The Moderating Role of Numeracy in the Effectiveness of Cause-Related Marketing

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Cause-related marketing is more effective when donations are provided in absolute amounts (vs. percentages). In two experiments, we examined whether this effect is moderated by individual differences in numeracy. The results showed that people with lower numeracy reveal this effect, whereas higher numerate individuals are unaffected by the presentation format.

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EXTENDED ABSTRACT

Cause-related marketing (CRM) is a well-known selling strategy to improve the success of a product by including a donation to a charitable cause into the product price (Varadarajan, & Menon, 1988). The effectiveness of CRM depends on several factors such as the type and the selling price of the product. Particularly, CRM is usually more effective in hedonic products than in utilitarian ones (Strahilevitz, 1999; Strahilevitz & Myers, 1998) and it works better in low-priced products (Chang, 2008). Research has also shown that CRM is often more successful when the amount of the charitable contribution is provided in absolute amounts (i.e., X Euro of the selling price) than in percentages (Chang, 2008). This effect occurs even though the donation amount in these different presentation formats is equal.

A prerequisite to perceive the actual donation amount in each presentation format might be sufficient numerical ability (i.e., numeracy). Individual differences in numeracy influence the comprehension of numerical information, including the transformation of frequencies, percentages and probabilities into each other (Peters et al., 2006; Reyna & Brainerd, 2008). Accordingly, the presentation of numerical information either in frequencies or in percentages changes the meaning of these numbers for less numerate individuals, but does not influence evaluations of higher numerate individuals (for an overview see Peters, 2012). For example, individuals with lower numeracy were willing to donate more if the victim is presented in a frequency format (i.e., 1 out of 100 vs. 1% out of 100), whereas higher numerate individuals are not affected by the format (Dickert, Kleber, Peters, & Slovic, 2011). Therefore, we expect that numeracy moderates the effect of presentation formats on CRM effectiveness. Particularly, we hypothesize that people with less numeracy are influenced by the presentation format of the donation amount, whereas the effectiveness of CRM is not affected by different presentation formats for higher numerate individuals.

In two experiments, we manipulated the presentation format between-subjects by showing the donation amount of the sales price either in absolute amounts (absolute condition: “X Euro of the selling price will be donated”) or in percentages (percentage condition: “X% of the selling price will be donated”). Numeracy was assessed with an objective questionnaire, which measures the understanding of frequencies and percentages (Peters et al., 2007). To examine whether the predicted interaction between numeracy and presentation format depends on product type and selling price, the product type (hedonic vs. utilitarian) and the selling price (low vs. high) were also manipulated in both experiments.

In Experiment 1 (N = 56), we used a 2 (presentation format: absolute vs. percentage) x 2 (price level: low vs. high) x 2 (product type: hedonic vs. utilitarian) mixed-factorial design with numeracy as additional continuous predictor. Participants evaluated hedonic and utilitarian products with low and high selling prices regarding their willingness to purchase and their attractiveness. To test our hypothesis, we conducted a repeated measures regression with product type and price level as within-subjects factors and presentation format and numeracy as between-subjects factors. As dependent variable, we combined willingness to purchase and attractiveness ratings into one CRM effectiveness scale. The results support the predicted interaction between numeracy and the presentation format.

Particularly, less numerate individuals evaluated CRM as more effective if the donation amount is presented in absolute amounts than in percentages, whereas no difference was found for higher numerate individuals. This interaction was independent of the product type.

Experiment 2 (N = 118) was designed to replicate our findings regarding the interaction between numeracy and the presentation format of the donation. In contrast to Experiment 1, we examined the same hedonic and utilitarian products by describing their purpose differently and therefore manipulate product type between-subjects. In addition, we considered the attitude towards helping others as a covariate (Koschate-Fischer, Stefan, & Hoyer, 2012). Participants were randomly assigned to one of the four between-subjects conditions (presentation format x product type) and evaluated products of low and high prices. In this experiment, we replicated the interaction of numeracy and presentation format with better evaluations of the absolute donation amounts for less numerate individuals and no effect for participants with higher numeracy. Neither the products’ type nor the selling price affected this interaction.

Both experiments consistently showed that the effect of presentation formats on CRM effectiveness depends on individual differences in numerical abilities of the consumer. As hypothesized, less numerate individuals evaluated absolute donations as more effective than percentages, whereas evaluations of higher numerate individuals were not influenced. Furthermore, we found that this interaction was independent of the product type. Accordingly, in the conception of CRM campaigns it should be considered that presenting donations in percentages requires sufficient numeracy to easily comprehend the absolute donation amount correctly. Therefore, presenting absolute donation amounts should be preferred over percentages in all types of products. In general, this research demonstrates that individual differences can result in differential evaluations of the same CRM campaign and should be considered in its conception.

REFERENCES


