



# Internet Marketing Applications for Green Products: Based on Regulatory Focus Theory

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**Abstract.** The rapid development of the Internet has made “Internet marketing” a popular marketing method for various enterprises. In order to better promote green products through internet marketing, this paper empirically examines the effect of regulatory focus (RF) on the purchase of green products by conducting a two-factor ANOVA with 2 (RF: promotion vs prevention) \* 2 (product type: green vs non-green). The findings show that the interaction between RF and product type is significant, with consumers in the promotion focus being more likely to purchase green products than those in the prevention focus.

**Keywords:** Regulatory theory · Green product purchase intention · Internet marketing · Experimental study

## 1 Introduction

The current consumption pattern exceeds the Earth’s supply capacity, resulting in continuous environmental deterioration and impacting the interests of all humans, leading to widespread concern around the world. The natural environment can be affected by individual consumption activities, with nearly a third of environmental problems being caused by consumer behavior, such as the improper disposal of plastic bags and batteries.

However, although most consumers express a positive attitude towards green products, they seem reluctant to actively purchase them [1]. This inconsistency between the willingness to buy green products and their purchasing behavior makes the marketing of green products difficult. What motivates people to buy green products is the first question that needs to be understood. Scholars have tried to understand the reasons behind consumers’ decisions to buy green products in terms of personal, social and other external factors, and have also found that demographic factors play a less significant role in the purchase of green products than psychological factors [2].

As a psychological theory, regulatory focus theory describes the strategic direction that individuals use to pursue their goals, which can influence all stages of the consumption choice process and has a fundamental and stable impact on all types of consumption choice decisions [3]. Therefore, this study uses this theory as a basis for empirical studies to determine which types of consumers are more willing to consume green products.

## 2 Literature

### 2.1 The Study of the Factors Influencing Green Product

Green products are defined in this document as products that are ecologically and humanly sound in their production, use and disposal, and whose purchase is considered to be green consumption in its entirety. Research conducted on the influences of green product purchases includes demographic characteristics factors, consumer psychological factors and other external factors. Among these, the influence of psychological factors has been highlighted, such as the role of consumer expectations, consumer motivation and consumer environmental responsibility in the purchase of green products.

### 2.2 Regulatory Focus and Green Consumption

Higgins (1997) proposed the “regulation focus” (RF) to explain the different strategies that individuals use to meet differential self-regulatory needs as they move towards their goals, divided into two motivational orientations: prevention and promotion. Individuals who have promotion focus seek aspirations and hopes and are concerned with personal development and self-actualization. They seek gain, are pleased by it. While, prevention-focused individuals seek responsibility and safety. They are motivated by avoiding losses and perceive losses as painful. RF is classified according to its origin as either idiosyncratic or situational, the former being long-term and stable from an early age, while the latter is transient and can be induced [4]. RF has become an important tool in the study of consumer behavior. All stages of the consumer’s shopping decision, from identification of needs to post-purchase feedback, are influenced by RF [5].

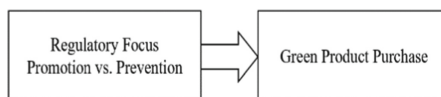
## 3 Research Hypothesis

Individuals with different regulatory focus have different tendencies to make action decisions, and considering whether to buy green products is also a decision choice. Thus, Fig. 1 gives the theoretical framework of the study, which explains the relationship between RF and the purchase of green products.

Combining the definition of RF with previous research, it can be speculated that prevention-focused consumers focus on responsibility and duty, so they are more responsible for a greener lifestyle and will be willing to purchase green products that meet their safety needs; promotion-focused consumers who are more concerned about their dreams and income think that buying green products is a strategy called for green consumption and will bring a burden, so they may not have a preference for green product. Based on this insight, we can make the following hypothesis:

H1: Consumers in the prevention focus are more likely to buy green products.

H2: Consumers in the promotion focus are more likely to buy non-green products.



**Fig. 1.** Theoretical framework

## 4 Empirical Analysis

Subjects selected for the study were people who have experience in online shopping. Using a between factorial design of 2 (RF: prevention/promotion) \*2 (product type: green/non-green), where the independent variables are RF and product type, and the dependent variable is the green products purchase intention. Study propose is to compare the influence of RF on the purchase intentions of green and non-green products and to further explore which RF is more inclined to purchase green products.

“SPSS 26.0” were used for data analysis. The questionnaire consisted of four parts: (1) The initiation material for the situational regulation focus, which was used to manipulate the first variable: RF. (2) A descriptive material on product type, used to manipulate the independent variable of product type, and four multiple-choice questions on green product purchase intentions. (3) Gender and age demographic information questions. The questionnaire items were measured on a seven-point Likert scale, except for the third part.

### 4.1 Study 1

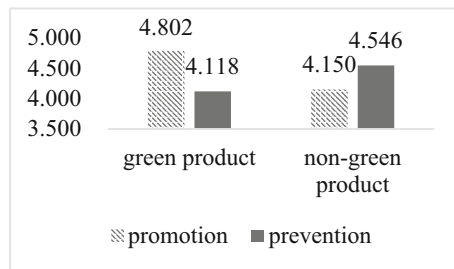
The aim of study 1 was to test H1 and H2. 232 questionnaires were received during the experiment (65 men, 167 women, age = 20.5). The variable Cronbach's  $\alpha$  coefficient of 0.837 for the green product purchase intention indicates good reliability and the KMO value of 0.772 ( $>0.7$ ) indicates that the validity of the questionnaire is acceptable. The significance probability of Bartlett Test of Sphericity was 0.000 ( $<0.01$ ) shows a high correlation between the question items, and the validity test passes, allowing for factor analysis.

Conduct an independent sample t-test on the mean scores of two groups divided by the average scores of two questions based on situational regulation focus. The results of the test showed that the score for promotion focus ( $M = 2.603$ ,  $SD = 1.354$ ) was lower than the score for prevention focus ( $M = 3.170$ ,  $SD = 1.667$ ) and the difference was significant ( $t = 2.845$ ,  $p < 0.05$ ), indicating that situational regulatory focus was successfully initiated. Independent samples t-test was performed by product type. It showed that the green product group scored significantly higher ( $M = 5.071$ ,  $SD = 1.228$ ) than the non-green product group ( $M = 4.250$ ,  $SD = 1.094$ ) and that this difference reached a statistically significant level ( $t = 5.386$ ,  $p < 0.001$ ), indicating that manipulation of product types was effective.

The results of the ANOVA are shown in Table 1 and Fig. 2 indicate that the main effects of RF ( $F = 0.944$ ,  $p > 0.05$ ) and product type ( $F = 0.574$ ,  $p > 0.05$ ) were not significant and that the interaction between RF and product type had a significant effect on purchase intention ( $F = 13.227$ ,  $p < 0.05$ ). This implies a significant effect of RF on consumers' product purchase intentions across product types. A subsequent contrast analysis revealed that in the green product condition, the green product purchase intention in the promotion focus ( $M = 4.803$ ,  $SD = 1.154$ ) was higher than in the prevention focus ( $M = 4.118$ ,  $SD = 1.201$ ) and the difference was significant ( $p = 0.002 < 0.05$ ). In the non-green product condition, the green product purchase intention in the promotion focus ( $M = 4.150$ ,  $SD = 1.146$ ) was lower than in the prevention focus ( $M = 4.546$ ,  $SD$

**Table 1.** Analysis of variance results for Study 1 (dependent variable: green product purchase intention)

Source	Type III sum of squares	Df	Mean Square	F	significance
Corrected model	18.628 <sup>a</sup>	3	6.209	4.860	.003
Intercept	4493.928	1	4493.928	3517.566	.000
Reg.focus	1.206	1	1.206	.944	.332
Product type	.733	1	.733	.574	.450
Reg.focus*Green Pdt	16.899	1	16.899	13.227	.000
Error	291.285	228	1.278		
Total	4812.000	232			
Corrected total	309.914	231			

**Fig. 2.** Study 1 results

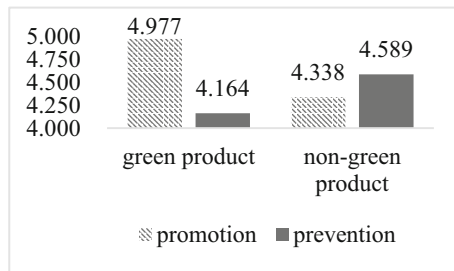
= 1.019), but the difference was not significant ( $P = 0.056 > 0.05$ ). In conclusion, the data results are sufficient to reject H1 and not sufficient to reject H2.

## 4.2 Study 2

The objective of study 2 was to test H1 and H2 again. There were 130 participants (41 men, 89 women, age = 21.9). Similar to the procedure in study 1, the data from this experiment passed an independent samples t-test and a two-way ANOVA was conducted. The results are shown in Table 2 and Fig. 3, indicating that the main effects of RF ( $F = 1.779$ ,  $p > 0.05$ ) and product type ( $F = 0.258$ ,  $p > 0.05$ ) were not significant for green product purchase intention, but there was a significant interaction between RF and product type ( $F = 6.355$ ,  $p < 0.05$ ). The results showed that RF main effect ( $F = 1.779$ ,  $p > 0.05$ ) and product type ( $F = 0.258$ ,  $p > 0.05$ ) main effects were not significant for green product purchase intention, but there was a significant interaction between the two variables ( $F = 6.355$ ,  $p < 0.05$ ). The comparative analysis showed that consumers with promotion focus had higher purchase intention for green products ( $M = 4.977$ ,  $SD = 1.030$ ,  $p = 0.007 < 0.05$ ). For non-green products, purchase intention was lower for those with promotion focus ( $M = 4.338$ ,  $SD = 1.251$ ) than prevention focus ( $M = 4.589$ ,  $SD = 1.032$ ), the difference was not significant ( $P = 0.403 > 0.05$ ).

**Table 2.** Analysis of variance results for Study 2 (dependent variable: green product purchase intention)

Source	Type III sum of squares	Df	Mean Square	F	significance
Corrected model	12.223 <sup>a</sup>	3	4.074	2.820	.042
Intercept	2649.368	1	2649.368	183.670	.000
Reg.focus	2.570	1	2.570	1.779	.185
Product type	.373	1	.373	.258	.612
Reg.focus*Green Pdt	9.182	1	9.182	6.55	.013
Error	182.050	126	1.445		
Total	2847.063	130			
Corrected total	194.274	129			

**Fig. 3.** Study 2 results

The above results can again reject H1 and prove that consumers in promotion focus are more inclined to buy green products. Because the difference between the two types of consumers is still not significant in the condition of non-green products, it is still not enough to reject H2.

## 5 Conclusion

The results of the study show that RF has an impact on the purchase of green products. There was a significant difference in purchase intentions between green and non-green products among individuals who were promotion-focused, and they clearly preferred to purchase green products.

Different consumers have different needs and preferences, so internet marketing needs to consider different individual differences in order to meet the needs of consumers. Internet technology, computer technology and information technology can provide internet marketers with tools and techniques to help them make better use of regulatory focus theory and design and implement internet marketing strategies. The suggestions are as follows: (1) Social media monitoring and data mining are first used to analyze consumer

information and then combined with machine learning models to analyze behavioral patterns for purchase decision prediction. (2) Use website building tools, website analytics tools, responsive design techniques, etc. to design websites that match user characteristics. (3) Perform search engine optimization (SEO) to increase the visibility of the content. (4) Make full use of tools such as social media analytics tools and social media promotion tools. For users who promote orientation, social media marketing can highlight the benefits and advantages of the product and provide sharing and reviews of the user's experience.

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