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Information and Knowledge Influence the Relationship between Green Confusion, Greenwash with Purchase Intension

Abstract

This study discusses the effect of greenwash and green confusion on purchase intention and determines the moderation effect of information and knowledge. The study is quantitative, so the researcher collected data from the university staff and faculty members regarding fast foods. This research study used the statistical package for social sciences to commence a quantitative study. The data was collected from 201 participants from the said population. The results assure that there is a negative relationship between greenwash and green confusion with purchasing intention. Therefore, the current study recommends that businesses reduce their greenwashing practices by not just claiming their "greenness" but also demonstrating the proof of their green products to avoid risk and customer misunderstanding. The result of the study confirmed that information and knowledge moderate the relationship between greenwash and green confusion with purchase intention. Furthermore, the companies will provide the committed environment with clear information. The study tries to fill the gap and improve the information and knowledge regarding fast food to the customer, which will improve the intention of the customers.

Key Words: Purchase Intension, Greenwash, Green Confusion, Information and Knowledge

Introduction

In the current situation, firms are continuously attempting new techniques for the dienedioate their product, whereas green marketing is a more usable and effective method in differentiation. Similarly, companies are taking advantage of green marketing to show their social and environmental responsibility for products and services. Therefore, most companies are turning their attention to environmental sustainability ([Chang, 2011](#); [Chen and Chang, 2013](#)). Several consumers are suffering from health issues due to a poor diet, and the researcher analyzed that the food items are relevant. These problems are faced by offering the formation of food content. Before lunching the food items, the consumer should be educated, empower and enable to choose the healthier diets of significant effect. In several countries, the consumer was made confused by using different techniques and put their wrong evaluation and limiting its capacity towards healthier choices. There is no clear instruction where the labels can be effective and frustrate the consumer in guiding due to lack of information. While information builds an encouraging intension among the consumers ([Leire and Thidell, 2005](#); [Lestari, Hanifa, et al. 2020](#)).

Besides this information and knowledge and guiding the consumer regarding choosing of food items, the decision will be made on the attitude, preference, value and intention towards the food items ([Wang, Wong, et al. \(2020\)](#)). According to [Woo and Ki \(2019\)](#), attitude is the most significant predictor of purchasing intention. Attitude will enable you to the impact of labeling. On the other side, the study analyzed that declaring about the healthier of the product did not moderate among the perception and intension of the foods ([Cermin, Berry, Burton and Howlett, 2019](#)).

On the other side, consumer demands and behaviors are changed due to the changes in environmental protection and marketing. However, few companies comply with green business strategies by employing the concept of "greenwashing," in which they make vague environmental claims and mislead consumers about environmental practices. Furthermore, the study by [Kim and Lyon \(2015\)](#) Concluded that all firms are not fully capable of accepting green marketing capabilities.

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Greenwashing allows businesses to receive potential benefits or capital while lowering costs. Greenwash will activate the pressure in stakeholders, where the firms present themselves as green firms but not green in reality. Aside from greenwashing, consumers need information and awareness to make environmentally friendly purchase decisions ([Garnett, 2008](#); Wang, Zhang, et al., 2018). For example, consumers have the intention to purchases a new product; they need time, information and confidence to take a proper decision.

Regarding the consequences, causes and techniques of the Greenwashing and purchasing intension has already been discussed in several sectors like gas, automobile, finance, food and hospital industry, while few studies were conducted on the education sector, especially in developing countries ([Kaufmann, Panni, et al. 2012](#)). Most of the researchers find the direct relationship between the study variables purchase intention, greenwash and green confusion, while little attention has been given to the indirect relationship of information and knowledge among the variables. For the said purpose, the researcher selected the quantitative study, which explains the impact of greenwash and green confusion with purchase intention and the moderating role of information and knowledge among the relationship. The study is significant to provide important information regarding the green market context for both the academicians and specialists, where the companies will expectedly enhance the purchase intentions by using the idea of greenwashing. Therefore, the researcher will try to fill the gap and conducted the study in developing countries like Pakistan, where the study was conducted by [Alarcon \(2011\)](#) and [Khan, Rasli, et al. \(2014\)](#), concluded that Pakistan is one of the under-research countries in the Asian countries.

Literature Review

Greenwash and Purchase Intention

Purchase intention is defined as the intention of the customer to purchase a product after evaluating (Ehitlark, Geurts and Swenson, 1993; [Bhaskar and Kumar, 2016](#)). During the assessment of the product, the customer knows about the information, price shape, where the judgment of the customer influences the purchasing of the product (Yii et al, 2020). Purchasing intention is associated with actions that are future planned and transforms the attitude and beliefs in a product to action (Schivinshki and Dabrowski, 2016). In addition, it was found that attitude was an important factor in buying a healthier product.

Greenwash has been defined as that the untruth, misleading and misunderstanding of the product of a company ([Parguel, Benoit-Moreau and Larceneux, 2011](#)) Moreover, greenwash concepts are related to the interaction that leads the customer to the right decision ([Lyon and Montogomerery, 2015](#)). It shows the appearance of environmentally friendly instead of unfriendly substances. Moreover, it defines the concept of greenwash as an act of deceiving a consumer about a company's environmental applications and the product's environmental benefits ([Aji, 2014](#)).

From the above discussion, it has been concluded that a product can be sold with its characteristics, which shows its value and belief of the customers. Furthermore, Underwood, 2003 explained that a product would be significant when it presents knowledge, value, credibility and ecologically sustainability. Moreover, the companies attract the consumers, where the company shows the elaborated features of the product, caring about the customers and expressed to them that the company is too friendly ([Chen and Chang, 2013c](#)). According to Nyilasy, Gangadharbatla and Paladino, (2014), it was dedicated that greenwash is not only related to ethical matters, but it is an essential deterrent of perception, which affects the purchasing intentions of the customer. Sometimes, the customer purchases the product with any reality and description act, but the company convinces the customer and falsely image leads in reduction of trust of the customer, where the customer feels hesitation. As a result, greenwash creates confusion among the consumer in purchasing the product. Therefore, the hypothesis has been formulated.

H1: Greenwash has a significant negative impact on green purchase intention.

Green Confusion and Purchase Intention

Green confusion is defined by [Avclar and Deirgunes \(2017\)](#) as an insufficient description of the

product. Furthermore, the author explained that consumers' confusion is the consumer's failure in taking the right decision (Chen and Chang, 2013). In addition, the authors defined confusion as a failure to correctly understand a product's environmental qualities. According to Tumbull et al, (2000), those consumers who are confused are more complex, ambiguous and need more product information. Green claims should be clear, accurate and true. Consumer confusion creates misinterpretation of the market. The confusion among the consumers arises due to cognitive ability in the processing of information. The consumer will attempt to get more and more information regarding the product, which becomes overload, and as a result, the consumer will be confused (Langer et al, 2008).

From the above discussion, it has been concluded that green confusion is the outcome of greenwash. Similarly, greenwash and green confusion affect the purchasing intention of the consumer regarding the product. Therefore, the second hypothesis has been formulated.

H2: Green Confusion has a Significant Negative Impact on Green Purchase Intention

Moderating Role of Information and Knowledge

From the discussion, the greenwash affects purchasing intentions of the consumers, whereas the green confusion is the outcome of the greenwashing. Similarly, green confusion affects the purchasing intentions of the consumers. A high level of information and understanding is beneficial for the unfavorable link of greenwash and green confusion with buying intentions. Moreover, the researcher adopted in his study that information and knowledge are the influencing factors of purchasing intentions. It also affects the decision-making process that includes the economic value, advantages and disadvantages and attributes. Consumers search for information regarding green products and their value. The information pointed the consumer to a better product with the comparison of the same ones and allowed the consumer for judgment. As a result, a consumer should easily assess relevant, understandable and clear information on the product through labeling or other assessable sources. Therefore, the moderation hypotheses are formulated to strengthen the relationship between greenwash, confusion with purchase intention.

H3: Information and knowledge positively moderate the relationship between Greenwash and Purchase intention.

H4: Information and knowledge positively moderate the relationship between Green confusion and Purchase intention.

Conceptual Framework

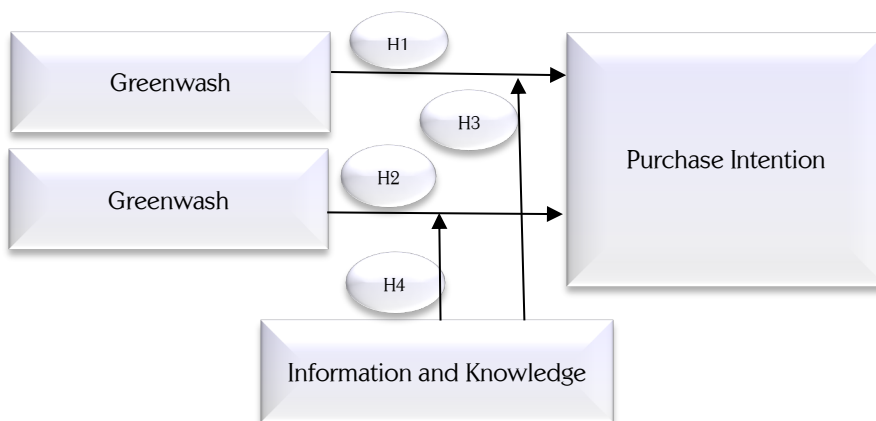


Figure 1: Conceptual Framework

Research Methodology

Designing for the research covers the decision from broad to the data collection method. Research

designing is depended on the questions of the study. The current study is using the quantitative approach by using cross-sectional data, where the data will be collected on one short.

The population of the current study was 702 faculty and staff members of the universities at Swabi districts, the Khyber Pakhtunkhwa Province, Pakistan. According to [Krejcie and Morgan's \(1970\)](#) respondents, having 702 will have a 248-sample size. Furthermore, the data was collected through a valid and reliable questionnaire. After all, 223 questionnaires were returned with a response rate of 89.9%. During distribution, the participants were informed that the data will be used only for academic research purposes and will be kept confidential.

Furthermore, the questionnaire was consisting of five sections. The questionnaire was using the five Likert scale from strongly disagree (1) to strongly agree (5). Gender, age, marital status, qualification, and income are among the demographic characteristics in the first section. The second section consists of items related to purchasing intention, where purchasing intention was measured on five items adapted from [Nguyen et al. \(2019\)](#), where the Cronbach value of the items was 0.90. The third sections consist of greenwash items which were adopted from [Chen and Chang \(2013\)](#), and the Cronbach alpha was 0.85. The fourth section consists of green confusion, green confusion was calculated based on five items ([Aji & Sutikno, 2015](#)), and the reliability value was 0.87. The last section five consists of items related to information and knowledge were measured on five items adopted from the Thi Thu Huong Nguyen, Yang, Nguyen, Jahnsen, and Cao (2019), and the Cronbach value was 0.77.

Response Rate

According to the mentioned sample, the data was collected from the academicians and staff members from the district Swabi. For this survey, the questionnaire was distributed among 260 employees from the population where the data were collected from 223, so the response rate was 89.9%.

Control Variables

A one-way ANOVA was performed on control variables that are gender, age, designation, income, marital status, where it has been calculated that how much control variables affect greenwash, green confusion, purchasing intention and information and knowledge.

After analysis, it was obtained that the significant difference among the greenwash with control variables are gender was ($F=.914. p<0.01$), age was ($F=.770. p<0.08$), income was ($F=.296. p<0.01$). Furthermore, a significant difference between green confusion with control variables is gender was ($F=.029. p<0.01$), age was ($F=.332. p<0.01$), income was ($F=.253. p<0.01$). Moreover, Table 1 shows that the difference among the purchase intention with control variables are gender was ($F=1.146. p<0.05$), age was ($F=1.099. p<0.05$) and income was ($F=1.848. p<0.05$).

Table 1. One-Way ANOVA

	Greenwash		Green Confusion		Purchase intentions	
	F Value	P Value	F Value	P Value	F Value	P Value
Gender	.914	.000	.029	.000	1.146	.000
Age	.770	.008	.332	.001	1.099	.001
Marital Status	1.784	.170	4.224	.016	1.073	.344
Designation	2.029	.091	1.309	.268	.437	.782
Income	.296	.001	.253	.003	1.848	.002
Educational Qualifications	1.590	.178	.900	.465	1.678	.157

Result

Descriptive Statistics and Correlation

As mentioned in the response rate that 223 questionnaires were used for final data analysis. There are 223 questionnaires in SPSS version 23. The researcher applied the hypotheses to achieve the target

answers to the objectives. Descriptive statistics have been shown in Table 2, where the mean and standard variation values are presented. Furthermore, the table shows the Cronbach's alpha is within the acceptable range of 0.70 (Nunnally & Bernstein, 1994). Moreover, Table 2 shows that relationships between greenwash and green confusion with purchase intention are significantly negative.

Table 2. Descriptive Statistics and Correlation Analysis

	Mean	SD	1	2	3	4
1. Greenwash	3.01	.887	(0.70)			
2. Green confusion	3.38	.773	-.167*	(0.73)		
3. Purchase intention	2.63	.758	-.246**	-.052*	(0.77)	
4. Knowledge and information	3.47	.853	.074*	.394**	.017*	(0.71)

P<0,05, Alpha values in brackets SD= Standard Deviation,

Regression Analysis

For finding the effect of the independent variables on dependent variables that there are significant negative relationships between greenwash with purchase intention ($\beta=-.223$, $P<0.01$), thus hypothesis 1 is supported. Furthermore, table 3, shows that there is a significant negative relationship between green confusion and purchase intention ($\beta=-.051$, $P<0.01$), so hypothesis 2 is supported.

Table 3. Regression Analysis

	β	R ²	ΔR^2
Greenwash	-.223	.246	.060
Green confusion	-.051	.052	.003

**Significant at $p<0.01$, Dependent variable Purchase Intention*

Moderation Analysis

For finding the moderation effect of the information and knowledge on the relationship between greenwash and purchase intention. For this, the researcher uses the Hayes model for moderation. In which model one from the templet has been used. In the model, the greenwash is entered as an independent variable, purchase intension is entered as the dependent variable, while the information and knowledge were employed as a moderation effect. Table 4 reveals that greenwash and purchase intentions are moderated by information and knowledge ($\beta=0.1425$, $P<0.01$), thus hypothesis 3 is supported.

Table 4. Moderated Regression Analysis

	β	SE	LLCI	ULCI
Constant	4.4125	.5668	3.2954	5.5296
Greenwash	.6767	.1958	-1.0625	-.2908
Information and knowledge	.3578	.1673	-.6876	-.0280
Int_IKGW	.1425	.0576	.0290	.2559

P<0.01, Ik= Information and knowledge, GW=Greenwash

Furthermore, information and knowledge were used as a moderation effect. Table 5 shows that green confusion and purchase intentions are moderated information and knowledge ($\beta=-.009$, $P<0.01$), so hypothesis 4 is supported.

Table 5. Moderated Regression Analysis

	β	SE	LLCI	ULCI
Constant	2.622	.8095	1.027	4.218

	β	SE	LLCI	ULCI
Green confusion	.0384	.2372	-.505	-.4291
Information and knowledge	.0697	.2462	-.416	-.5550
Int_IKGC	-.009	.0686	.144	.126

$P < 0.01$, Ik = Information and knowledge, GC = Green confusion

Figure 1 shows the interaction effect of information and knowledge and greenwash on purchase intention. It further explains that as the level of the low moderator (Information Knowledge) increases, the relationship between greenwash and purchase intention is stronger. While figure 2 shows the interaction effect (multifaction of independent variables with dependent variable) of information and knowledge and green confusion on purchase intentions. It shows that as the level of low moderator stronger, the relationship between green confusion and purchase intention.

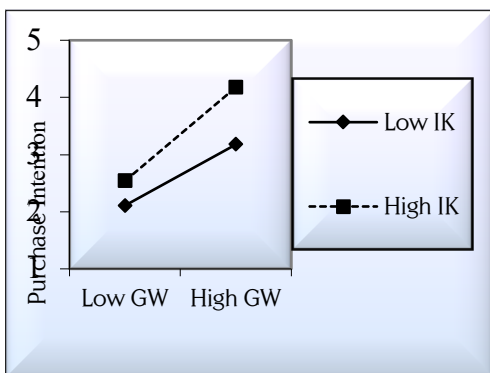


Figure 1: Moderated of Ik on GW and PI

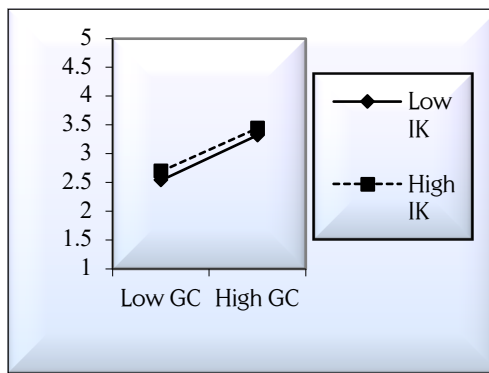


Figure 2: Moderated of Ik on GC and PI

Discussions

This study focused on greenwash, green confusion, purchase intention and information and knowledge. Most of the study was conducted on the direct relationship between the variables, while this stud tries to find the direct as well as an indirect effect. In the current study, the researcher will find the information and knowledge moderation among the variables.

The first hypothesis of the study was that there is a negative relationship between greenwash and purchase intention. From the finding of the study, the hypothesis is supported, where it has been elaborated that greenwash affects the purchasing intention of the employees. The result of the current study is identical to the results ([Chen and Chen, 2014](#))

Another hypothesis of the study was that as that there is a negative relationship between green confusion and purchase intention. The findings of the current study supported the hypothesis, where it means that as the level of confusion is higher than the intention of the product will be lower. The study results are identical to other studies ([Langer et al., 2008](#), [Chen and Chen, 2013b](#))

The third hypothesis was that information and knowledge modulate the association between greenwash and purchasing intent positively. The result of the hypothesis was supported. It explains that greenwash has a negative impact on purchasing intention, while if the information and knowledge are increase, then the level relationship will be positive. Information and knowledge will positively affect the purchase intention.

Moreover, the last hypothesis of the current study was information and knowledge positively moderate the green confusion and purchase intention. The result of the hypothesis was supported, which means that green confusion is a negative impact on purchasing intention, while information and knowledge positively moderate green confusion and purchase intention. The level of purchasing intention of the employees will be clear due to the moderation effect of information and knowledge.

Practical Implications

From the results of the study, it has been suggested to the food and beverages companies that the information regarding the product should be clear, which will affect the purchasing intention of the customers. The wrong, confused and ambiguous information decreases the intentions of the customers. Furthermore, the companies need a natural environment for their customer to increase their market value. Besides these, the company needs to increase their consumers.

The practical implication of the study for the companies is that they will provide the true environment for their customers, which will increase their sales and market shares. In addition, the company will show their performance as they committed with their customers. The study also provides details about the product to the customers, which will increase the purchasing intention. The confusion regarding the product or less information will make the customer clear that there is something wrong or hidden issue.

Limitation and Future Direction of the Study

Every study has some limitations, so this study is also not exempted from limitations. The first limitation of the study is that study consists of four variables like greenwash, green confusion, purchase intention and information and knowledge. Second, the study is quantitative by using the cross-sectional approach. Third, the study is limited to developing countries like Pakistan and further Khyber Pakhtunkhwa and district Swabi. The study is limited to the employees of universities.

According to the limitation, the researcher suggested that if other variables like capitalism, trust, personality traits, etc., are added to the model. The researcher also recommended using a qualitative approach or using a longitudinal method for collecting data. The sector of the study may be changed from universities to another sector like banking, another area of the country.

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