer the problem formulation and hypothesis which states that environmental knowledge moderates the relationship between green products and purchase intentions.

Based on the results of the inner model path analysis, it shows that environmental knowledge significantly positively moderates the relationship between green products and purchase intention. This can be seen from the path coefficient value of 0.113 and the p-value of 0.050. A positive path coefficient value indicates that the influence is positive, while the p-value is less than 0.05. So, it can be interpreted that the effect is significant. This means that it can be concluded that there is a significant positive relationship in moderating the independent and dependent variables.

The creation of green products must consider environmental aspects so as to minimize negative impacts on nature (Davari & Strutton, 2019). Green products significantly influence consumer purchasing intentions, where if the product is proven to be environmentally friendly, then consumer intentions to purchase the product increase. If consumers are knowledgeable about environmental issues, their level of awareness will increase and thus, potentially, promote favorable attitudes towards green products. (Ankit & Mayur, 2019).

The results of this research are in line with Mahmoud's (2019) research which confirms that environmental knowledge strengthens the influence of green products on purchase intention. This relationship is supported by several previous studies where environmental knowledge variables strengthen the influence of green products on purchase intention. (Anderson et al (2019); Ansar (2019); Ankit dan Mayur (2019)).

Therefore, consumers with high environmental knowledge will be more inclined to buy green products.

### **3.6 The Moderating Effect of Environmental Knowledge Between Green Prices on Purchase Intentions.**

The discussion regarding the moderating influence of environmental knowledge between green prices and purchase intentions is to answer the problem formulation and hypothesis which states that environmental knowledge moderates the relationship between green prices and purchase intentions.

Based on the results of the inner model path analysis, it shows that environmental knowledge negatively moderates the relationship between green prices and purchase intention. This can



be seen from the path coefficient value of -0.053 and the p-value of 0.376. A path coefficient value that is negative indicates that the influence is negative, while the p-value is greater than 0.05. So it can be interpreted that the effect is not significant. This means that it can be concluded that there is an insignificant negative relationship in moderating the independent and dependent variables.

Basically, consumers who have a high level of environmental knowledge are more likely to be aware of the importance of environmental issues and are more likely to seek sustainable products and services. (Hamzah & Tanwir, 2021; Mahmoud et al., 2017). However, this does not mean that these consumers will be willing to pay more for green products, especially if the product has a much higher price than conventional products but does not have significant added value. (Kalama, 2007). Even the most environmentally friendly consumers are unwilling to pay premium prices for green products (Chen, 2001; Luzio & Lemke, 2013; Peattie, 2001).

Luzio & Lemke, (2013) Again confirming this idea, as the majority of eco-friendly consumers interviewed expressed their limitations and even annoyance at having to pay an eco-friendly premium, especially when there is no perceived production cost justification. Additionally, interviews confirmed that price is a more important factor in influencing consumption of less frequently purchased and more expensive products (e.g. cars and “household goods”) than more frequently purchased and less expensive products such as organic food, clothing, cleaning household. products, etc. (Sriram & Forman, 1993)

In general, research shows that environmental knowledge can increase the impact of green prices on purchase intentions. However, the influence of environmental knowledge on the relationship between green prices and purchase intention may not be significant because there are other factors that influence purchase intention. However, this relationship is not statistically significant, meaning that this relationship is not strong enough to conclude that environmental knowledge significantly influences the relationship between green prices and purchase intention.

### **3.7 The Moderating Effect of Environmental Knowledge Between Green Places on Purchase Intentions**

The discussion regarding the moderating influence of environmental knowledge between green places on purchase intentions is to answer the problem formulation and hypothesis which states that environmental knowledge moderates the relationship between green places and purchase intentions.

Based on the results of the inner model path analysis, it shows that environmental knowledge significantly negatively moderates the relationship between green places and

purchase intention. This can be seen from the path coefficient value of -0.169 and the p-value of 0.011. A path coefficient value that is negative indicates that the influence is negative, while the p-value is smaller than 0.05. So it can be interpreted that the effect is significant. This means that it can be concluded that there is a significant negative relationship in moderating the independent and dependent variables.

Consumers with high environmental knowledge will be more likely to buy environmentally friendly products or services, including products or services sold in green places (Hamzah & Tanwir, 2021; Mahmoud et al., 2017). However, if consumers have high environmental knowledge, they will also be more critical in assessing green places. In fact, the correlation is not always positive. For example, green consumers may use their environmental knowledge to reduce green purchases (Peattie, 2001; Schlegelmilch et al., 1996). This seemingly paradoxical behavior can be explained by green consumers' industry-specific knowledge, understanding of product technical details, and above-average awareness of arbitrary product “greenwashing.”

In the research of Luzio & Lemke (2013), Most of the eco- consumers interviewed indicated a preference for purchasing eco- friendly products at cooperatives, local specialty stores, and farmers' markets. There appears to be an avoidance of purchasing environmentally friendly products in mainstream retailers such as supermarkets. As mentioned by Bezenc, on and Blili (2010), one of the reasons put forward for this behavior is that consumers feel more comfortable consuming in places that are in line with their values. In other words, green consumers shop in places that are perceived as more trustworthy, authentic, with higher levels of trust and sometimes friendly relationships.

In addition, the findings are similar to Tanner and Kast's (2003) argument that contextual factors such as availability/accessibility of environmentally friendly products, price, product packaging, and origin can also explain the choice of alternative purchase places. Ironically, these green furniture products are even more widely available in supermarkets which generally cannot be trusted as environmentally friendly places.

Based on the explanation above, it can be concluded that environmental knowledge moderates the relationship between green places and purchase intention in a significantly negative way because consumers with high environmental knowledge will be more critical in assessing green places. They will know better that not all green place claims are truly environmentally friendly.

### **3.8 The Moderating Effect of Environmental Knowledge Between Green Promotion on Purchase Intentions**

The discussion regarding the moderating influence of environmental knowledge between green promotion and purchase intention is to answer the problem formulation and hypothesis which states that environmental knowledge moderates the relationship between green promotion and purchase intention.

Based on the results of the inner model path analysis, it shows that environmental knowledge positively moderates the relationship between green promotion and purchasing interest. This can be seen from the path coefficient value of 0.113 and the p-value of 0.058. A positive path coefficient value indicates that the influence is positive, while the p-value is greater than 0.05. So it can be interpreted that the effect is not significant. This means that it can be concluded that there is a positive but not significant relationship in moderating the independent and dependent variables.

Consumers can be easily manipulated about “being eco-friendly” because eco-friendly brands evoke positive emotions and some consumers feel better when they think they are using an eco-friendly brand (Hartmann and Ibáñez, 2006). However, dishonest actions taken to manipulate public opinion regarding environmentally friendly attitudes have a negative impact on consumer perceptions and behavior. This stimulates environmental skepticism (Lin et al., 2017; Chen and Chang, 2013) and creates a perception of risk that makes consumers feel uncertain about their purchasing decisions (Mitchell, 1999). Questioning the reliability of environmentally friendly claims increases consumer confusion and risk perception (Chen and Chang, 2013). If consumers' environmental knowledge is high, then they will be more critical in assessing green promotion.

Although in line with (Hamzah & Tanwir, 2021; Mahmoud et al., 2017) The significance can be different if consumers have different levels of knowledge. Albayrak et al., (2013) explained that consumers who are skeptical and have a low level of environmental awareness do not show a positive attitude towards environmentally friendly brands. McDonald and Oates (2006) explain that “subjective knowledge”, namely what consumers believe they know, is sometimes wrong and thus differs from “objective knowledge”, which represents a confusing dilemma.

Therefore, the relationship between green promotion and purchase intention will be stronger if consumers have high environmental knowledge. However, this relationship is not statistically significant, so this relationship is not strong enough to conclude that environmental

knowledge significantly influences the relationship between green promotion and purchase intention.

## **4. CLOSING**

### **4.1 Conclusion**

This research aims to analyze the role of environmental knowledge as a moderator of the green marketing mix on purchasing intentions. Based on the results of research that has been carried out and data analysis as explained in the previous chapter, the following conclusions from the research results are as follows:

- 1) Green products have a positive but not significant effect on purchase intention.
- 2) Green price has a positive and significant effect on purchase intention.
- 3) Green place has a positive and significant effect on purchase intention.
- 4) Green promotion has a positive and significant effect on purchase intention.
- 5) Environmental knowledge moderates the influence of green products on purchase intentions.
- 6) Environmental knowledge does not moderate the influence of green prices on purchase intentions.
- 7) Environmental knowledge moderates the influence of green place on purchase intention.
- 8) Environmental knowledge does not moderate the effect of green promotion on purchase intentions.

### **4.2 Limitations**

There are several limitations in this research, including the following:

- 1) Researchers are only able to research 4ps of green marketing.
- 2) Researchers use online questionnaires to collect data so that the emotional condition of respondents when filling out the questionnaire is unknown.

### **4.3 Suggestions**

The suggestions given for the results of this research are as follows:

- 1) The results of this research show that green products are not magic words that immediately make consumers interested in buying environmentally friendly furniture products. This is because shopping for furniture is a purchase that has high value. Research shows that consumers tend to ignore factors such as the environment when shopping for high-value products, one of which is furniture. In addition, the more knowledgeable a person is, the more critical his attitude towards environmental campaigns. So, in implementing green marketing strategies, companies are expected to ensure that they are consistent in their green

campaign behavior. Because if not, the strategy will not have a significant effect or could even have negative implications.

- 2) Based on the conclusions and limitations above, there is a suggestion that future researchers are expected to be able to add data collection methods such as interviews and documentation, then future researchers are expected to be able to add other green marketing, namely 7P's.

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