



Article

The Effectiveness of Product Sustainability Claims to Mitigate Negative Electronic Word of Mouth (N-eWOM)

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Abstract: The purpose of this study is to investigate the role of negative electronic word-of-mouth (N-eWOM) messages on attitudes, subjective norms, perceived behavior control (PBC), and the intention to purchase sustainable dairy products. This study also investigates the moderating role of product sustainability claims to reduce the effect of N-eWOM on customers. It comprises two experiments on college students (n = 120; 90) who have at least two accounts on different social media platforms. We use both qualitative and quantitative techniques. The model was developed and tested on data collected from questionnaires. The results of Study 1 suggest that N-eWOM reduces purchase intentions, attitudes, subjective norms, and PBC. High N-eWOM reduces purchase intention more than the low N-eWOM. Study 2 found that with high N-eWOM, product sustainability claims (congruent or incongruent) moderate the effect of N-eWOM on attitudes, subjective norms, PBC, and purchase intention. Purchase intention is higher when a product sustainability claim is congruent. These novel findings contribute to our understanding of ways to mitigate the impact of N-eWOM by taking preventive actions, such as making product sustainability claims.

Keywords: Negative e-WOM; product sustainability claim; attitudes; subjective norm; perceived behavior control; purchase intentions



Citation: Halim, R.E.; Rahmani, S.; Gayatri, G.; Furinto, A.; Sutarso, Y. The Effectiveness of Product Sustainability Claims to Mitigate Negative Electronic Word of Mouth (N-eWOM). Sustainability 2022, 14, 2554. https://doi.org/10.3390/ su14052554

Academic Editor: Flavio Boccia

Received: 1 December 2021 Accepted: 14 February 2022 Published: 23 February 2022

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1. Introduction

Electronic word-of-mouth (eWOM) messages about product sustainability have gotten the attention of scholars, who have shown that information related to sustainability significantly influences consumers' intention to purchase products [1]. eWOM is a positive or negative statement about a product available to society and institutions or the company that makes the product by someone who has used it [2]. It has a great influence on consumers' purchasing decisions [3,4]. Several studies show that eWOM influences consumer attitudes [5] and purchasing interests [6]. Compared to offline WOM, online reviews have a wider reach and remain accessible longer [7]. It is also easier to re-transmit eWOM to others [8]. An information search is one stage in the theory of purchasing decision-making [9]. Therefore, information is important for consumers to have before deciding to buy a product.

There is both positive and negative eWOM. Research has shown that negative WOM is more influential, attracts more attention, and reaches more people than positive WOM [10]. Negative WOM is more influential in purchasing decision-making than positive WOM [11]. Chevalier and Mayzlin [12] found that N-eWOM (online reviews) affected book sales more than positive eWOM. From the producer side, N-eWOM is very detrimental because even one negative review can be damaging [13]. N-eWOM has affected customer acquisition,

Sustainability **2022**, 14, 2554 2 of 18

retention, and loyalty [14] as well as organizational reputation [15,16]. Because of the strong negative impact of N-eWOM, it is important to know how negative online reviews, which influence consumers' intent to purchase, can be managed.

There are several studies on ways to reduce the impact of N-eWOM. Sen and Lerman [17] stated that N-eWOM had less impact on hedonic products than utilitarian products. Gu, Tang, and Whinston [18] found that sales of popular products were not significantly affected by N-eWOM and that experimental products were less affected than search products. Consumers with product knowledge were more affected by N-eWOM [19]. Generally, producers reduce the impact of negative online reviews by offering an apology or giving an explanation [20]. The tendency of businesses to provide brand responses to customer complaints online has increased substantially in recent years [21]. Some studies found that the impact of negative online reviews can be reduced by responding to customer complaints [22], offering an apology, or giving an explanation [23]. Spark and Bradley [24] noted the tendency of businesses to respond to customer complaints online. This means giving a reaction to a negative event.

From the description above, there are studies of N-eWOM issues and how to reduce their impact on products. However, there are still not many studies on the effect of product sustainability claims, such as those on dairy products. The aim of this study is to confirm how the theory of planned behavior (TPB) applies to the N-eWOM issue, namely how N-eWOM affects attitudes, subjective norms, perceived behavior control (PBC), and purchase intention on dairy products that are claimed to be sustainable. Moreover, this study examined how product sustainability claims could mitigate the impacts of N-eWOM. A product sustainability claim is a variable that the company already has; it is an intangible asset of the company. So, if the negative event occurs at time "t," then product claims are pre-existing variables or "t-1", and N-eWOM is news that circulates after an event or "t+1". This study uses "t-1" and "t+1" as combination variables. This research offers an important contribution to mitigating N-eWOM by using product sustainability claims as an asset that can be managed by the company. This research is different in that it is about mitigating the negative impact of N-eWOM by using product sustainability claims.

2. Theoretical Background and Hypothesis

2.1. Product Sustainability

Product sustainability looks at how products can provide economic benefits for the company while providing environmental and social benefits for society in general [24]. Product sustainability indicators are increasingly gaining recognition as a product sustainability assessment tool, which is always related to the company's performance in aspects like energy, environment, resources, technical, and economic improvement [25]. More sustainable products provide opportunities to address consumption practices that increase waste. However, despite their best efforts to improve products, many companies lack a comprehensive strategy [25]. In manufacturing, developing new materials, better design methods, and society's increasing demands on manufactured products, the design for manufacturing concept has paved the way for incorporating these into more sustainable product development [26].

The relation of product sustainability to WOM could be seen in a study on tourism, wherein a greater perception of foreign tourists in their sustainability assessment increased the WOM intention of foreign tourists [27]. Furthermore, positive and negative information related to sustainability on social media significantly influences consumers' intention to purchase sustainable products [1,28]. As with product sustainability, previous studies on product attributes have shown different perspectives. They contribute to a literature review of sustainability labels that shows that consumers have positive attitudes toward olive oil that has a sustainability label, and they will pay more for products that carry those labels [29]. Other studies on sustainability messaging have investigated logos, certifications, and claims to show the different ways a product is advertised [30]. Messaging at Chinese shows had less of an emphasis on sustainability compared to those in Europe and the

Sustainability **2022**, 14, 2554 3 of 18

United States. Moreover, sustainability is also applied in other contexts, such as in methods that simultaneously evaluate environmental, economic, and social aspects, to project more sustainable designs of products and services [31].

Even though the case of sustainable dairy is sensitive, it is well known that milk and other dairy products are basic food products that are important in the development of healthy human beings [32]. Studies indicate that increased intake of milk and other dairy products to meet nutritional recommendations can protect against most common chronic diseases, and they have few reported side effects [33]. Dairy products are generally divided into seven categories, but consumers still mainly buy liquid milk [34]. One study recommended increasing dairy consumption by increasing consumer health awareness [34]. There is already enough evidence to proceed with a dietary change that involves switching from dairy products to plant-based alternatives [35]. However, plant-based milk alternatives are often lower nutritional substitutes than cow's milk. The protein content of plant-based milk alternatives is an average of 48% of cow's milk, and the levels of vitamins and minerals tend to be less consistent with plant-based milk alternatives [36]. In Indonesia, to promote dairy farm sustainability, their business sustainability factor is the standardization of a company's management system [37].

2.2. The Theory of Planned Behavior and Negative eWOM

The theory of planned behavior is a reliable model that focuses on several variables, such as consumer attitudes, subjective norms, and perceived behavioral control [38]. In a healthy workspace, the constructs of subjective norms, attitudes, and perceived control of behavior predict the safe behavior of supervisors [39], and extended TPB appears to be an efficient model with a focus on attitudes, knowledge, risk perception, and previous behavior [40]. Other contexts for product sustainability issues also confirm the TPB theory, such as pesticide handling [41], wellbeing food [42], green hotels [43], green pesticides [44], energy conservation [45], green restaurants [46], energy savers [47], and household waste sorting [48]. Studies that relate the TPB to WOM have shown significant relationships between attitudes and PBC and WOM intention [49], and that eWOM is related to TPB constructs [50].

Bachleda and Berrada-Fathi [51] found that N-eWOM plays an important role in service consumption decisions. Companies must actively manage N-eWOM because studies have shown that the effect of N-eWOM on consumer attitudes toward service providers and purchase intentions is far greater than the effect of positive eWOM [52]. N-eWOM is reported to have an impact on several important metrics, such as customer retention and loyalty [14], company profitability [28], and organizational reputation [1,15].

Bach Leda has defined attitudes as positive or negative feelings of individuals toward target behavior [53]. Comparing the impact of positive and negative reviews on hotel customer choices, Vermeulen and Seegers [54] emphasized that negative reviews resulted in negative attitudes. Conversely, positive reviews improved the attitudes of customers toward the hotel. Lee and Cranage [22] found that N-eWOM influenced attitudes toward restaurants more than positive eWOM.

In TPB, subjective norms are defined as perceived social pressure to perform or not perform behavior by individuals [55]. Jalilvand and Samiei [56] studied the impact of eWOM on the selection of tourist destinations and the influence of past travel using eWOM and TPB construction. They found that positive eWOM had a significant impact on attitudes to visit Isfahan, subjective norms, PBC, and the intention to travel. Tourism experiences have a significant impact on the use of eWOM and the TPB construct. Researchers have found that negative WOM had a positive effect on subjective norms, and it led to brand switching by consumers. In simple terms, it can be concluded that N-eWOM makes subjective norms smaller, meaning that the orientation of other people's views is small and their attitude toward the brand is also reduced, which results in moving to another brand.

Perceived behavioral control (PBC) is a measure of the extent to which individuals believe that displaying certain behaviors will be easy or difficult [57]. PBC is an individual's

Sustainability **2022**, 14, 2554 4 of 18

perception of the ease or difficulty of behavior and the control the person has to implement that behavior [58]. Therefore, if someone has the opportunity and the ability to act according to information they believe, then they will be motivated to act. For example, after receiving negative information that a product contains hazardous substances, they will avoid buying and consuming the product. Thus, eWOM negatively influences decision-making and hinders purchasing [11,59]. Jalilvand and Samiei [60] found that eWOM affected PBC. An individual's attention to negative news and the credibility of the news received by consumers determines the perception of risk for the product being reported. Thus, PBC consumers are affected by negative reviews. Purchasing behavior in the TPB framework has a mediator's attitudes, subjective norms, and PBC. If eWOM is negative with mediator attitudes, subjective norms, and PBC, and it results in negative behavior, such as not buying a product, then the three mediators following the N-eWOM become negative. Thus, it can be hypothesized that:

Hypothesis 1 (H1). Consumers' attitudes toward the sustainability of a product with high N-eWOM are lower than with low N-eWOM.

Hypothesis 2 (H2). Consumers' subjective norms toward the sustainability of a product with high *N-eWOM* are lower than with low *N-eWOM*.

Hypothesis 3 (H3). Consumers' PBC toward the sustainability of a product with high N-eWOM are lower than with low N-eWOM.

The eWOM phenomenon has changed people's behavior and decisions, such that they rely more on the opinions of and information from other users. They even make offline decisions based on information obtained online [61]. Besides influencing results on sales figures at the corporate level, for example, eWOM also influences individual end-users in terms of their attitudes, trust, or purchase intentions [62,63]. Wu et al. [64] conducted a study in Taiwan on the effects of eWOM on the purchase of notebooks, a product with high levels of involvement, and shampoos, a daily consumption product with low involvement. They found that eWOM positively influenced the purchase intentions of the two products. Bachleda and Berrada-Fathi [51] found that N-eWOM, as well as negative WOM, played an important role in the choice of services that had not been used before. Thus, it can be hypothesized that:

Hypothesis 4 (H4). Consumers' purchase intentions toward the sustainability of a product with high N-eWOM are lower than with low N-eWOM.

2.3. Product Claims

Product claims are a way for manufacturers to use products' intrinsic cues to be clearly visible to consumers. Manufacturers communicate attributes of products or services that are considered persuasive [65] so consumers will be interested in buying them. Claims, illustrations, and symbols convey important information about what can be expected of the product [66]. When understood by consumers, such product claims can improve marketing communication [67]. If a product is exposed to negative reviews online, the product claim can represent the company as the information provider. Generally, N-eWOM is overcome by clarifying explanations by the company's public relations office to address negative issues. However, even if the company does not rebut negative reviews, the product claims are already there to do that, or at least to provide authentic information about the product. Consumers who want correct information quickly can at least get it through product claims attached to product packaging or advertised. Product claims are primarily, or even exclusively, a type of direct information for consumers. When faced with situations where information is uncertain, consumers can use product claims as primary information. Chen [68] found that when there is negative information about a product, the three constructs of TPB—attitudes, subjective norms, and PBC—become negative, resulting

Sustainability **2022**, 14, 2554 5 of 18

in cautious attitudes in consumers not to buy the product. Product claims as signals of product quality are expected to reduce these negative impacts.

Product claims are a way for producers to use intrinsic product cues to make them clearly visible to consumers [69]. Product claims are one way of communicating product or service attributes that are considered persuasive, therefore consumers will be interested in buying them [65]. There has been a positive increase in sales of wheat, high fiber cereals, folate-fortified breakfast foods, and cooking oil following claims or media coverage of the health benefits of these products [66].

Congruity theory examines how conformity or non-conformity with expectations affects individual responses, including information processing and evaluation [70]. When people find new information that matches their previous knowledge, they easily accept the new information. If the new information is not appropriate, it will challenge previous knowledge. Stayman et al. [71] examined how conformity affects satisfaction, and they found that when trials did not match the schema's expectations, participants' evaluations of the product were more negative. Congruent schemes are preferable and easier to process [72]. New information that complements existing knowledge is preferred.

Hypothesis 5a (H5a). Product sustainability claims moderate the effect of high N-eWOM on attitudes, and congruent claims do this more than incongruent ones.

Hypothesis 5b (H5b). *Product sustainability claims moderate the effect of high N-eWOM on subjective norms, and congruent claims do this more than incongruent ones.*

Hypothesis 5c (H5c). *Product sustainability claims moderate the effect of high N-eWOM on PBC, and congruent claims do this more than incongruent ones.*

Hypothesis 5d (H5d). Product sustainability claims moderate the effect of high N-eWOM on purchase intention, and congruent claims do this more than incongruent ones.

This study confirms the hypothesis by using an experimental approach with two studies, namely Study 1, to examine the effect of N-eWOM on attitude, subjective norms, perceived behavior control, and purchase intention. Meanwhile, Study 2 examines the impact of product sustainability claims (congruent and incongruent) on attitudes, subjective norms, perceived behavior control, and purchase intention. Study 1 involves high, low, and a control group of N-eWOM, while Study 2 involves only high N-eWOM. Product sustainability claims are both congruent and incongruent.

3. Study 1: The Effect of Negative eWOM

The first experiment aimed to examine the effect of N-eWOM on product sustainability on attitudes (H1), subjective norms (H2), PBC (H3), and purchase intention (H4) (Figure 1). A control group, who were not exposed to N-eWOM, tested the products.

3.1. Method

Participants and procedure. Study 1 had three treatments on participants: low N-eWOM, high N-eWOM, and no N-eWOM (the control group). The experiment matrix of Study 1 is shown in Table 1. All the participants were undergraduate students from two universities in Jakarta, Mercu Buana University, and Indonesia Banking School. There were 149 participants in four pilot studies, and 120 participants for the three conditions in Study 1. The participants were randomly assigned to follow one of the three treatments (Table 2). The procedure for Study 1 is shown in Figure 2.

Table 1 shows the experiment matrix of Study 1. It describes the combination of the variables in the study and the experimental conditions. The variables in the study are attitudes, subjective norms, PBC, and purchase intention. The experiment condition involved high N-eWOM and low N-eWOM, as well as a control group. The combination of variables and treatment produced 12 scores that will be indicators of experimental results.

Sustainability **2022**, 14, 2554 6 of 18

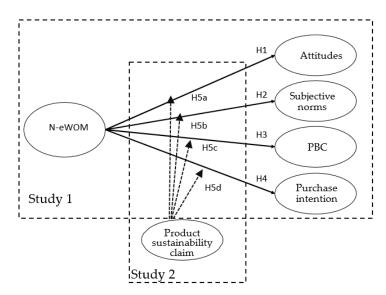


Figure 1. Research Framework.

Table 1. Experiment matrix of Study 1.

Variable	Control Group (=0)	High N-eWOM (=1)	Low N-eWOM (=2)
Attitude (H1)	μ10	μ11	μ12
Subjective norm (H2)	μ20	μ21	μ22
Perceived behavior control (H3)	μ30	μ31	μ32
Purchase intention (H4)	μ40	μ41	μ42

Table 2. Sample of Study 1.

Category				High N-eWOM (n = 41)	Total n = 120	
0 1	Male	22	12	12	44	
Gender	Female	23	22	22	76	
	Mean	23.84	20.85	22	22.37	
Age	Minimum	20	19	18	18	
	Maximum	33	35	35	35	
	≤1 h		7.	6%		
Social media	2 h		9.	1%		
access duration	3 h		17	.4%		
(hour Per day) *	4 h		16	.7%		
•	>4 h		49	.2%		
	Facebook		66	.7%		
Account *	Instagram		98	.3%		
	Twitter		50	.0%		

Note: * = from the total sample.

Figure 2 describes the experimental process carried out in this study. Nine steps were taken to produce scores that will be compared with the results as an output in this experiment. Participants entered the experiment room and were given information related to the experiment to be executed. After that, they were grouped in three predetermined conditions. The participants were then shown the sustainable products to be used in the experiment. Then, two of the groups were shown N-eWOM in the form of negative comments related to the product. Participants then answered questions related to the first

Sustainability **2022**, 14, 2554 7 of 18

study, questions related to their demographics, and questions for the manipulation check. Finally, participants returned their answers and were given rewards for participating.

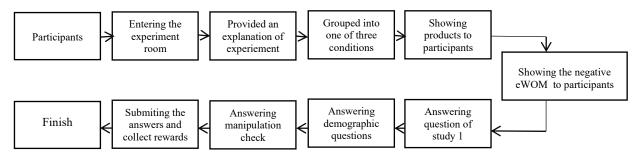


Figure 2. Procedure for Study 1. The effect of N-eWOM.

3.2. Stimulus Development

To create a stimulus, we conducted four pilot studies; each was carried out by undergraduate students. Pilot Study 1 (n = 37) was an exploratory study to determine the utilitarian products to be used in the study. We determined the criteria for utilitarian product sustainability of beverage products. Product sustainability is usually viewed from a business perspective to reduce product-related risks [23]. Participants were asked to write down the types of drinks that they commonly purchased. The highest-ranking choice was ultra-high-temperature (UHT) milk products. Usually, cow milk is not a natural, untreated product [73]; however, fluid milk consumers included milk that was all-natural, organic, reduced fat, and vitamin-fortified [74]. Most national food-based dietary guidelines (FBDGs) recommend increasing dairy consumption relative to the current diet, and this has a substantial increase in the impact across all environmental dimensions. Pilot Study 2 (n = 48) was conducted to create fictitious brands to control the effect of attitudes on existing brands. Participants were asked to propose a brand name for UHT milk that had not been used before. From this, we made a list of the five fictitious brands with the most support. Next, a different group of students chose one name from the list. Most participants chose the name "Moo Milk" as the brand of the fictitious UHT milk products. Pilot study 3 (n = 30) was conducted to determine the negative reviews influencing participants not to buy UHT milk. *Pilot study 4* (n = 34) was conducted to equate participants' perceptions of high and low negative reviews. It involved interviews of 30 students who had participated previously. These participants provided written answers to questions to find out how many negative reviews were considered low and high, what social media accounts were generally owned by participants, and what parties who submitted online reviews were considered credible.

Based on the results of the pilot studies, packaging images and video advertisements were made to describe "Moo Milk". It was presented as having calcium for bone health. Furthermore, a high-fidelity mock-up was made on a smartphone application to access negative reviews on three social media platforms: Facebook, Twitter, and Instagram. There were 3 low negative reviews and 15 high negative reviews. These reviews included comments from nutritionists and the Food and Drug Monitoring Agency (BPOM). They are an official institution for controlling food quality in circulation. BPOM and nutritionists—seen as credible and trusted sources by the pilot study participants—comprised official institutions (100%), experts (47%), and friends or family (38%). All the negative reviews were fictitious, and they were used only for this experimental study.

3.3. Measurement of the Dependent Variable

Participants were asked to answer questions to measure the dependent variable of product sustainability for a product called "Moo Milk". *Attitudes* were measured by four items, adapted from Taylor and Todd [75]. *Subjective norms* consisted of four questions adapted from Fizben and Ajzen (1975) [76]. *Behavioral control* was measured by three items adapted from Chen [68], and *purchase intentions* consisted of five questions adapted from Taylor and Todd [75]. Table 3 shows the measurement test results in Study 1. They

Sustainability **2022**, 14, 2554 8 of 18

were valid instruments (loading factor > 0.6), and they were reliable: attitudes (α = 0.923), subjective norms (α = 0.821), behavioral control (α = 0.844), and purchase intentions (α = 0.884). All measurements used seven-point Likert scales. Validity and reliability met the cut-off value [77].

Table 3. Validit	y and Reliability	y Instrument ((n = 120)).
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Construct	Items	Loading	α	
Attitudes	A1. Overall, buying Moo Milk is a good thing.	0.935		
	A2. Generally, buying Moo Milk is recommended.	0.921	- - 0.923	
	A3. Generally, buying Moo Milk is safe.	0.881	- 0.723	
	A4. Moo Milk will give me benefits.	0.875	-	
	SN1. Parents suggested I should not buy Moo Milk.®	0.793	_ 0.821	
Subjective norms	SN2. My family members suggested buying Moo Milk based on their experience.	0.745		
,	SN3. My friends suggest I should not buy Moo Milk.®	0.819		
	SN4. My colleague gives a reference to buy Moo Milk.	0.784		
	PB1. I believe I can buy Moo Milk.	0.924	0.844	
Perceived behavior control	PB2. I tend to buy Moo Milk (X).	0.797		
	PB3. I believe that I have the opportunity to buy Moo Milk.	0.905		
Purchase Intention	PI1. I will look for information to buy Moo Milk.			
	PI2. I plan to buy Moo Milk.	0.897		
	PI3. In the next three months, I will buy Moo Milk.	0.879	0.884	
	PI4. Overall buying Moo Milk is not problematic or safe.	0.786	_	
	PI5. I will buy Moo Milk with my family.	0.884	_	

3.4. Results

Manipulation checks. To find out whether N-eWOM reduces attitudes, subjective norms, PBC, and purchase intentions, participants accessed eWOM negative mock-up shows about products online through a smartphone application. In the high N-eWOM conditions, 15 N-eWOM impressions were given, while for low N-eWOM, 2 impressions were given. To determine whether participants felt they received high or low N-eWOM, they responded to two statements (α = 0.918): "The number of negative reviews is large, more than 5 reviews" and "The number of negative comments online is small, less than 3 reviews." In the control group, no N-eWOM impressions were given. The results of T-tests showed that there were significant differences between the high and low N-eWOM groups (F (1, 88) = 1456, p = 0.000 (2 tailed)). As noted earlier, N-eWOM lowers consumers' attitudes toward products. It is estimated that consumers believe it when products are given massive negative reviews, but this is different with low N-eWOM conditions. This hypothesis was tested using one-way ANOVA with contrast. The control group was compared with the treatment groups, and then the two treatment groups were compared with each other (see Table 4).

Attitudes. The four statements form one variable based on factor analysis, and each has accepted a loading factor > 0.6 with Cronbach α = 0.916 [77]. The test results using one-way ANOVA on the four questions about the attitude variable showed a significant difference between the high N-eWOM condition, the low N-eWOM condition, and the control group (F (2, 117) = 159,937, p = 0.000). The contrast test showed that the control group was significantly higher than the low N-eWOM group ($M_{control}$ = 17.8, M_{low} = 15.7, p = 0.000) and the low N-eWOM condition group was significantly higher than the high

Sustainability **2022**, 14, 2554 9 of 18

N-eWOM group ($M_{low} = 15.79$, $M_{high} = 8.32$, p = 0.000) This result *supports H1*: Attitude of consumers with high N-eWOM is lower than attitudes of consumers with low N-eWOM.

	Mean			Test of Betweet Subject Effects			
Constructs	Control (<i>n</i> = 45)	Low N-eWOM	High N-eWOM	df	Mean Square	F	Sig
Attitude	17.8	15.7	8.51	2	1060.893	159.937	0.000
Subjective norm	16.8	15.8	9.1	2	735.712	118.975	0.000
Perceived behavior control	13.9	12.2	7.8	2	415.528	82.568	0.000
Purchase Intention	22.2	19.5	13.0	2	1184.754	85.270	0.000

Table 4. Between Group One-Way ANOVA: Study 1.

Subjective Norms. Factor analysis of the four questions on subjective norm formed one variable, and each had an accepted loading factor > 0.6 and Cronbach α = 0.793 [77]. One-way ANOVA showed a significant difference between the high N-eWOM group, the low N-eWOM group, and the control group (F (2, 117) = 118,975, p = 0.000). The contrast test results showed that the control group was not significantly higher than the low N-eWOM group ($M_{control}$ = 16.82, M_{low} = 15.84, p = 0.067). However, the low N-eWOM group was significantly higher than the high N-eWOM group (M_{low} = 15.84, M_{high} = 9.07, p = 0.000). Therefore, the subjective norms of consumers with high N-eWOM were lower than with low N-eWOM. Therefore, H2 was supported.

Perceived Behavioral Control. Factor analysis of the three questions on PBC formed one variable, and each had an accepted loading factor > 0.6 and Cronbach α = 0.844 [77]. Oneway ANOVA showed a significant difference between the three groups (F (2, 117) = 82.568, p = 0.000). The contrast test found (M_{low} = 12.24, M_{high} = 7.84, p = 0.000). This proves that the PBC of consumers with high N-eWOM is lower than PBC with low N-eWOM. This supports H3.

Figure 3 shows the mean of the experimental results for the negative effect of N-eWOM on attitudes, subjective norms, PBC, and purchase intention. The three lines show three conditions, namely low N-eWOM, high N-eWOM, and control. The three conditions provide scores based on the participants' answers. The three conditions produced a similar trend, namely that an increase in score in one condition was followed by an increase in another condition.

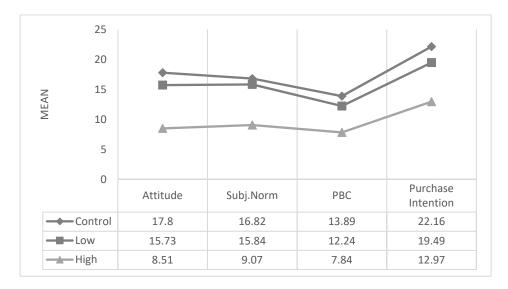


Figure 3. Impact of N-eWOM on attitudes, subjective norms, PBC, and purchase intention.

Sustainability **2022**, 14, 2554 10 of 18

Purchase Intention. N-eWOM makes consumer purchase intentions for dairy product sustainability decrease. It is estimated that consumers believe it when products are given massive negative reviews, but this is different with low N-eWOM conditions. This hypothesis was tested using one-way ANOVA with contrast. The control group was compared with the treatment groups, then the two treatment groups were compared with each other. The test of purchase intention consisted of five questions that formed a variable with a loading factor > 0.6 and Cronbach $\alpha = 0.884$. One-way ANOVA shows a significant difference between the three groups (F (2, 117) = 85.270, p = 0.000). The contrast test shows that participants in the low N-eWOM group were lower than the control group ($M_{low} = 19.49$, $M_{control} = 22.16$, SE = 0.791, p = 0.000), and those in the high N-eWOM group were lower than the control group ($M_{high} = 8.51$, $M_{control} = 22.16$, SE = 0.791, p = 0.000). The contrast test shows that the purchase intentions in the low N-eWOM group are higher than in high N-eWOM group (p = 0.000). Therefore, p = 0.0000. Therefore, p = 0.0000.

3.5. Discussion

The results showed that, in the context of product sustainability, such as milk, NeWOM about products reduced purchase intentions as well as attitudes, subjective norms, and PBC. The more negative the reviews, the lower the purchase intention. This shows that N-eWOM reduces the customer's intention to use or buy the product. This is understandable because negative information about a product attracts the attention of consumers. So, consumers re-evaluate the product, and this affects their attitude toward the product. A changed attitude changes the intention to use the product, which in turn reduces the intention to buy the product.

These results support the previous study, wherein the quantity of reviews affects purchase intention, especially for products with low engagement [3]. The number of reviews affecting purchase intention also confirmed others studies, in which more reviews of products tended to influence consumers to buy such products [13]. Moreover, these experiments and several previous studies confirm the position that reviews or negative comments from customers have a big effect on purchase intention, and they ultimately affect a product's sustainability.

4. Study 2: The Effect of Product Sustainability Claims

Study 2 is a replication of Study 1 with the variable of product sustainability claims as a moderator. N-eWOM about a product makes consumers reluctant to buy it. For this reason, factors are needed to improve the situation, one of which is product claims.

Product claims are used to mitigate N-eWOM. Research has shown that congruent product claims increase purchase intentions. Also, Study 2 tests whether a congruent product claim can reduce the impact of N-eWOM on attitudes, subjective norms, and PBC. This study answers hypotheses H5a, H5b, H5c, and H5d.

4.1. Method

Figure 4 shows the experimental process carried out in this study to determine the effects of claims about sustainable products. Nine steps were taken to produce scores that will be compared with the results as an output in this experiment. Participants entered the experiment room and were given information related to the experiment to be carried out. An explanation was given so the participants understood the whole process of the experiment. After that, participants were grouped into two predetermined conditions, namely congruent product claims and incongruent product claims. The participants were then shown the sustainable products to be used in the experiment. After seeing the product to be used, participants were shown N-eWOM in the form of negative comments about congruent or incongruent products. Participants then answered questions related to the second study, questions related to their demographics, and questions for the manipulation check. Finally, participants returned their answers and were given rewards for participating.

Sustainability **2022**, 14, 2554 11 of 18

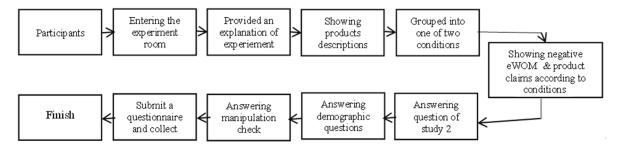


Figure 4. Procedure of Study 2. The effect of product claims.

Participants and procedure. Study 2 used a between-subject design with two treatment conditions: product claims that were congruent or incongruent. The participants were 90 undergraduate students of Mercu Buana University, Jakarta (42 males and 48 females) who were randomly assigned to one of two conditions (Table 5).

Table 5. Sample Study 2.

		Gro			
Categ	Category		Congruent n = 45	— Total n = 90	
G 1	Male	17	25	42	
Gender	Female	28	20	48	
	Mean	23	22.24	22.62	
Age	Minimum	18	18	18	
	Maximum	35	30	35	
	≤1 h		7.8%		
Length of social	2 h		8.9%		
media access	3 h		18.9%		
(hours per day) *	4 h		15.6%		
	>4 h		48.9%		
	Facebook		61.1%		
Account *	Instagram		96.7%		
	Twitter		55.6%		

Note: * = from the total sample.

4.2. Stimulus Development

Similar to Study 1, the independent variable, N-eWOM, was used in the high N-eWOM condition. Product claims are an important tool to inform consumers about product characteristics and quality and to help them choose the most suitable product [78]. Product claims that are congruent with the product are seen as convincing and reliable, while those that are not congruent are considered dubious [79]. We manipulated product sustainability claims by making mock-ups of milk packaging with an image of a bone. For the congruent claim, we pasted the statement, "milk with calcium for strong bones". For the incongruent claim, we pasted the statement, "milk to lose fat in the body" (see Figure 5).

Figure 5 shows the product sustainability images used in the experiment. They consisted of a milk product with different descriptions. The first product had the statement, "milk with calcium for strong bones", and the second product had the statement, "milk to lose fat in the body". The descriptions represent product sustainability because this product can provide economic benefits for the company while providing benefits for society in general [23]. Strong bones and losing fat are important for people's lives. The product images were the same except for the statements.

Sustainability **2022**, 14, 2554 12 of 18



Figure 5. Product sustainability claims on milk packaging: (a) congruent product claim; (b) incongruent product claim.

4.3. Procedure and Result

Study 2 aimed to find out the factors that can mitigate the impact of N-eWOM. Product sustainability claims were used in this study as a moderator that was expected to mitigate negative impacts. The 90 participants were randomly assigned to two different classrooms. Participants were shown the advertisement video for Moo Milk twice. Then they were asked to read N-eWOM on paper that contained screenshots of NeWOM from social media. After reading the negative reviews, participants were shown one version of the Moo Milk packaging. Then they answered research questions, filled out demographic forms, and answered manipulation checks.

Manipulation checks were used to measure the image and narrative of product claims according to product quality. They involved three questions: (1) Based on the product claim information listed, how important is this product for bone health? (2) I think the product claim listed on the packaging is very appropriate. (3) I think the product claims listed there are very consistent packaging. All three statements have α Cronbach = 0.833, and each statement forms a single variable with a loading factor of >0.5. t-tests showed a significant difference between the groups with congruent product claims and incongruent claims (F (1, 88) = 0.206, p = 0.000 (2 tailed)). The results showed that the manipulation went well.

Attitudes, Subjective Norms, PBC. Study 1 confirmed that N-eWOM decreases attitudes, subjective norms, and behavior control. Study 2 examined the variable of product sustainability claims as a factor that mitigates N-eWOM. In this section, we examine whether attitudes, subjective norms, and behavior control in the group that received the congruent product claim were higher than in the group that received the bad reputation conditions in high N-eWOM.

Figure 6 shows the means of the experimental results representing the effect of high N-eWOM on congruent and incongruent claims with respect to attitudes, subjective norms, PBC, and purchase intention. It shows two conditions, namely congruent N-eWOM, and incongruent N-eWOM. Each condition provides a score based on the participants' answers in the experiment. The two conditions produce a similar trend, namely that the high and low scores for the congruent claim are matched by scores for the incongruent claim.

Sustainability **2022**, 14, 2554

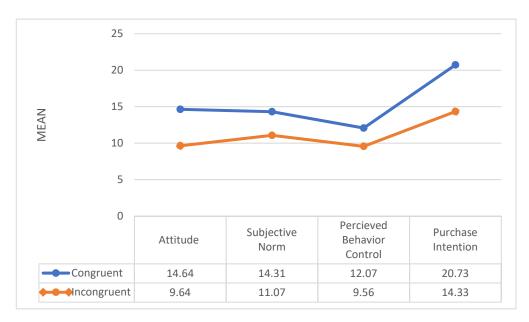


Figure 6. High N-eWOM with product sustainability claim moderation.

Table 6 showed a significant difference in attitudes between the group with the congruent product claim and the group with the incongruent product claim with high N-eWOM $(M_{congruent} = 14.64, SD = 4057; M_{incongruent} = 9.64, SD = 3076; F (1.88) = 43,397, p = 0.000).$ These results support Hypothesis 6a: In high N-eWOM, consumer attitudes on congruent product claim are higher than on incongruent product claim in high eWOM conditions. The subjective norm variable in the group with the congruent product claim was higher than in the group with the incongruent product claim with high N-eWOM (M_{congruent} = 14.31, SD = 3.322; $M_{incongruent} = 11.07$, SD = 2.709; F(1, 88) = 25.781, p = 0.000). These results support Hypothesis 6b: in high N-eWOM, subjective norms in congruent product claims will be greater than subjective norms in incongruent product sustainability claims. Likewise, the perceived behavioral control variable in the high N-eWOM in the group with the congruent product claim was higher than in the group with the incongruent product claim ($M_{congruent} = 12.07$, SD = 2.911; $M_{incongruent} = 9.560$, SD = 3.072; F(1, 88) = 15.846, p = 0.000). Thus, *Hypothesis H6c is proven*. The statistical analysis on the intention to purchase variable in high N-eWOM in the group with the congruent product sustainability claim was higher than in the group with the incongruent product sustainability claim $(M_{congruent} = 20.73, SD = 4.169; M_{incongruent} = 14.33, SD = 3.760; F(1, 88) = 58.481, p = 0.000),$ which supports H6d.

Table 6. Between Group One-Way ANOVA: Study 2.

	Me	Test of Between Subject Effects				
Constructs	Congruent	Incongruent	df	Mean Square	F	Sig
Attitudes	14.64	9.64	1	562.500	43.397	0.000
Subjective Norms	14.31	11.07	1	236.844	25.781	0.000
Perceived Behavior Control	12.07	9.56	1	141.878	15.846	0.000
Purchase Intention	20.73	14.33	1	941.600	58.481	0.000

4.4. Discussion

The results of Study 2 show that congruent claims of product sustainability have a different effect on purchase intentions than incongruent claims. For products with high negative reviews, purchase intentions are higher with congruent product claims than with incongruent claims. These different means showed that congruent product

Sustainability **2022**, 14, 2554 14 of 18

sustainability claims overcome the impact on decreased purchase intentions from high N-eWOM. Research by Smith and Vogt [80] on the impact of the integration of information from advertising and negative word of mouth states that when two pieces of information are received by consumers, advertising can reduce the detrimental effects of negative WOM. This study also supports a previous study [81], wherein product claims on packaging have significant power to communicate product benefits, which increases the firm's value. These findings support the previous study showing that product claims that are congruent with perceptions of products will improve attitudes toward products and buying intentions [82]. These results are in accordance with previous research conducted by Kozup et al. [83] and Roe et al. [84], which show that product sustainability claims that are also functional and congruent have an impact on purchasing intentions.

5. Conclusions and Limitations

5.1. Conclusions

The objective of this study was to confirm that, for product sustainability (dairy products), N-eWOM reduces attitudes, subjective norms, PBC, and purchase intention. As approached by the theory of planned behavior, N-eWOM stimulates negative customer attitudes, disturbs subjective norms and behavior control, and reduces purchase intention. Moreover, the study of employee product sustainability claims (congruent and incongruent) mitigated the effects of N-eWOM significantly. The study confirms that congruent product sustainability claims have a different effect on purchase intentions than incongruent claims. The results showed that congruent product sustainability claims overcome the impact of high N-eWOM on decreased purchase intentions.

Our study proved that a congruent product sustainability claim could reduce the impact of high N-eWOM on a product. Companies can make their product sustainability claims understood and trusted by consumers. Product sustainability claims can be socialized regularly to consumers, so that they are well received by consumers. They can be one of the tools to reduce negative perceptions of products. This study replicates previous findings, showing that processing advertising content before negative information about a brand has the greatest impact. The results of Study 2 strengthen the findings that negative information must be countered with positive information so that the negative impact is reduced. Companies should use congruous product sustainability claims and make those claims familiar to customers by regularly sending product claim messages to customers.

5.2. Managerial Implications

This study provides guidance on product sustainability management. In the case of product sustainability (milk), companies should reduce the occurrence of negative eWOM so as not to reduce consumer attitudes, subjective norms, behavior control, and purchase intentions. Consumer engagement with advertised products reduces their perception of intrusion and increases their intentions based on positive eWOM and advertising [85]. A proactive approach that informs customers earlier and gives compensation can reduce N-eWOM [86]. Feedback can make the biggest impact on consumers when it addresses short-term problems [87].

For product sustainability, congruent sustainability claims are needed to increase visual attention, positive evaluation, and the likelihood of choosing the product. Visual attention is influenced by the congruence of images in food decisions [88]. Affect congruency increased in the story world, led to more positive evaluations, and increased the likelihood of choosing a product that the story was advertising [89]. Therefore, communication can be made more effective when it is value-congruent [90], color-text congruent [91], gender-congruent [92], and music-congruent in advertising [93].

5.3. Limitations and Future Research

One obvious limitation of our study is that we use advertising to inform the participants about product sustainability, but we did not conduct additional testing about the

Sustainability **2022**, 14, 2554 15 of 18

effect of advertising exposure on purchase intention [94]. Future research should examine whether attitudes toward advertising are an antecedent to decreased purchase intention when there is high N-eWOM. Secondly, product sustainability, in this study, is sustainable dairy, and it is sensitive to product sustainability [32]. Future research should compare cow's milk with plant-based milk.

Author Contributions: Conceptualization: R.E.H., S.R. and G.G.; methodology: R.E.H., S.R. and G.G.; validation, formal analysis, and investigation: R.E.H., S.R., G.G. and Y.S.; writing—original draft preparation: R.E.H., S.R., G.G. and A.F.; writing—review and editing: R.E.H. and Y.S.; supervision: R.E.H. and S.R.; project administration: R.E.H. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data presented in this study are available on request from the corresponding author.

Acknowledgments: We thank all the undergraduates at the two universities in Indonesia who volunteered to take part in this study and all our colleagues who helped us with the data collection. The authors are grateful to the anonymous reviewers for their helpful comments and suggestions to improve the quality of this paper.

Conflicts of Interest: The authors declare no conflict of interest.

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Sustainability **2022**, 14, 2554 18 of 18

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