# Developing a Scale for Measurement of Customer Engagement in Online Brand Communities: Structured Abstract

## INTRODUCTION

If an organisation does not take care of its online community, engagement chances of the community itself will be driving the communication, and not necessarily in the most desirable direction. It is therefore no longer an optional activity. More specifically, social media based online communities are rapidly emerging as core activities for marketing and customer service teams. The challenges for managing online brand community is the quantitative measurement of its activities, which help both researchers and practitioners to gauge the level of engagement.

Fuelled by the growth of social media amongst consumers and record amounts of investment into online brand communities, organisations are still finding it difficult to quantify the value of their engagement (Hoffman, & Fodor, 2010). The year 2010 marks a turning point in this area of research where the call for more work is highlighted by the Marketing Science Institute (MSI). The frequently cited work of customer engagement is based on the work prior to 2010 by Bagozzi & Dholakia (2002), they did not use the term "engagement" or "interaction" but they simply the true indicators to measure the user participation in online communities. These were very simplistic - reducing engagement to the frequency of visits and the duration of the visit. The work of Brodie & Hollebeek (2011) is one of the most influential studies post 2010 and introduces a new view of the subject area. Brodie et al. (2013: 107) are one of the first studies that proposes the definition of 'customer engagement' and highlight this concept in online environment:

*"A psychological state that occurs by virtue of interactive, co-creative customer experience with a focal agent/object (e.g. a brand)".*

Starting with the seminal work of Brodie, et al., (2013), scholars are focusing on exploring this continuously evolving technological environment and more studies are called for to advance our understanding in this increasingly important area of consumer engagement (Araujo et al., 2015; Schivinski, et al., 2016). This need is characterised by a number of journal special issues and authors who are calling for the need to advance this field of understanding (Dessart, 2017).

The current paper identifies five behavioural dimensions - Co-developing, Sharing, *Socialising, Advocating* and Learning - which extend Brodie's original work and offer a reliable and valid scale to measure the behavioural consumer engagement. These dimensions were proposed initially by Brodie, et al., (2013), who noted the complex and interconnected nature of online consumer engagement and their range of sub-processes. Whilst definitions of what engagement actually entails vary, the benefits of an engaged consumer are mostly supported by many and include amongst others - increased trust, emotional bonding and consumer loyalty (Dessart, et al., 2015).

The aim of the current paper is to focus on the development of a reliable scale which advances the original work and offers a questionnaire that can be used by future practitioners and researchers examining consumer behavioural engagement in online brand community. This study responds to Brodie et al's (2013) and others such as Dessart et al (2016) work for the need of empirical study to investigate the findings of their explorative study.

# BACKGROUND

A systematic literature review was followed in order to identify existing studies and themes. Using structured quantitative literature review, which aims to be more objective in the identification and selection of articles for considerations has been used following Backhaus et al (2011). Following a systematic literature review, the studies divided into two groups (before and after 2010) due to a revolutionary change in study of engagement concept from 2010.

## Key ideas in relation to measurement of customer engagement before 2010

A large body of research has been devoted to measure the engagement concept as a one-dimensional construct (Bagozzi and Dholakia, 2002; Algesheimer et al., 2005; Dholakia et al., 2004). Customer and community participation were dominant terms to describe a simple customer behaviour in online community. Visit duration and visit frequency were two important factors to assess the level of participation in online communities (Shen et al., 2009). This body of research can be argued to adopt a simplistic approach that does not differentiate level of engagement (De Valck et al., 2009). In addition, there is no attempt to highlight the importance of the participation in relation to organisational performance outcome (Hollebeek et al., 2014).

## Key ideas in relation to measurement of customer engagement after 2010

As a result of technological advancements, the concept of engagement became a key term in discussion about online brand community. Since 2010, the concept of engagement has been investigated as a promising concept that provide "enhanced predictive and explanatory power of focal customer behaviour outcomes including brand loyalty" (Hollebeek et al., 2014: 149). The focus of this group of research was to conceptualise the engagement construct, which reveal the complexity of the concept. Therefore, a simple one-dimensional construct of the studies before 2010 was replaced with a multi-dimensional engagement construct. Abdul-Ghani et al. (2011) proposed 'utilitarian', 'hedonic' and 'social' while Hollebeek (2011) suggested three dimensions of 'cognitive', 'behavioural' and 'affective'. Viveck et al. (2012) explored the customer engagement as a multi-dimensional with 'cognitive', 'affective', 'behavioural' and social dimensions. Although, this body of research has expanded the scope of the customer engagement beyond a simple concept, there is few attempts to operationalise the engagement construct to date (Schivinski et al., 2016). Therefore, the objective of the current research is to develop a reliable and valid scale to measure the behavioural customer engagement in online brand community.

# METHODOLOGY

Following the extant scale development literature (e.g. Churchil, 1979; Netemeyer et al., 2003), the current study developed a research design with three phases: **Phase 1: Construct definition and item generation.** A working definition proposed in this phase to specify domain of the construct (Churchil, 1979). The relevant literature was consulted to conceptualise the construct and specify the domain. **Phase 2: Initial validation of the scale:** An Item pool generated from a systematic literature review and a focus group **Phase 3: Final validation:** Items were purified adopting EFA and CFA analysis of data collected from a sample of 507 respondents.

**Construct definition and item generation**

The objective of this phase is to propose working definition for customer engagement construct and generate an item pool to measure the construct. As the current study aims to measure the customer engagement as a behavioural construct, following definition is proposed:

*A multi-dimensional behaviour resulting from psychological state of perceiving association with a brand in the context of the online brand community.*

This definition is in line with the Bowden (2009) and Mollen and Wilson's (2010) view of the engagement concept, which comprises both cognitive and emotional aspects. The definition is consistent with the authors who posit that customer engagement behaviour go beyond transactions Van Doorn et al., 2010; Pham and Avent, 2009). Furthermore, the definition draw a clear line and separate the engagement from similar concepts such as participation, interaction and involvement which more fully represent the behaviour of transactional customers not engaged customers. Sashi (2012) categorises transactional customers when both relational exchange and emotional bonds are low with "minimal personal relationships and no anticipation or obligation of future exchanges". Importantly, consistent with Dessart et al. (2016), the definition focus on behavioural as a multidimensional aspect of customer engagement. An initial item pool was generated from the literature review and a focus group of PhD students who were specialised in online customer behaviour and active in using social media platforms and familiar with at least one online brand community. A large pool of potential items generated including 48 items which reflect all these five behavioural dimensions.

**Phase 2: Initial validation of the scale Phase**

The objective of this phase is to test the initial validation of the developed scale from phase 1 and drop poorly performing items from the initial item pool. Following Anderson and Gerbing (1991), an experience survey was conducted to assess the content validity. A panel of eight doctoral researchers and two marketing academics participated in the survey. During an in-person meeting, the definition of the construct and each dimension were discussed to avoid any confusion about the survey. They were asked to assign the item generated in Phase 1 to the most related dimension. An extra option was provided as "not applicable' for those items that are not linked to any of five dimensions. 'the proportion of substantive agreement = $P_{sa}$' and 'substantive-validity coefficient = $C_{sv}$' are two indices used to assess the extent to which an item capture the domain of the intended dimension. The index ($P_{sa}$) calculated "as the proportion of respondents who assign an item to its intended construct" (Anderson, 1991). $P_{sa}$ was calculated following the formula ($P_{sa} = n_c / N$) where $n_c$ represents the number of participants who assign a specific item to the desired dimension and N represents the total number of participants (N=10). The index ($C_{sv}$) explains the extent to which an item might represents an intended dimension more than any other dimension. It was calculated following the formula $C_{sv} = (n_c - n_0)$ where $n_c$ is defined same as in the formula for $P_{sa}$ and $n_0$ represents "represents the highest number of assignments of the item to any other dimension" (Anderson and Gerbing, 1991). The items with value greater than 0.5 for both indices were retained ($P_{sa} \geq 0.5$ and $C_{sv} \geq 0.5$). As a result, 7 items were dropped due to lack of content validity.

**Phase 3: Final validation**

The objective of the final phase is to purify the items that represent the customer engagement as a multi-dimensional construct. A questionnaire was developed using the developed items from phase 2. Data collected from 600 customers who are a member of various types of online

brand community via Amazon Mechanical Turk. After data cleaning, 507 questionnaires used to assess the reliability as well as convergent and discriminant validity. Regarding reliability, all factor loadings were above 0.7, no item with cross-loadings observed. It was followed by confirmatory factor analysis (CFA) to assess convergent as suggested by Hair at al. (2010). In addition, Fornell-Larker tests were conducted for discriminant validity. The AVE exceeded the squared correlation for the specific paired constructs. As a result, a reliable and valid scale with 18 items* proposed that are represented by the five first-order constructs that evidenced with a strong relationship with the second-ordered construct and explained 89.1% of the total variance.

*A reliable and valid scale with 18-items*

| Socialising | I use the brand community to communicate with people who share the same interest as me.<br>It is important for me to have conversation with other members in the OBC who share the same opinion about the brand.<br>Having conversation with other members who share the same opinion in the OBC is interesting. |
|---|---|
| Sharing | I like participating in the brand community because I can use my experience to help other people.<br>I like to share my experience and knowledge with others in this brand community to help them be more educated about the brand.<br>I really like helping other community members with their questions.<br>I feel good when I can help to improve the brand and its products. |
| Learning | I am motivated to participate in this brand community because I can receive help from other community members.<br>I am motivated to participate in the brand community because community members can use their knowledge to help me.<br>I like participating in this brand community because it gives me an opportunity to receive help from other community members.<br>It is important to me to be able to use this community to find answers to my questions about the brand. |
| Advocating | I promote the brand through my participation and expression in the OBC.<br>When asked, I recommend the brand to other members of the OBC.<br>This is my preferred brand that can be seen in my participation in the OBC. |
| Co-developing | I am motivated to participate in the brand community because I can help to improve the brand and its products.<br>I like to know that my comments and suggestions can influence the brand and its products.<br>Increasing the influence I have on the brand and its products makes me want to participate more in the brand community.<br>I hope to improve the brand or product through my participation and expression in the brand community. |

## CONCLUSIONS AND IMPLICATIONS FOR THEORY AND PRACTICE

The current paper extends the work of Brodie et al. (2013) by testing the theory in empirical practice. It offers an in-depth community measurement instrument which is unavailable with any of the other tools. The current study contributes to the growing body of research about the importance of customer engagement in online environments and how it leads to other organisational performance outcomes such as loyalty, satisfaction and sales growth. Regarding theoretical contributions, the current research provides a better understanding of customer behavioural engagement in online brand communities and enhances academic insights into online customer behaviour. In addition, the developed scale can be used in future studies to investigate how behavioural customer engagement influences customer- and organisation-related consequences. Regarding practical contribution, this study will enhance community managers' understanding of online members' behaviour to design broader relationship marketing approaches. In addition, the community managers can benefit from the developed scale to measure the community members' engagement and ensure that the relationship marketing tactics would consider all behavioural dimensions.

References Available Upon Request