Optionally Green: the Role of Green Attribute Optionality in Influencing Performance Evaluations

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Extending past literature on innovation and choice architecture, we find that green attribute optionality enhances performance evaluations when the attribute represents an opt-in default policy. Moreover, we explore the moderating variable of cognitive style and the mediating mechanism of green product typicality.

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EXTENDED ABSTRACT

As firms seek to develop green products, they may find that consumers are unwilling to alter their consumption behavior due to a perceived performance reduction. However, past literature has often viewed green products homogeneously, whereby a product is either green or non-green. In contrast, we state that a product can feature a green attribute, but that it is not required for the base product to function (termed green attribute optionality), potentially overcoming the negative green product performance stigma.

Building on the innovation locus literature that recognizes the distinction between core and peripheral innovations (e.g., Gatignon, et al. 2002), we extend the concept of peripheral to include optionality. When optional the attribute may enhance a product’s green benefits, but is not required for it to function. Thus, we posit that performance risk is not transferred from the attribute to the base product, enhancing performance evaluations.

In addition, we state that optionality includes two default policies. Based on choice architecture and default literature, a product may possess a green attribute that is default, but may be deactivated (opt-out). Alternatively, the green attribute may be deactivated, allowing the user to activate it when needed (opt-in). As defaults act as a carrier of meaning (Brown and Krishna, 2004), we posit that when the green attribute is the default option (opt-out), performance evaluations will be reduced.

Additionally, we explore the moderating role of cognitive style and the mediating variable of green product typicality. In the former, we posit that holistic thinkers will view product attributes as interconnected, focusing on the degree to which differing attributes are connected and form an entity. In contrast, analytical thinkers may be able to detach the attribute from the product, viewing each attribute as separate (Nisbett, et al., 2001). Based on this, we posit that the impact of green attribute optionality on performance evaluations will be negated when an analytical mindset is activated. In the latter, we predict that an opt-out strategy, whereby the green attribute is default, will lead to an increase in the extent to which the product is viewed as typical of similar green products, thus degrading performance evaluations.

Three experiments were conducted to examine the effect of green attribute optionality on performance evaluations. In Study 1a, we explore both the optional and non-optional conditions. In Study 1b, we introduce the default policies, investigating opt-in, opt-out and non-optimal strategies. In Study 2, we examine the moderating variable of cognitive style. Finally, in Study 3, we present the mediating mechanism of green product typicality.

In Study 1a, we performed a one-factor (green attribute optionality: non-optional vs. optional) between subjects’ experiment with 75 respondents. Green attribute optionality was manipulated by presenting respondents with an advertisement for a washing machine along with a heading that outlined the product’s eco-friendly mode. Located at the bottom of the advertisement, a statement indicated that the eco-mode was user-activated. In the non-optional condition, no statement was presented. Finally, we measured performance evaluations. An ANOVA revealed that when the environmental attribute was optional, respondents rated the product as higher in performance ability than if it was non-optional (F (1, 73) = 5.796, p < .05).

Study 1b introduced choice architecture and the two default optionality policies. One hundred and twenty-five respondents were recruited to test a one-factor (green attribute optionality: non-optional vs. opt-in policy vs. opt-out policy) between-subjects experiment. All respondents were given a press release for a washing machine, like Study 1a. In the opt-in condition, participants read that the user “can activate the EcoX technology” compared to the opt-out condition that read that users “can deactivate the EcoX technology”. There was no optionality information in the non-optional condition. Next, we measured performance evaluations, green evaluations and environmental consciousness. An ANCOVA, including environmental consciousness as a control variable, revealed a significant main effect (F (1, 121) = 4.364, p < .05), whereby opt-in was significantly higher than both the opt-out and the non-optional. Moreover, there was no significant difference between the non-optional and the opt-out conditions. Finally, no significant effect was found on green evaluations (p = .128).

Study 2 introduces the moderating variable of cognitive style. We recruited 245 respondents to examine a 3 x 2 between-subjects experiment. The manipulations for optionality were the same as in Study 1b, while cognitive style was manipulated by asking respondents to write about a meaningful event that took place in their lives alone (analytical) or with friends and/or family (holistic). A significant main effect was found (F (1, 238) = 9.887, p < .05) whereby opt-in enhanced performance evaluations. In addition, a significant interaction was found (F (1, 238) = 4.363, p < .05), where the analytical condition negated the effect of choice architecture. Finally, there was no main effect for green evaluations (p = .764).

Finally, in Study 3, we test a 2 x 2 between subjects’ experiment with 149 respondents to examine the mediating variable of green product typicality, which was measured along with performance and green evaluations and environmental consciousness. In this study, the non-optional condition was removed. Cognitive style was manipulated as in Study 2, while optionality was manipulated via an advertisement for a kettle, in which the green was described similarly to Study 2. A two-way ANCOVA revealed a significant interaction between green attribute optionality policy and cognitive style (F (1, 144) = 4.690, p = .05). Furthermore, a significant direct effect was found (F (1, 144) = 5.014, p < .05). Finally, using Process Model 7 (Preacher and Hayes, 2008), we found a significant moderated mediation with a 95% confidence interval excluding zero (CI = -.3895 to -.0029).

Taken together, we show that optionality enhances performance evaluations. Specifically, the optionality policy of opt-in. In addition, this perceived performance enhancement does not come at the expense of perceived greenness. Additionally, we find support for the moderating variable of cognitive style and the mediating role of green product typicality. Our results provide both theoretical implications, as well as practical contributions for green product development.

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