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# Green Self-Identity as a Mediating Variable of Green Knowledge and Green Purchase Behavior

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| Article Info | Abstract |
|---|---|
| | **Purpose** - Most environmental problems can be solved with community support through public purchase behavior on eco-friendly products. Therefore, this study aimed to examine the effect of green knowledge on purchase behavior with self-identity as a mediating variable.<br>**Methodology** - The data were collected using a questionnaire and a self-administered survey, generating 271 valid responses. The PLS-SEM approach with SmartPLS Version 3.0 was used to develop a study model and evaluate hypotheses.<br>**Findings** - The results showed that green knowledge influences purchase behavior and self-identity. Furthermore, green self-identity influences purchase behavior and mediates between knowledge and purchase behavior. When customers gain more knowledge, their identity in caring for the environment increases and enhance the purchase behavior of eco-friendly products. The results implied that business people should educate consumers concerning environmental conservation efforts through the use of eco-friendly products.<br>**Originality** - Green self-identity as a mediator between green knowledge and purchase behavior. Studies on green self-identity are still limited as many focus on purchase intention in green products, only a few studies focus directly on green purchase behavior. |

## 1. Introduction

Indonesia is currently highlighting the unresolved environmental issues and problems because the concern pertains to the future quality of life. The biggest problem of waste (SINDOnews, 2018) and its disposal due to the large population needs to be addressed. The Ministry of Environment and Forestry [KLHK] data show that the waste generated nationally is 175,000 tons per day, or 64 million tons per year (Baqiroh, 2019). The special plastic waste composition is around 15% of the total waste generation. Plastic waste mainly comes from food, beverage, and consumer goods packaging, shopping bags, and other goods wrapping (Baqiroh, 2019). Additionally, global warming and pollution are serious threats affecting people's health and quality of life.

Environmentally-friendly products are often referred to as green products. They are sustainable products designed by considering fewer resources, less environmental impact, and preventing waste generation during their life cycle and after use (Ghazali et al., 2021). Green products are designed to reduce waste and maximize resource efficiency using non-toxic materials and environmentally-friendly procedures (Das, 2021). They are produced without using toxic chemicals and in hygienic conditions (Burki, Ersoy, & Najam, 2019), are recyclable (Agustini et al., 2021), easy to reuse and use few resources (Soewarno, Tjahjadi, & Fithrianti, 2019). Moreover, the products are equipped with eco-friendly packaging (K. Taufique, Siwar, Talib, Sarah, & Chamhuri, 2014) and are not harmful to the environment (Salehzadeh, Sayedan, Mirmehdi, & Heidari Aqagoli, 2021). Although many green products are available in the market, Indonesians still lack green knowledge. This is seen from Environmental Performance Index 2020 results that rank Indonesia 116th. A country's Environmental Performance Index is better when supported by people with good environmental knowledge (Wendling, Emerson, de Sherbinin, & Esty, 2020).

One major goal of marketing is to influence consumers' decisions in purchasing products or using services (Ali, 2021; Naz, Oláh, Vasile, & Magda, 2020; Siddique, Saha, & Kasem, 2020). This study focused on the purchasing behavior of environmentally friendly products. Previous studies found that consumers' green product purchasing behavior is influenced by their green knowledge (Amoako, Dzogbenuku, & Abubakari, 2020; Hariharan & Shamini, 2019; Noor & et al., 2017). However, other studies showed that consumers' green or environmental knowledge does not affect their purchase intentions (Wijaya, Setyawan, & Rahman, 2019). The knowledge also does not affect consumer purchasing behavior on green products (Ali, 2021; Pedersen & Neergaard, 2006; Siddique et al., 2020). Some studies found that households with sufficient knowledge about climate change and environmental factors do not act more environmentally friendly (Bartiaux, 2008). These findings show the inconsistency of previous studies on green knowledge and product purchasing behavior. Therefore, this study added a mediating variable of green self-identity because consumers' positive self-interest is also the main reason for their purchases by considering themselves green consumers (Sharma, Saha, Sreedharan, & Paul, 2020; Sun, Li, & Wang, 2021).

Studies on green self-identity are still limited as many focus on purchase intention in green products (Barbarossa, De Pelsmacker, & Moons, 2017; Patel, Trivedi, & Yagnik, 2020; Ponsree et al., 2020; Sun et al., 2021; Tung, Koenig, & Chen, 2017). Only a few studies focus directly on green product buying behavior (Confente, Scarpi, & Russo, 2020; Khare, 2015) and pro-environmental behavior (Hansmann & Binder, 2020; Hansmann, Laurenti, Mehdi, & Binder, 2020). Therefore, this topic deserves further studies and development by focusing on green product purchase behavior. The aim is to find a direct relationship between green knowledge and purchase behavior mediated by green self-identity. When consumers have environmental knowledge, their green self-identity is strengthened, and their purchase behavior increases. Therefore, the gaps in the previous studies necessitate exploring the effect of green knowledge on purchase behavior mediated by green self-identity.

## 1.1 Green Purchase Behavior

Consumer buying behavior involves a process a person conducts when deciding to purchase a particular product (Kushwaha & Sharma, 2016). Studies show that consumers' pro-environmental beliefs, awareness, and green buying behavior are influenced by psychographics, past beliefs, social norms, and environmental awareness (Khare, 2015). Consumers need to buy green products produced using environmentally friendly materials and processes, and their

consumption should be environmentally harmless (Siddique et al., 2020; Wu & Chen, 2014). They often respond to different stimuli and factors and feel the urge to use and buy green products (Singh & Gupta, 2020). Several studies on green marketing show the various factors influencing the purchase of green products, including the impact of knowledge (Amoako et al., 2020; Hariharan & Shamini, 2019; Noor & et al., 2017) and green self-identity (Confente et al., 2020; Khare, 2015).

## 1.2 Green Knowledge

Green knowledge is a person's ability to understand environmental and sustainability issues (Naz et al., 2020). The term 'knowledge' related to consumer behavior is associated with the factors impacting the decision process of buying behavior. Therefore, knowledge is the process through which consumers collect and organize evidence used in making decisions and evaluating the services and products to be purchased (Moser, 2016). Previous studies showed that green knowledge significantly and positively affects the green product purchasing behavior at leading shopping malls in Accra, the capital of Ghana (Amoako et al., 2020), in Batticaloa district (Hariharan & Shamini, 2019), and generations Z in Malaysia (Noor & et al., 2017). However, studies in developing countries such as Malaysia found that the green product purchasing decisions of consumers with environmental knowledge are not based on that knowledge (Ali, 2021). In another study, households with sufficient knowledge about climate change and environmental issues do not act in a more environmentally friendly way (Bartiaux, 2008). This could be based on the consumer's level of environmental knowledge. People with good environmental knowledge have better green self-identities. Therefore, the following hypotheses were proposed:

$H_1$: Green knowledge positively impacts green purchase behavior.
$H_2$: Green knowledge positively impacts green self-identity.

## 1.3 Green Self-identity

Self-identity is important in influencing consumers' green purchases. Green self-identity is a personal self-perception given the potential for certain eco-friendly behaviors of buying green products (Patel et al., 2020). Self-identity is an advantage reflecting an individual's self-perception related to environmental awareness. Its importance focuses on ecological behavior and commitment to an identity that influences salience (Khare, 2015). Consumers' eco-friendly behavior could be conceptualized as a personality trait. When consumers believe they have a green identity, they adopt consumption behaviors consistent with their identity (Sun et al., 2021). This study aimed to examine the relationship between green self-identity and actions. Academically, the importance of self-identification is better known as identity theory, which describes the self as an entity dependent on individual norms and social behavior (Sharma et al., 2020). Consumers perceiving themselves as environmentally-friendly green consumers experience the satisfaction of self-determined needs (Patel et al., 2020). Therefore, this study also aimed to investigate the effect of green knowledge on purchase behavior with green self-identity as a mediating variable. This led to the proposal of following hypotheses:

$H_3$: Green self-identity positively impacts green purchase behavior.
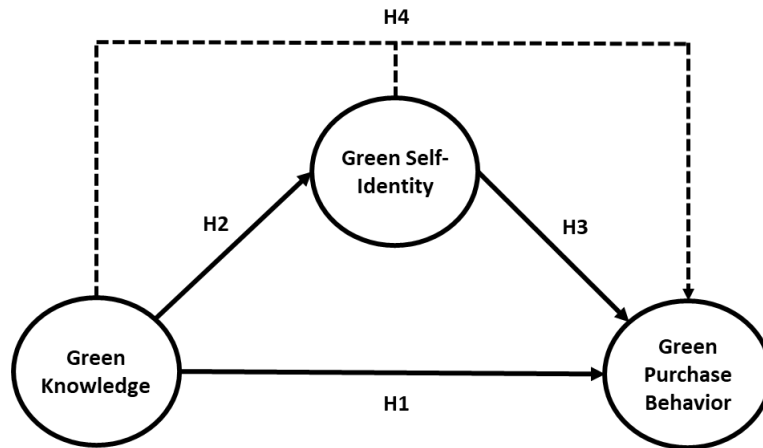$H_4$: Green self-identity positively mediates the relationship between green knowledge and purchase behavior.

**Figure 1. Research Model**

## 2.    Research Method

This study used a deductive approach to construct a hypothesis based on a literature review. Data were collected using a survey questionnaire and were analyzed using appropriate statistical techniques to obtain results on the relationship between several predetermined variables. A non-probability purposive sampling technique was used to select a sample of all consumers in Indonesia that have purchased green products. Purposive sampling was used because the respondents had to be consumers that had purchased green products and were over 17 years of age. This study used 200 samples based on the provisions of Malhotra (2010) regarding studies in marketing. Data were collected through an online survey with a structured questionnaire using a google form. The data collection process was conducted for three weeks and obtained 273 responses. Two incomplete data were not used in data analysis, leaving 271 responses. Table 1 shows the operationalization of study variables:

**Table 1.** Variable operations

| Variable | Indicator Statement | Source |
|---|---|---|
| Green Purchase Behavior [GPB] | 1. I stopped buying products with a negative impact and harmful to the environment.<br>2. I prefer products that cause less pollution.<br>3. When there was a choice, I would buy a product with a little negative impact on people and the environment.<br>4. I buy recyclable products.<br>5. I do not buy household products that harm the environment.<br>6. I buy energy-efficient household appliances. | K. M. R. Taufique and Islam (2021) and Ali (2021) |
| Green Knowledge [GK] | 1. Eco-friendly products provide higher quality than conventional products.<br>2. I know more about recycling than the people around me.<br>3. I know a place that sells cheaper and good-quality green products.<br>4. I know the meaning of the green symbol or label on the product packaging.<br>5. I am aware of environmental and social issues. | Ali (2021) |
| Green Self-identity [GSI] | 1. I care about environmental issues.<br>2. I am an eco-friendly consumer.<br>3. Buying environmentally friendly products makes me a consumer that cares about the environment.<br>4. I feel satisfied when I buy environmentally friendly products.<br>5. I prefer consuming organic products. | Confente et al. (2020) |

Questionnaires were developed to collect consumer data about green knowledge, self-identity, and purchase behavior. Each variable was measured using indicators adopted from previous studies. Items were measured using a five-point Likert scale indicated by choice of "strongly disagree"' to "strongly agree."

This study used a two-step approach to data analysis suggested by J. F. Hair, Hult, Ringle, and Sarstedt (2013). The first and second steps analyze the measurement model and examine the structural relationship between variables, respectively. The two-step approach establishes the variables' reliability and validity before assessing the model's structural relationships. Additionally, the selected constructs' reliability and validity need assessment. Composite reliability [CR] should be assessed for internal reliability similar to Cronbach's Alpha above 0.7. Joseph F. Hair, Black, Babin, and Anderson (2019) required a minimum loading value of 0.6. Convergent validity was evaluated using average variance extracted (AVE) and all constructs were above 0.5, indicating satisfactory convergent validity (Fornell & Larcker, 1981). Furthermore, the PLS structural equation modeling technique was applied using SmartPLS Version 3.0 to test the model (Ringle, Wende, & Becker, 2015). Variance-based PLS-SEM was used to evaluate the proposed model and examine the hypothesized relationships through SmartPLS 3. This study used PLS-SEM to estimate the cause-and-effect relationship model with latent variables, because it has a causal predictive approach that highlights predictions in statistical models to explain causal relationships (Ravand & Baghaei, 2016). Also, it helps assess cause and effect relationships among variables built with a moderate sample size (J. F. Hair et al., 2013).

## 3.    Results and Discussions

A total of 271 responses were collected from the questionnaires. Table 2 shows the demographic characteristics of all respondents used in the analysis. Of the 271 respondents, 195 or 71.96% were females, while 76 or 28.04% were males.

**Table 2.** Demographic characteristics of respondents

|  | Frequency | % |  | Frequency | % |
|---|---|---|---|---|---|
| *Gender* |  |  | *Province* |  |  |
| Male | 76 | 28.04 | Central Java | 147 | 54.24 |
| Female | 195 | 71.96 | West Java | 24 | 8.85 |
| *Age* |  |  | East Java | 8 | 2.94 |
| 17 – 25 | 78 | 28.78 | DKI Jakarta | 22 | 8.12 |
| 26 – 34 | 67 | 24.73 | Maluku | 16 | 5.90 |
| 35 – 43 | 70 | 25.83 | Central Sulawesi | 12 | 4.42 |
| 44 – 52 | 40 | 14.76 | Southeast Sulawesi | 3 | 1.11 |
| 53 – 63 | 16 | 5.9 | North Sulawesi | 2 | 0.74 |
| *Education* |  |  | South Sulawesi | 1 | 0.37 |
| High School | 55 | 20.3 | West Sumatra | 1 | 0.37 |
| Diploma [D1-D3] | 37 | 13.64 | South Sumatra | 1 | 0.37 |
| Diploma 4 or Bachelor | 114 | 42.06 | North Sumatra | 2 | 0.74 |
| Master | 58 | 21.40 | NTT | 7 | 2.60 |
| Doctor | 7 | 2.6 | Papua | 4 | 1.48 |
| *Income* |  |  | Riau | 2 | 0.74 |
| < Rp 1.000.00 | 54 | 19.93 | Bali | 4 | 1.48 |
| Rp 1 – 3 million | 59 | 21.77 | Banten | 2 | 0.74 |
| Rp 3.1 – 5 million | 64 | 23.61 | DI Yogyakarta | 8 | 2.94 |
| Rp 5.1 – 7 million | 44 | 16.24 | Central Kalimantan | 2 | 0.74 |
| Rp 7.1 – 9 million | 15 | 5.53 | East Kalimantan | 2 | 0.74 |
| > Rp 9.000.000 | 35 | 12.92 | Riau Islands | 1 | 0.37 |
| Note: N = 271 |  |  |  |  |  |

Source: Data Processed Results (2021)

Based on age, 78 respondents or 28.78% were aged between 17 and 25, 70 or 25.83% were between 35 and 43 years old, while 67 24.73% were between 26 and 34. Moreover, 114 respondents had Diploma 4 or Bachelor Degree education, 58 had Masters degree, while 55 had High School education. Based on income, 64 respondents earned between IDR3,100,000 and 5,000,000, 59 or 21.77% earned between IDR1,000,000 and 3,000,000, while 54 earned less than IDR1,000,000. There was an uneven distribution throughout Indonesia because 147 respondents resided in Central Java Province.

Figure 2 shows the environmentally friendly products purchased by consumers based on the data collected. The data indicates that 81.9% of the products purchased by consumers are organic vegetables and fruits, 63.1% are eco-friendly cloth shopping bags, 54.2% are LED lights, 47.2% are reusable straws, while 36.9% are recyclable cutlery, such as from wood. Additionally, 35.1% of the products are cooking utensils safe for health, 32.5% are energy-efficient utensils, 22.9% are recycled paper tissues, 19.9% are recycled papers, while 16.2% are environmentally friendly laundry detergents. The data also denotes that 11.8% of the products are carbon-free soaps and shampoos, 10.7% are silicone cups, while 0.4% are biodegradable children's toys, organic fertilizers, beverage bottles, soaps, and shampoos.
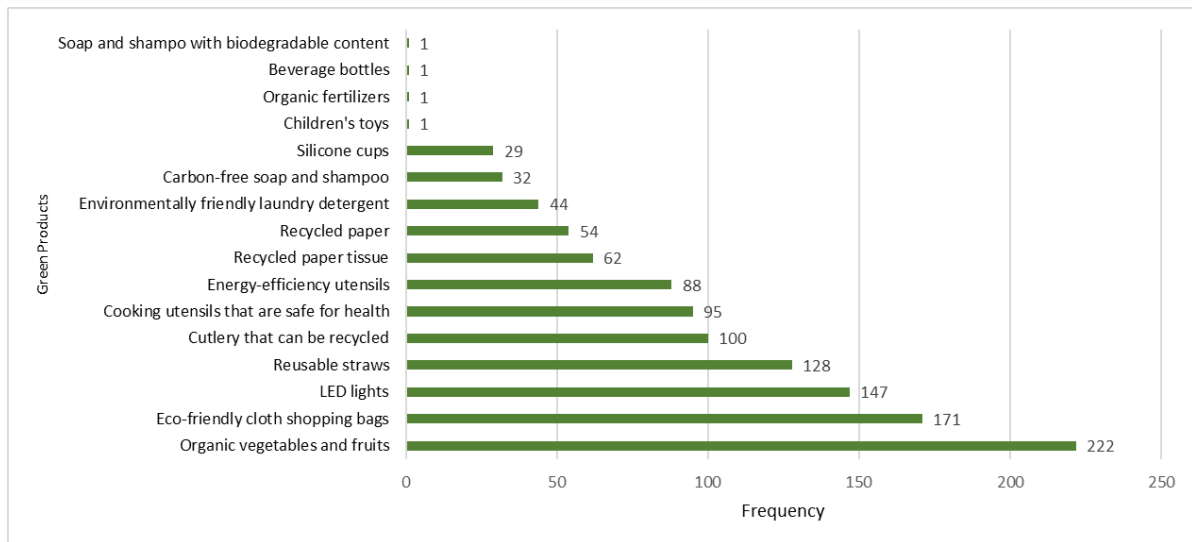


Source: Data Processed Results (2021)

**Figure 2.** Environmentally friendly products purchased by consumers

This study conducted a pre-test by performing validity and reliability tests of instruments. The validity test with 30 respondents for all indicators showed that the corrected item-total correlation or r-count value ranged from 0.505 to 0.941, greater than the r-table value of 0.361. Reliability test results showed a Cronbach's alpha value > 0.07, green knowledge value of 0.780, green self-identity value of 0.905, and green purchase behavior value of 0.759 were declared reliable. The reliability and validity of the main data were examined before testing the hypothesis. The convergent validity test showed AVE results less than 0.5, while the outer loading values were less than 0.7 for indicators GK1 [0.604], GPB2 [0.421], and GPB3 [0.461].
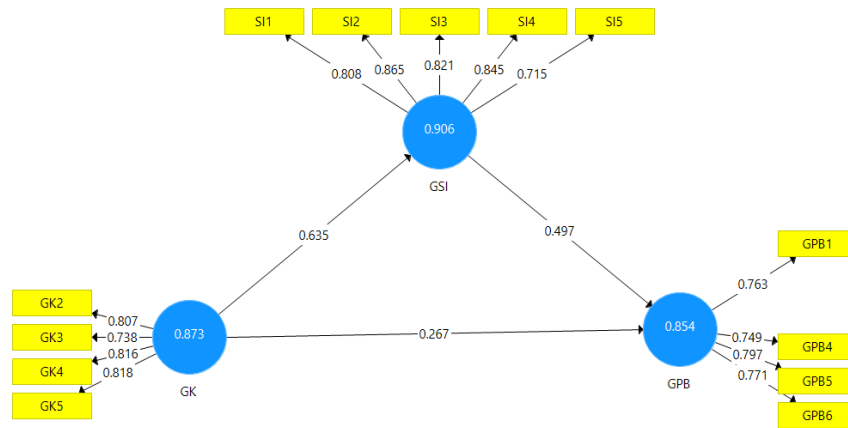
**Figure 3.** Outer loading

The three indicators above were deleted and tested for reliability and validity again. Therefore, Figure 3 shows the result of the outer loading without the three indicators.

**Table 3.** Construct reliability and validity

|  | Cronbach's Alpha | rho_A | Composite Reliability | AVE |
|---|---|---|---|---|
| GK | 0.806 | 0.807 | 0.873 | 0.633 |
| GSI | 0.870 | 0.878 | 0.906 | 0.660 |
| GPB | 0.773 | 0.773 | 0.854 | 0.593 |

Source: Data Processed Results (2021)

The construct reliability results from the main data collected are reliable, with rho_A > 0.7. Composite validity for each construct was measured accurately with CR > 0.7, while the convergent validity was measured accurately with AVE > 0.5, as shown in Table 3.

**Table 4.** Fornell-larcker criterion and cross-loadings

| Fornell-Larcker Criterion | | | |
|---|---|---|---|
|  | GK | GPB | GSI |
| GK | 0.795 | | |
| GPB | 0.583 | 0.770 | |
| GSI | 0.635 | 0.667 | 0.812 |
| Cross-Loadings | | | |
|  | GK | GPB | GSI |
| GK2 | 0.807 | 0.468 | 0.522 |
| GK3 | 0.738 | 0.439 | 0.487 |
| GK4 | 0.816 | 0.464 | 0.497 |
| GK5 | 0.818 | 0.482 | 0.512 |
| GPB1 | 0.441 | 0.763 | 0.486 |
| GPB4 | 0.488 | 0.749 | 0.573 |
| GPB5 | 0.399 | 0.797 | 0.427 |
| GPB6 | 0.451 | 0.771 | 0.543 |
| GSI1 | 0.526 | 0.507 | 0.808 |
| GSI2 | 0.581 | 0.619 | 0.865 |
| GSI3 | 0.531 | 0.546 | 0.821 |
| GSI4 | 0.499 | 0.548 | 0.845 |
| GSI5 | 0.425 | 0.477 | 0.715 |

Source: Data Processed Results (2021)

The discriminant validity was checked to examine how a construct is different from other constructs based on empirical standards. An examination of the Fornell-Larcker Criterion and Cross-loading showed that all the roots of the AVE [Fornell-Larcker Criterion] of each construct were greater than their correlations with other variables. Moreover, cross-loadings indicated that the outer loading indicator on the related construct was greater than the cross-loading on the other constructs. The results are shown in Tables 4. Before hypothesis testing, Multicollinearity was tested with VIF Collinearity Statistics. The model estimates showed VIF for green knowledge variables and self-identity of 1.674 smaller than 5, implying no multicollinearity.

The hypothesis of the study model was tested after all the conditions were met. Table 5 shows the results of hypothesis testing.

**Table 5.** Results of hypothesis testing

| Path Coefficient | | | | |
|---|---|---|---|---|
| | Beta | T Statistics | P Values | f Square |
| GK → GPB | 0.267 | 4.897 | 0.000 | 0.083 |
| GK → GSI | 0.635 | 17.915 | 0.000 | 0.674 |
| GSI → GPB | 0.497 | 9.896 | 0.000 | 0.288 |
| **Total Effects** | | | | |
| GK → GPB | 0.583 | 15.194 | 0.000 | |
| GK → GSI | 0.635 | 17.915 | 0.000 | |
| GSI → GPB | 0.497 | 9.896 | 0.000 | |
| **Specific Indirect Effect** | | | | |
| GK → GSI → GPB | 0.316 | 8.724 | 0.000 | |
| **R Square and Q Square Redundancy** | | | | |
| | R Square | R Square Adjusted | Q Square | |
| GPB | 0.487 | 0.484 | 0.276 | |
| GSI | 0.403 | 0.400 | 0.260 | |

Source: Data Processed Results (2021)

Hypothesis testing using partial least squares showed a that green knowledge significantly and positively affected purchase behavior, with Beta = 0.267, t = 4.897, t > 1.96, p = 0.000, p < 0.05, and f-square = 0.083]. This implies that green knowledge has a medium influence on purchase behavior, according to Cohen (Henseler, Ringle, & Sinkovics, 2009), supporting H1. Green knowledge significantly and positively affected self-identity, with Beta = 0.635, t = 17.915, t > 1.96, p = 0.000, p < 0.05, and f-square = 0.674]. It means that green knowledge greatly influences self-identity, supporting H2. Furthermore, self-identity significantly and positively affected purchase behavior, with Beta = 0.497, t = 9.896, t > 1.96, p = 0.000, p < 0.05, and f-square = 0.288]. It signifies that green self-identity has a medium influence on purchase behavior, supporting H3. The analysis showed that self-identity significantly and positively mediates the relationship between knowledge and purchase behavior, with Beta = 0.316, t = 8.724, t > 1.96, p = 0.000, and p < 0.05, supporting H4.

The coefficient of determination results showed the influence of the green knowledge and self-identity independent variables on purchase behavior. The influence is seen from the $R^2$ value of 0.487, indicating that knowledge and self-identity explain 48.7% of purchase behavior. Variables outside the model explain the remaining 51.3%. Moreover, the effect of green knowledge on self-identity indicated an $R^2$ value of 0.403. This means that 40.3% of self-identity is explained by knowledge. Stone Geisser Test or $Q^2$ Redundancy processed through blindfolding

procedure resulted in Q² of 0.276 and 0.260, greater than 0, implying predictive relevance (Joseph F. Hair et al., 2019). Another fit measure suggested by Joseph F. Hair et al. (2019) is Standardized Root Mean Residual [SRMR]. The measure compares the data and model interpretation correlation matrices, where an SRMR value less than 0.08 indicates the model has a good fit. The SRMR results showed a value of 0.073, less than 0.08, meaning the empirical data explained the model well. Figure 4 shows the structural model in drawings.
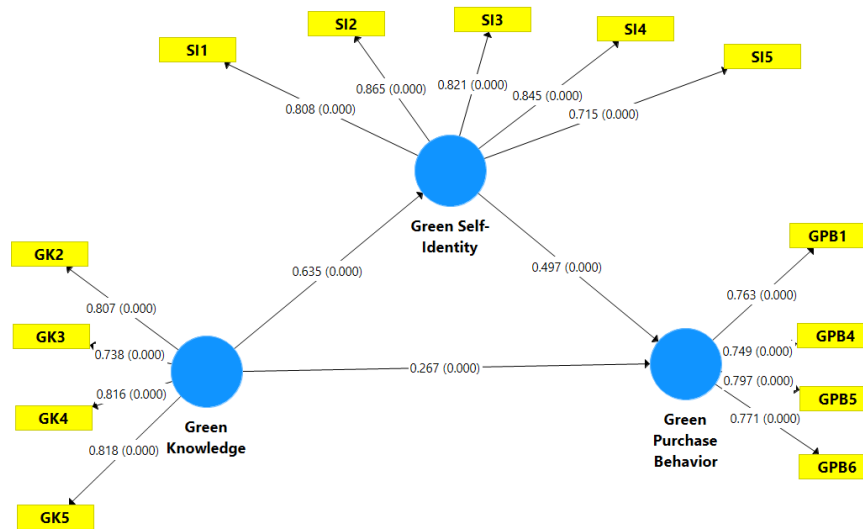


**Figure 4.** Structural model

The results show that green knowledge significantly and positively affected purchase behavior. This signifies that consumer purchase more environmentally friendly products when they have strong environmental or green knowledge. The results support the hypothesis that green knowledge affects consumers' purchase of environmentally friendly products. This occurs when consumers know about recycling products and where to buy cheaper and good-quality green products. They also need to know the meaning of environmentally friendly symbols or labels on product packaging and environmental and social issues. Therefore, environmental knowledge influences consumers' green buying behavior (Khare, 2019). These results support previous studies which showed that green knowledge positively affected the purchasing behavior of environmentally friendly products for youths in Ghana (Amoako et al., 2020), Batticaloa district (Hariharan & Shamini, 2019), and generation Z in Malaysia (Noor & et al., 2017). The findings further indicate that green knowledge influences purchasing behavior.

The hypothesis test results showed that green knowledge positively affects green self-identity. This demonstrates that a thorough environmental understanding increases a pro-environmental self-identity. When people identify their environmental problems, their self-identity of environmental care improves. Therefore, businesses that produce green products should continuously educate consumers on the importance of environmental sustainability (Steg & Vlek, 2009). Green knowledge includes the relationship between the perceived environmental impact and the awareness to preserve the environment for the next generation (Kumar, 2012). Knowledge of environmental problems and their causes increases individual motivation to act responsibly (Amoako et al., 2020). Therefore, this knowledge is necessary for realizing a self-identity that cares about the environment.

Green self-identity significantly and positively affects green purchasing behavior. These results strengthen previous studies which showed that green self-identity positively affects green

purchase intention (Confente et al., 2020; Sharma et al., 2020). The theory of planned behavior postulates that perceived behavioral control describes an individual's perception of having the means and opportunities to behave in a certain way (Amoako et al., 2020). This study found that consumers increase their purchase of environmentally-friendly products when they believe they care about the environment and are satisfied when buying and consuming organic products. However, previous studies found that green self-identity influenced purchase behavior in non-green consumers but not in green consumers (Barbarossa & De Pelsmacker, 2016).

The results indicated that green self-identity mediated the effect of green knowledge on purchase behavior. This study found partial mediation in the significant influence (Joseph F. Hair et al., 2019) of green knowledge on purchase behavior and self-identity. Consumers' green self-identity grows due to improved knowledge, leading to more green purchase behavior. According to previous studies, green self-identity is an antecedent of self-centeredness in its influence on purchase intentions for eco-friendly products and a driver of environmentally friendly behavior (Barbarossa & De Pelsmacker, 2016). This study found that the consumer value system could influence the green products' perceived value, especially how they identify themselves as green. (Confente et al., 2020). Consumers are strongly associated with product characteristics because it helps in differentiating themselves. In this case, buying green products gives consumers a pro-environmental status and enables them to project their commitment to the environment and differentiate themselves from others (Khare, 2015).

## 4.    **Conclusions**

This study aimed to examine the effect of green knowledge on purchase behavior mediated by green self-identity. The results showed a positive influence of green knowledge on purchase behavior and green self-identity. Also, green self-identity positively influenced purchase behavior, indirectly affected by knowledge mediated by self-identity. These findings support all of the hypotheses tested. Therefore, better environmental knowledge improves environmental self-identity and increases the purchase behavior of eco-friendly products.

The results implied that business people could discover more about consumer behavior patterns of buying environmentally friendly items. Business people should educate consumers concerning environmental conservation efforts through the use of eco-friendly products. This could be accomplished through product marketing that emphasizes the use of healthy and environmentally safe items. When customers gain more knowledge, their identity in caring for the environment increases.

This study was limited by the Covid-19 pandemic that forced data to be collected online because consumers could not be reached personally. Respondent data also remained concentrated in the Central Java region. Therefore, future studies could use data from respondents in all regions of Indonesia.

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