



(RESEARCH ARTICLE)



The influence of green brand image and green perceived quality towards green loyalty through green satisfaction as an intervening variable for LG consumers in Semarang city

Yohana Julianti Siregar *, Sudharto P. Hadi and Sari Listyorini

Master Of Business Administration, University of Diponegoro, Semarang, Indonesia.

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Abstract

The research aims to prove and analyze the influence of green brand image and green perceive quality on the green loyalty of LG brand environmentally friendly AC consumers in Semarang city, mediated by green satisfaction. The research sample was 100 consumers of LG electronics products taken using purposive sampling techniques. Data was obtained use questionnaire and documentation. The research instrument uses a 5-Point Likert scale. The data analysis tool uses Smart PLS. This research concludes that Green Brand Image influence Green Satisfaction positively and significantly; Green Satisfaction influences Green Loyalty positively and significantly; Green Satisfaction significantly mediate influence Green Brand Image and Green Perceived Quality on Green Loyalty.

Keywords: Green Brand Image; Green Perceived Quality; Green Loyalty; Green Satisfaction

1. Introduction

The rapid development of technology, science regarding electronics and materials, has resulted in quite large changes to modern electronic devices in everyday life. This change is directly proportional to the efforts that humanity has made to overcome waste from electronic products that are not environmentally friendly (Xue & Zu, 2017; Yu, et al., 2018).

Since the concept of electronics can recycled Recyclable / degradable was introduced in 2009 by Kim, et al., (2009), this opens up new potential in electronic applications. Eco-friendly electronics are based on recyclability and degradable materials can be extensively destroyed because they have superior biodegradation and recycling properties (Li, et al., 2018).

According to Prakash (2002), the relationship between marketing discipline and the environment is important for organizations as an opportunity that can be used to achieve its goals. Meanwhile, Ottman (2011) believes that green marketing is a concept that not only emphasizes improving products, but also improving people's lifestyles by changing their behavior, which ultimately increases sales power and overall company performance.

There is a growing trend in the percentage of global customers who are willing to pay more for sustainable or environmentally friendly products.

The brand that is the object of this research is Lucky Goldstar (LG), which prioritizes the company's goals by providing "Innovation for a better planet". LG 's campaign seeks to reduce the environmental impact of products and practice responsible environmentally friendly management through smart and sustainable production as a commitment to the future of the earth (LG, 2023).

* Corresponding author: Yohana Julianti Siregar

As an environmentally friendly brand, LG must be able to maintain its market in order to compete in the market. Together with the campaign given by LG, it is said that LG is a brand with environmentally friendly products that produces products by reducing and neutralizing carbon emissions in the production process and increasing the use of renewable energy. It is still a problem for LG to maintain customer loyalty even though it has implemented environmentally friendly and electricity-friendly products required by customers. Customer loyalty is a firmly held commitment to repurchase or support a preferred product/service consistently in the future, resulting in repeat purchases of the same brand even though situational influences and marketing efforts have the potential for brand switching behavior (Oliver, 1999).

In connection with the green industry, having customer loyalty is very important. For this reason, understanding the factors that can influence green loyalty can provide benefits for companies to implement green marketing, which provides the perception of quality products in a comprehensive market so that they are able to survive in the market for environmentally friendly products in society. One of the factors that can influence green loyalty is green satisfaction. Green satisfaction is the level of consumer satisfaction related to enjoyable consumption to satisfy environmental desires, sustainable expectations, and green needs. Green satisfaction is an important factor in brand loyalty because it is a response to environmentally friendly product performance that is better than consumer expectations. This has been explored as a significant predictor of customer loyalty and it has also been suggested that loyalty is one-way consumers express their satisfaction with the quality of the product or service obtained (Cronin, et al., 2011).

Research conducted by Imaningsih, et al., (2019) also resulted in the finding that green satisfaction has a significant positive effect on green loyalty. Additionally, satisfied green consumers are more likely to repeat their purchases and become less receptive to offers from competitors. Green customer loyalty as a long-lasting relationship with business institutions that care about the environment or green, makes consumers committed to repurchase or repurchase the products they like (Gupta, 2020).

Green brand image is a series of product perceptions in consumers' minds that are related to environmentally friendly commitment and environmental concern (Chen, 2010). In addition, companies that have invested a lot of effort in improving their green brand image will increase customer satisfaction regarding the need for green products in society in a sustainable manner.

Apart from green brand image, another variable that can influence green satisfaction is green perceived quality. Green perceived quality is defined as consumers' assessment of the superior quality of environmentally friendly products (Chen & Chang, 2013). The quality perceived by consumers will be important in assessing consumer satisfaction (Kim, et al., 2008).

This research aims to prove and analyze the influence of green brand image and green perceived quality on the green loyalty of LG brand environmentally friendly AC consumers in Semarang City, mediated by green satisfaction.

2. Literature Review

Consumer behavior is essentially about understanding why consumers act and what they do. Schiffman and Kanuk (2008) stated that the study of consumer behavior is a study of how an individual makes decisions to allocate available resources (time, money, effort and energy).

Consumer behavior according to Kotler & Keller (2008) is related to the study of how individuals, groups and organizations select, buy, use and place goods, services, ideas or experiences to satisfy their wants and needs. Meanwhile, Schiffman and Kanuk (2008) revealed that consumer behavior describes how individuals make decisions to utilize their available resources (time, money, effort) to purchase goods related to consumption. Based on these two definitions, two important things can be obtained, namely: (1) as a physical activity and (2) as a decision-making process.

There are factors that influence consumer behavior which are greatly influenced by the circumstances and situations of the layers of society in which they are born and develop. Factors that influence consumer behavior according to Kotler (2008) consist of: Cultural factors consisting of: culture, sub - culture, social class; Social factors such as reference group, family and social status; Personal Factors consisting of age and life cycle stage, work and economic environment, lifestyle, personality and self-concept; and Psychological Factors namely motivation, perception, learning, as well as beliefs and convictions.

2.1. Green Marketing

In recent years, *green marketing* is one of the emerging ideas in marketing, and the concept has become widely accepted in practice. In addition, *green marketing* is a much broader concept that includes all marketing activities developed to stimulate and maintain consumers' environmentally friendly attitudes and behavior (Jain & Kaur, 2004). Previous research shows that companies can carry out *green marketing activities* to investigate consumers' environmentally friendly attitudes and behavior, to identify *green product markets*, to group *green markets* into different segments based on consumer needs, to develop *green positioning strategies*, and to formulate *green mix programs*. *marketing* (Jain & Kaur, 2004).

2.2. Strategic Green Marketing Orientation (SGMO)

Green marketing includes all activities related to product modification, production processes and packaging changes, as well as modifying advertising, etc. Meanwhile, Ottman (2011) believes that green marketing is a concept that not only emphasizes product improvement but also improves people's lifestyles by changing their behavior which ultimately increases sales power and overall company performance.

Hong, et al., (2009) stated that the aim of (SGMO) is to increase the real benefits of the organization through the implementation of innovative environmental strategies. SGMO has an important role in creating a balance between financial and non-financial performance (Chahal, et al., 2014). SGMO has three main strategies, namely green innovation, green process, and green supply chain. Green innovation is the development of innovative new environmentally friendly products. The development of new products or services sends a positive signal to every stakeholder that the organization is a company that pays attention to the environment. The green process is a focus on environmental aspects within the company itself.

2.3. Green Brand Image

A strong brand image will create a better brand message than its competitors (Hsieh & Li, 2008). A product with a greater brand image is likely to be associated with better quality and higher value, thus forming a positive spiritual image (Ng, et al., 2014). *Green brand image* refers to consumers' perceptions of the brand as sustainable and environmentally friendly (Chen, 2010). Consumers tend to perceive higher quality and a green brand image of a company when the company claims to provide environmentally friendly products (Ng, et al., 2014). In this research, *green brand image* is defined as a series of product perceptions in consumers' minds that are related to environmental commitment and environmental concern (Chen, 2010).

In other words, *the green brand image* is interpreted by consumers not only because of the company's social activities but also through product offerings (Kull & Heath, 2016). The indicators used to measure the *green brand image variable* are according to Lin, et al., (2017) in the form of: (1) Environmentally friendly brands have a good reputation for their concern for the environment; (2) Environmentally friendly brands are successful in their performance of not damaging the environment; (3) Eco-friendly brands are known for their concern for the environment; (4) Environmentally friendly brands can be trusted in their promises not to have a negative impact on the environment.

2.4. Green Perceived Quality

Because consumer judgments are usually based on incomplete or asymmetric information, consumer trust can depend directly on the perceived quality of the product or brand, which is considered a signal to consumers (Kardes et al., 2004).

The main reasons for the difference between perceived quality and objective quality are: (1) perceived quality is influenced by consumers' pre-existing impressions; (2) consumers' perceptions of important quality dimensions are different from those of producers; and (3) due to differences in information, consumers fail to obtain comprehensive information, and thus make conclusions about product quality based only on one or two selected pieces of information (Aaker, 2012).

The indicators used to measure the *green perceived quality variable* according to Chen & Chang (2013) are: Quality of products from environmentally friendly brands used; The quality of products from environmentally friendly brands is reliable and considers their good impact on the environment. The quality of products from environmentally friendly brands is more durable and performs effectively; and The quality of products from environmentally friendly brands is good for protecting the environment.

2.5. Green Satisfaction

Satisfaction is defined as a general feeling of pleasure or satisfaction experienced by consumers arising from the ability of a product or service to meet expectations, desires and needs (Mai & Ness, 2006). *Green satisfaction* relates to the desire and effectiveness of environmentally friendly brands, products and services as a result of products or services that are reliable, friendly and have the ability to preserve the environment (Chen, et al., 2015). In Chen's research (2010) *Green satisfaction* is defined as the level of consumer satisfaction related to enjoyable consumption to satisfy *environmental desires, sustainable expectations, and green needs*.

The indicators used to measure the *green satisfaction variable* are (Chen, et al., 2015): Happy with the decision to choose environmentally friendly products; Buying environmentally friendly products is the right decision because of their environmental function; From the perspective of environmental effectiveness, environmentally friendly products are the right decision; Overall, satisfied with a product that performs better for the environment.

2.6. Green Loyalty

Customer loyalty has been considered an important factor that leads to competitive advantage over other companies in a highly competitive and dynamic environment. Customer loyalty is a multidimensional construct built by two components, namely attitudes and behavior. Similarly, Lam, et al., (2004) define customer loyalty as evidence of repeated support from a service provider and recommendations from the service provider to other customers.

Oliver (1999) defines loyalty as a strong willingness to buy or visit a product or service consistently and profitably, even though the consumer is in a situation where he might choose another brand. Meanwhile, Izogo (2015) states that *green marketing* can be described as a strong intention to repurchase or support a preferred service or product continuously in the future.

Green loyalty indicators according to Kang & Hur (2011): Recommend environmentally friendly products to others; Always use environmentally friendly brands because they care about the environment; Willing to pay more to benefit from eco-friendly brands; and prefer to use environmentally friendly brands rather than brands that are not environmentally friendly brands.

2.7. Hypothesis Development

2.7.1. The Influence of Green Brand Image (X1) on Green Satisfaction (Z)

The brand image of a company refers to the general impression felt by consumers (Dowling, 2004). Brand image reflects company features in consumers' perceptions that influence *behavior* (Riel & Fombrun, 2007). In other words, an environmentally friendly brand image relates to the environmental features of a company (Amores-Salvadó, et al., 2014). A positive and strong *green brand image is the basis for environmental legitimacy* company (Chen, et al., 2006; Hunter & Bansal, 2006). Many studies report that green brand image is positively related to green satisfaction (Ha, 2022; Bekk, et al., 2016; Hussain & Waheed, 2016; Shaheen, et al., 2017), and also increases sales revenue and competitive advantage (e.g. Chen, 2008; Chen, et al., 2006; Hu & Wall, 2005;

An environmentally friendly green brand image will be especially important in industries, where business activities have important and negative social and environmental externalities' (Amores-Salvadó, et al., 2014). Despite expecting many positive effects from *green products*, only a few studies show the positive impact of *green brand image* on *green satisfaction* (Bathmanathan & Hironaka, 2016). Companies in these environmentally sensitive industries will go to great lengths to communicate to their customers that environmental issues are being properly addressed.

On this basis, in this research hypothesis 1 is put forward as following:

H1 : *Green brand image* has a significant positive effect on *green satisfaction* of LG brand environmentally friendly AC consumers in Semarang City

2.7.2. The Influence of Green Perceived Quality (X2) on Green Satisfaction (Z)

The positive relationship between *green perceived quality* in general and *green satisfaction* has been confirmed in many empirical studies (Cretu & Brodie, 2007; Elsässer & Wirtz, 2017; Riel, et al., 2005). The underlying logic is that buyers are satisfied with products that have high performance. *Green perceived quality* is reflected in its environmental characteristics and benefits (Ali, et al., 2011). Examples of green attributes are environmentally friendly labels, non-polluting materials, recyclability, high energy conservation, and a general guarantee of existing environmental impacts

(Tseng & Hung, 2013 According to Chang and Fong (2010), *green perceived quality* can be defined as 'the dimensions of product features, product design, and product package that are involved in energy saving, pollution prevention, waste recycling, and environmental friendliness'. Customer decisions are influenced by knowledge about *green perceived quality* (Mayer, 2013; Norazah, 2013; Suki, 2016). Several studies have reported a direct impact on performance and a close relationship between *green perceived quality* and *green satisfaction* (Chang & Fong, 2010; Chen & Fong, 2016; Chen & Chang, 2013; Suki, 2017). Meanwhile, recent research also states that *green perceived quality* has a significant positive effect on *green satisfaction* with environmentally friendly electronic products (Shaheen, et al., 2017; Gil & Jacob, 2018; Cecilia & Tanamal, 2020).

On the basis of this formulation, in this study hypothesis 2 is put forward:

H2 : *Green perceived quality* has a significant positive effect on *green satisfaction* of LG brand environmentally friendly AC consumers in Semarang City

2.7.3. The Influence of Green Satisfaction (Z) on Green Loyalty (Y)

Many studies have investigated the antecedents of the influence of *green satisfaction* and *green loyalty*. Satisfaction and loyalty are generally considered to be very important concepts for practical purposes and theoretical purposes (Jamal, 2004). Previous research has paid much attention to the influence of consumer satisfaction and loyalty in general. However, there are fewer studies that investigate the influence of *green satisfaction* on *green loyalty* in relation to environmental concern (Kordshouli, et al., 2015). Chang and Fong (2010) introduced the concepts of *green satisfaction* and *green loyalty* which proved useful for studying environmentally friendly purchasing behavior (Asgharian, et al., 2012; Cheema, et al., 2015; Kordshouli, et al., 2015; Saeednia & Valahzaghari, 2012).

Green loyalty refers to customers' desire to maintain relationships with brands that are environmentally friendly or environmentally friendly and customers' commitment to repurchase preferred products regularly in the future (Asgharian, et al., 2010).

Many studies have investigated and confirmed the positive relationship between customer satisfaction and customer loyalty (Biedenbach, et al., 2002; Silva & Alwi, 2006; Elsässer & Wirtz, 2017; Fornell, et al., 2006; Gountas & Gountas, 2007; Zboja & Voorhees, 2006). Satisfied customers are more likely to repurchase a product or service compared to customers who are dissatisfied or less satisfied (Oliver, 1999). Recent research also provides confirmation of the positive and significant influence of *green satisfaction* on *green loyalty* towards green electronic brands (Gupta, 2020; Supriyanto, et al., 2019).

On this basis, hypothesis 3 is formulated:

H3 : *Green satisfaction* has a significant positive effect on *the green loyalty* of LG brand environmentally friendly AC consumers in Semarang City

2.7.4. The Influence of Green Brand Image (X1) on Green Loyalty (Y)

Efforts to understand consumer responses to environmental sustainability issues have resulted in recent research tending to focus on how consumer perceptions of brands and companies influence consumer behavior to create consumer behavior (Gao, et al., 2016). Consumers who are concerned about the environment will tend to like brands that satisfy their concern for the environment (Butt, et al., 2017). Research that provides insight into understanding the drivers of pro-environmental purchasing behavior is important for influencing consumer perceptions of the environmental performance of brands that practice environmental awareness with the primary goal being loyalty (Padel & Foster, 2005).

Brand performance towards the environment which creates a good image in terms of consumer preferences for the brand also results in an increase in green brand loyalty (Tingchi, et al., 2014; Jeong, et al., 2018). Namkung & Jan (2013) stated that *green brand image* is able to influence *consumer behavior* which leads to loyalty to green brands. Recent research also confirms that *green brand image* can be an antecedent that positively increases *green loyalty* (Joshi & Rahman, 2016; Zaremohzzabieh, et al., 2021).

On this basis, hypothesis 4 is formulated:

H4 : *Green brand image* has a significant positive effect on *the green loyalty* of LG brand environmentally friendly AC consumers in Semarang City

2.7.5. The Influence of Green Perceived Quality (X2) on Green Loyalty (Y)

Green brand customer loyalty is important as a firmly held commitment to repurchase or reuse products consistently amidst situational influences that cause consumers to switch to other green brands. Tuu, et al., (2011) stated that consumer loyalty towards environmentally friendly products is used as a cumulative construct which includes the act of consuming (action loyalty) and expected consumption (repurchase in the future). Most previous researchers revealed that in increasing loyalty to green brands, the quality of green products as an antecedent plays an important role (Bloemer & Odekerken-Schroder, 2002; Ibrahim & Najjar, 2008).

Previous research confirms that there is a positive relationship between Green Perceived quality and *green loyalty in research conducted by Aydin & Ozer (2005) and research conducted by Marakanon & Panjakajornsak (2017).*

On this basis, hypothesis 5 is formulated:

H5 : *Green product quality has a significant positive effect on the green loyalty of LG brand environmentally friendly AC consumers in Semarang City*

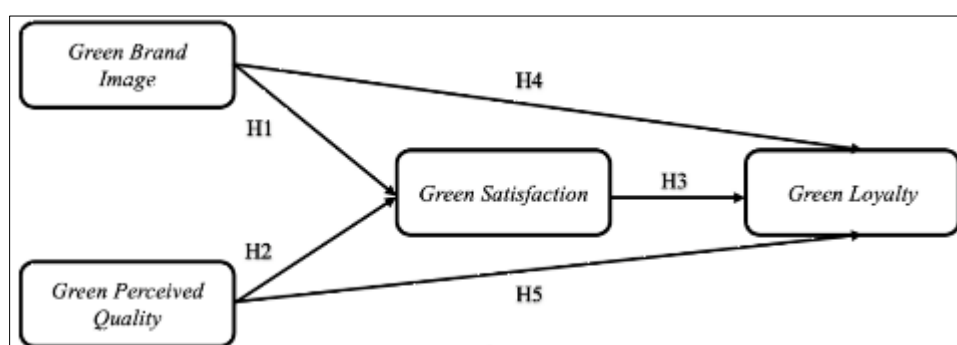


Figure 1 Research Framework

Source: Ha (2022); Cecillia & Tanamal (2022); Gupta (2020); Ahadun, et al. (2021); Marakanon & Panjakajornsak (2017)

3. Research Methods

This type of research is explanatory research, namely research that focuses on the position and relationship of the variables studied (Sugiyono, 2006). The research location is in Semarang City, Central Java Province. The research object is consumers of electronic products from the LG brand. The research implementation time is 6 (six) months from July 2023 to December 2023. Primary data source obtained from consumers of LG electronic products in Semarang City. Primary data were obtained through questionnaires distributed to respondents. Secondary sources obtained from journals, literature, or sources other media. The sample in this research was taken using a *purposive sampling technique*, namely technique for determining samples with certain characteristics (Sugiyono, 2017). The researchers used the minimum sample size for MLE, namely 100 samples/respondents to avoid *sampling error* and avoid poor *Goodness of Fit results because a sample size that is too large will affect the results of the evaluative criteria in SEM.*

The measurement of the Green Brand Image variable uses the Lin, et al., (2017) measurement model. The measurement of the Green Perceived Quality variable uses the Chen & Chang (2013) measurement model. The measurement of the Green Satisfaction variable uses the measurement model of Chen, et al., (2015). The measurement of the Green Loyalty variable uses the Kang & Hur (2011) measurement model.

The research instrument in this study will use a 5 gradation Likert scale. The data collection technique uses a questionnaire. The data analysis tool uses a structural equation model (SEM) which is operated using Smart PLS.

4. Results and discussion

The majority of respondents are female (67%), domiciled in East Semarang (43%), aged 27-36 years (59%), have a Bachelor's degree (43%), work as private employees (40%), have an income of month more than IDR 4,500,00.00 (48%), and have 2-3 units of LG AC (63%).

4.1. Direct Effect

The next stage in this research analysis is testing the research hypothesis. This hypothesis testing is intended to determine the influence between research variables, which is done by bootstrapping this research model and then looking at the results of the t-statistics values and their level of significance for the P-value in the Path Coefficient table.

Table 1 Path Coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Green Brand Image -> Green Satisfaction (H1)	0.326	0.319	0.090	3,600	0,000
Green Perceived Quality -> Green Satisfaction (H2)	0.387	0.399	0.094	4,097	0,000
Green Satisfaction -> Green Loyalty (H3)	0.315	0.316	0.100	3,157	0.002
Green Brand Image -> Green Loyalty (H4)	0.277	0.273	0.096	2,873	0.004
Green Perceived Quality -> Green Loyalty (H5)	0.223	0.227	0.088	2,522	0.012

Source: Processed Primary Data (2023)

Based on results analysis in Table 1 above, results calculations on testing direct effect of all paths in study show that the t -Statistics result is > 1.96 and the P-Values < 0.05. Green Brand Image and Green Perceived Quality have a significant positive effect on Green Satisfaction. Green Satisfaction, Green Brand Image, and Green Perceived Quality have a significant positive effect on Green Loyalty.

4.2. Indirect Effect

Indirect effect testing is carried out to determine the influence of the independent variable on the dependent through intervening variables. The intervening variable is variables that can influence connection between variable independent to variable dependent through influence connection No directly (Sugiyono, 2018).

Table 2 Indirect Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Green Brand Image -> Green Satisfaction -> Green Loyalty	0.103	0.101	0.044	2,330	0.020
Green Perceived Quality -> Green Satisfaction -> Green Loyalty	0.122	0.127	0.053	2,295	0.022

Source: Processed Primary Data (2023)

Based on Table 2, it can be seen that this is related to indirect influences in the form of:

- Influence *Green Brand Image* against *Green Loyalty* via *Green Satisfaction*

The influence of Green Brand Image on Green Loyalty via Green Satisfaction shows a t-Statistics value of 2.330 with a positive value (+) and P-Values of 0.020. Based on the obtained values, it can be said that the T-Statistics value has a value of > 1.96 and the P-Values is < 0.05. So it can be said that the Green Brand Image has an influence positive significant to Green Loyalty via Green Satisfaction.

- 2. Influence *Green Perceived Quality* towards *Green Loyalty* via *Green Satisfaction*

The influence *Green Perceived Quality* towards *Green Loyalty* via *Green Satisfaction* shows a *T-Statistics* value of 2.295 with a positive value (+) and *P-Values* of 0.022. Based on the obtained values, it can be said that the *T-Statistics* value has a value of > 1.96 and the *P-Values* is < 0.05 . So it can be said that *Green Perceived Quality* has an influence positive significant to *Green Loyalty* via *Green Satisfaction*.

4.3. Total Effect

Total influence or the total effect is order track through One variable exogenous to variable intermediary from variable intermediary the to endogenous variables. To obtain this, it is done by adding the path coefficient from the exogenous variable to the intermediary variable with the path coefficient from the intermediary variable to the endogenous variable. As for the results total effect in study This can seen in the following table.

Table 3 Total Effect

	Green Brand Image	Green Loyalty	Green Perceived Quality	Green Satisfaction
Green Brand Image		0.410		0.261
Green Loyalty				
Green Perceived Quality		0.302		0.292
Green Satisfaction		0.273		

Source: Processed Primary Data (2023)

Based on Table 3 above can is known *total effect* of highest to lowest, namely: (1) *Green Brand Image* has total influence on *Green Loyalty* is 0.410; (2) *Green Perceived Quality* has total influence on *Green Loyalty* is 0.302; (3) *Green Perceived Quality* has total influence on *Green Satisfaction* is 0.292; (4) *Green Satisfaction* has total influence on *Green Loyalty* is 0.273; (5) *Green Brand Image* has total influence on *Green Satisfaction* is 0.261.

Green Brand Image influences *Green Satisfaction* positively and significantly. The better the *green brand image* of LG AC, the higher the *green satisfaction*. A good *green brand image* of LG ACs in the eyes of consumers will ultimately have an impact on increasing the *green satisfaction* of LG AC consumers in Semarang City.

Green brand image is a driving factor for *green satisfaction*. *Green brand image* in this research is a factor that can be influenced by the company on the perspective of LG AC consumers in Semarang City. *Green satisfaction* results from using LG AC because there is a positive comparison between consumer expectations and the performance of LG AC. In other words, *green satisfaction* is felt by consumers as the level of fulfillment related to the use of LG AC to satisfy the need for *green products, sustainable expectations and green needs*.

Green brand image contributes as a vital function to consumer behavior when the quality of the product is difficult to identify at first purchase. The *green brand image* in the findings of this research confirms that the aspects contained in the LG brand AC are comparable to consumers' thoughts about the brand, which takes the form of a positive perception of the brand in the minds of consumers.

Green Perceived Quality is able to influence *Green Satisfaction* positively and significantly. The higher the *green perceived quality* of an LG AC, the higher the *green satisfaction*. These results are in line with the findings of previous research conducted by Shaheen, et al., (2017); Gil & Jacob (2018); Cecillia & Tanamal (2020) also found a positive and significant relationship. In other words, the high *green perceived quality* of LG ACs in the eyes of consumers will ultimately have an impact on increasing the *green satisfaction* of LG AC consumers in Semarang City.

This confirms that consumers will be satisfied with products that have high performance. The *green perceived quality* of LG AC is reflected in its characteristics and benefits to the environment. This is based on the presence of an environmentally friendly label, non-polluting, recyclable materials, high energy conservation, and a general guarantee against environmental impacts as a claim from LG AC. The high quality of LG ACs also has an impact on effective initiatives to increase *green satisfaction* of LG AC consumers in Semarang City. Consumers are more interested in products that have high quality so that they can fulfill their satisfaction.

Green Satisfaction is able to influence *Green Loyalty* positively and significantly. The higher the *green satisfaction* from LG AC, the higher the *green loyalty*. This is in line with previous research findings conducted by Suhaily & Darmoyo (2019); Issock, et al., (2019); Gupta (2020); and Supriyanto, et al., (2019) who also found a positive and significant relationship. In other words, the high *green satisfaction* of LG ACs in the eyes of consumers will ultimately have an impact on increasing *the green loyalty* of LG AC consumers in Semarang City.

Satisfaction occurs when consumers feel satisfied with product performance. Customer satisfaction is the level to which customers are happy with the use of products used or consumed from a brand or company. Meanwhile, green satisfaction refers to pleasant fulfillment related to consumption to satisfy customers' environmental desires, sustainable expectations and green needs. Consumers will be satisfied with a product because of their purchasing decision experience and the performance attributes of a product. *Green satisfaction* as a level of enjoyment related to consumption fulfillment to satisfy customers' environmental desires, customer expectations, sustainable expectations, and green needs of consumers that meet or exceed customer needs towards regulatory requirements related to the environment and sustainability. Consumers in this research expect that the AC products offered by LG are environmentally friendly, which provides a sense of security for the environment without having to sacrifice quality and/or having to pay a higher price to get this privilege.

The findings in this research confirm that when LG AC consumers feel satisfied with product performance, consumer loyalty will increase. Satisfaction and loyalty are considered very important concepts for practical purposes in the form of company profits.

Green Satisfaction is able to mediate the influence of *Green Brand Image* on *Green Loyalty* positively and significantly. The results of testing the fourth hypothesis which states that *green brand image* has a significant positive effect on *green satisfaction* through *green loyalty* is in line with the findings of previous research conducted by Ahadun, et al. (2021) and Windayanti & Chrysnaputra (2020) who also found a positive and significant relationship. In other words, the existence of a good *green brand image* and high *green satisfaction* of LG ACs in the eyes of consumers will ultimately have an impact on increasing *the green loyalty* of LG AC consumers in Semarang City.

Green Satisfaction is able to mediate the influence of *Green Perceived Quality* on *Green Loyalty* positively and significantly. This is in line with the findings of previous research conducted by Marakanon & Panjakajornsak (2017) and Ahadun, et al., (2021) which also found a positive and significant relationship. In other words, the existence of good *green perceived quality* and high *green satisfaction* of LG ACs in the eyes of consumers will ultimately have an impact on increasing *the green loyalty* of LG AC consumers in Semarang City.

Green perceived quality is an important factor in generating *green satisfaction*. LG AC consumers who care about the environment will buy environmentally friendly ACs or brands. When consumers believe in ACs that produce less pollution or harm to the environment, they will then feel *green satisfaction*.

5. Conclusion

This research concludes as follows: (1) Green Brand Image is able to influence Green Satisfaction positively and significantly. The better the green brand image of LG AC, the higher the green satisfaction; (2) Green Perceived Quality is able to influence Green Satisfaction positively and significantly. The higher the green perceived quality of an LG AC, the higher the green satisfaction; (3) Green Satisfaction is able to influence Green Loyalty positively and significantly. The higher the green satisfaction from LG AC, the higher the green loyalty; (4) Green Satisfaction is able to mediate the influence of Green Brand Image on Green Loyalty positively and significantly; (5) Green Satisfaction is able to mediate the influence of Green Perceived Quality on Green Loyalty positively and significantly.

Some of the limitations of this research are: (1) This research uses a closed questionnaire so it is not possible to find out more comprehensive information from respondents regarding factors that can influence green loyalty through the indicators presented in the statements in the questionnaire; (2) The Green Brand Image and Green Perceived Quality variables are only able to describe the endogenous variable, namely Green Loyalty, at 37.0%, while the remaining 63% is influenced by other variables outside this research and are only able to describe the endogenous variable, namely Green Satisfaction, at 18.4. % while the remaining 81.6% is influenced by other variables outside this research.

Researchers suggest that LG can increase green loyalty in the form of: (1) paying attention to LG's green brand reputation so that it increases and providing awareness to consumers that LG's commitment to caring for the environment is very high. Implementing an environmentally friendly marketing program helps strengthen the characteristics and value proposition of LG air conditioners from a consumer perspective and can inform consumers about the characteristics of green products in a unique and distinctive way; (2) LG must provide AC quality that is more

durable and performs effectively by implementing quality control for AC products before they are launched strictly and carefully. Apart from that, the most important thing is to conduct reviews for product suppliers and distributors. It is important to check with LG suppliers and distributors so that the quality of the product from the factory to the hands of consumers remains the same; (3) LG is expected to be able to guarantee the effectiveness of LG AC by providing quality products which provide a guarantee for AC products purchased by consumers. Apart from that, LG can implement customer centricity in terms of paying special attention to meeting consumer needs and expectations both in products and consumer services. In this case, it is necessary to understand what consumers or LG's target market needs to facilitate the preparation of marketing strategies that suit consumer needs. Apart from that, LG can conduct customer satisfaction surveys by distributing forms online or through LG sales outlets or also through customer service or call centers. This survey can be used as evaluation material to increase consumer satisfaction.

Compliance with ethical standards

Disclosure Conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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