Customer Guilt and its Relation to Purchase Intention of Green Products: A Study to University ‘Green’ Activist Students

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Abstract
Purpose – This paper aims to investigate the structural model of customer guilt, perceived customer effectiveness, self-monitoring, and green purchase intention.

Methodology – The present study is a survey of university students in four universities in Greater Surakarta. These students are involved in student organisations such as scout and university student hiking club. PLS-SEM is implemented in this study to compute structural relationships among variables.

Findings – The result shows that customer guilt and self-monitoring affect green purchase intention. However, this study cannot prove that perceived consumer effectiveness is the mediator of customer guilt and self-monitoring to green purchase intention.

Originality – This study proposes a model for green purchase intention of specific groups of young people who are more aware of environmental issues.

Keywords: Green purchase intention; Customer guilt; Perceived customer effectiveness; Self-monitoring; Young people

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1. Introduction

Sustainable consumption has attracted international attention for more than a couple of decades (Cho et al., 2015). Sustainable consumption is also known as green consumption, eco consumption, or environmental consumption. This issue arises when society becomes more aware of the need to improve environmental quality. Experts consider this issue as consumers’ responsibility for their consumption activities which contribute to environmental degradation. Behaviours related to green consumption is viewed as prominent since it saves the earth and sustainability development (Nittala, 2014). Scholars have recognised that the issue of green consumption as a prestigious behaviour (Lee & Park, 2013).

Green purchase behaviour and intention are parts of green consumption issues. Green purchase intention is the probability of consumers to purchase green products rather than conventional products (Rashid, 2009). The high intention to buy a product leads people to do actual buying (Wang et al., 2016) because intention determines people’s behaviours (Ramayah et al., 2010). Theory of planned behaviour (TPB) states the relationship between buying intention and the actual buying behaviour. There is an argument that consumers who intend to purchase green products are aware of the environmental features of the product and of the environmental degradation caused by product consumption (Jaiswal & Kant, 2018).
Many scholars have conducted studies on the determinant of green purchase intention and behaviour. Scholars view that green features in a product attract people to buy it (Ali & Ahmad, 2012), especially for consumers who have attention to environmental destruction. However, Rehman and Dost (2013) argued that green features in the product is just a claim for being green to improve green value. Furthermore, socio-demographics of the consumer, such as education, age, gender, and economic level, are recognised as the determinants of green purchase intention (Nittala, 2014).

Meanwhile, other scholars argue that consumers’ environmental knowledge affects people’s intention to purchase green products (Kim et al., 2016; Mei et al., 2012; Wang et al., 2016). People with high knowledge of environmental issues have a higher level of environmental awareness (Lai & Cheng, 2016), which is the antecedent of intention to purchase green products (Lee, 2010).

Apart from that, Akehurst et al. (2012) argued that psychographic factors have more influence to create green consumers. TPB and the theory of reasoned action (TRA) are some of the theories that include psychographic variables as the determinant of behaviour. Furthermore, behavioural beliefs through behavioural attitude, normative beliefs represented by subjective norms, and control beliefs which are known as perceived behavioural control, are incorporated in TPB as the determinant of behavioural intention, which in turn affects actual behaviour (Muraguri et al., 2020; Turaga et al., 2010; Yadav & Pathak, 2017). All those variables and environmental awareness included in Value-Based Norm (VBN) initiate self-efficacy and belief are psychological variables for the abovementioned behavioural theories approach.

Several other scholars argue that a ‘belief’ that an individual can solve the environmental problem determines the intention to purchase green products. It is known as perceived consumer effectiveness (PCE). For example, Kabadayi et al. (2015) incorporated self-monitoring and customer guilt into perceived consumer effectiveness to determine green purchase intention. Later, Antonius (2018) developed a complex green purchase intention model by expanding Kabadayi et al. (2015). His study showed that self-monitoring and customer guilt could influence perceived consumer effectiveness which determines green purchase intention. However, in some cases, perceived consumer effectiveness were unable to influence green behaviour (Verma, 2017).

Based on the abovementioned background, this study aims to investigate the relationship between customer guilt, self-monitoring, perceived consumer effectiveness, and intention green purchase behaviour among university students involved in green student associations. Furthermore, this study implemented PLS-SEM since we applied ordinal data to measure respondents’ perceptions.

1.1 Customer Guilt

People with high environmental awareness will react as scared, sad, mad, or guilty when they find environmental degradation (Kollmuss & Agyeman, 2002). In terms of VBN theory, this is a personal norm. Guilt, is an emotional reaction of an individual (Basil et al., 2008; Baumeister et al., 1995) when they make a mistake (Barrett et al., 1993) and violate moral and social norm (Kugler & Jones, 1992). Consequently, some scholars have linked guilt and personal norm (Aguilar-Luzón et al., 2012; Cowan & Kinley, 2014).

Generally, scholars study guilt along with pride. Being proud is an emotional reaction after conducting a good deed, but guilt is an emotional reaction to bad behaviour (Bissing-Olson et al., 2016). In other words, guilt is a negative feeling (Dahl et al., 2005). People have low self-esteem as a result of their actions that violate values and norms (Burnett & Lunsford, 1994). Guilt
motivates people to participate in environmental activities (Lacasse, 2016). Truelove et al. (2016) even stated that a lack of guilt led to a lack of environmental awareness.

Many scholars in marketing have studied guilt since it could persuade customers to purchase (Brennan & Binney, 2010; Ham et al., 2015; Shaughnessy, 1996). Meanwhile, do Paço and Raposo (2010) involved guilt as the indicator of environmental awareness. Guilt is a personal emotion that may control people for having sustainable behaviour (Antonetti & Maklan, 2014; Han, 2014). People with environmental-conscious behaviours would have felt guilty when their activity did not support environmental protection (Garnelo-Gomez, 2017; Howell, 2013). Antonetti and Maklan (2014) have made evidence that perceived consumer effectiveness (PCE) is the mediator of customer guilt (CG) and green purchase intention. Guilt improves environmental knowledge about environmental behaviour (Bissing-Olson et al., 2016) and influences environmental behaviour (Lacasse, 2016). Truelove et al. (2016) noted that without guilt, people will not be aware of the environment. However, the experiment to activate guilt which was conducted by Peattie and Peattie (2008) failed in creating environmentally benign consumer. For the reasons stated above, we propose two hypotheses:

H1: Customer guilt influences perceived consumer effectiveness
H2: Customer guilt influences green purchase intention

1.2 Self-monitoring

Self-monitoring (SM) of an individual may vary in the extent to which the value, create, cultivate, project social images and public appearances. Self-monitoring contributes to green purchase behaviour. People with different self-monitoring will have different acts affecting consumer purchase behaviour (Hogg et al., 2000). Consumers with high self-monitoring are commonly collective consumers who present their social level (Bian & Forsythe, 2012). People with high self-monitoring of the environment will act as an environmentalist. The study of Lee dan Park (2013) showed that people’s self-monitoring of the environment influence their purchasing behaviour.

Self-monitoring is related to recognition, analysis, social image projection, and public appearance (Gangestad & Snyder, 2000). Self-monitoring is the expression of people’s sensitivity to social norm conformity (DeBono, 2006; Snyder & Gangestad, 1986; Lennox & Wolfe, 1984). Snyder and Gangestad (1986) suggested that the indicators for self-monitoring include self-control, proper behaviour, and emotional suppression. Self-monitoring is related to the ability to perceive others (Flynn et al., 2006). In addition, Browne et al. (1997) stated that people with low self-monitor are insensitive to social issues. Based on these contexts, we defined the following hypothesis:

H3: Self-monitoring leads to green purchase intention

1.3 Perceived Consumer Effectiveness

Perceived Consumer Effectiveness (PCE) is another psychographic variable that has a significant role in pro-environmental behaviours (Ellen et al., 1991). PCE influences Green purchase intention (Ghali, 2020). PCE was also the mediator of attitude and behaviour (Berger & Corbin, 1992; Ghvanidze et al., 2016). The study of Sharma and Sharma (2016) conducted on 115 respondents in New Delhi proved that PCE is the mediator between spirituality and purchase intention to purchase green products. Meanwhile, Jaiswal and Kant (2018) study of 600 students
in Lucknow, Karanpur and Varanasi, India, also proved that PCE is the mediator of purchase intention to purchase green products.

PCE is a personal attitude (Tucker et al., 2012) that determines green purchase behaviour (Khare, 2015). There are many ways of PCE definitions. It was defined as the belief that the effort may create different problem solutions (Ellen et al., 1991). It was also defined as the belief that every action may alter a better condition (Ellen et al., 1991). Scholars believe that PCE may alter behavioural change (Antonetti & Maklan, 2014). Therefore, PCE plays a vital role in green purchasing decisions (Han & Jin, 2015; Y. ki Lee et al., 2014). A consumer who believes that environmental behaviour has a positive impact on the environment will engage in high environmentally conscious behaviour (Alzubaidi, 2018). Consequently, green purchase behaviour becomes their habit. Thus, the hypothesis is:

**H₄:** Perceived consumer effectiveness influence green purchase intention

Furthermore, a study of Burhanudin et al. (2020) showed that PCE can mediate customer guilt and green purchase intention. Therefore, the hypothesis is:

**H₅:** Perceived consumer effectiveness is the mediator influence between customer guilt and green purchase intention

The conceptual model that will be investigated in this study is depicted in Figure 1. Customer guilt and self-monitoring in Figure 1 are exogenous latent variables, whilst PCE and green purchase intentions are endogenous latent variables. PCE is a mediator of customer guilt to green purchase intention. This relation, along with self-monitoring, influences green purchase intention.

![Figure 1. Model of This Study](image)

### 2. Research Methods

Data from respondents were collected through self-administered questionnaires, which were distributed to targeted respondents which met the following criteria. The first criterion of respondents are students from four universities in Greater Surakarta, i.e. Universitas Sebelas Maret (UNS), Universitas Muhammadiyah Surakarta (UMS), Universitas Islam Negeri (UIN) Surakarta, and Institut Seni Indonesia (ISI) Surakarta. They must also have joined a scout group and/or university student hiking club inside or outside of their university. These criteria were selected because Brochado et al. (2017) argued that people
involved in green organisations may have better environmental awareness. We then shared the questionnaire to people who fit the requirements and consented to participate. Hence, the respondent is selected through accidental sampling.

Finally, 124 university students agreed and participated in this study which is in line with the statement by Ferdinand (2014) who argued that the sample size should be between 30 to 500. This number met the minimum requirement of data.

This study investigated the relationship of four variables, i.e. customer guilt (CG), self-monitoring (SM), perceived consumer effectiveness (PCE), and green purchase intention (GPI). Each variable used different number of measurements. The outer model for CG was measured using two statements (Lascu, 1991), SM was measured using three statements which referred to Gangestad and Snyder (2015) and Lennox and Wolfe (1984), perceived consumer effectiveness PCE was measured by using two statements according to Majláth (2010), and the intention to purchase green products was measured by using two statements (Rashid, 2009). Likert scale from 1 (strongly disagree) to 5 (strongly agree) to express respondents' agreement with the statements were implemented in this study.

Partial Least Square (PLS) Path Modeling or PLS-SEM was applied in this study. We used this method because we used an ordinal scale for measuring the variables. Moreover, PLS-SEM was applied because it generally does not require any assumptions about the data. Furthermore, PLS-SEM is more efficient for small samples (Hair Jr. et al., 2014).

This study used predictive relevance measurement. The steps for evaluation of the Structural Equation Model by (Jaya & Sumertajaya, 2008) where the equation is

\[ Q^2 = 1 - (1 - R_{11}^2) (1 - R_{22}^2) \]  

(1)

Q2 is relevance measurement, \( R_{11}^2 \) is the \( R^2 \) of model where perceived consumer effectiveness is the response variable, and \( R_{22}^2 \) is the \( R^2 \) of model where green purchase intention is the response variable. Meanwhile, the measurement of the Goodness of Fits used the following equation:

\[ \text{GoF} = \sqrt{\text{AVE}} \times R^2 \]  

(2)

Where GoF is Goodness of Fits and AVE is the average variance extracted. For testing the parameter, we applied (Heizer et al., 2017), where \( H_0: p_{ij} = 0 \) and \( H_1: p_{ij} \neq 0 \), for \( i = 1, 2, 3, 4; j = 1, 2, 3, 4, i \neq j \). The \( t_{(ij)} \) followed Equation 3.

\[ t_{(ij)} = \frac{p_{ij}}{s_{\text{error}}} \]  

(3)

Where \( p_{ij} \) estimates of parameter coefficient of latent variable i to latent variable j, and \( s_{\text{error}} \) is the error standard. The critical area is rejecting \( H_0 \) if \( t_{(ij)} < -t_\alpha \) or \( t_{(ij)} > t_\alpha \).

3. Results and Discussions

3.1 Respondent Profile

This study had 124 respondents who agreed to participate. The gender of responders in this study was nearly same. Similarly, the proportion of respondents aged equal or below 21 years old and respondents aged over 21 years old was comparable. However, the percentage of respondents
who were students at UNS was the largest. The second largest respondents studied at UIN Surakarta. Approximately, 35.29% of the students joined the scouts whilst 25% of them joined hiking club in their universities.

In this study, we also questioned respondents where they learned about environmental training. Friend was the dominant informant of environmental management to respondents. They also mentioned that television (24.19%), and social media (20.96%) were the sources of information for them.

<table>
<thead>
<tr>
<th>Table 1. Respondent’s Profiles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>Gender</td>
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<tr>
<td></td>
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<td>Age</td>
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<td>University</td>
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<tr>
<td>Student organisation</td>
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<tr>
<td>Information about environmental management</td>
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</tbody>
</table>

Source: processed data, 2023

3.2 Model Evaluation and Measurement

As mentioned above, this study applied PLS-SEM. We implemented a reflective model, which is shown in Figure 1. In this study, validity of the constructs was measured in two ways i.e. convergent validity and discriminant validity. The convergent validity of the model was measured by using average variance extracted (AVE). Meanwhile, the discriminant validity was indicated from the higher loading score of the construct. According to Hair Jr et al. (2014), when the correlation value is close to or above 0.7, an item is considered to have high validity; when the correlation is between 0.5 to 0.6, the item considered to have moderate validity. All validity tests of the models are presented in Figure 2, Table 2, and Table 3.

**Figure 2. Outer Loading Value of Green Purchase Intention Model**
Table 2 presents the discriminant validity of the model. All statements of latent variables were grouped based on their variables. There were no misplaced statements on other variables. Thus, all constructs in this study met discriminant validity. Meanwhile, in this study, statement reliability or convergent validity used three measurements: Cronbach's alpha, composite reliability, and AVE.

### Table 2. Cross Loading of All Variables

<table>
<thead>
<tr>
<th>Construct</th>
<th>CG 1</th>
<th>GPI 1</th>
<th>PCE 1</th>
<th>SM 1</th>
<th>CG 2</th>
<th>GPI 2</th>
<th>PCE 2</th>
<th>SM 2</th>
<th>SM 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG</td>
<td>0.9344</td>
<td>0.4350</td>
<td>0.1732</td>
<td>0.2724</td>
<td>0.8788</td>
<td>0.3494</td>
<td>0.0468</td>
<td>0.2040</td>
<td>0.8768</td>
</tr>
<tr>
<td>GPI</td>
<td>0.4966</td>
<td>0.8420</td>
<td>0.2466</td>
<td>0.4487</td>
<td>0.2700</td>
<td>0.8768</td>
<td>0.5673</td>
<td>0.6248</td>
<td>0.4497</td>
</tr>
<tr>
<td>PCE</td>
<td>0.0746</td>
<td>0.4497</td>
<td>0.9103</td>
<td>0.6490</td>
<td>0.1645</td>
<td>0.4336</td>
<td>0.9137</td>
<td>0.6597</td>
<td>0.4688</td>
</tr>
<tr>
<td>SM</td>
<td>0.1926</td>
<td>0.4688</td>
<td>0.5189</td>
<td>0.7682</td>
<td>0.2168</td>
<td>0.5496</td>
<td>0.7010</td>
<td>0.9004</td>
<td>0.5869</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td>0.2711</td>
</tr>
</tbody>
</table>

See Table 3 for the detail. By using Cronbach alpha, it is clear that the reliability of GPI is acceptable in exploratory research, while three other variables at the satisfactory to good.

### Table 3. Convergent Validity of All Variables

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach's Alpha</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG</td>
<td>0.7887</td>
<td>0.9026</td>
<td>0.8227</td>
</tr>
<tr>
<td>GPI</td>
<td>0.6477</td>
<td>0.8498</td>
<td>0.7389</td>
</tr>
<tr>
<td>PCE</td>
<td>0.7978</td>
<td>0.9082</td>
<td>0.8318</td>
</tr>
<tr>
<td>SM</td>
<td>0.8095</td>
<td>0.8878</td>
<td>0.7260</td>
</tr>
</tbody>
</table>

Table 4 shows the summary of $R^2$ of each model. The inner model in this study was measured by using predictive relevance ($Q^2$). Equation 1 is the equation for measuring $Q^2$. The value of $Q^2$ in this model is 0.4375. When $Q^2$ is more than zero (0), the conclusion is that the model has predictive relevance. Meanwhile, Goodness of Fits of the model (using Equation 2) is 44.07%. This indicates that structural relation among CG, PCE, FM, and GPI is 44.07%.

### Table 4. $R^2$ Values Each Relationship

<table>
<thead>
<tr>
<th>Variable</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship among CG, PCE, SM and GPI</td>
<td>0.4809</td>
</tr>
<tr>
<td>Relationship between CG and PCE</td>
<td>0.0173</td>
</tr>
</tbody>
</table>

### 3.3 Measuring The Direct and Indirect Effect

Table 5 summarises the parameters of five direct effects of the model. The fifth column shows the $t$-statistics. By using $\alpha = 5\%$, the $t_\alpha$ is equal to 1.65. The parameter is significant when t-statistics is higher than $t_{5\%}$. The data analysis shows that CS’s influence on PCE (hypothesis 1)
and PCE on GPI (hypothesis 4) do not represent significance. Meanwhile, two other models, i.e. hypothesis 2 and hypothesis 3, are statistically significant at $\alpha = 5\%$.

Hypothesis 5 is testing the relationship of perceived consumer effectiveness as the mediator between CG and GPI. In this study, we failed to prove the relationship between CG and CPE and the relation between PCE to GPI. Thus, PCE is not the mediator between CG and GPI.

### Table 5. Direct Effect of Each Hypothesis

| Original Sample (O) | Standar Error | T Statistics ($|O/STDEV|$) | Decision |
|---------------------|---------------|-----------------------------|----------|
| CG $\rightarrow$ PCE | 0.1315        | 0.1014                      | 1.2967   | Fail to reject H0 |
| CG $\rightarrow$ GPI | 0.3096        | 0.0796                      | 3.8887   | Reject H0         |
| SM $\rightarrow$ GPI | 0.4780        | 0.1080                      | 4.4265   | Reject H0         |
| PCE $\rightarrow$ GPI | 0.1028        | 0.1094                      | 0.9392   | Fail to reject H0 |

Our previous research showed that customer guilt impacts the intention of an individual to buy green products (Astuti & Rakhmania, 2019). This study also showed that customer guilt affects green purchase intention (Hypothesis 2). The result also applies to Hypothesis 3, where the self-monitoring (SM) variable influences green purchase intention. This study supports Lee dan Park (2013) findings. In this case, university students who had high intention to purchase green products initially felt guilty if they did not act sufficiently for the environment. Their economic behaviour was also driven by their self-control and ability to obscure the negative feelings to achieve a positive social image. It implies that if the green product producers want to attract the environmental activist youth to buy their product, they could increase the feeling of guilty and self-monitoring of the youth.

However, this study failed to confirm that the guilt (CG) they felt after committing harmful acts to the environment (CG) influences their belief in their ability to solve the environmental problem (PCE) (Hypothesis 1). Therefore, in this study, the guilty feeling does not influence the attitude of the youth. Instead, their pessimistic attitude may motivate them to solve environmental problems, regardless of their level of guilt. This study does not support the finding of Antonetti and Maklan (2014) who proven that PCE can be the mediator of relationship between customer guilt and purchase intention.

This study also failed to demonstrate the relationship between PCE and GPI. A recent research study by Ghali (2020) proved that PCE is a determinant of GPI, but it could not determine the green purchase behaviour. It might be caused by young people who are optimistic or pessimistic about their ability to save the environment have a similar intention to buy green products. In other words, the relation trend between PCE and GPI is random. In this case, the youth’s belief that they can save the environment does not guarantee that they will buy green products. Their conviction that they can take action to save the environment, in some cases, does not reflect their intended behaviour or vice versa. Since the PCE does not affect green purchase intention, the PCE is unable to mediate customer guilt and self-monitoring. Therefore, this study does not support Antonetti and Maklan (2014) and Burhanudin et al. (2020) findings that PCE is the mediator of guilt and green purchase intention.
4. Conclusions

This study found a link between customer guilt and self-monitoring among university students who join scout groups and hiking clubs and their behavioural intention to buy green products. However, this study failed to prove that perceived consumer effectiveness is a mediator of customer guilt and self-monitoring of green behaviour intention. Young people who are interested in green activities are the ideal target consumers of green products. This implies that to improve the attention of young people who are aware of the environment, their customer guilt and self-monitoring could be increased or created. Advertising that influences customer guilt and self-monitoring could be created to draw people’s attention to green products.

This study focuses on young environmental activists in four universities in Surakarta who join green activities. Thus, this study is limited to the study area and the inference cannot be implemented to other areas such as all young people or society. This study might be improved by increasing the number of respondents and including some other variables.

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