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This paper reports results from a study in which the role of consumer confidence in brand evaluations was investigated. Data from a survey of Internet shoppers showed that confidence is a direct predictor, not a moderator, of purchase intention. This result is contrary to expectations from social psychology but in line with earlier research in marketing. However, confidence does moderate the relationship between brand beliefs and brand attitude.

Keywords

purchase, intention, does, predict, confidence, attitude, brand, moderate

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Does Confidence Moderate or Predict Brand Attitude and Purchase Intention?

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This paper reports results from a study in which the role of consumer confidence in brand evaluations was investigated. Data from a survey of Internet shoppers showed that confidence is a direct predictor, not a moderator, of purchase intention. This result is contrary to expectations from social psychology but in line with earlier research in marketing. However, confidence does moderate the relationship between brand beliefs and brand attitude.
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Introduction

In the field of social psychology the confidence with which an attitude is held has long been regarded as a moderator of the attitude-intention relationship. Several studies support this (see the overview in Ajzen, 1988). Higher confidence is associated with a stronger relationship between attitudes and behavioural intentions.

In marketing, on the other hand, confidence has most often been regarded as a predictor of purchase intent, not a moderator of the attitude-intention relationship (e.g., Howard, 1989; Howard & Sheth, 1969). There appear to be few marketing studies that have studied confidence as a moderator. However, some studies have found a direct relationship between confidence and purchase intention (e.g., Laroche, Kim, & Zhou, 1996; Laroche & Sadokierski, 1994).

An area in which there is little, if any, research on the role of confidence is in the formation of brand attitude; specifically whether confidence predicts brand attitude or whether it moderates the relationship between brand beliefs and brand attitude. Beliefs about an object are generally regarded as central for the formation of the attitude toward that object (Eagly & Chaiken, 1993; Fishbein & Middlestadt, 1995; Fishbein & Middlestadt, 1997). In marketing, brand beliefs are of central importance as an antecedent of brand attitude (Mittal, 1990; Rossiter & Percy, 1997). The question is whether confidence has a direct influence on brand attitude, whether confidence moderates the influence of brand beliefs on brand attitude, or whether confidence is neither a moderator nor influences brand attitude directly.

Sharma, Durand and Gur-Arie (1981) distinguish between three types of moderator variables: homologizers, quasi moderators, and pure moderators. The first type of moderator variable influences the strength of the relationship between the predictor variable(s) and the criterion variable, while the latter two influence the functional form of the relationship.

The purpose of this paper is to investigate whether confidence moderates the brand attitude-purchase intention relationship or the brand beliefs-brand attitude relationship

and, if so, whether confidence is a homologizer, quasi moderator, or pure moderator according to the typology in Sharma *et al.* (1981).

Method

The data in this paper were taken from an Internet survey carried out on behalf of Microsoft Network in Sweden (msn, www.msn.se). The purpose of the survey was to evaluate the effectiveness of an Internet advertising campaign for a Swedish mail order and Internet retailing company. The brand advertised in the campaign was the name of the mail order/Internet retailing company. The sample was drawn on the subsections of msn where the advertising campaign had run. Sampling was done through the banner ad administration system and "cookies" were used to ensure that visitors to the site only had one chance to be chosen for the survey (given the limitations of cookies, e.g., use of multiple computers and non-acceptance of cookies).

The individuals who were chosen for the survey were exposed to the questionnaire in a pop-up window and only had that opportunity to participate in the survey (they were not recontacted or given the opportunity to participate at a later time). The exact response rate is not known, but typical response rates for this type of survey in Sweden range from 10 to 20%. There were 786 usable responses. Of these, 522 had made at least one purchase via mail order or the Internet in the last year and they were included in the analysis. The non-purchase respondents were dropped from the sample. The mean age in the remaining sample was 38 years and 60% were women.

Confidence was measured with a single item: "How certain or uncertain do you feel about the evaluations of BRAND X that you did above?" Responses were measured on a five-point scale (endpoints "Very uncertain" and "Very certain"). The confidence question was placed after the purchase intention, brand attitude and brand belief question and the confidence evaluation thus covered all of them. Brand attitude was measured with a single item with a four-point scale ("the single best brand"; "one of several top brands"; "an average brand"; "a below-average brand") taken from Rossiter and Percy (1997) and purchase intention with a single item with a five-point scale (endpoints "definitely will not buy" and "definitely will buy"). Brand beliefs were measured with five statements concerning perception of benefits such as range of products, delivery and ease of shopping. Responses were measured with five-point scales (agree-disagree) and the brand beliefs statements were used to form a mean index.

The statistical analyses in this paper followed a procedure in Sharma *et al.* (1981). They suggest the use of moderated regression analysis (MRA) to investigate whether the proposed moderator variable is quasi moderator, a pure moderator, not a moderator, or an independent predictor (independent variable). If the MRA shows that the variable is none of these, they recommend that regression analyses in sub-groups based on the moderator variable are used to determine whether the variable is a homologizer or not a moderator at all.

To avoid problems with multicollinearity, the predictor and moderating variables were standardized before the interaction variables were calculated and the standardized variables were used in the regression models (Dunlap & Kemery, 1987). The two

regression models containing the interaction variable were checked for multicollinearity. This was done following recommendations in Hair, Anderson, Tatham and Black (1998). None of the two models had condition indices greater than 15 in combination with two or more variance proportions greater than .90. On the basis of this, it was concluded that multicollinearity did not constitute a problem in any of the models.

Results

The moderated regression analysis with purchase intention as the dependent variable is shown in Table 1. The analysis shows clearly that brand attitude and confidence have a significant influence on purchase intention and that the interaction between the two variables does not. This means that confidence is not a moderator variable, but simply an independent predictor variable (Sharma et al., 1981).

Table 1
Moderated regression analysis (MRA) with purchase intention as dependent variable

Predictors	Models		
	1	2	3
Brand attitude	.731***	.682***	.685***
Confidence		.202***	.201***
Interaction			-.018
R^2	.439	.468	.468
Adjusted R^2	.437	.465	.464
n	458	458	458

***indicates $p < .01$.

The moderated regression analysis with brand attitude as dependent variable is shown in Table 2. The analysis shows that brand beliefs were significantly related to brand attitude and that the interaction was not significantly related to brand attitude. Table 2 is less clear with respect to confidence. Confidence was only significant on the .10 level, and it cannot be concluded that there was a direct effect.

The results in Table 2 mean that confidence cannot be classified as pure moderator, which requires that the regression coefficient for confidence in model 2 is zero at the same time as the coefficient for the interaction variable is non-zero (Sharma et al., 1981). It also means that confidence cannot be classified as a quasi moderator, which requires that both the confidence variable and the interaction variable have non-zero regression coefficients. Since the confidence variable did not significantly influence the dependent variable, the alternative that confidence is an independent predictor variable is also left out. The only case left is that confidence is a homologizer variable, i.e., it moderates the strength in the relationship between brand beliefs and brand attitude.

Table 2
Moderated Regression Analysis (MRA) with Brand Attitude as Dependent Variable

	Models		
Predictors	1	2	3
Brand beliefs	.406***	.390***	.390***
Confidence		.051*	.051*
Interaction			.001
R^2	.354	.359	.359
Adjusted R^2	.353	.356	.355
N	460	460	460

***indicates $p < .01$.
**indicates $p < .05$.
*indicates $p < .10$.

To investigate whether a variable is a homologizer, Sharma *et al.* (1981) recommend that separate regression models are run for subgroups formed on the basis of the moderator variable and that the R^2s of the models are compared. If the R^2s for the different subgroups are significantly different then it can be concluded that the variable is homologizer.

Table 3 shows five regression models, one model for each scale-step on the confidence question, with brand attitude as dependent variable and brand beliefs as independent variable. The table shows large differences in R^2 and there is also a difference in the size of the regression coefficients.

Table 3
Confidence Subgroup Regression Models with Brand Attitude as Dependent Variable

	Models				
Predictor	Very uncertain	Fairly uncertain	Neither certain nor uncertain	Fairly certain	Very certain
Brand Beliefs	.563***	.509***	.462***	.417***	.58***
R^2	.445	.243	.225	.215	.454
n	50	54	76	202	78

***indicates $p < .01$.

To test whether the differences in R^2 were statistically significant the multiple R's from the regressions were used (cf. Howell, 1997). For each pair of models the multiple R's were Fisher's z'-transformed and the difference between them tested for statistical significance (cf. Cohen & Cohen, 1975). This analysis showed that the difference in R^2 between the "Fairly certain" and "Very certain" models was significant at the $p < .05$, and that two other differences were significant at the $p < .10$ level. The rest of the differences were not significant. The analysis thus lends some support to confidence being a homologizer of the brand beliefs-brand attitude relationship.

It is somewhat surprising that the relationship between brand beliefs and brand attitude is the strongest at both extreme ends of the scale. Cross-tabulations revealed, however, that the "Very uncertain" group had their responses clustered around the centre of both the brand belief and brand attitude scales and that the "Very certain" group had their responses clustered around the top end of both scales. In the other three groups the responses were more spread out over the scales.

Discussion and Conclusions

The results in this paper indicate that confidence does not moderate the brand attitude-purchase intention relationship, a result that is contrary to what is generally expected in social psychology (cf. Ajzen, 1988). Instead the results support the theory that confidence is a predictor of purchase intention, a result that is in line with results in some earlier marketing studies (e.g., Laroche et al., 1996; Laroche & Sadokierski, 1994).

The results also weakly support the theory that confidence moderates the brand beliefs-brand attitude relationship. According to the typology of Sharma *et al.* (1981) confidence is a homologizer, i.e., confidence influences the strength of the relationship between the two variables but not its functional form.

The result that confidence is a predictor of purchase intention and not a moderator seems somewhat counterintuitive. A consumer who holds a negative brand attitude is expected to hold a low or moderate purchase intention even if she is confident about her brand attitude. In the same vein it is reasonable to expect that a confident positive brand attitude leads to stronger purchase intentions than a non-confident positive brand attitude. In light of this it would be desirable with more research on the role of confidence in relation to brand attitude and purchase intention.

The result that confidence moderates the relationship between brand beliefs and brand attitude is intuitively appealing. It seems reasonable that high confidence should be associated with a strong relationship between brand beliefs and brand attitude. The relatively strong relationship, however, for the "very uncertain" group is less intuitive, but reasonable in light of the distribution of the responses; the strong relationship results from most respondents choosing the mid-points of both scales, which seems to be a natural way to respond if you are uncertain about the brand.

The results of the present study are limited since only one type of brand was investigated. The results should not be generalized to other product categories than mail order and Internet retailers. It would, of course, be of great value with similar studies carried out in different product categories.

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