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Online Brand Advocacy (OBA): The development of a multiple item scale

Violetta Wilk, Geoffrey N. Soutar and Paul Harrigan.

Abstract

Purpose: Despite an increasing interest in online brand advocacy (OBA) and the importance of online brand conversations, OBA's conceptualization, dimensionality and measurement are unclear, which has created confusion. This research answered calls from researchers and practitioners for a better understanding and measurement of online brand advocacy (OBA). The development and validation of a parsimonious and practical OBA scale is outlined in this paper.

Design/ methodology/approach: A multi-methods, multi-stage approach was followed to develop a parsimonious OBA scale. From an initial pool of 96 items obtained from qualitative research and from items used in prior general brand advocacy scales, a test-retest reliability study followed. Academic judges were consulted to verify dimensionality, followed by two separate online surveys to further purify the scale and to assess criterion related validity. Programs including SPSS, AMOS and WarpPLS were used.

Findings: This research extends our knowledge of OBA by developing and testing a parsimonious and practical 16-item, four-dimensional OBA scale. Unlike previous attempts to measure OBA, this study suggested OBA is a multidimensional construct with four dimensions (i.e. brand defence, brand information sharing, brand positivity and virtual positive expression). Further, this study showed that OBA is conceptually different from consumer brand engagement (CBE) and electronic word-of-mouth (eWOM).

Research limitations/ implications: Future research is encouraged to validate the OBA scale in various contexts and locations. Researchers can use the new OBA scale to examine potential brand-related antecedents and consequences of OBA.

Practical implications: This study provides brand and marketing practitioners with a better understanding of brand advocacy occurring online. The OBA scale offers clear markers or trademarks that will be useful in assessing any brand's health online and to track and better manage online brand communications and performance.

Originality/value: This research provides the first empirical investigation of Wilk, Harrigan and Soutar's (2018) exploratory insights into OBA. The resulting parsimonious scale has furthered OBA as a new area for academic enquiry and presented practitioners with a practical way of measuring OBA.

Keywords: online brand advocacy, OBA, scale development, CBE, eWOM.

Paper type: Empirical

1. Introduction

Mobilized by the connectivity offered by their digital devices, today's 'wired' consumers are increasingly sceptical about traditional marketer-driven communication (Pini and Pelleschi, 2017; Kotler *et al.*, 2016; Campbell and Kirmani, 2008; Laran *et al.*, 2011). In this digital age, digital communication is increasing and consumers are empowered to co-create information online through brand-related user-generated content (UGC) (Global Digital Report, 2018). As a consequence, the social media environment is largely consumer, not marketer, controlled (John *et al.*, 2017; Kotler *et al.*, 2016; Hoffman and Fodor, 2010). Consumers have become more receptive to brand-related information given by other consumers through direct consumer-to-consumer (C2C) communication during their socializing and networking online, and they consider this information trustworthy (Brown *et al.*, 2007; Bickart and Schindler, 2001). Indeed, a PricewaterhouseCoopers report (2016) found 67 per cent of shoppers globally read or wrote social media reviews and comments, and felt such comments influenced their shopping behavior. Academic research also suggests C2C online brand-related communication influences consumers' behavior (Keylock and Faulds 2012; Adjei *et al.*, 2010; Bagozzi and Dholakia 2006). One such form of communication is online brand advocacy (OBA) (Wilk *et al.*, 2018).

Brand advocacy has been seen as favourable communication about a brand, the recommendation of a brand to others or the defence of a brand when it is attacked (Kemp *et al.*, 2012; Park and MacInnis, 2006; Keller, 2007). It also refers to the extent to which people are willing to spend time and effort to actively recommend and support a brand (Stokburger-Sauer *et al.*, 2012; Jillapalli and Wilcox, 2010; Bhattacharya and Sen, 2003). Brand advocacy is freely given by customers, who go out of their way to evangelize brands they have experienced to others (Fuggetta, 2012) and such communication may take place off- or on-line.

Despite an increasing interest in OBA (Parrott *et al.*, 2015; Leventhal *et al.* 2014; Wallace *et al.*, 2012) and the importance of online brand conversations (Adjei *et al.*, 2010; Hoffman and Fodor, 2010), OBA's conceptualization, dimensionality and measurement are unclear, which has created confusion. Some prior studies have used word-of-mouth (WOM) scales to measure OBA (e.g. Chou *et al.*, 2016; Wallace

et al., 2012). However, some have argued OBA is unique and differs from offline brand advocacy, pushing for further investigation (Wilk *et al.*, 2018; Graham and Havlena, 2007), while others have suggested there is a need to improve our understanding of how consumers advocate for brands online (Divol *et al.*, 2012, Urban, 2005).

This research provides a first empirical investigation of Wilk *et al.*'s (2018) exploratory OBA findings, building on their recent insights and Parrott *et al.*'s (2015) study of online brand advocates' behavior. This study also answers a call by Graham and Havlena (2007, p. 432) for a "stable and accurate measure of online brand advocacy" that is "a better match to our offline variable" by defining OBA and developing and validating an OBA scale. Social Exchange Theory (Emerson, 1976) provided the lens through which OBA was investigated and differentiated from other constructs with which it is often confused. The literature review which follows, provides some fundamental insights for this study.

2. A literature review

Much prior research has focused on brand advocacy at a general level and suggested OBA fits within general brand advocacy, rather than reflecting on its nature and scope, given its online context. Many general brand advocacy definitions exist and OBA has been inconsistently and interchangeably referenced in some papers, creating confusion. As can be seen in Table 1, references to brand advocacy online included electronic word-of-mouth (eWOM) (e.g. Cheung and Lee, 2012; Brown *et al.*, 2007; Hennig-Thurau *et al.*, 2004), user-generated brand content (e.g. Smith *et al.*, 2012), social media brand advocacy (e.g. Keylock and Faulds, 2012; Hoffman and Fodor, 2010), online brand recommendations (e.g. Fuggetta, 2012; Fagerstrøm and Ghinea, 2011; Cheong and Morrison, 2008) and consumer-brand engagement (e.g. Hausman *et al.*, 2014, Brodie *et al.*, 2013; Chu and Kim, 2011). These constructs may be examples of OBA or important aspects of OBA, but should not be used as a substitute for it (Wilk *et al.*, 2018; Graham and Havlena, 2007).

<Insert Table 1 about here>

Some researchers investigating brand advocacy in online settings, have used improvised OBA scales. For example, Wallace *et al.* (2012) suggested OBA consisted of social network advocacy and brand acceptance, and used WOM items; although their items specifically referred to Facebook. Keylock and Faulds (2012) and Graham and Havlena (2007) also used offline brand advocacy measures to assess advocacy online, with a focus on brand recommendation to peers or other consumers. Clearly much work is needed if we are to better understand OBA in its own right.

2.1 Differentiating OBA from general brand advocacy, consumer-brand engagement (CBE) and electronic word-of-mouth (eWOM)

Social Exchange Theory (Emerson, 1976, p. 336) suggests social behavior is an exchange process that is “two-sided, mutually contingent and mutually rewarding” to the parties involved. Online brand-related communication between consumers is an example of such a social (albeit, virtual) exchange process, in which consumers exchange brand-related knowledge, information and generally help the ‘collective’ or other consumers (Pasternak *et al.*, 2017; Beukeboom *et al.*, 2015) in a “mutually contingent” way (i.e. consumers help others by way of the brand-related information they provide). This exchange might occur, for example, in the form of consumer-brand engagement (CBE) (Wirtz *et al.*, 2013; Sashi 2012), electronic word-of-mouth (eWOM) (Beukeboom *et al.*, 2015; Van Doorn *et al.*, 2010) or OBA (Wilk *et al.*, 2018). Consequently, in order to better understand OBA, it is not only necessary to differentiate it from offline brand advocacy, but also to see *whether* and *how* it might be different to eWOM and CBE, as the two constructs have often been used in this context.

The *Oxford Dictionary* suggests advocacy is “publicly speaking on behalf of someone or in support of someone”, it’s “the action of representing someone’s interests underpinned by the belief in someone or something”. This resonates with OBA and with the working definition suggested by the present study that is based on Wilk *et al.*’s (2018) research, which suggested OBA:

1. Is a strong, influential, purposeful and non-incentivised, online representation of a brand and that brand’s best interest.

2. Is given by a brand-experienced customer (either past or current).
3. Includes ‘standing up for’ and speaking on behalf of the brand.
4. Is given as user-generated content (UGC) that reflects specific and in-depth brand knowledge, defence, positivity and virtual positive expression in support of a brand.

This definition is further explained and refined in this paper. In order to better understand OBA, it is necessary to differentiate it from offline brand advocacy and to see *whether* and *how* it might differ from eWOM and CBE, the two constructs that have often been used in this context.

General brand advocacy

As noted earlier, brand advocacy is generally seen as favourable communication about a brand, the recommendation of a brand to others or the defence of a brand when it is attacked (Kemp *et al.*, 2012; Jillapalli and Wilcox, 2010; Park and MacInnis, 2006). Research has suggested brand advocacy is part of relational behavior (Melancon *et al.*, 2011) that some refer to as customer ‘extra-role behavior’ or ‘elective behavior’ (Park *et al.*, 2010; Ahearne *et al.*, 2005). Brand advocacy involves discretionary activities in which customers choose to engage (van Doorn *et al.*, 2010; Bolton and Saxena-Iyer, 2009). In some studies, brand advocacy has been classified as social advocacy (e.g. consumer-to-consumer communication), physical advocacy (e.g. owning and using the brand) (Noble *et al.* 2012; Keylock and Faulds, 2012; Adjei *et al.*, 2010; Bhattacharya and Sen, 2003; Mael and Ashforth, 1992) or active and explicit recommendations (Sweeney *et al.*, 2012; Keller, 2007; Mazzarol *et al.*, 2007; Muniz Jr and O’Guinn, 2001).

A comparison of OBA with general brand advocacy

In today’s digital world, highly involved customers use their networking, socializing and information exchange opportunities and capabilities on virtual, online platforms, such as networking sites, online communities, blogging sites and online shopping sites (Smith *et al.*, 2012; Brown *et al.*, 2007) to actively endorse the brands they love off- or on-line (Wragg, 2004). However, despite a recognition that brand advocacy may occur off- and on-line, no clear distinction has been made between the two

constructs (i.e. off- and on-line brand advocacy), to account for the uniqueness of the online environment, as has been done with WOM (offline) and eWOM (Hennig-Thurau *et al.*, 2004; Cheung and Lee, 2012; Cheung and Thadani, 2010). Notably, the shift to co-creating brands through user-generated content (UGC) (Smith *et al.*, 2012; Boyd and Ellison, 2008) in online consumer networks and the rise of the active consumer, the ‘prosumer’, (Lawer and Knox, 2006), accelerated by new C2C communications platforms and channels (Adjei *et al.*, 2010), have resulted in consumers driving brand advocacy in online settings (Wallace *et al.*, 2012). This trend has forced organizations to implement new brand management strategies. However, as noted in prior research, to do this effectively, organizations need a greater understanding of OBA and researchers need an adequate OBA measure, rather than makeshift scales (Divol *et al.*, 2012; Graham and Havlena, 2007; Urban, 2005).

OBA appears to be different to general brand advocacy. According to Wilk *et al.* (2018), OBA mirrors offline brand advocacy characteristics (e.g. brand defence, brand support, recommendation and positive brand mention) (e.g. Badrinarayanan and Laverie, 2011; Jillapalli and Wilcox, 2010; Fullerton, 2005; Algesheimer and Dholakia, 2005). However, unlike offline brand advocacy, OBA seems to be multidimensional and, thus, is more complex. OBA seems to be more elaborate with unique online aspects (e.g. virtual positive expression). With roots in offline brand advocacy, OBA is an elaborate, purposeful and multidimensional construct that appears to differ from general or offline brand advocacy, as it emulates the communication environment in which it is given (i.e. the nature of online communication differs from offline (face-to-face) communication, as online communication is highly visible, has an unlimited global reach, and is permanent) and uses virtual visual positive expression (e.g. emoticons, emojis, lettering) to advocate for a brand online (Wilk *et al.*, 2018), as these are prevalent in online communication and assist in communicating affect in online text based messages (Riordan, 2017).

OBA reflects online brand advocates’ perceptions about a brand (a cognitive dimension) and their positivity and affection for that brand (an affective dimension) (Wilk, *et al.*, 2018). OBA can be seen when people speak publicly on behalf of and ‘stand up’ for a brand online, which are at the core of what ‘advocacy’ means (e.g. Oxford Dictionary, 2019). Further, speaking on behalf of and ‘standing up for’

a brand online usually takes place in online conversations between many consumers (Adjei, *et al.*, 2012). Offline brand advocacy generally takes place at a specific, one-off, time (e.g. face-to-face or phone conversations) and is directed at one or, at most, a small number, of potential customers, whereas OBA has a global reach and permanence.

Unlike brand advocacy offline, OBA's strength is in the immediate online environment in which it takes place (i.e. OBA can be seen in brand URLs links, photos and other materials that are convenient and unique to online communication). Unlike offline brand advocacy, OBA can be received and acted on almost simultaneously. OBA might also be able to shorten consumers' decision making journeys, as consumers exposed to an OBA post can verify the information at a click of a button, click through to a brand website and order the advocated brand within seconds of exposure to OBA. Such convenience is not possible offline.

Further, OBA should not be confused with incentivized, non-volitional efforts by consumers and non-consumers of a brand (e.g. celebrities), evident in, for example, influencer or viral marketing, which may be strategically planned, initiated and supported (e.g. financially or otherwise) by a brand (e.g. De Veirman, *et al.*, 2017; Ferguson, 2008; Scheer and Stern, 1992). OBA is more organic in nature; consumer-driven and initiated voluntarily, stemming from an established consumer-brand relationship.

Given the increasing importance of C2C online communication and its potential impact on consumers' purchase behavior and attitudes towards brands (Keylock and Faulds, 2012; Hoffman and Fodor, 2010; Adjei *et al.*, 2010; Bagozzi and Dholakia, 2006), it is surprising research into the ways through which consumers advocate for brands online is so limited and that OBA has not been well defined. Perhaps not surprisingly, some have highlighted the need for further exploration in this area (Parrott *et al.*, 2015; Divol *et al.*, 2012; Urban, 2005) and others have called for the development of an accurate OBA measure (Graham and Havlena, 2007).

Electronic word-of-mouth (eWOM)

Henning-Thurau *et al.* (2004, p. 39) defined eWOM as “any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet,” while Stauss (2000, p. 243) described online WOM as “Internet customer communication” that occurs when “customers report/interact about consumption-relevant circumstances on the Internet”. EWOM seems to be a broad construct that encompasses any online communication between people about anything or any topic and may be positive or negative. Positive WOM has been widely investigated (e.g. Sweeney *et al.*, 2012; East *et al.*, 2008; Mazzarol *et al.*, 2007; Keller, 2007; Muniz Jr and O’Guinn, 2001). Prior research suggests positively framed WOM highlights the strengths of a product or service and encourages people to adopt that product or service, while negatively framed WOM emphasises the weaknesses or problems of a product or service and, thus, discourages people from adopting them (Duan *et al.*, 2008; Dellarocas *et al.*, 2007). Further, online forwarding or passing of eWOM is the norm online and an important aspect to how consumers socialise, network, communicate and generally interact with each other online (Norman and Russell, 2006; Sun *et al.*, 2006). Chu and Kim (2011, p. 51) suggested opinion-passing behavior is an “enhanced dimension of eWOM” warranting further attention.

A comparison of OBA with eWOM

As opinion-passing behavior, OBA may be seen as an “enhanced dimension of eWOM” (Chu and Kim, 2011, p. 51). While OBA might seem to fit the definition of eWOM, closer inspection of Hennig-Thurau *et al.*’s (2004) eWOM dimensions suggests eWOM lacks an online interpersonal influence aspect (Senecal and Nantel, 2004) and does not make explicit the brand advocacy characteristics evident in earlier advocacy definitions (i.e. the defence of a brand when it is attacked and the active support of a brand) (Jillapalli and Wilcox, 2010; Keller, 2007; Park and MacInnis, 2006). Unlike eWOM, OBA seems to be ‘strongly persuasive’, ‘explicit advocacy, giving reasons’ and ‘with full-frontal rhetoric’ (Ehrenberg, 2000). It includes virtual visual aids such as emoticons and images of an advocated brand that consumers use to illustrate their feelings in their online discussions with others (Schamp-Bjerede

et al., 2014; Hogenboom *et al.*, 2013). Thus, OBA may include an advocate's verbal (written) and non-verbal virtual communication not seen in eWOM research to date.

Message valence and the strength of the communication seem to play a key role in the persuasiveness of WOM messages (Sweeney *et al.*, 2012; East *et al.*, 2008). However, it is the 'speaking on behalf of', defending, supporting the brand and being a spokesperson for the brand that positions OBA in its own right in a more forceful and authoritative way than eWOM. Further, if eWOM is the same as OBA, OBA could be given by people who have not experienced or owned a product or experienced a service, which does not fit suggested definitions. eWOM has hedonic and utilitarian aspects (Voss *et al.*, 2003), can involve simple recommendations (Lee *et al.*, 2008) and have cognitive and affective aspects (Yap *et al.*, 2013; Wu and Wang, 2011). However, it is unclear if these dimensions apply to OBA, suggesting OBA should be explored in its own right. Thus, just as eWOM has been differentiated from offline WOM (Cheung and Thadani, 2012; Chu and Kim, 2011; Breazeale, 2009; Hennig-Thurau *et al.* 2004), OBA should be explored and assessed against general brand advocacy definitions.

Consumer-brand engagement (CBE)

A construct which seems to be closely related to brand advocacy is consumer-brand engagement (CBE), which has been defined as "behaviors that go beyond simple transactions" and as "a customer's behavioral manifestations that have a brand focus, beyond purchase, resulting from motivational drivers" (van Doorn *et al.*, 2010, p. 254). More specifically, CBE has been defined as "the level of an individual customer's motivational, brand-related and context-dependent state of mind characterised by specific levels of cognitive, emotional and behavioral activity in direct brand interactions" (Hollebeck, 2011, p. 790). CBE is often thought of as a psychological process, behavioral manifestation and/or a motivational psychological state (Cheung *et al.*, 2011; van Doorn *et al.*, 2010; Bowden, 2009). Patterson *et al.*, (2006) defined customer engagement as a psychological state that is characterized by a degree of vigour, dedication, absorption and interaction; traits also evident in the brand advocacy literature (e.g. Jilapalli and Wilcox, 2010; Jones and Taylor, 2007; Keller, 2007; Park and MacInnis, 2006).

In her research, Hollebeek (2011) noted the relevance of CBE dimensions appears to be context specific (e.g., online versus brand) and suggested three generalized themes: immersion (engrossed in), passion (love or adoration) and activation (willingness to spend time interacting with the brand). In contrast, Vivek *et al.* (2012, p. 133) defined CBE as the “intensity of an individual’s participation in and connection with an organization’s offerings or organizational activities, which either the customer or the organization initiates”.

Regardless of its definition, CBE seems to involve a consumer’s interactive experiences with a brand to enhance brand loyalty (Brodie *et al.*, 2013; Roberts and Alpert, 2010), increase sales (Lee *et al.*, 2011) and generate positive WOM communication (Libai *et al.*, 2010). Notably, CBE literature supports the notion that consumers who are highly engaged with a brand are activists for that brand (Hollebeek, 2011; Libai *et al.*, 2010). As an example, Wallace *et al.* (2014) explored whether brand engagement, evidenced through "Liking", was associated with brand outcomes such as brand love, and advocacy through eWOM and brand acceptance. Their study suggested consumers who engage with inner self-expressive brands are more likely to offer eWOM for that brand, whereas, consumers who engage with socially self-expressive brands are more likely to accept wrongdoing from a brand.

A comparison of OBA with CBE

OBA seems to be closely related to CBE, and there are some initial indications in recent research that OBA may be an outcome of CBE (Wallace *et al.*, 2014). As was the case with eWOM, at the outset, OBA seems to also fit the CBE definition, but OBA is unlikely to be the sole constituent CBE. Indeed, it is likely to be the behavioral outcome of CBE. It might be that it is after a CBE event had taken place that a consumer advocates for a brand and that such engagement might enhance the level of OBA undertaken. CBE research talks about ‘immersion’, ‘passion’ and ‘activation’ (Hollebeek, 2011) and about similar dimensions to those examined by eWOM researchers (cognitive processing, affection and activation) (Hollebeek *et al.*, 2014); again posing the question as to whether OBA can be looked at this way. However, CBE seems to be broader than communication between consumers about a brand, which is fundamental to OBA (i.e. OBA takes place within online discussions). OBA seems to include aspects

of CBE (i.e. engaged consumers often advocate or defend a brand) and of eWOM (i.e. it is positive and given by a consumer who has experienced the brand), but it seems it is not clearly differentiated from these constructs, which led to the decision to develop an OBA scale using the approach discussed in subsequent sections.

3. The exploratory study

The exploratory study into OBA which informed this research has been reported by Wilk, Harrigan and Soutar (2018). These researchers presented qualitative insights that suggested OBA is a multidimensional construct and has distinct aspects that make it unique. Their study used a netnography approach (Kozinets, 2002) to examine active C2C discussion threads from two different online communities. One hundred discussion threads (1,060 posts from 437 unique usernames) were from an open online community (OOC), while 100 discussion threads (736 posts from 430 unique usernames) were from an online brand community (OBC). Both communities were Australian-based and designed to provide online support to parents of young children. Data were collected between November 2014 and February 2015. This length of time was deemed sufficient to provide in-depth findings and reached ‘thematic/data saturation,’ as no new insights into unique OBA characteristics were being uncovered when data collection finished (Green and Thorogood, 2004; Gaskell, 2000). Brand advocacy included discussions about local and international brands, and ranged from high-involvement products, such as prams and family car brands, to low-involvement products, such as baby formulas and hygiene products.

Their analysis revealed seven aspects to OBA (brand endorsement, representing the brand’s best interest, brand knowledge, reasoning, love, experience through storytelling and virtual visual positive expression). The study indicated OBA had characteristics that were particular to online communication, suggesting existing offline brand advocacy measures (e.g. Kemp *et al.*, 2012; Groth, 2005; Fullerton, 2005) needed to be reconsidered in online contexts. OBA was found to be an elaborate and multidimensional construct, with some similarity to offline brand advocacy, but with additional unique characteristics reflective of online communication, that needed to be considered.

4. Conceptualising OBA

Based on the literature review, the exploratory, qualitative research findings and the findings presented in Wilk *et al.*'s (2018) paper, an OBA conceptualisation was developed. OBA is based on broader brand advocacy definitions seen in prior offline research (e.g. Jillapalli and Wilcox, 2010; Keller, 2007; Park and MacInnis, 2006). However, sufficient evidence exists in both the literature and in the exploratory research reported in the preceding section, to suggest OBA has unique characteristics that reflect the online communication environment in which it occurs. Unlike offline brand advocacy which typically includes short, WOM based scales when measured (e.g. Kemp *et al.*, 2012; Groth, 2005; Fullerton, 2005) and which have been adapted in recent online communication research (e.g. Wallace *et al.*, 2014; Adjei *et al.*, 2010), OBA seems to be more elaborate and defined by seven aspects that crystallise into cognitive, affective and virtual positive expression dimensions.

As noted earlier, according to the *Oxford Dictionary*, advocacy means “publicly speaking on behalf of someone or in support of someone, it’s the action of representing someone’s interests underpinned by the belief in someone or something”. This definition resonates with our definition of OBA that suggests:

OBA is a strong, influential, purposeful and non-incentivised, online representation of a brand and a brand’s best interest, by a brand-experienced customer (either past or current), which includes ‘standing up for’ and speaking on behalf of the brand. OBA is given as UGC that reflects specific and in-depth brand knowledge, defence, positivity and virtual positive expression in support of the brand. OBA is a multidimensional construct that may be simultaneously positively and negatively valenced.

5. The scale development process

The OBA scale development process commenced with a review of the Wilk *et al.*'s (2018) study, which informed the development of an initial set of items that were tested for reliability with a student sample.

The dimensionality of these items was subsequently reviewed by some academic experts. The retained items were then revised using a more general sample to develop the final scale. Churchill's (1979) scale development procedure guided the process and these procedures are outlined in subsequent sections.

5.1 Stage one: Development of an initial set of items

Wilk *et al.*'s (2018) exploratory study suggested one hundred and ninety nine (199) OBA statements. However, on closer inspection, it was evident some items were too generic or more reflective of other brand-related constructs and these were removed. The remaining ninety six (96) items were retained for further examination.

5.2 Stage two: Item reduction and an exploratory investigation of dimensionality

The student survey

The 96 items were used to create the questionnaire distributed to a sample of students at a large Australian university. Following the critical incident technique (Gremier, 2004), respondents were asked to "Think of a time when you've had a positive experience with a brand and how you reacted to this experience in your online communications with others." Prompted by a statement that preceded the item that said "When I discuss this brand online, I often...", respondents were asked to rate each item on a Likert-type scale (ranging from strongly disagree (1) to strongly agree (7)). The questionnaire was pre-tested with a small sample (52) of respondents, allowing minor wording changes to be made prior to the major data collection phase being undertaken.

The items were initially presented in a survey administered two weeks apart to a sample of undergraduate University students in order to examine their test-retest reliability (Peter, 1979). A total of 226 usable responses were obtained to survey 1 and 209 responses were obtained to survey 2. Of these, 186 were 'matched responses' (i.e. the responses to survey 1 and survey 2 were from the same respondent) and these were used to examine the items' test-retest reliability. While the respondents were younger (18 to 30 years of age) than those in the online community forums examined in the qualitative

phase (late 20s to mid-50s), the aim of this phase was to examine test-retest reliability. Most respondents were local Australian residents (52%), while the rest were international students (mostly from China (18%) or Singapore (14%).

Correlations were computed between the matched test (survey 1) and retest (survey 2) responses. Fourteen (14) of the 96 items were removed at this point, as they had test-retest correlations that were less than 0.40 (Paul and Rana, 2012; Field, 2005), which meant 82 items were retained for the subsequent analysis, as outlined subsequently.

The 226 responses obtained in the first survey were used to examine these items in more detail. As the Measure of Sampling Adequacy (MSA) (0.91) suggested a factor analysis was likely to be useful (Hair *et al.*, 2014), a principal components analysis (PCA) was undertaken. A parallel analysis (O'Connor, 2000) suggested six factors should be retained and a varimax rotation was used to obtain a simple structure for these factors. When the loadings were examined, a large number of items loaded onto more than one component. As the purpose in this phase of the analysis was to reduce the item pool without changing the nature of the dimensions, these items were removed and the remaining 44 items were re-analysed. Once again, six factors, which explained 59% of the variation in the data, were obtained. However, in this case, after varimax rotation, a simple structure was obtained as there were no cross-loading items.

At this point, the factors were given names that were thought to reflect their nature (Hair, *et al.*, 2014) by looking at items with higher loadings. The names given and the tentative descriptions developed for each factor were:

1. **Brand Positivity:** positive and favourable communication about a brand, endorsement of a brand.
2. **Brand Defence:** proactive and reactive defence of a brand, standing up for a brand's best interests, providing backing for a brand, preserving a brand's good name and good will.

3. **Virtual Positive Expression:** virtual visual manifestation in support of a brand, visual online expression and indication of feelings in favour of a brand.
4. **Brand Zest:** expressing conviction and enthusiasm for a brand, exceptional feeling for a brand based on brand experiences and the sharing of brand stories.
5. **Brand Knowledge:** providing shrewd and relevant information about a brand, online astuteness about a brand's intricate details.
6. **Brand Appraisal:** providing honest brand comparisons and outlining distinct brand details, being honest and transparent about a brand's shortcomings.

Confirming dimensionality: initial reliability

The scales were further refined by undertaking a confirmatory factor analysis (CFA) on each factor in turn, to see whether the suggested factors fitted the data. As responses had been obtained at two time periods in order to examine the items' test-retest reliability, the CFA was undertaken on the second wave data to reduce the impact of using the same data in undertaking the EFA and the CFA. In this phase of the analysis, the AMOS program was used to fit the suggested scales (Foster *et al.*, 2011). In some cases, the factors did not fit the data well, as there were items that had correlated errors, which can be problematic (Gerbing and Anderson, 1984). Such items were removed in an iterative fashion until a good fit (a Chi-square statistic with a probability greater than 0.05) was obtained. As would be expected given the Chi-square statistics, all of the other goodness of fit measures (e.g. CFI, AGFI, RMSEA and SRMR) were all acceptable. This resulted in 24 items being retained. Table 2 shows the fit for each of the six factors in this case. In order to ensure the reduction in items during this process had not changed the nature of the dimensions, the correlations between each of the original factors (obtained from the 44 items) and the relevant revised factors (obtained from the 24 items) were computed. As can also be seen in Table 2, these correlations ranged from 0.92 to 0.99, suggesting no such changes had occurred and that the revised scales could be safely used in subsequent analysis (Thomas *et al.*, 2001).

<Table 2 about here>

The measurement properties of the revised scales were then examined to ensure they were reliable and that they had convergent and discriminant validity. As can be seen in Table 3, all of the OBA dimensions were reliable, as their Cronbach alpha coefficients ranged from 0.76 to 0.87 and their composite reliability coefficients ranged from 0.86 to 0.91, which were all above the minimum suggested 0.70 level (Hair *et al.*, 2014). The six factors also had convergent validity, as their average variance extracted (AVE) scores ranged from 0.55 to 0.79, which were also well above the minimum suggested 0.50 level (Fornell and Larcker, 1981). Finally, all of the OBA dimensions had discriminant validity as the squared correlations (shared variance) between them ranged from 0.01 to 0.22, while the lowest AVE score was 0.55 (Fornell and Larcker, 1981). Thus, the six OBA dimensions were retained at this point of the analysis.

<Table 3 about here>

5.3 Stage three: The academic judges' survey

Experts have often been used as judges of a scale's domain in marketing (e.g. Zaichowsky, 1985; Babin and Burns, 1998; Sweeney and Soutar, 2001; Baldus *et al.*, 2015). Consequently, an online survey was used to obtain the views of a number of relevant academics to ensure the 24 items reflected the OBA scale's suggested domains. The questionnaire was pre-tested with a small sample of academics (8), allowing minor changes to be made prior to distribution.

The judges were presented with a working definition of OBA and an outline of the six dimensions and their descriptions. They were then asked to "Think about the nature of online brand advocacy (OBA) and the manner in which it could be presented, (to) please indicate to which of the proposed dimensions (boxes below) each statement most closely relates" and to sort the items into the suggested dimensions. If the judges believed that any of the statements related to some other dimension that was not included in the questionnaire, they moved that item to an 'Other' box. The judges were also able to suggest a more suitable name for any of the dimensions, or to suggest a new dimension and a descriptor for it.

Of the 20 judges approached, 14 responded. The 21 items that nine or more judges classified as representative of a dimension were retained for further analysis. The measurement properties of the scales obtained from the reduced set of items were also initially assessed using the data obtained from the second wave of the student sample.

The measurement properties of the six dimensions were not affected by the reduction in the number of items. Once again, all of the OBA dimensions were reliable, as their Cronbach alpha coefficients ranged from 0.76 to 0.87 and their composite reliability coefficients ranged from 0.86 to 0.91, which were all above the minimum suggested 0.70 level. The six factors also had convergent validity, as their AVE scores ranged from 0.62 to 0.79, which were also well above the minimum suggested 0.50 level (Fornell and Larcker, 1981). Finally, all of the OBA dimensions had discriminant validity as the squared correlations (shared variance) between them ranged from 0.01 to 0.21, while the lowest AVE score was 0.62. Thus, the 21 items shown in Table 4 and the six OBA dimensions were retained at this point of the analysis.

<Table 4 about here>

5.4 Stage four: The online surveys (scale refinement and validation)

As the scale had been initially examined on a student sample, it was decided to validate it on a more general sample. Consequently, the 21 OBA scale items were included in a questionnaire that was administered to members of an online Australian research panel who are paid a small amount to answer such surveys. Respondents were asked to think about a time when they had a positive experience with a brand and how they reacted to this experience online. They were asked to name the brand, which was automatically replicated in questions asked throughout the survey, allowing personalisation of the questionnaire. The respondents indicated their level of disagreement or agreement with each of the 21 retained OBA items on a seven-point Likert-type scale that ranged from strongly disagree (1) to strongly agree (7). The section that asked about OBA began with the phrase, “When I discuss (brand name inserted automatically) online, I often...”.

Online Survey 1

Two hundred and three (203) complete responses were obtained, although 12 were excluded as the respondents could not recall a specific brand they had advocated online, which meant 191 responses were used in this phase of the analysis. Within the responses, a wide variety of brands (goods and services) were named, including: electronics, cosmetics, banking, clothing, sports goods, cars, restaurants/eateries, hotels, airlines, telecommunication providers, and baby feeding and hygiene products. One hundred and one respondents (101) were female, 89 were male and one was transgender. Most were married with children (86), single (43) or living with a partner (23). The age range most represented was 25 to 34 years of age (47), 35 to 44 (36), 45 to 54 (27) and 55 to 64 (27). Most respondents were professionals (73), although 21 were unemployed. Seventy four (74) had a University degree and 57 had a TAFE qualification. Household income before tax was almost equally spread out throughout the income categories between \$25,000 through to \$149,999, with 47 respondents having incomes in the \$25,000 to \$49,999 range. Almost all respondents (164) spend 4 or less hours per week communicating about brands online, suggesting OBA is not a time-intensive activity.

An investigation of OBA dimensionality

The procedure used tested the robustness of the proposed 21-item OBA scale and involved steps similar to those outlined in the first stage. As the scale had only been developed with a student sample, it was decided to begin with an exploratory factor analysis (EFA) to see whether the same dimensions were found. In this case, the MSA was 0.91, again suggesting a factor analysis was likely to be useful. However, only four factors were found with eigenvalues greater than one that, together, explained 75% of the variation in the data. While a parallel analysis suggested three factors, Velicer's (1976) method suggested four. Consequently, it was decided to retain four factors, as this ensured all of the items were reasonably well explained, as the communalities in this case ranged from 0.48 to 0.89.

When the four factors were rotated to obtain a simple structure using the oblimin method, the correlations between the factors ranged from -0.46 to 0.38, suggesting the factors were not highly correlated. Consequently, a varimax rotation was used to better understand the factors. When this was

done three items were removed, as they loaded almost equally onto two of the factors (0.58 and 0.53, 0.58 and 0.51, 0.54 and 0.48 respectively). The remaining 18 items were re-analysed and the four retained factors now explained 78% of the total variation in the data. In this case, varimax rotation led to a simple structure (with no cross-loading items) (Hair *et al.*, 2014) and the factor loadings ranged from 0.57 to 0.88. At this point, the four factors were named based on the items that had high loadings with the relevant factor (Hair *et al.*, 2014). Table 5 provides information about the factors' names and the items that were used to measure each of the four factors.

<Table 5 about here>

Confirmatory factor analyses were also undertaken to assess these factors. Three of the factors fitted the data well (non-significant Chi-square statistics and other acceptable goodness of fit measures). However, one of the Brand Defence items and one of the Brand Positivity items had a correlated error and subsequently both were removed ("Talk about the good points of this brand" and "Talk about the good points of this brand" respectively), leaving 16 items. Removing these items did not alter the nature of the constructs being measured, as the correlations between the full and reduced scales were 0.99 and 0.98 respectively. When this was done all of the factors fitted well, as can be seen in Table 6. Due to the different natures of the samples and the change in the dimensional structure, the 16-item four-factor model was also examined with the student sample. In this case, all of the factors fitted well (non-significant Chi-square statistics and other acceptable goodness of fit measures), as can also be seen in Table 6, suggesting the revised four-dimensional OBA scale was an appropriate one.

<Table 6 about here>

The measurement properties of the revised dimensions were examined to ensure they were reliable and that they had convergent and discriminant validity. As can be seen in Table 7, all of the OBA dimensions were reliable, as their Cronbach alpha coefficients ranged from 0.87 to 0.96 and their composite reliability coefficients also ranged from 0.88 to 0.96, which were all well above the minimum suggested 0.70 level (Hair *et al.*, 2014). The four factors also had convergent validity, as their AVE scores ranged from 0.65 to 0.82, which were also well above the minimum suggested 0.50 level (Fornell and Larcker,

1981). Finally, all of the OBA dimensions had discriminant validity, as the squared correlations (shared variance) between them ranged from 0.10 to 0.45, while the lowest AVE score was 0.65 (Fornell and Larcker, 1981). Thus, the 16 relevant items shown in Table 5 and the four OBA dimensions were retained.

<Table 7 about here>

Online Survey 2: OBA's distinctiveness and criterion related validity

The distinctiveness of the OBA measure was assessed by examining its relationship with two conceptually related variables, specifically, CBE and eWOM. These constructs were chosen as they have been related to brand advocacy in prior research, as noted previously in this paper. It would be expected that if consumers advocated for a brand online, they would be engaged with the brand (CBE) and that they would give eWOM for that brand. However, if OBA is a distinct construct, then it should have discriminant validity from these related constructs. In order to examine this issue, additional data were obtained from the same online panel provider and the sample was reflective of the first survey. These respondents were asked about their OBA, CBE and eWOM. In this case CBE was measured using Hollebeek *et al.*'s (2014) scale and eWOM was measured using Cheung and Lee's (2012) scale. A total of 201 useable responses were obtained in this data collection phase.

Initially, the measurement properties of the three constructs were assessed and the results obtained are shown in Table 8. All of the constructs were reliable, as all of the CR and coefficient alpha scores exceeded 0.80, and all of the constructs had convergent validity, as all of the AVE scores exceeded 0.60. Finally, all of the constructs had discriminant validity, as the squared correlation (shared variance) between each pair of constructs was less than their AVE scores. Thus, all of the constructs had appropriate measurement properties and can be used with some confidence. Importantly, while OBA, CBE and eWOM were positively related, as was expected, this analysis suggested they are different constructs. Thus, the OBA measure developed here is indeed distinct from prior CBE and eWOM scales.

<Table 8 about here>

Given this outcome, criterion related validity was assessed. Following Sweeney and Soutar's (2001) suggestion, the relationships between CBE and eWOM and a single item overall OBA measure ('I consider myself an advocate for <brand name> online') were examined first, after which their relationships with the four OBA dimensions were assessed. As can be seen in Table 9, the single item overall OBA scale was significantly positively related to the two constructs, as was expected, with R^2 coefficients of 0.43 (for eWOM) and 0.48 (for CBE), supporting the expected relationships. The impacts of the four OBA dimensions were then examined. In this case, the explained variances improved significantly, as can also be seen in Table 9, as the R^2 coefficients increased to 0.62 (for eWOM) and 0.74 (for CBE). These increases were significant well beyond the 0.01 level (Soper, 2019). It seems the four suggested OBA dimensions provide considerably more information than was obtained when an overall, single item OBA scale was used.

It was also clear the four OBA dimensions had different impacts on CBE and eWOM, and that not all of the dimensions impacted significantly on these two constructs. For example, Brand Positivity and Brand Information Sharing impacted on both CBE and eWOM, Virtual Visual Positive Expression only impacted on eWOM and Brand Defence only impacted on CBE. These findings suggest each OBA dimension plays an important and separate role in forming different brand-related attitudes and behaviors and, consequently, all four dimensions should be retained, as they add diagnostic information that would not be available if they were not included.

Consequently, it is evident that OBA exemplifies online social exchange behaviour and, seen through the lens of Social Exchange Theory (Emerson, 1976), OBA is an online brand-related communication between consumers in which consumers exchange more than just brand-related knowledge, information and generally help the 'collective' or other consumers (Pasternak *et al.*, 2017; Beukeboom *et al.*, 2015); OBA is also an online exchange of brand-related emotion.

<Table 9 about here>

6. Conclusions

This paper outlined the development process used to develop a new OBA scale. The four stage approach developed a parsimonious OBA scale from an initial pool of 96 items obtained from the qualitative findings found by Wilk *et al.* (2018) and from items used in prior general brand advocacy scales (Chou *et al.*, 2015; Wallace *et al.*, 2012). The process resulted in a final 16-item OBA scale that had four dimensions.

6.1 Theoretical and managerial implications

This research extends our knowledge of OBA by developing and testing a parsimonious and practical 16-item, four-dimensional scale. Unlike previous attempts to measure OBA (e.g. Chou *et al.*, 2015; Wallace *et al.*, 2012), this study suggested OBA is a multidimensional construct with four dimensions (i.e. brand defence, brand information sharing, brand positivity and virtual positive expression). The scale will allow academic researchers to better investigate relationships between OBA, CBE and eWOM, as well as, such pro-brand outcomes as brand loyalty and purchase intent. There is much scope for further research in this area that might link OBA to other brand-related constructs (e.g. self-brand attachment).

This research has clear implications for brand managers and marketing practitioners, as organisations compete for business in commercial environments that are not only increasingly competitive, but are part of a global stage; necessitating organisations to implement new online brand management and customer management strategies. However, to manage brands effectively, organisations need to have a better understanding of the ways in which consumers talk about their brands (i.e. *how* they advocate for their brands online (OBA) to other consumers). This study provides marketing practitioners with a better understanding of brand advocacy occurring online. The OBA scale offers clear markers or trademarks of OBA that should enable marketers and brand owners to assess brand health online and to track and manage online brand communications and performance. This research should help brand managers and marketing strategists develop holistic brand management and marketing strategies that

account for the peculiarities of consumers-driven brand-related online communication and behavior. Such information should assist managers better understand consumers' behavior and equip them to better manage their brands in online settings.

Brand managers will now be better equipped to leverage firm-generated content (FGC) by identifying consumer-driven OBA, which is consumer (UGC), rather than firm, generated, and which may be better received by its potential customers. Echoing Kumar *et al.*'s (2016) recent study that suggested "investing in developing a social media community with a dedicated fan base can significantly strengthen customer-firm relationships and can lead to a definitive impact on the firm's revenues and profits", this study suggests marketers should embrace social media not only for FGC but also for UGC, which includes OBA. Brand managers need to identify and enhance the ways in which customers can easily, freely and elaborately communicate online about brands, specifically by way of OBA posts; such as through online community forums. The profiling of OBA posts across various online communication channels will help brands better integrate positive brand content online. Online marketing and branding efforts, such as online advertising or brand-content sharing, need an integrated approach that is not only firm but also consumer-generated. Brand managers should rethink increasing their paid social media spend (such as on owned-social media "OSM") and, instead, focus on creating and enhancing OBA opportunities through earned-social media by their online brand advocates (Parrott *et al.*, 2015; Stephen and Galak, 2012).

OBA's four dimensions (brand defense, brand information sharing, brand positivity and virtual visual positive expression) highlight not only its uniqueness and its complexity but also the uniqueness and complexity of online brand related conversations involving consumers. Brand managers need to be aware that OBA is a powerful and important channel for online brand advocates to authentically speak on behalf of their brand to the global community of consumers. OBA is an avenue for brand positivity, brand knowledge and brand support by the brand's best spokespeople; its advocates. Further, OBA may indeed be the antidote to fake news or negative publicity that brands are subjected to more and more online (Tandoc, *et al.*, 2018; Allcott and Gentzkow, 2017; Newman, *et al.*, 2017).

By giving rise to brand positivity, OBA enables brands to leverage off the ‘social contagion’ (Park, *et al.*, 2018; Bapna and Umyarov, 2015) it creates. Moreover, the virtual visual cues evident in OBA draw attention to the changing online communication conventions, specifically the need for brands to communicate affect, not just brand information, when communicating with their consumers online. Indeed, the virtual visual cues might be influential in relaying brand related information (marketing and non-marketing related) online. This has clear implications not only for marketers but also for online communicators, specifically online customer relationship managers and public relations advisors.

In this digital age, where commerce is becoming more conversational and seamlessly integrated into people’s lives, the way in which consumers interact with and about brands is changing and this means that organizations need to manage their brands differently. Specifically, the social exchange that occurs between consumers online is more elaborate. Consequently, organizations need to be better equipped to understand how consumers advocate for their brands online in order to be able to track their brand’s health. This research presented a parsimonious and practical scale to measure OBA, which also serves as a marker of key OBA traits, allowing managers to more accurately track their brand’s performance.

Future research can use the new OBA scale to examine potential brand-related antecedents and consequences of OBA. Of particular interest would be OBA’s influence on its givers (online brand advocates) and receivers (potential consumers). Future studies could also investigate incentivised OBA versus non-incentivised OBA, to see whether incentives play a role in consumer-driven OBA. Researchers are encouraged to validate the OBA scale in various contexts and locations, explore how OBA manifests itself on various digital platforms.

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Table 1: OBA examples in the literature

OBA examples	Source
User Generated (brand) Content (UGC)	Cheong and Morrison, 2008; Smith et al., 2012
Social network (brand) advocacy	Hausman et al., 2014; Wallace et al., 2012
Social media (brand) advocacy	Hoffman and Fodor, 2010; Keylock and Faulds, 2012
Facebook: recommendations and 'Like'	Hausman et al., 2014; Wallace et al., 2012
Twitter: recommendations and 'Follow'	Bulearca and Bulearca 2010; Smith et al., 2012
Online recommendations	Cheong and Morrison, 2008; Fagerstrøm and Ghinea, 2011
Consumer brand engagement (CBE) online	Brodie et al., 2013, Hollebeek et al., 2014
eWOM advocacy	Beukeboom <i>et al.</i> , 2015; Chu and Kim, 2011; Hennig-Thurau et al., 2004
C2C (brand) communication	Adjei et al., 2010; Bagozzi and Dholakia, 2006; Keylock and Faulds, 2012

Table 2: Model fit for the six OBA factors (second student sample)

Factor	Original # Items	Final # Items	Chi-square	df	Prob.	Original-Refined Correlation
Brand Positivity	12	5	10.25	5	0.07	0.96
Brand Defence	10	5	4.75	5	0.45	0.97
Virtual Positive Expression *	6	3	0.06	1	0.80	0.92
Brand Zest	6	5	5.11	5	0.40	0.99
Brand Knowledge *	6	3	0.36	1	0.56	0.94
Brand appraisal *	4	3	0.31	1	0.58	0.95

* Scales with only 3 items had error variances of two items equalized to provide the needed degree of freedom.

Table 3: The measurement properties of the six OBA dimensions (24 items)

OBA Dimension	Composite Reliability	Cronbach's Alpha	AVE Score
Brand Positivity	0.89	0.85	0.62
Brand Defence	0.91	0.87	0.67
Virtual Positive Expression	0.92	0.87	0.79
Brand Zest	0.86	0.79	0.55
Brand Knowledge	0.86	0.76	0.68
Brand Appraisal	0.87	0.77	0.68

Table 4: The 21 items in the initial OBA scale

Factor	Descriptor	Item
Factor 1: Brand Positivity	Positive and favourable communication about the brand, endorsement of the brand.	<p>Say positive things about the brand.</p> <p>Mention I am happy with its performance.</p> <p>Talk about the brand favourably.</p> <p>Say the brand is great.</p> <p>Talk about the good points of this brand.</p>
Factor 2: Brand Defence	Proactive and reactive defence of the brand, standing up for the brand's best interest.	<p>Defend the brand when others talk it down.</p> <p>Stand up for the brand when others talk negatively about it.</p> <p>Talk up the brand when others talk negatively about it.</p> <p>Defend the brand if I hear someone speaking poorly about it.</p>
Factor 3: Virtual Positive Expression	Virtual visual manifestation in support of the brand.	<p>Use emoticons or emojis, such as smilies or winks.</p> <p>Use smilies [😊].</p> <p>Use visual symbols (e.g. emoticon, emoji, exclamation or capital lettering).</p>
Factor 4: Brand Zest	Expressing conviction and enthusiasm for the brand, exceptional feeling for the brand.	<p>Express how excited I am to support the brand.</p> <p>Try to convince others to buy the brand.</p> <p>Feel a need to express my fondness for the brand.</p>
Factor 5: Brand Knowledge	Shrewd and relevant information about the brand, online astuteness about the brand.	<p>Provide details about upcoming promotions and available discounts for the brand.</p> <p>Provide extra details about the brand (e.g. price, store locations, availability of discounts or a link to a website).</p> <p>Share information about available or upcoming promotions (discounts) for the brand.</p>
Factor 6: Brand Appraisal	Honest brand comparison and outlining distinct brand details.	<p>Provide lengthy explanations as to why this brand is better than other brands.</p> <p>Discuss its good and not so good points.</p> <p>Provide a lot of information about the brand.</p>

Table 5: The items used to measure the OBA scale's four dimensions.

Factor	Item
Brand Defence	Defend the brand when others talk it down.
	Stand up for the brand when others talk negatively about it.
	Talk up the brand when others talk negatively about it.
	Defend the brand if I hear someone speaking poorly about it.
	Try to convince others to buy the brand.
	Talk about the good points of this brand. *
Brand Positivity	Say positive things about the brand.
	Mention I am happy with its performance.
	Talk about the brand favourably.
	Say the brand is great.
	Express my fondness for the brand. *
Brand Information Sharing	Provide details about upcoming promotions and available discounts for the brand.
	Provide extra details about the brand (e.g. price, store locations, availability of discounts or a link to a website).
	Share information about available or upcoming promotions (discounts) for the brand.
	Provide lengthy explanations as to why the brand is better than other brands.
Virtual Positive Expression	Use emoticons or emojis, such as smilies or winks.
	Use smilies [☺].
	Use visual symbols (e.g. emoticon, emoji, exclamation or capital lettering).

* Item removed as a result of the CFA analysis.

Table 6: Model Fit for the revised four OBA dimensions (16 items)

OBA Dimension	Chi-Square (Prob.) (Online Sample)	Chi-Square (Prob.) (Student Sample)
Brand Defence	10.60 (0.06)	5.10 (0.40)
Brand Positivity	1.99 (0.16)	1.43 (0.23)
Brand Information Sharing	6.19 (0.05)	2.51 (0.29)
Virtual Positive Expression *	1.16 (0.28)	0.06 (0.80)

* As there were only 3 items, error variances of the 2 items were equalised to provide the needed degree of freedom.

Table 7: The measurement properties of the revised OBA scale (16 items)

OBA Dimension	# Items	Composite Reliability	Cronbach's Alpha	AVE Score
Brand Defence	5	0.96	0.96	0.82
Brand Positivity	4	0.89	0.89	0.66
Brand Information Sharing	4	0.88	0.87	0.65
Virtual Positive Expression	3	0.91	0.91	0.76

Table 8: The measurement properties of the OBA, CBE and eWOM scales (new sample)

Construct	# Items	Composite Reliability	Cronbach's Alpha	AVE Score
OBA				
Brand Defence	5	0.93	0.91	0.73
Brand Positivity	4	0.93	0.91	0.78
Brand Information Sharing	4	0.90	0.85	0.69
Virtual Positive Expression	3	0.95	0.92	0.86
CBE	10	0.94	0.93	0.61
eWOM	5	0.92	0.89	0.70

Table 9: The relationships between OBA, CBE and EWOM

Outcome	Dimension	Standardised Path Coefficient	T value	Adjusted R ²	Variance (R ²) explained by single overall OBA item
CBE	Brand Defence	0.26*	3.71	0.74	0.48
	Brand Positivity	0.50*	7.14		
	Brand Information Sharing	0.20**	2.86		
	Virtual Positive Expression	0.01***	0.14		
EWOM	Brand Defence	0.10***	1.43	0.62	0.43
	Brand Positivity	0.42*	6.00		
	Brand Information Sharing	0.28*	4.00		
	Virtual Positive Expression	0.16**	2.29		

* Significant at <0.001. ** Significant at <0.01. *** Not significant.