

Constructing and validating a scale to measure Social media brand community enjoyment (SMBCE)

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Purpose

Social Media Brand Communities (SMBCs) enable brand managers to create strong consumer-brand relationships (McWilliam, 2000); engage with loyal customers, generate favorable purchase intentions and positive word of mouth (Algesheimer et al., 2005). In this context, the concept of enjoyment as a major force driving SMBCs becomes very relevant (Hutter et al., 2013). There has been a growing interest on enjoyment, but there is still the need to provide a comprehensive definition of enjoyment (Rogers, et al. 2016). Furthermore, to our knowledge, no prior study has undertaken a dedicated effort to understand and measure the specific dimensions of enjoyment for SMBC's.

The purpose of our paper is to develop a reliable and valid scale to measure Social Media Brand Community Enjoyment (SMBCE). To this end, we use standard scale development procedures and developed the scale based on five studies (with total N=1073) with four studies conducted in India (development and validation) and one in Portugal (generalization).

Methodology

We carried out the scale development procedure following the guidelines suggested by Churchill (1979) and DeVellis (2003) as given:

- Study 1: Focus group discussions (FCD) followed by expert opinions and content validation checks.
- Study 2: Exploratory factor analysis (EFA) of the items generated from study 1.
- Study 3: Confirmatory factory analysis (CFA) on the items retained from study 2.
- Study 4: Testing the SMBCE scale in a nomological network of antecedents and consequences.
- Study 5: Establishing the etic validity and generalizability of the scale using data from a different country (in cultural orientation and internet penetration) than the first four studies.

India was selected as the country for the initial scale development because of multiple reasons. India is the world's third largest economy in terms of GDP and it is projected to emerge as the world's largest economy within the next 40 years (Alamro and Rowley, 2011). Moreover, India is ranked third in the number of Facebook users (internetworldstats.com, 2016).

Study 1

Based on review of literature and four FCD (subjects between 18-40 years, male female ratio 1:1) we wanted to identify the overall themes of SMBCE (N=32). The FGD data was content analyzed to identify the themes of SMBCE.

Findings

Five themes (covered by 40 items) emerged from the FGD: engagement; affect; fulfilment; self-expression and participation. Out of the five, engagement is one of the most used constructs in social media marketing and is found to lead to enjoyment (Calder et al., 2009; Hollebeek et al. 2014). The second theme was the affect related to the positive thoughts and feelings that consumers felt while being a part of a community (Warner 1980; Davis 1989). The third theme was fulfilment as an attitudinal outcome of the actions that consumers performed on brand communities (Lin et al. 2008). The fourth theme was self-expression of consumers' self through the SMBC (Baldus et al., 2015). The last theme was related to the ability of the consumer to participate actively in the brand community. 37 items were retained from the initial list based on the views of an experts' panel (4 academicians; 5 experts). These items were then tested on a random sample of 75 respondents (same profile as FGD) for relevance and understanding, and a final set of 27 were retained for study 2 based on the feedback.

Study 2

Study 2 was administered online in the same business school as in study 1 (screening question: name of the SMBC; N=200; male-female close to 1:1; mean age approx. 27). The respondents' were asked to provide their thoughts/feelings/actions with respect to their favorite SMBCs on the 27 scale items on a five point Likert Scale (1 strongly agree – 5 strongly disagree).

Findings

We conducted EFA (principal axis factoring) to get an overview of the latent variables and to identify redundant items (Netemeyer et al., 2003; Lewis et al., 2005).

The 27 items resulted in a 5-factor solution with the items loading onto the same five theorized sub-constructs. However, seven items showed factor loadings below 0.4 and were dropped for the next round of the study. The internal consistency reliability of the five factors (after purification) was above 0.7 (Kline, 1998), ensuring acceptable internal consistency reliability. Thus, we retained 20 items for study 3.

Study 3

Study 3 was conducted in India using similar procedures to study 2 (N = 263; male-female close to 1:1; mean age approx. 26.5) to test the psychometric properties of the scale further.

Findings

The model calibrations did not reveal any high modification index (above 4), however, the self-expression construct had an item with low loading. Thus, we retained 19 items in the

solution that had statistically significant t values (table 1). The internal consistency reliability (alpha), Average Variance Extracted (AVE) and construct reliability measured through composite reliability (CR) for all the five scale dimensions were above standard cutoffs (Chin, 1998; Hair et al., 2010) (table 1). Thus, the convergent validity of the five dimensions of the SMBCE scale was established.

Discriminant validity of the constructs was tested by comparing the square of inter-factor correlations with the AVE values of each construct (as per Fornell and Larcker, 1981). We found the AVE values to be larger than the respective values of the squared inter construct correlations and thus discriminant validity was ensured.

However, the presence of reasonably high inter factor correlations among the five SMBCE constructs indicated the presence of a higher order construct. Thus, we tested four alternative measurement models to ascertain the right model structure (Anderson and Gerbing, 1988).

- Model 1: the base model with five correlated dimensions;
- Model 2: the five dimension model with all dimensions uncorrelated;
- Model 3: the single factor model where all 19 items load onto one factor;
- Model 4: the second-order factor model where SMBCE is modeled as a second order construct

The model fit results (and comparisons) indicated the best fit of the data to model 4 ($Chi\ sq/df = 1.92$, $GFI = 0.913$, $AGFI = 0.881$, $CFI = 0.933$, $RMR = 0.065$, $RMSEA = 0.061$) and statistically significant loadings of the individual dimensions of FOCs on SMBCE. In addition, the construct validity statistics of SMBCE were above the required thresholds and it displayed high internal consistency reliability ($CR=0.93$, $AVE=0.77$, $\alpha=0.89$). Thus, we decided to model SMBCE as a second order construct for study 4 where we tested the nomological validity of the scale.

Study 4

Study 4 was conducted in India to test for the nomological validity of the SMBCE scale (as per suggestions of Diamantopoulos and Winklhofer, 2001; Lewis et al., 2005). To this end, we used a set of antecedents and consequences of SMBCE (and their respective measures) drawn from existing literature (figure 1). The opening brief (post screening) in this case asked the respondent to provide the answers with respect to his/her most frequently used SMBC. We used similar procedures to that of study 2 (N = 281; male-female close to 1:1; mean age approx. 27).

Findings

The CFA results indicated unidimensionality, internal consistency and discriminant validity for the SMBCE scale dimensions (with support for the second order factor structure). The other constructs in the model (Openness to experience, Brand affect, Brand attachment, Purchase intention and Word of Mouth) were also found to elicit accepted levels of internal consistency reliability and construct validity. The nomological model displayed good fit ($Chi\ sq/df = 1.89$, $GFI = 0.902$, $AGFI = 0.879$, $CFI = 0.912$, $RMR = 0.055$, $RMSEA = 0.063$) and the study hypotheses (figure 1) were supported with statistically significant path coefficients (table 2) and reasonably high R square values for the endogenous constructs.

Study 5

There are contradictory views on whether scales and measures developed in one cultural set-up (a country) could be used in another without changes (Ford et al., 2014). While the 'etic' view suggests that scales are universal, the 'emic' view (Malhotra et al., 1996; Craig and Douglas, 2012) points out several challenges of using the same instruments in different cultures and contexts. To avoid this trap and make the SMBCE scale more generalizable, we decided to test the scale in a different country. We selected Portugal as the second focal country because of its different cultural setup (Hofstede, 1980), varied internet penetration rates (India: 19.7% and Portugal: 64.9%) and relatively lesser proportion of social media users to total number of internet users (Chaffey, 2016).

Procedure

The questionnaire used was similar to study 4. However, we removed the Brand Attachment construct since we wanted to use a simpler model for generalization. The respondents were selected from a large business school in Portugal that had similar set of audience (both at graduation level and executive level) (N=297; male-female close to 1:1; mean age approx. 27.5).

Findings

We first tested the scale norms by comparing summated average scores on each SMBCE dimensions across Portugal (study 5) and India (study 4). The paired difference tests between the average scores were not found to be significant thereby leading to the inference that the scale would lead to similar outcomes for SMBC users across cultural contexts.

Subsequently, we tested the factor structure of the SMBCE scale for the Portugal data and found the same to lead to a reasonably good model fit (Chi Square/df = 2.12, GFI = 0.91, CFI = 0.93, RMR = 0.06 and RMSEA = 0.05). The first order factors elicited standard levels of reliability, convergent and discriminant validity and the SOC was supported. Next, we conducted a structural invariance analysis to compare the SMBCE model structure for both countries. The difference in fit ($\Delta\chi^2/\Delta df$) was not found to be significant between the country specific data models ($\Delta\chi^2/\Delta df_{\text{India-Portugal}} = 0.739$; $p > 0.05$) thereby supporting the presence of invariance across countries. In addition, the goodness of fit indices was similar for the country specific models. Thus, we inferred that the nature of the SMBCE construct and its sub-constructs are similar across both countries.

Following this, we tested the simplified nomological model for Portugal data (model fit: Chi Square/df = 2.77, GFI = 0.90, CFI = 0.91, RMR = 0.065 and RMSEA = 0.06) and found the hypothesized relations between antecedents and consequences to be significant. Thereby, we found the SMBCE scale to be generalizable and established its 'etic' validity.

Theoretical implications

The present study adds evidence to the body of knowledge concerning online consumer behavior, enjoyment theory (Tamborini et al., 2011; Rogers et al., 2016), and in particular, SMBC. The novelty of the study lies in the development of a five dimensional scale to measure SMBCE. From a psychometric viewpoint, the study followed the steps in scale development in a robust way and then went ahead to test the etic validity of the scale in a different context than where it was developed. The scale developed was found to relate empirically to its theoretical antecedents and consequences. Thereby the scale could be considered as theoretically sound, reliable and valid.

Practical implications

The findings provide valuable insights for brand managers who aim to build strong consumer-brand relationships through SMBC. The first major implication of the present study is the creation of a measure for SMBCE. The SMBCE scale will allow marketers to measure the level of consumer enjoyment on his/her brand community. This will enable marketers to understand the brand's position in social media from the consumer's perspective. The findings from the last two studies also provide relevant guidelines for brand managers.

Limitations

The samples used in this study consisted of majorly young audience whereas a reasonable amount of middle aged or elderly participation is visible on social media websites (Knoll, 2015). Thus, a future study involving different generations of social media users may increase the generalizability of our findings. Second, it may be relevant to investigate the moderating effect of peer group behaviour on the influence of SMBCE on response towards the brand as the former has been found to influence social media behaviour (Craig et al. 2015).

Keywords: Brand community; social media brand community, enjoyment, scale development

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Table 1. Study 3: CFA Results

Construct/Items	Loading	t Value	p
Engagement (CR=0.85, AVE=0.65, α =0.75)			
I am absorbed intently	.848	8.69	***
My attention was focused	.796	9.29	***
I am fully concentrated	.778		
Affect (CR=0.88, AVE=0.65, α =0.77)			
I am happy	.790	8.31	***
I am pleased	.797	8.67	***
I am satisfied	.846	8.27	***
I am relaxed	.792		
Fulfillment (CR= 0.84, AVE= 0.63, α =0.70)			
It means a lot to me	.772	8.33	***
It is rewarding	.842	8.66	***
It is worthwhile	.775		
Self-Expression (CR=0.86, AVE =0.67, α =0.75)			
I can freely express my thoughts about the brand	.822	8.34	***
I can be myself while interacting with community members	.831	8.41	***
I can share my opinions about the brand without hindrance	.796		
Participation (CR= 0.91, AVE= 0.64, α =0.76)			
I feel empowered	.844	8.43	***
I feel I can contribute to the brand	.869	8.45	***
I feel I can interact with the brand	.871	7.13	***
I feel liking and following the brand	.743	5.93	***
I get to know what others are speaking about the brand	.741	6.83	***
I get to know latest brand happenings	.715		

Table 2. Study 4: Nomological Model Results

Hypothesis	Path relation	Std. Estimate	S.E.	R ²	P
H1	Openness to Experience → SMBCE	0.850	0.14	0.79	< 0.01
H2a	SMBCE → Brand Affect	0.741	0.11	0.55	< 0.01
H2b	SMBCE → Brand Attachment	0.784	0.13	0.62	< 0.01
H3a	Brand Affect → Purchase Intention	0.474	0.12	0.80	< 0.01
H3b	Brand Attachment → Purchase Intention	0.531	0.10		< 0.01
H4a	Brand Affect → WOM	0.862	0.11	0.76	< 0.01
H4b	Brand Attachment → WOM	0.712	0.12		< 0.01

Figure 1. The Nomological Model

