Customer Engagement Behavior: Scale Development and Validation

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Our purpose is to develop a validated scale for customer engagement. Based on Service-dominant Logic and Value Co-creation theory, we have composed a definition of CEB. We carried out four studies to develop the scale following the procedure proposed by Hinkin. The CEB Scale we developed is reliable and validated.

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EXTENDED ABSTRACT

Customer non-purchase behavior also plays an important role in the marketing of products. This behavior includes, but is not limited to, recommending brands to others, blogging and posting on the Internet about consumption experiences and participating in company activities. Scholars are increasingly aware of the importance of non-purchase behavior. Van Doorn et al. (2010) defined this behavior as “customer engagement behavior (CEB)” with the term referring to a customer’s behavioral manifestations toward a brand or a firm beyond purchase that results from motivational drivers (Van Doorn and Lemon et al., 2010). Numerous studies have examined CEB customer engagement behavior. However, there is lack of research delineating the boundaries of CEB and the means for measuring those boundaries. The purpose of this study is to define the boundaries of and measure CEB, through a set of multi-item scales.

Study 1 is Item Generation. In the first phase of the research, 21 consumers with opinion leader intentions were asked to describe in open-ended interviews the behaviors that they exhibit in a relationship with a brand which they are engaged. We established guidelines for the interviews based on the operationalized definition and drivers of CEB in related literature. This stage generated 58 initial items. Three marketing professors and 12 graduate students were asked to evaluate these items. They suggested improvements and eliminated items that were ambiguous, redundant or otherwise faulty. As a result, we obtained 37 items with good content validity to test via EFA.

Study 2 is item purification. It involved pilot testing the items with a convenience sample of undergraduate students in a class setting from a university; 87 respondents completed the questionnaire without any response errors. We evaluated the items using exploratory factor analysis. An iterative process eliminated items that had factor loadings below 0.5, high cross loadings above 0.4 and low commonalities below 0.3 (Churchill Jr, 1979; Hinkin, 1998). The final factor analysis resulted in three factors with eigenvalues exceeding 1, composed of 14 items, explaining 72% of the total variance. The KMO (0.766) and Bartlett’s test of sphericity (p-value<0.001) indicated that factor analysis was appropriate for the data.

Factor 1 relates to behavior in which customers directly promote brand sales beyond purchase behavior. We call factor 1 promotion because the customer behavior promotes the performance of a company or a brand. Factor 2 encompasses behavior in which customers join an Internet community and discuss a brand or company with other customers in that forum. We term factor 2 communication because it describes the flow of brand or company information and communication among customers. Factor 3 represents the interaction between the company and the customer. We name factor 3 collaboration because this construct relates to behavior in which customers cooperate with the company and in which the customer and company improve business performance together.

Study 3 is scale structure and item revision. The scale from study 2 was not ideal because some important elements of CEB did not appear in the three dimensions. Based on the literature and in-depth interviews, we added self-concept connection behavior to express the relationship between customers and brands in CEB. We named this dimension self-expression and added relevant items to the results of study 2. We conducted another EFA with a new set of items. To enhance the generalizability of the results, we conducted a survey (n=157). The process of EFA was identical to that in study 2. The KMO value was 0.849 and Bartlett’s test of sphericity was p-value<0.001. Subsequently, a factor analysis was conducted on the remaining 16 items using the maximum likelihood estimation method with oblique rotation. Using eigenvalues of greater than 1.0 and a scree test as guidelines for factor extraction, a final four-factor model emerged with 16 items. All of the factor loadings of the items exceeded 0.5, all factors’ Cronbach’s α were above 0.7 (0.741-0.828), all item-total correlation coefficients were above 0.4 (0.483-0.709), and each factor had a high internal consistency. In summary, the CEB scale we established had four dimensions and 16 items.

Next, we tested the validity of the CEB scale, including the internal consistency, composite reliability, convergent validity, discriminant validity, common method variance, and nomological validity. To test the nomological validity, we built four hypotheses to determine the relationships among brand loyalty, self-enhancement, brand attachment and customer relationship equity.

To test these hypotheses, we conducted a survey both in the field and online. The sample size was 432, with an effective sample size of 421 after eliminating no-response questionnaires. The design of the questionnaire in study 4 was identical to that in study 3 except we added items of self-enhancement, brand loyalty, customer relationship equity and brand attachment. CEB consists of four dimensions with 16 items.

We evaluated measurement properties by running CFA. The model fit was good (chi-square=6.00; d.f.=2; CFI=0.99; GFI=0.99; NFI=0.99; NNFI=0.98; RMSEA=0.069; SRMR=0.022). All of the path coefficients were above 0.5 (0.52-0.88) and significant at the α=0.05 level. The composite reliabilities for all the five latent constructs were between 0.771 to 0.860. Additionally, the coefficient alpha values were well above the threshold value of 0.7 (0.764-0.858). The t value for all loadings are greater than 2.57 (Netemeyer et al., 2003) providing evidence of convergent validity. The results show that the AVE for each construct is above 0.5 (0.520-0.671), which means that all the constructs have a good convergent validity. We computed the average variance of the five factors and compared it with the highest variance that each factor shared with the other factors in the model. The AVE for each factor was of greater than the highest shared variance. Finally, we tested our hypotheses. Four hypotheses are supported, therefore, the CEB scale we developed has good nomological validity.

Following Van Doorn et al.’s (2010) definition, we developed a CEB scale with acceptable reliability and validity and tested the relationships among CEB, brand loyalty, brand enhancement, brand attachment and customer relationship equity. The results provide a tool for empirical research of customer engagement behavior and enrich the theory in service dominant logic, co-creating value, and customer relationship management.

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