The Impact of Brand Actions on Facebook on the Consumer Mind-Set

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Abstract: Despite all the surrounding hype, it is still not clear exactly how social media affects consumer behavior. In an effort to contribute to the current debate on the effectiveness of social media marketing this study aims to theorize and empirically demonstrate how brand's social media efforts influence a wide array of consumer mind-set metrics that underlie the consumer purchase decision-making process. Specifically, we relate key dimensions of a brand's social media actions (intensity, valence and richness) to well established consumer mind-set metrics ranging from awareness through attitude to satisfaction. We hypothesize that brand actions' intensity (more brand posts) with neutral valence and richer content will have a strong impact on the consumer mind-set. Using a unique data set that captures both social media and consumer mind-set metrics for multiple brands, we propose empirically testing our model with panel vector auto regression.

Keywords: social media, mind-set metrics, panel vector auto regression

1 Introduction

US companies now spend on average more than 13% of their marketing budgets on social media (The CMO Survey, 2016), with marketers increasingly supplementing traditional marketing efforts with social media activities (Srinivasan et al., 2015). Most Fortune 500 companies have invested in social media presences, including Twitter accounts (73%), Facebook fan pages (66%), and YouTube channels (62%; Heggestuen and Danova, 2013). In addition to simply being present, brands typically also engage in proactive activities on social media by creating, developing, and managing online content to help drive consumer conversations (Peters et al., 2013). Brands also try to gain social media exposure through voluntary brand mentions, comments and recommendations from users, all in an effort to ultimately help increase demand for their products. However, to be able to justify the necessary budgets, brands need to be able to demonstrate the impact of these efforts on consumers, something that is currently difficult to do (Hoffman and Fodor, 2010).

Brands typically conduct marketing campaigns to understand, inform, involve and satisfy consumers (Keller, 2008). Thus the objective of marketing actions is to affect consumers' hearts and minds (Hanssens et al., 2014). To measure the effect of their efforts, brands collect survey metrics that purport to reflect the consumer mindset. These include measures such as awareness, attitude, purchase intent and satisfaction, which collectively are held to represent the essence of the consumer purchase decision-making process (Wiesel et al., 2011). The central premise of the "consumer mind-set" is well established and posits that customers move toward a purchase through a series of stages, including a cognitive-awareness (e.g., need recognition, information search and being aware of the brand), an affective (e.g., consumer attitudes, evaluation of alternatives and consideration set inclusion), and ultimately, a conative (e.g. purchase intent and actual customer) stage (Rogers, 1995, 1962; Wiesel et al., 2011).

Whilst classical marketing mix elements have been shown to impact these metrics (Srinivasan et al., 2010) the effect of social media actions remains to a large extent under-explored. Given that the relative importance of traditional marketing mix elements is declining (Mangold and Faulds, 2009) as consumers place more trust in social media channels (Srinivasan et al., 2015), understanding how brands' social media actions affect the consumer mindset has taken on increased urgency.

Several studies have already attempted to link social media activity to consumer mindset metrics. For example Rishika et al. (2013) find that customers' social media participation increases website visit frequency and profitability. Similarly, Goh et al., (2013) analyze how user- and brand-generated content on a brand's Facebook page impacts purchase behavior. Colicev et al., (2016) demonstrated that social media actions affect brand equity, with the relationship mediated by brand awareness and willingness of consumers to recommend the brand through word-of-mouth. Although these studies provide important insights into the impact of social media on consumers, most are based on a single brand and employ a limited set of social media data (e.g. Facebook posts (Goh et al., 2013), Facebook likes and unlikes (Srinivasan et al., 2015)). Furthermore, these studies do not examine the more extensive and complex relationship between brands' social media efforts and the consumer mind-set.

We aim to fill this research gap by extending current research on the effect of social media actions to the consumer mind-set. Overall, we argue that firm's social media actions may directly "feed the funnel" by bringing in prospective customers. To provide a granular approach to social media actions, this paper separate various dimensions of a brand's social media actions (i.e., valence, intensity and richness) and relate them to the consumer mind-set. The first dimension captures the intensity of the brand effort, represented by how often a brand posts on its Wall. To capture the second dimension, we analyse the polarity of efforts that represents the valence (positive, negative, and neutral) of brand's posts. Finally, richness refers to the various forms of content that a brand can post, flowing along a continuum from simple textual status updates to more information dense photos or videos. In theory, messages with richer content are more likely to be noticed and shared as they are more engaging and informative than simple text (Smith et al., 2012). Accordingly rich messages should in theory generate more consumer engagement and therefore play a more significant role in influencing consumers (Daft and Lengel, 1986).

Our aim thus is to answer the question "Which social media metrics under control of managers positively impact consumers' engagement and ultimately their mind-set?", enrich-

ing our understanding of the value of brand social media activity and helping managers better justify their expenditure on social media marketing.

2 Data and Methods

To test our theory, we have assembled a novel, comprehensive, dataset that combines measures of the intensity, valence and richness of brand's social media efforts on Facebook with consumer engagement and consumer mind-set metrics. Data on social media activity was collected using a series of third-party automated tools, each of which had been previously validated by manually crosschecking its output against actual data from the selected brands' social media presences. Firstly, over a period of ten days we accessed each brand's Facebook page and manually collected our desired metrics (e.g., "fans" of a brand page, "likes", "shares", "comments" on brands' posts). We also counted each brand's daily Facebook posts over the same period. In the second step, we compared the collected data with the data vendor's records. Finding no discrepancies suggested that the data provider reliably collects and archives data from Facebook.

To capture the consumer mindset metrics we follow the marketing literature and rely on survey data (Aaker, 1996; Lehmann et al., 2008; Steenkamp et al., 1997). To obtain high validity survey metrics requires active recruitment and interaction with a large diverse set of participants (Steenkamp et al., 1997). Therefore, we obtained our consumer mindset metrics from YouGov Group, which uses online consumer panels to monitor brand perceptions. YouGov monitors multiple brands in multiple industries by surveying 5,000 randomly selected consumers (from a panel of 5 million) on a daily basis For estimation of the model as depicted we combine the traditional VAR approach with the panel-data approach, thus allowing for unobserved individual (brand-level) heterogeneity. Panel Vector Auto Regression (PVAR) (Holtz-Eakin et al., 1988) is a relatively new econometric technique that is a variant of the vector autoregression for use with panel data. We will adopt the reduced form of PVAR models in which each dependent variable is endogenous and is a linear function of its own past values, the past values of all other dependent variables, a set of exogenous variables, and an error term. While the use of PVAR is fairly nascent, it has been recently employed in the marketing (see for e.g. Borah and Tellis, 2015) and information systems fields (Dewan and Ramaprasad, 2014).

We adopt the reduced form of PVAR in which each dependent variable is endogenous and is a linear function of its own past values, the past values of all other dependent variables, a set of exogenous variables, and an error term. Based on the unit root and cointegration tests, we specify the PVAR model in Equation (1):

$$\begin{bmatrix} Satisfaction_{it} \\ PurchaseIntent_{it} \\ Consideration_{it} \\ Awareness_{it} \\ Earned(volume)_{it} \\ Earned(valence)_{it} \\ Owned(richness)_{it} \\ Owned(neutral\_valence)_{it} \\ Owned(positive\_valence)_{it} \end{bmatrix} = \sum_{n=1}^{p} \begin{pmatrix} \gamma_{1,1}^{n} \cdots\cdots \gamma_{1,9}^{n} \\ \vdots \\ \vdots \\ \gamma_{9,1}^{n} \cdots\cdots \gamma_{9,9}^{n} \end{pmatrix} \begin{bmatrix} Satisfaction_{it-n} \\ PurchaseIntent_{it-n} \\ Consideration_{it-n} \\ Awareness_{it-n} \\ Earned(volume)_{it-n} \\ Earned(valence)_{it-n} \\ Owned(richness)_{it-n} \\ Owned(neutral\_valence)_{it-n} \\ Owned(positive\_valence)_{it-n} \end{bmatrix} + \begin{pmatrix} \phi_{1,1} \cdot \phi_{1,2} \\ \vdots \\ \vdots \\ \phi_{9,1} \cdot \phi_{9,2} \end{pmatrix} \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} + \begin{bmatrix} u_{1i} \\ u_{2i} \\ u_{3i} \\ u_{4i} \\ u_{5i} \\ u_{6i} \\ u_{7i} \\ u_{8i} \\ u_{9i} \end{bmatrix} + \begin{bmatrix} e_{1it} \\ e_{2it} \\ e_{3it} \\ e_{4it} \\ e_{5it} \\ e_{6it} \\ e_{7it} \\ e_{8it} \\ e_{9it} \end{bmatrix} \quad (1)$$

Where Satisfaction = Satisfaction mindset metric, Purchase Intent= Purchase Intent mindset metric, Consideration=Consideration mindset metric, Awareness= Awareness mindset metric, Earned (volume) = earned social media volume, Earned (valence) = earned social media valence, Owned (Richness) = owned social media richness, Owned (Neutral) = owned social media neutral valence, Owned (Positive) = owned social media positive valence. The off-diagonal terms of the matrix $\Gamma - \gamma_{kl}^{n}$ estimate the indirect effects among the endogenous variables and the diagonal terms estimate the direct effects. The exogenous vector contains the advertising awareness variable and a deterministic trend t to capture the impact of omitted, gradually changing, variables.

3 Implications

This study aims to contribute to the literature in several ways. The paper is currently at the conceptual stage with further developments expected in the coming months. We aim to provide a theoretical explanation as to why social media metrics should affect mind-set metrics as this link is currently underexplored in the current marketing literature. Examining this relationship should reveal new insights on the importance of social media for organizations. Our research answers the question on the return on investment (ROI) on social media marketing by establishing that social media positively affects consumer behavior.

Improving the way in which consumer reach their purchase (or repurchase) decision is a key goal in marketing, which can now be systematically related to drivers in social media metrics. For example, marketers could use social media activity both as an influencer and as a predictor of customer mind-set metrics. Alternatively, marketers could potentially use consumer engagement as a predictor of their consumers' mind-set, or could influence consumer engagement and mind-set by actively posting appropriate content in the appropriate format at the appropriate interval on their Facebook presence. In addition, by considering different dimensions of social media and consumer mindset our research underscores that not all social media are created equal and, therefore may not affect the consumer mindset in a similar fashion. Finally, marketers could estimate the feedback loops from the consumer mind-set to online consumer engagement metrics to identify how consumer mind-set can drive consumer engagement.

Our model will this potentially allow managers to estimate the immediate and long-term impact of their social media actions. On the one hand, the immediate impact is relevant as managers need to be able to monitor social media conversations so as to be

able to estimate customer mind-set metrics almost in real time to allow for accurate predictions. In addition, being able to measure the long-term impact should also allow managers to better justify company investments in social media marketing and obtain their much needed funding.

4 Preliminary Findings

The Power of Consumer Voice: Earned Social Media. Our findings emphasize the importance of earned social media in shaping the consumer mindset. First, we find that the *valence* of earned social media has strong positive effects on all consumer mindset metrics. We find that "what" consumers say (*valence*) is more important than how often they say it (*volume*). In light of these findings, managers should acknowledge the power of earned social media and incorporate it into their extended marketing mix. Social media enables the wisdom of the crowd, in effect making levers under the direct control of the brand less manifest.

Volume and Valence of Owned Social Media. Social media managers have at their disposal several other tools that they can use to influence the consumer mindset. Our study suggests four managerial levers: namely the three dimensions of owned social media and advertising. Our findings indicate that the *volume* of brand posts can have a beneficial effect on *Awareness*. In other words, more frequent brand posts translate into more consumers discovering the brand. Interestingly, we find that the hallmarks of persuasive marketing messages in traditional settings - adopting a positive language (advertising-like tone) - can have a negative effect on social media. Brand posts with a positive *valence* have a negative effect on purchase intent. In contrast, we find that adopting a neutral *valence* positively affects the purchase intent. This is consistent with our previous argument that a neutral tone conveys more objectivity, which can be perceived by social media audiences as being more trustworthy and informational.

Richness of information. Another key finding relates to the *richness* of the posts that managers use to convey information to their consumer base. Rich posts are the strongest predictors of purchase intent and satisfaction. In other words, to positively impact consumer choices, managers should create richer content using photos, videos and / or music.

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