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The Impact of Eco-Labels on Consumers: Less Information, More Confusion?

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It is frequently assumed that the increasing number of eco-labels rather confuses the consumers than supports their decision making. The study empirically tests this assumption. The findings show that the number of eco-labels enhances consumer confusion, while the credibility of the source of the label decreases confusion. Consumer confusion, in turn, contributes to decision uncertainty and consumer's dissatisfaction, which can lead to undesirable consequences for consumers and marketers.

[to cite]:

Alexandra Langer, Martin Eisend, and Alfred Ku? (2007) ,"The Impact of Eco-Labels on Consumers: Less Information, More Confusion?", in E - European Advances in Consumer Research Volume 8, eds. Stefania Borghini, Mary Ann McGrath, and Cele Otnes, Duluth, MN : Association for Consumer Research, Pages: 338-339.

[url]:

http://www.acrwebsite.org/volumes/13855/eacr/vol8/E-08

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EXTENDED ABSTRACT

The number of available eco-labels has dramatically increased over the years. Figures indicate a number of more than 1000 eco-labels on products in Germany alone. Given this number, the present study investigates whether the high number of eco-labels informs consumers or confuses them. In addition to the number of labels, also involvement and credibility were varied in an experimental setting as both variables play an important role in information processing of consumers.

Conceptual background and hypotheses

The problem of confusion arises since consumers are restricted in their cognitive ability to process information. The more information they are trying to process the higher the probability that they experience an information overload. In turn, information overload leads to confusion.

H1: A high vs. low number of eco-labels enhances consumer confusion.

If and to what extent a consumer faces confusion depends on further variables; particularly involvement plays a crucial role as it affects the depth and intensity of information processing. While high involved consumers dedicate their cognitive resources to a primary task, low involved consumers distribute their resources over several secondary tasks. The probability of information overload and consumer confusion is lower for those who focus a primary task as they are able to process the relevant information more deeply. Given the same amount of information, low involved consumers are much more likely to be confused.

H2: High vs. low involvement reduces consumer confusion.

Either private or governmental institutions assign labels to ecological products. In contrast to private institutions, governmental institutions are independent and their labels are perceived as more credible. The assumption is largely supported by attribution theory. Consumers attribute information provided by private companies to external causes (i.e. the necessity to sell their products), while they attribute information from independent sources to internal causes (i.e., the real opinion of the source that is based on objective data). In the first case, a reporting bias occurs such as that the deviance of the provided information from objective data is much more likely. Therefore, the source lacks credibility. Credibility is strongly related to the comprehension of information which reduces consumer confusion.

H3: Eco-lables provided by sources with high credibility (governmental sources) vs. sources with low credibility (private companies) reduce consumer confusion.

In case consumers are confused, they are less likely to consider as many available alternatives as possible and to evaluate the attributes of those alternatives correctly in order to come up with a satisfying purchase decision. Hence, they feel more uncertain. Furthermore, information overload and consumer confusion also reduces satisfaction. Uncertainty is the mediating factor as confusion increases uncertainty related to expectations of successful decisions and, by this, reduces satisfaction.

H4: Consumer confusion reduces (a) decision certainty and by this (b) consumer satisfaction.

Method

226 participants were randomly assigned to one condition of a 2 (low vs. high number of eco-labels) x 2 (low vs. high involvement) x 2 (high credible (governmental) vs. low credible (private company) source) between-subjects experimental design. Yoghurts were chosen as a test product as they are commonly advertised with eco-labels and the product is familiar to participants of the study. Involvement was manipulated following suggestions in the literature. The number of eco-labels was varied by using either two or six different labels for six yoghurts. Pictures of real yoghurts were used. Those pictures were redesigned using a graphic software in order to provide similar cans with neutral writing, same ingredient information, and using the same colors and shapes of the cans. The labels of the six yoghurts were either only private labels or private labels with one governmental label. Credibility of the sources was assessed by two pretests with 40 students each. Dependent variables of the experiment were certainty with the purchase decision, satisfaction, and consumer confusion.

Results

The manipulations worked as expected. ANOVA results show that the number of eco-labels significantly enhances consumer confusion. However, involvement has no significant influence on consumer confusion. The source of the labels has a significant effect that is in line with our assumptions. None of the interaction effects reveals significance. Results of a path model show that decision certainty fully mediates the effect of consumer confusion on satisfaction.

Discussion

Besides the effect of involvement, all other hypothesized relationships could be supported. The main focus of the study was to investigate the effect of the number of eco-labels on consumer confusion which came up with the strongest effect size in the analysis. Apparently, even involvement is not able to reduce consumer confusion or to moderate the effect of the number of labels. While this effect contradicts a-priori assumptions, a different kind of involvement may still be meaningful as we manipulated only situational involvement and not enduring involvement. Enduring involvement is more related to consumers' a-priori knowledge which plays a crucial role in evaluating ecological information. The study also confirmed the effect of the labels' credibility. Apparently, labels provided by governmental sources help to reduce consumer confusion as source credibility seems to be related to comprehensibility of stimuli.

Consumer confusion reduces decision certainty and satisfaction. This can lead to undesirable consequences for consumers and marketers. As consumer satisfaction is a main goal of marketers, the consequences of consumer confusion are profound. Hence, the study provides some practical implications. We suggest that private sources of eco-labels should consider the reduction of the number

of labels, for instance, by fostering cooperative labels. Also stronger governmental regulation would offer a solution to the problems caused by the inflationary use of eco-labels.

The study also contributes to research concerning consumer confusion. Particularly, the results show that situational involvement may be of minor importance for reducing consumer confusion. Furthermore, the investigation of the consequences provides a partial model for the way consumer confusion affects consumer behavior. This provides an avenue for further research that could incorporate further determinants (e.g., product experience) and consequences (e.g., repurchases) of consumer confusion.

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