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Table of Contents:

1	<b>Assessing the Environmental Policy of a Natural Protected Area Using Visitor Opinions. Case Study of Parnassos National Park, Greece</b> Aristotelis MARTINIS	501
2	<b>The Waste-Free Production Development for the Energy Autonomy Formation of Ukrainian Agricultural Enterprises</b> Grygorii KALETNIK, Inna HONCHARUK, Yuliia OKHOTA	513
3	<b>Economic and Legal Aspects of Compensation for Environmental Damage</b> Olga R. AFANASIEVA, Lidia V. ZARAPINA, Maria M. MUKHLYNINA, Alla P. ADAMENKO, Sergey A. SHUMAKOV	523
4	<b>Sustainability Focus in Destination Management. The Case of Russia</b> Elena Aleksandrovna DEDUSENKO, Urs WAGENSEIL	529
5	<b>Legal Issues for Ensuring Phytosanitary Safety and Environmental Protection</b> Zhambyl ORYNTAEV, Zhanna AKSHATAYEVA, Gulnar AIGARINOVA, Zhanna KALKANOVA, Gulnur RASHEVA	538
6	<b>Formation of Approaches to Environmental Policy under Conditions of Digital Economy</b> Aleksandr A. FEDULIN, Ilona V. CHERNAYA, Elena Y. ORLOVA, Galina I. AVTSINOVA, Tatyana V. SIMONYAN	549
7	<b>Reducing the Risks of Environmental Pollution by Agents of Biological Origin</b> L.R. VALIULLIN, R.S. MUKHAMMADIEV, A.S. SOLOVYOVA, E.V. SKVORTSOV, Rin.S. MUKHAMMADIEV, D.A. VALIULLINA, N.R. KASANOVA	555
8	<b>Influence of Atmospheric Air Quality on the Morbidity of the Population Living in the Region of Oil and Gas Production in the Republic of Kazakhstan</b> Perizat AITMAGANBET, Gulmira UMAROVA, Valentina SABYRAKHMETOVA, Sergey PEREPELKIN, Dariya DOSKABULOVA, Gulnur URGUSHBAEVA, Dina EGIZBAEVA	563
9	<b>Typology of Territories by the Accessibility of Social Services. Example of the Great Silk Road Zone of Influence</b> Sembrika Nimaevna IVANOVA	571
10	<b>Assessment of Environmental and Occupational Safety in Mining Industry during Underground Coal Mining</b> Marat L. RUDAKOV, Konstantin A. KOLVAKH, Iana V. DERKACH	579
11	<b>The Conceptual Framework for Water Accounting in Sustainability of Peatland Ecosystems. An Islamic Perspective</b> Andi IRFAN, Dessyka FEBRIA, Leny NOFIANTI, Silva RIJULVITA	589
12	<b>Environmental and Economic Sustainability of Regional Development</b> Balhiya K. SHOMSHEKOVA, Saken U. ABDIBEKOV, Bauyrzhan S. KULBAY, Aibarshyn M. KASENOVA, Anar S. SADVAKASOVA	594
13	<b>The Needs for Determining Degradation Risks from Temperature and Relative Humidity of Post-Byzantine Church Indoor Environment</b> Laura SHUMKA, Leonidha PERI, Entela LATO	601
14	<b>Modern Organizational and Economic Mechanism for Environmental Safety</b> Grygorii KALETNIK, Svitlana LUTKOVSKA	606

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15	<b>Factors of Human Activities Impact on the Nature in the Arctic Regions</b> Natalia V. KARMANOVSKAYA, Mikhail A. ELESIN, Tatyana P. BAZELYANSKAYA	613
16	<b>An Investigation of Green Product Innovation on Consumer Repurchase Intention: The Mediating Role of Green Customer Value</b> Murry Harmawan SAPUTRA, Bening KRISTYASSARI, Naili FARIDA, Elia ARDYAN	622
17	<b>Prospects for the Development of Decorative Nursery in the Crimea</b> Anna I. REPETSKAYA, Irina G. SAVUSHKINA, Ekaterina V. GORODNYAYA, Elena A. KRAVCHUK, Stanislav O. VISHNEVSKY, Natalya V. NEVKRYTAYA, Roman V. SALOGUB	634
18	<b>Pro-Environmental Forms of Transport in the Experience and Perception of Tourists Visiting Warsaw</b> Agata BALIŃSKA	645
19	<b>Tourism, Poverty and Carbon Emissions in Newly Industrialized Countries</b> Rufaro GARIDZIRAI, Clement MOYO	653
20	<b>Improving Public Water Resources Policy in Ukraine: Municipal and Environmental Issues</b> Oleg A. DIEGTIAR, Volodymyr H. HORNYK, Sergii O. KRAVCHENKO, Valentyna V. KARLOVA, Tatyana V. SHTAL	669
21	<b>Analysis of the Effectiveness of State Support to Farms in Region of Russia. Case of Sverdlovsk Region</b> Viktor KUHAR, Ekaterina KOT, Olga LORETTIS, Olga TEREKHOVA, Aleksey RUCHKIN, Nadegda YURCHENKO	679
22	<b>Determinants of Environmental Disclosure in Indonesia</b> KISWANTO, Ika Diah APRIYANI, Heri YANTO, Ain HAJAWIYAH, Hadrian Geri DJAJADIKERTA	682
23	<b>Training of Engineering Personnel for Working in Agriculture Considering the Requirements for Digitalization Development in Agro – Industrial Complex</b> O.D. RUBAEVA, I.A. ZUBAREVA, N.A. PAKHOMOVA, E.A. MALYKHINA	692
24	<b>Education System Environmentalization in Ukraine within the Modern Context</b> Tetiana KHARCHENKO, Liudmyla HATSKA, Julia SAGAYDACK, Lesia CHUBUK	704
25	<b>Integrated Use of Multitrophic Aquaculture Resources in the Recreational Business</b> Elena I. SHISHANOVA, Aleksandr S. BAGDASARIAN, Anna E. SEMAK, Alexander L. FROLOV, Pavel N. SHARONIN	714
26	<b>Effect of Swine Bone Powder for Reduce Cadmium Uptake by Rice</b> Sasithorn PECHRSAN, Thares SRISATIT	721
27	<b>Sustainable Ecological Development of the Global Economic System. The Institutional Aspect</b> Olena DOVGAL, Nataliia GONCHARENKO, Olena RESHETNYAK, Georgiy DOVGAL, Natalia DANKO, Tetiana SHUBA	728
28	<b>Application of Multi Criteria Decision Making in Adopting Suitable Solid Waste Management Model for an Urban Local Body. Case Study of Bhubaneswar City of Odisha, India</b> Das LALIT, Das ADYASHA, Mishra SITIKANTHA	741
29	<b>Environmental Taxes. Its Influence on Solid Waste in Mexico</b> Germán MARTÍNEZ PRATS, Yazmín Isolda ÁLVAREZ GARCÍA, Francisca SILVA HERNÁNDEZ, Daniel TAGLE ZAMORA	755
30	<b>Statistical Analysis of Air Pollution and Life Expectancy in Eastern Europe</b> Cristian DINU, Cristina POPÎRLAN, Irina Valentina TUDOR	763

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## An Investigation of Green Product Innovation on Consumer Repurchase Intention: The Mediating Role of Green Customer Value

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### Abstract

This study examines the critical role of green customer value in order to increase purchase intention based on green products. Data analysis techniques were carried out using Structural Equation Modeling with Partial Least Square (SEM-PLS). The respondents used in this study were the low-cost green car (LCGC) users in Central Java, Indonesia. The number of samples used was 240, with a purposive sampling technique. The findings of this study indicate that all hypotheses are supported. Green customer value is also proven to mediate (partial mediation) the relationship between green product innovation and repurchase intention. This explains that environmentally friendly product innovation by companies will be able to increase consumer buying interest if green customer value can be proven to be encouraged. The results also show that the consumer repurchase intention is influenced by consumer attitudes towards green brands and the quality perceived by consumers in the green products they use. This finding contributes theoretically and practically

**Keywords:** green product innovation; green customer value; repurchase intention; green brand attitudes; green perception quality.

**Jel Classification:** M31; G50; Q57.

### Introduction

In the last few decades, environmental issues and sustainability are the focus of the company (Lyon and Maxwell 2004, Ardyan *et al.* 2017). Lubin and Esty (2010) explain that corporate executives are aware of the challenges of sustainability that have implications for the survival of their organizations and competitiveness. Many companies now intentionally and intensely communicate to external parties (Li *et al.* 2020), how they integrate sustainability into their marketing functions and business practices (Royne, Levy and Martinez 2011). The company's focus will have an impact on environmentally friendly business innovation (Raska and Shaw 2012, Pfeffer 2010).

The initial study of green innovation-focused primarily on issues regarding definitions and the theoretical explanation for the importance of green innovation (Chen 2011, Nocci and Verganti 1999). Most companies identify market opportunities and take strategic steps to build environmentally friendly competencies by initiating process innovations and developing environmentally friendly products (Chen 2008a, Chiou *et al.* 2011). Environmentally friendly products are

believed to be able to increase sales, company profits, and the competitiveness of business organizations. These studies are critical issues for the company. The company began to concentrate on developing a business based on environmentally friendly products, both in developing countries and developed countries

The study of green innovation has been studied in several western countries (Foster and Green 2000, Hillestad, Xie, and Haugland 2010), South Korea, Japan, Taiwan (Chiou *et al.* 2011; Lin, Tan, and Geng 2013), China (Yang and Lin 2020), but it has not been tested in developing market countries such as Indonesia or other ASEAN countries. Most previous research examined the concept of environmentally friendly product innovation and consumer repurchase intentions in the context of developed countries, whereas, in the context of developing countries, such research has not been widely practiced. Some researchers analyzed the importance of green innovation (Rennings 2000, Chen 2008a), but there is little research that sharply links or measures how far the action is towards consumer consumption intention. Fuentes (2015) explained that studies are still limited to integrating and implementing green marketing and innovation programs in daily practice. Farida and Ardyan (2015) explained that the awareness of Indonesians about green consumerism is still shallow. This study discusses a more integrated and holistic conceptual framework of everything related to the concept of green product innovation and repurchase intention from a consumer view. This study examines the critical role of green customer value in order to increase purchase intention based green product

## 1. Literature Review and Hypothesis Development

### 1.1. Natural Resources-Based View and Green Marketing

Resources Based View (RBV) is a concept that focuses on competitive advantage. The company must be able to manage and operate its resources more than its competitors (Penrose 1959). In its development, many companies want to focus on the long term and create future positions. Miemczy, Howard, and Johnsen (2016) revealed the shift from competitive advantage to sustainable competitive advantage. Many factors force companies to focus on environmental preservation and more sustain an uncertain economy (Ozturk and Eraydin 2010). Companies that focus on sustainability must develop new resources as a reaction to environmental changes (Minbashrazgah and Shabani 2019) and able to handle environmental problems (Baker and Sinkula 2005). The RBV approach eventually changes to natural resource-based view (NRBV). The NRBV approach relates to the creation of competitive advantages through natural resources (Hart and Dowell 2011, Hart 1995).

The central concept in this paper refers to natural resource-based view (NRBV). NRBV is known as the theoretical foundation of green marketing (Hart and Dowell 2011). Green means symbols related to environment-friendly, energy-efficient, organic (Parker, Segev and Pinto 2009), global warming (Farida and Ardyan 2015), ozone friendly, recyclable, and eco-friendly (Mourad and Ahmed 2012). Research on market growth and green consumerism began to develop since the mid-1990s. Research shows a gap between environmental concerns and purchases (Intel 1995). Leonidou *et al.* (2011) explained that there are three critical pillars in green marketing: internal green marketing, tactical green marketing, and strategic green marketing. Green product innovation is part of the strategic green marketing pillar. Therefore, based on this description, a study is needed to discuss the importance of green product innovation, which sharply connects or measures how far the company has taken action towards consumer consumption interest (Chen 2008b)

### 1.2. Repurchase Intention

According to Assael (1984), purchase intention is the possibility of a customer to buy a product. Measuring the desire to buy is essential in developing a marketing strategy (Soderlund and Ohman 2003). Marketers usually investigate marketing elements that are critical factors in determining or influencing consumers to buy products, for example, purchase intention is influenced by past experience (Xu *et al.* 2020). Repurchase Intention is the interest in purchases made based on buying experience that has been done in the past (Butcher 2005). The decision to adopt or reject a product arises after the consumer tries the product and then there is a feeling of liking or disliking the product. A strong repurchase intention reflects a high level of satisfaction from consumers towards the product. Butcher (2005) argues that consumers' intention in repurchasing is one measure of the success of a company. The desire to repurchase is customer behavior, where the customer responds positively to the quality of the company's product and intends to re-consume the product from a company (Cronin Jr and Taylor 1992).

### 1.3. The Effect of Green Product Innovation on Green Customer Value

Green product development is an important activity of the company to respond to the environmental sustainability challenge (Albino, Balice, and Dangelico 2009). Pujari (2006) describes a shift in company activity from pollution prevention and clean technology to product. The company seeks to develop a green product. Green product is a product designed through an environmentally friendly approach (Rath 2013) and aims to minimize environmental impacts (Albino, Balice, and Dangelico 2009). Companies reduce non-renewable resources (Robert 1995) and create renewable resources.

Product innovation has the main goal of increasing product value for new consumers and markets, while process innovation is carried out to increase productivity and cost-efficiency (Carrión-Flores and Innes 2010, Demirel and Kesidou 2011). Green product innovation refers to innovative ideas related to environmentally friendly that significantly outperforms conventional products (Baumann, Boons and Bragd 2002; Wagner 2007; Soylu and Dumville 2011). Green product innovation has distinctive characteristics because the changes made are more directed at recycled products, using raw materials that can be recycled, have little or no pollution levels, and pay attention to other impacts that do not endanger ecology and the environment (Groot and Borén 2010). Green product innovation is an innovative product that is characterized by considering the problem of recycling and disposal throughout its life cycle, the use of materials that can be recycled, less pollution, non-pollution or non-toxic, consider saving energy use, no impact bad for ecology, and human toxicity (Chiou *et al.* 2011, Groot and Borén 2010).

Customers who buy environmentally friendly products are increasing (Suki, Suki and Azman 2016). Customers begin to assess the value of environmental-friendly products or what we call green customer value. Green customer value is the customer's assessment of the product, whether the product meets his need for green (Chen and Chang 2012). According to Wong, Turner, and Stoneman (1996), green product innovation will increase the value of customers who buy this green product. Green product innovation enhances the perception of the value of customers (Baker and Sinkula 2005, Paladino 2007, Foster and Green 2000).

Innovation is an important aspect to increase customer purchase intention (Pujari 2006) and business performance (Ardyan *et al.* 2017). Innovative products should enhance more value to consumers to increase revenue and increase their purchase intention (Holak and Lehmann 1990). The intention to buy will be stimulated when the customer is given the right information related to product innovation (Horn and Salvendy 2006). We propose the following hypothesis:

H1: Green product innovation positively effects on green customer value.

H2: Green product innovation positively effects on repurchase intention.

#### 1.4. The Effect of Green Customer Value on Attitude Toward Green Brand and Repurchase Intention

Customer's perceived value is a comparison between net benefits and the total cost of the product or service. Customer's perceived value is related to the customer's views about quality, benefits, social psychology related to product or service (Zameer *et al.* 2015). Green customer value is defined as customer perceptions relating to the desires of the consumer environment, green needs, and sustainable expectations (Patterson and Spreng 1997). Consumers increasingly expect detailed information to evaluate company claims regarding environmentally friendly activities (Chen and Chang 2012, Reynolds and Yuthas 2008). Information will have an impact on customer-company relationships that are more transparent and will increase the value of corporate social responsibility (Vacarro and Echeverri 2010).

The brand's attitude is related to consumer preferences and the evaluation of the overall brand, which symbolizes consumers' likes and dislikes for a brand (Kotler and Gertner 2002). Consumers are more aware and knowledgeable about testing the company claims that they are environmentally friendly. Customers estimate which offer will give the most felt value and act on that estimate. Many customers are willing to pay premium prices for products that contribute to sustainability and environmental sustainability (Meise *et al.* 2014). According to Suki (2016), the increasing value of customers on environmentally friendly products, the positive attitude of consumers towards these products will increase and also affect repetitive purchase intentions. Kuo, Wu, and Deng (2009) explain that customers form value expectations and follow up, and then they will calculate or evaluate bids that will give the highest value. Customer value is a result of the customer after buying a product or service. If in the previous purchase, the customer feels comfortable and comfortable so that the formation of customer value, then this is certainly one that affects the consumer's buying interest again. Customer rational decision determine by a benefit that provides against their importance (Khan and Mohsin 2017)

The researchers previously noted that purchasing decisions for environmentally friendly products are usually based on consumer ratings of products that are environmentally friendly (Gupta and Ogden 2009, Felix and Braunsberger 2016). The feeling and positive image of consumers on a product have a fundamental impact that shapes the attitude of customers and influences their intention to repurchase environmentally friendly products (Schiffman and Wisenblit 2014, Thøgersen *et al.* 2015). Environmentally friendly customer values have a positive impact on consumer attitudes and consumer desires to repurchase products. We propose the following hypothesis:

H3: green customer value positively effects on repurchase intention.

H4: green customer value positively effects on attitude toward green brand.

#### 1.5. The Effect of Attitude toward Green Brand on Repurchase Intention

Attitude is an evaluative response from customers to the brand. This is following some expert opinions that attitude is an overall evaluation of the brand and is consumer response to the brand (Keller, Heckler and Houston 1998). The attitude towards the brand is the influence of consumer perceptions of the brand, which can lead to concrete actions, such as

brand choices (Keller, Heckler and Houston 1998). The more customer is interested in a brand, the stronger the desire of customer to own and choose a brand. Chaudhuri (1999) stating that the attitude towards the brand is the overall evaluation of the consumer towards the brand, in the brand equity model it was found that an increase in market share occurs when the attitude towards the brand is more positive, the brand attitude will influence brand equity. The brand's attitude is said to have a positive value if it's liked, the brand is more remembered (Till, Baack and Waterman 2001, Shapiro and Krishnan 2001), and brands are preferred over competing brands (Jin 2003). Attitudes are formed from customer trust in ad impressions (MacKenzie and Lutz 1989), intrinsic and extrinsic attributes of the brand (Keller 1993), benefits, and experience (Zeithaml 1988, Keller 1993).

Attitudes toward brands form the basis of actions and actions taken by consumers regarding certain brands. Consumers who have a positive attitude towards the brand will tend to be loyal to the brand, as long as they continue to get satisfaction from consuming the brand (Sheth, Newman and Gross 1991). Research conducted by Peyrot and Van Doren (1994) concluded that there is a positive influence between attitudes toward brands and interest in consumer repurchases. The market share of a brand will increase when attitudes toward consumer brands become positive (Baldinger and Rubinson 1996).

A green brand is a brand management concept that is related to environmental awareness. The attitude towards the green brand means an overall evaluation of the brand that cares about the environment (Farida and Ardyan 2015). Green marketing research has previously stated that consumer attitudes about environmentally friendly behavior significantly affect their environmental knowledge and purchase intentions of green products (Aman, Harun and Hussein 2012; Barber, Taylor and Strick 2009; Flamm 2009). In line with the research, Yadav and Pathak (2016) explained that consumer attitudes towards green products significantly increase the intention to repurchase green brands. The positive attitude of consumers towards a brand that is believed to be environmentally friendly will greatly influence the interest of consumers to repurchase the product (Suki 2016; Teng 2009; Huang, Yang and Wang 2014). Farida and Ardyan (2015) explained that green brand attitude plays an important role in increasing repeat purchase intention. We propose the following hypothesis:

H5: attitude toward green brand positively effects on repurchase intention.

### 1.6. The Effect of Green Perceived Quality on Repurchase Intention

High perceived quality can benefit the brand in various ways, such as being a step to strengthen existence, becoming the basis for consumers to be willing to pay premium prices, to stimulate consumer interest, steps to strengthen differentiation and ultimately this can also be a reason for consumers to make a purchase (Aaker 2008). McDougall and Levesque (2000) concluded that perceived quality is significant as a determinant of customer satisfaction and loyalty. Perceived quality becomes more important because perceived quality can enhance behavioral intention (Wang, Tao, and Chu 2020) and marketing performance significantly (Sweeney, Soutar and Johnson 1997). Customers have the potential to increase the desire to repurchase in the future if their perceptions match the reality (Jiang and Rosenbloom 2005). Satisfaction with environmentally friendly brand performance will increase customer loyalty to repurchase products (Olsen 2002). Consumers highly consider the quality of products that contribute to protecting the environment and sustainability. The better the quality of environmentally friendly products that are felt by consumers, the more it increases consumer interest to repurchase intention (Aaker and Joachimsthaler 2012; Hartmann and Ibáñez 2006; Rios *et al.* 2006). We propose the following hypothesis:

H6: Green perceived quality positively effects on repurchase intention.

### 1.7. Green Customer Value as a Mediator between Green Product Innovation and Repurchase Intention.

Consumers who like green brands will try to repurchase. Consumers see the importance of innovation in green products. They see the importance of innovation in green products related to environmental preservation, such as the issue of toxicity of waste, pollution, material/resources, and energy (Dangelico and Pujari 2010, Roy *et al.* 1996). Green product innovation directly affects repurchase intention (Pujari 2006, Holak and Lehmann 1990). In practice, consumers do not experience benefits directly related to the impact of products on the environment (Hartmann and Ibáñez 2006). However, value is still seen as crucial for increasing repurchase intention. In this study, green customer value is important as a mediation of the influence of innovative green products on repurchase intention. We propose the following hypothesis:

H7: Green customer value as a mediator between green product innovation and repurchase intention.

## 2. Methodology

### 2.1. Samples and Measures

The approach in this study is the quantitative method with the nature of research is verification, while the type of research is survey research. This research was conducted in 2018 using cross-sectional data. The sample used in this study was



240 users of the Low-Cost Green Car (LCGC) in the Central Java region. This figure is considered reasonable for statistical analysis, as stated by previous experts (Hair *et al.* 2010). In the same opinion, Bagozzi and Yi (2012) also recommend that the sample size for research is above 100 or 200.

We use a questionnaire to collect data. The questionnaire in this study refers to a questionnaire adopted from previous researchers (see Appendix A). Measurements were made using a 5-point Likert scale (1 = strongly disagree and 5 = strongly agree). Before being used as a measurement tool for research, the instrument was first tested for its validity and reliability. A validity test is done to determine the ability of the instrument to measure the research variables. The qualitative measurement uses face validity and content validity, while quantitative measurements are carried out by confirmatory factor analysis (CFA). The results of testing the instrument can be seen in the following table

Table 1. Standardized Factor Loading of Measuring Model

Variable	Items Questioner	Standardize Loading	AVE	CR
Green Product Innovation	GPI1	0.836	0.703	0.905
	GPI2	0.875		
	GPI3	0.812		
	GPI4	0.831		
Green Customer Value	GCV1	0.761	0.625	0.870
	GCV2	0.793		
	GCV3	0.815		
	GCV4	0.794		
Green Perceived Quality	GPQ1	0.816	0.628	0.894
	GPQ2	0.844		
	GPQ3	0.708		
	GPQ4	0.805		
	GPQ5	0.781		
Attitude Toward Green Brand	ATGB1	0.844	0.711	0.881
	ATGB2	0.851		
	ATGB3	0.834		
Repurchase Intention	RI1	0.888	0.671	0.891
	RI2	0.777		
	RI3	0.811		
	RI4	0.797		

PLS-SEM analyzes the measurement model that tests the relationship between latent and manifest variables (Chin 1998). The measurement model will measure convergent validity (factor loading and Average variance extracted), determinant validity, and reliability (composite reliability). Hulland (1999) explained that the factor loading value must be above 0.7, and all measurements must be significant. The AVE value must be above 0.5, and the composite reliability value must be above 0.7 (Fornell and Larcker 1981). In the table above, all indicators of construct loading factors have a value of > 0.5; this shows that the model has good convergent validity. Then from the five existing constructs, all constructs that have Average Variance Extracted are relatively high so they have a value of loading factors above 0.5 (Hair *et al.* 2014). Furthermore, in testing reliability, this aspect assesses the CR (Composite Reliability) parameters. It seems that the CR score has a value of > 0.7. CR of the five constructs is all higher than the desired level of 0.7 from further analysis (Nunnally 1978). From Table 1 it can be explained that the observed variables can explain the research construct so that it meets the expected reliability principle. Thus, all factor loading values, AVE, and composite reliability are above that required, so it can be concluded that the instrument is valid and reliable.

Tabel 2. Mean, Standard Deviasi and Discriminant Validity

	Mean	St. Dev	1	2	3	4	5
1. Green Product Innovation	4.064	0.479	0.839				
2. Green Customer Value	4.075	0.458	0.459	0.791			
3. Attitude Toward Green Brand	3.895	0.485	0.375	0.573	0.792		
4. Green Perceived Quality	3.893	0.463	0.331	0.582	0.470	0.843	
5. Repurchase Intention	4.232	0.428	0.420	0.522	0.444	0.531	0.819

Fornell and Larcker (1981) explain that confidence analysis, cross-loading, and chi-square differences are used to measure discriminant validity. Discriminant validity is a measure that measures how far a measure is different from the other measures that can be compared with it (Malhotra 2012). Discriminant validity can be tested by comparing the square root AVE with a correlation between variables. Instruments are said to be valid if the AVE square root value is higher than the correlation between variables (Ardayan and Sugiyarti 2018). Table 2 explains that the instrument has discriminant validity.

### 3. Findings

The process of data analysis to test the hypothesis in this study using Structural Equation Modeling using the PLS program. The results of testing hypotheses in this study can be summarized in Table 3 below. The results of this study indicate that H1 to H7 hypothesis is accepted. Testing the role of mediating or intervening variables is done by a procedure developed by Sobel and known as the Sobel test. After being tested using the Sobel test, the green customer value is able to mediate the effect of green product innovation and repurchase intention. So that H7 is accepted.

Table 3. Hypotheses Test Result

Hypotheses	Result	
H1: Green Product Innovation → Green Customer Value	$\beta=0.471$ ; $\rho<0.001$	H1 Supported
H2: Green Product Innovation → Repurchase Intention	$\beta=0.192$ ; $\rho=0.001$	H2 Supported
H3: Green Customer Value → Repurchase Intention	$\beta=0.188$ ; $\rho=0.001$	H3 Supported
H4: Green Customer Value → Attitude Toward Green Brand	$\beta=0.595$ ; $\rho<0.001$	H4 Supported
H5: Attitude Toward Green Brand → Repurchase Intention	$\beta=0.305$ ; $\rho=0.001$	H5 Supported
H6: Green Perceived Quality → Repurchase Intention	$\beta=0.120$ ; $\rho=0.029$	H6 Supported
H7: Green Product Innovation → Green Customer Value → Repurchase Intention	Sobel test= 2.835; $\rho=0.005$	H7 Supported

### 4. Discussion

The results of testing all hypotheses in this study are supported. This shows that investigating the influence of green customer values to address the research gap in explaining the influence of green product innovation on the products customer repurchase intention can be overcome. This research uses a conceptual approach from natural resource-based view theory (NRBV), while the basic theoretical model of this research is developed and synthesized from several relevant marketing theories. While green product innovations are generally recognized as the key to environmental-based business development, and some empirical findings mainly show that green product innovation is a predictor of product repurchase interest (Rao 2002, Rao and Holt 2005, Vachon and Klassen 2008). This study proves the effect of green customer value as a mediating variable partially, on the relationship between green product innovation and green product repurchase intentions, in the context of emerging market countries, namely Indonesia.

Green product innovation has a positive impact on green customer value, which in turn affects the interest in consumer repurchases. This shows that aligning green activity innovations carried out by companies to increase customer value is essential. Thus, the company's ability to develop green customer value and sales performance through increasing customer repurchase intention will grow. This study extends the body of literature on green product innovation, empirically showing that mediating green customer value influences the relationship between green product innovation and repurchase intention. Thus, the company must begin to focus on controlling the ability to innovate green products that can increase customer value. The presence of apparent mediation factors implies that companies must take the industry's capabilities in terms of green product innovation to increase customer value must be taken into consideration. For example, new products use less or non-polluting / toxic materials, new eco-friendly products use packaging, new product designs, recycled calculations and end of life, and new products use recycled materials. Through these things, inputs need to be improved to increase the importance of environmentally friendly customer values. That is also the reason why environmentally friendly customer values are an intermediary factor because these values can bring a better level of consumer perception of a product and are interested in consuming it. The basic theoretical model of this research was developed and synthesized from relevant marketing theories. This study is the first to build a model to investigate the relationship between green product innovation, green customer value for green brands, perceived green quality, and repurchase intention in the cheap car vehicle industry (LCGC) in Indonesia. This finding provides effective guidance for achieving competitive advantage and sustainable performance. The results of this study are also useful for policymakers and their suggestion is that product innovation without considering the practical implications of increasing value for consumers will only be a futile and ineffective job, many companies innovate but cannot create green customer value in this aspect will not be able to survive. This will affect the economy and microeconomics more broadly in the long run. Maybe this is due to the complexity of environmental problems (Chan *et al.* 2016). However, it is still suggested that companies cannot underestimate the impact of environmental problems.

In this study, researchers provided empirical evidence that companies that produce environmentally friendly cars (LCGC) must be able to provide as many benefits and values as possible for consumers so that they don't just stop the green product problem. These empirical findings show that companies that innovate green products and are considered by consumers to be able to provide high green customer value, will remain the top choice for customers in the future.

## 5. Theoretical Implication

The company always has an interest in managing customer loyalty, including through repeated purchases to maintain the company's existence (Gordon 2010). The discussion of the importance of building customer loyalty and repurchase has often been done by researchers (Seo and Jang 2013), but not many have sharply measured how far factors can increase consumers' repeated buying actions on green products. This study bridges the theoretical gap by proposing an empirically tested model, which explains the role of innovative green product (GPI), in engineering green customer value (GCV) and increasing repurchase intention (RI). The distinguishing aspect of this research is to analyze behavioral loyalty attitudes with a natural resource-based Theory (NRBV) view approach. This paper discusses how to increase interest in buying back environmentally friendly products more comprehensively and integrated, related to factors that can leverage green customer values in the minds of consumers.

The findings in this study indicate that to create attitudinal loyalty behavior in the form of repurchase interest, it is necessary to increase the variable green product innovation, green customer value, attitude toward green brand, and green perceived quality. The construction of this research model complements the gaps of previous research models in describing the phenomenon of loyal consumer behavior towards a product brand that has a more comprehensive, environmentally friendly value. The conceptual model of this research can be used as an essential reference in product innovation management modeling with a natural resource-based view (NRBV), especially on brands of products that have ecological value and are environmentally friendly.

## 6. Managerial Implication

The findings of this study clearly show that there are three ways to encourage increased interest in buying environmentally friendly products, namely by increasing customer green product innovation and green value, increasing customer positive attitudes towards green product brands, and improving brand quality perceived by consumers. The findings of this study indicate that green product innovation contributes to the success of increasing interest in buying green products. This sends a clear signal to management practitioners that companies must be genuinely focused on innovating green products and may have to involve substantial financial and resource commitments; this investment is beneficial because green product innovation, if appropriately managed, can produce product success like conventional innovation. In this study, the success of green new product innovations was measured in terms of perceptions and subjective evaluations of respondents. The results of the study indicate that green product innovation that is able to increase the value of green benefits in the view of consumers, it will encourage consumers to repurchase the product at a later time. Increasing the value of green benefits in the view of consumers will also increase the positive attitude of consumers and the perception of product quality so that consumers will be loyal to the product. This is important to be understood by marketing managers, in order to be able to make the right marketing policy related to the innovation of environmentally friendly products that have been carried out by the company so that it can continue to be accepted by consumers and become consumers' first choice in the future. The company needs to pay more attention to making effective marketing strategies related to green products that have been produced. Operational activities through integrated marketing communications must continue to be improved, so that green product innovation, green customer value, positive consumer attitudes towards green brands, and interest in repurchasing these products can continue.

## Conclusion

This study examined the effect of green product innovation (GPI), green customer value (GCV), attitudes toward green brands (ATGB), and quality of green perception (GPQ) on repurchase intentions using PLS-SEM. The results of testing all hypotheses in this study are supported. The contribution of this research lies in the exploration of the construction of a relatively new research model, with unique research objects as evidence media to confirm the research model proposed in this study. Research on the effect of Green Product Innovation on repurchase intentions has been well studied in the context of large companies in developed countries but has not been studied in the context of developing market countries. While the context of consumer behavior in developed and developing countries is possible because of differences due to differences in awareness about the use of information technology and consumer knowledge in products and services, so that corporate differences also allow companies to take different approaches to stakeholders (Mubarik, Chandran and Devadason 2016). Indonesia is included in the category of emerging market countries with growing consumer potential, so this research also fills that gap.

The results of the mediation test analysis indicate that the value of green customers mediates the effect of Green Product Innovation on partial repurchase intention (partial mediation). These results indicate that Green Customer Value has a causality relationship and acts as a mediation of the relationship between Green Product Innovation in the intention to repurchase green products. The research model built to solve the research gap between Green Product Innovation and repurchase intention provides convincing results. All causal relationships of exogenous and endogenous constructs show a good and significant correlation and influence. The existence of the Green Customer Value concept as a mediating variable function partially following predictions and becomes a significant solution for the related research gap. This finding

also addresses the controversy of previous research that left a conflict between positive or negative support in the relationship between green product innovation and repurchase intention. The concept of green customer value combines both and becomes a means to increase interest in buying environmentally friendly products. This shows that even though the company has made environmentally friendly product innovations, the company must also ensure that the product must provide superior customer value, to increase interest in repurchasing customers. These results prove the importance of green customer value

### Limitation and Future Research

There are several limitations in this study, which can be of concern for further research. The proposed conceptual model may apply to different conditions. This hypothesis still needs to be empirically tested in different market contexts, for example, in the service sector or other fields in order to prove the scientific model to be more established. This study only uses samples in LCGC car users. Therefore, future research can use several other companies/industries as samples, or even test this research model across industries to strengthen generalization.

Finally, this conceptual model is developed using consumer perceptions. Future research can combine interpretations from customers and companies to develop a more comprehensive and stronger green repurchase intention model. Besides, to fully capture the entire spectrum of green purchasing, it may be useful to combine further other analysis units such as salesforce, field supervisors, or even head office staff to assess their contribution to green purchasing.

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