

# Negative Emotions in Excessive Product Packaging: The Effect of Environmental Concerns

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This study was performed to determine the influence of consumers' environmental concern on negative emotions, after consumers bought products with excessive packaging. The researchers surveyed 230 Taipei residents. Data were analysed using the partial least square technique. Analysis shows that environmental concern influences negative emotions namely guilt, regret, and shame in the context of purchasing products with excessive packaging. This study contributes by giving more understanding about what makes consumers feel negatively emotions, after purchasing products with excessive packaging that harm the environment.

**Key words:** *Excessive Packaging, Environmental Concern, Negative Emotions, Guilt, Regret, Shame.*

## Introduction

Packaging is the reason for the increasing amount of waste (Schwepker and Cornwell, 1991). Excessive packaging is particularly pointed to as a cause of increasing waste. Firms concerned about the environment should develop products/services with the aim of satisfying consumers and society (Soonthonsmai, 2007). That a product does not have unnecessary, wasteful, excessive packaging is one criteria for an environmentally friendly product (Elkington et al., 1990). Providing goods without excessive packaging is a green marketing management process performed for identifying, anticipating and satisfying customer needs and society, in accordance with a profitable and sustainable perspective (Peattie and Charter, 2003). Packaging is excessive if it supplies too much weight, is too heavy, too large, too costly, too ornate, or if its rhetoric is too flattering and so on (Chen et al., 2017).

The extant literature has highlighted the importance of emotion in various marketing aspects, and suggests that different emotions can directly determine different consumer behaviours

(Loewenstein et al., 2001). However, no research has focused on consumers' negative emotion in the context of excessive product packaging. Carrus et al. (2008) highlights how negative anticipated emotions significantly influence the desire to demonstrate favourable behaviour, which in this research refers to purchasing non-excess packaged products. This research will focus on investigating consumers' negative emotion and the influence of their environmental concern.

The cognitive appraisal theory of emotion, by Lazarus & Folkman (1984), was applied to guide human ways of thinking. It describes how negative emotions appear as the result of consumers' evaluating excessive product packaging. People will interpret and evaluate a situation, and emotion will later appear simultaneously with the results of the event/situation evaluation (Lazarus & Folkman, 1984). We propose a cognitive appraisal approach, to help us understand how consumer evaluations about excessive packaging as undesirable elicits their negative emotions. We address environmental concern as the cognitive appraisal process that occurs when consumers evaluate excessive product packaging, and further influence their negative emotions as the result of that appraisal. Regret, guilt and shame due to decisions to purchase products with excessive packaging are three emotions focused on by this research.

This study contributes to green marketing literature. It gives more understanding about what make consumers feel negative emotions after purchasing products that harm the environment. This paper starts with literature review and research frameworks. The methodology and findings are then presented. Finally, theoretical and managerial implications are discussed.

## **Literature Review**

### ***Environmental Concern and Negative Emotions***

Most researchers view environmental concern as a general attitude, the core of which is a cognitive and affective evaluation of the object of environmental protection (Bamberg and Schmidt, 2003). In addition, Elgaaied (2012) captures environmental concern as a one-dimensional concept referring to a general attitude toward environmental issues.

Different ranges of emotion can be elicited from cognitive appraisal processes (Watson and Spence, 2006). In this research, we focus on only three kinds of negative emotion, as the outcome of consumer evaluations in purchasing excessive packaged products.

Guilt is a negative emotion experienced when an individual feels responsible for a negative outcome (Tangney and Dearing, 2002). Soscia (2007) demonstrates that guilt is experienced when goal-incongruent outcomes are perceived as a direct consequence of personal action. The evidence from extant literature emphasizes that environmental concern will trigger experiences of guilt, when consumers choose products with excessive packaging, because



this action is against their environmental concern to behave in an environmentally friendly manner (Elgaaied, 2012). We propose this hypothesis:

**H1:** The higher the consumer environmental concern is, the higher the guilt will be.

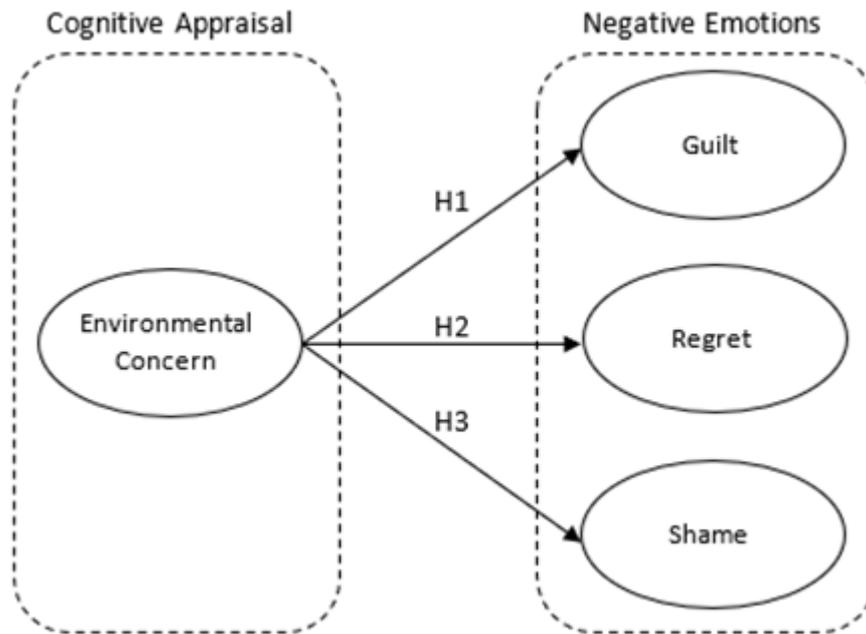
Regret is a negative emotion when consumers reflect on and evaluate decisions they have encountered, and comparisons are made between experienced outcomes and the outcomes that would have occurred under a different choice (Tsiros and Mittal, 2000). In current research contexts, consumers may ask themselves questions such as: “Should I have purchased the non-excessively packaged product rather than the excessively packaged one?” Decisions can become unpleasant when consumers feel they have made an incorrect choice (Landman, 1987). In the current research context, decisions to buy products with excessive packaging can become unpleasant, when consumers feel their choices were incorrect, because of their high concern for environment. Therefore, it is appropriate to recognise that environmental concern will trigger the appearance of regret, when customers purchase products with excessive packaging. So, we propose this hypothesis:

**H2:** The higher the consumer environmental concern is, the higher the regret will be.

Shame is a dejection-based emotion of condemning one’s entire self (Tangney and Dearing, 2002). People feel ashamed when they feel they are bad people (Leary, 2007). In the current research context, when consumer purchase excessive packaged products that contrary to their believe, they may feel shame because they feel that they are bad people. The consumers believe refers to environmental concern. These believe will form the benchmark for acceptable environmental behaviour while society creates expectations for real or perceived behaviour and later these unwritten rules influence the degree of shame someone might experience. Therefore, we propose this hypothesis:

**H3:** The higher the consumer environmental concern is, the higher the shame will be.

**Figure 1.** Research framework



## Methodology

This research is a survey because the purposes are to identify characteristics of the sample, to examine attitudes, and to analyze consumers' behavioural patterns. The data was collected in June 2017. The survey was conducted at three districts in Taipei City. The respondents were residents in three districts of Taipei City: Xinyi District, Neihu District, and Wanhua District. Respondents were personally approached in front of supermarket, namely Carrefour. Since the measurement scales were in English, a qualified interpreter translated the scale items into Chinese. Then, a bilingual researcher back-translated the scale items to English to confirm accuracy, and the consistency of their meaning. Three hundred and fifty consumers responded to the questionnaire.

The sampling procedure used in this research were non-probability sampling, using convenience sampling technique. Researchers obtained 230 questionnaires of which seven were incomplete and excluded from analysis. The survey consisted of two sections. The first gathered the respondents' socio-demographics (gender, age, last education background, occupation and income). The second section gathered responses about the variables' measurement items (Table 1). All the variables were measured by employing scales validated in previous studies, with slight modifications to ensure contextual consistency. Table 1 shows the items used in the survey, with references. All the items were measured in five-point Likert scales (1 = not at all likely; 5 = very likely).

**Table 1:** Measurements, Reliability, and Convergent Validity

Construct	Item	Description	Cronbach Alpha	Composite Reliability	AVE	Loading Factor
Environmental Concern  Elgaaied (2012)	EC1	Thinking about the environmental conditions our children and grandchildren have to live under, worries me.	0.83	0.88	0.60	0.74
	EC2	When I read newspaper articles about environmental problems or view such TV-reports, I am indignant and angry.				0.82
	EC3	If we continue as before, we are approaching an environmental catastrophe.				0.85
	EC4	It is still true that politicians do far too little for environmental protection.				0.70
	EC5	For the benefit of the environment we should be prepared to restrict our momentary style of living.				0.75
Guilt  Antonetti & Maklan (2014)	GUILT1	I feel remorse when I choose product with excessive product packaging.	0.92	0.95	0.86	0.88
	GUILT2	I feel bad when I				0.94

		choose product with excessive product packaging.				
	GUILT3	I feel guilty when I choose product with excessive product packaging.				0.95
Regret Bui et al. (2009)	REGRE T 1	I feel sorry when I choose product with excessive product packaging.	0.84	0.91	0.76	0.91
	REGRE T 2	I feel regretful when I choose product with excessive product packaging.				0.92
	REGRE T 3	I should have chosen product without excessive product packaging.				0.79
Shame Ghorbani et al. (2013)	SHAME 1	I feel ashamed when I choose product with excessive product packaging.	0.92	0.95	0.86	0.93
	SHAME 2	I feel embarrassed when I choose product with excessive product packaging.				0.95
	SHAME 3	I thought I'm being a fool when product with excessive product packaging.				0.90

## Results and Data Analysis

To test the hypotheses, we applied the partial least square (PLS), a causal modelling approach which aims at maximizing the explained variance of the dependent variables (Hair et al., 2014) using WarpPLS 6.0, a non-linear variance-based structural equation modelling software tool that uses the PLS regression algorithm.

The measurement model of all the variables with reflective indicators is assessed by looking at the reliability, composite reliability, convergent validity and discriminant validity (Hair et al., 2014). Table 1 shows the composite reliability measures and Cronbach's Alpha values for all reflective variables, which has acceptable values (greater than 0.7). Table 1 also shows good convergent validity. All the measured variables have AVE values above the critical value of 0.5 and factor loadings above 0.7. Table 2 shows good discriminant validity in which the square root of average variances extracted (AVEs) of the variables (diagonal elements) were greater than the correlation of the associated variables.

**Table 2:** Discriminant Validity

	EC	GUILT	REGRET	SHAME
EC	0.77			
GUILT	0.49	0.93		
REGRET	0.59	0.87	0.88	
SHAME	0.45	0.77	0.73	0.93

Note: Diagonal elements – Square root of AVE – between constructs and their measures; off-diagonal elements – correlations between constructs

Determinant coefficient ( $R^2$ ) value of 0.75, 0.50, and 0.25 is described as a rough rule of thumb for substantial, moderate, and weak, respectively (Hair et al., 2014). The  $R^2$  shown in Table 3 indicates that all the  $R^2$  value are around 0.25. This represents that guilt, regret, and shame explained environmental concern weakly, however  $R^2$  values of 0.20 are considered high in behavioural disciplines such as consumer behaviour (Hair et al., 2014).

Guidelines for assessing effect size ( $f^2$ ) provide that values of 0.02, 0.15, and 0.35, respectively, represent small, medium, and large effects (Cohen, 1988) of the exogenous latent variable. The effect size shown in Table 3 indicate that the effect size for guilt, regret, and shame are considered large.

The aim when measuring  $Q^2$  value was to examine the predictive relevance of one's theoretical structural model.  $Q^2$  greater than 0 implies that the model has predictive relevance, whereas  $Q^2$  less than 0 suggested that the model lacks predictive relevance. As

shown in Table 3,  $Q^2$  value for guilt, regret, and shame are greater than 0 (0.066) indicating that the research model has predictive relevance.

**Table 3:** Structural Model

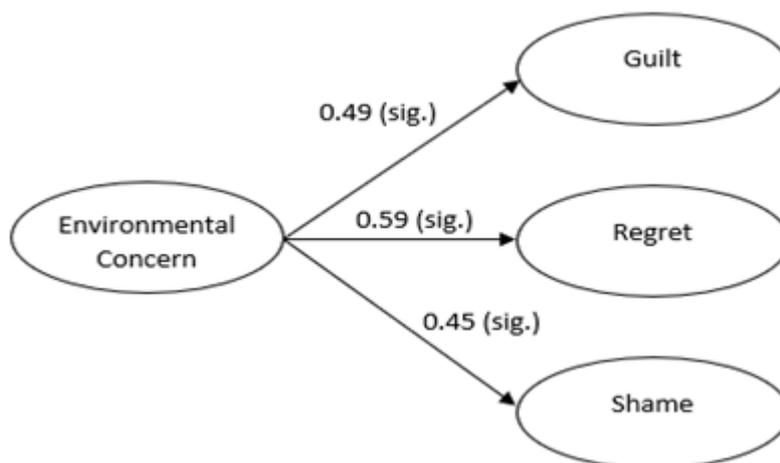
Construct	Determinant coefficient ( $R^2$ )	Effect Size ( $f^2$ )	Predictive Relevance ( $Q^2$ )
GUILT	0.24	0.49	0.24
REGRET	0.35	0.60	0.35
SHAME	0.20	0.45	0.20

The results of the hypothesis testing and coefficients relationship are shown at Figure 2. A coefficient value of 0.49 was obtained for the relationship between environmental concern on guilt. P-values of the coefficient are  $< 0.001$ , less than 0.05, which means there is a significant relationship between environmental concern and guilt. Therefore, Hypothesis 1 is accepted. The higher the consumer environmental concern is, the higher the guilt will be.

A coefficient value of 0.59 was obtained for the relationship between environmental concern and regret. P-values of the coefficient are  $< 0.001$ , less than 0.05, which means a significant relationship between environmental concern and regret. Therefore, Hypothesis 2 is accepted. The higher the consumer environmental concern is, the higher the regret will be.

A coefficient value of 0.45 was obtained for the relationship between environmental concern on shame. P-values of the coefficient are  $< 0.001$ , less than 0.05, which means a significant relationship between environmental concern and shame. Therefore, Hypothesis 3 is accepted. The higher the consumer environmental concern is, the higher the shame will be.

**Figure 2.** Hypothesis Testing





## Conclusions

There are some factors that influence consumers negative emotion after purchasing excessively packaged products. The current research enhances the understanding that in the context of excessive product packaging, the higher the consumer environmental concern is, the higher the guilt, regret, and shame will be. This result contributes to the application of cognitive appraisal theory of emotion, with negative emotion as the outcome. Previous studies in excessive packaging focused on behavioural outcomes such as purchase intention (Chen et al., 2017; Monnot et al., 2014). Thus, environmental concern is a potential variable for influencing consumers' negative emotions. Future research regarding the influence of negative emotions in encouraging consumers to perform pro-environmental behaviour, such as reducing their consumption of products with excessive packaging, will produce fruitful discussions. Marketers should also be more sustainable in their packaging, since the customer will feel negative emotions after purchasing excess product packaging. Marketers can use negative emotion as an approach in their marketing strategy, to attract consumers to purchase non-excessively packaged products.



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