Understanding the Impact of the Brand Experience on Brand Reputation by the Moderating Role of Technology Turbulence

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Abstract
Brand experience is the conceptualization of the brand’s design, identity, packaging and connection that will remind the brand’s perceptual, cognitive, emotional and behavioral reflections. In brand studies, mostly brand behavior, attitudes and feelings are analyzed. The brand experience arises not only under a general constraint or emotion situation but also in a more customized and detailed combination of feelings, perceptions, emotions and behaviors. This combination points out that brand consumers evaluate the brands and companies not only with the general sense or general behavior but also with more complex combinations. Brand’s organizational reputation arises not only from brand’s reputation of being a reliable brand, but also from emotional appeal, products and services, vision and leadership, workplace environment, which are also associated with factors such as social and environmental responsibility and financial performance. Brand experience influences the formation of this multifactorial brand reputation. The consumers in contact with the brand perceive the reputation of the brand they consume according to their experience in an environment where technology and market change constantly. This research examines the role of technological and market uncertainty which is a dimension of environmental uncertainty on the relationship between brand reputation and brand experience, which has emotional, behavioral and intellectual dimensions.

Keywords: brand experience, brand reputation, technology turbulence

1. Introduction
In today’s highly competitive consumption environment, suppliers have realized and adopted the construct of offering satisfying experiences to customers across several channels with lower prices and sometimes with new launches. Interestingly, very few studies have imparted an understanding of brand experience. Academic research also validates the relevance of customer experience in smartphone brands (Grewal et al., 2009; Morganosky & Cude, 2000; Ottes et al., 2012; Puccinelli et al. 2009; Srivastava & Kaul, 2014; Verhoeof et al., 2009).

Brand experience is conceptualized as a multi-dimensional construct and defined as “sensations, feelings, cognitions, and behavioral responses evoked by brand related stimuli that are part of a brand’s design and identity, packaging, communications, and environments” (Brakus et al., 2009; Khan & Rahman, 2015). Schmitt (1999) argued that there is a traditional approach to marketing view where consumers’ decision-making process highlights excessively on the rational and logical elements of the decision, and propose to expand emotional and irrational aspects into the decision process. He noted that “experiential marketing is usually broadly defined as any form of customer-focused marketing activity, at various touch-points, that creates a sensory-emotional connection to customers” (Schmitt, 2009, 2008; Khan et al., 2015).

2. Hypothesis Development
According to Brakus et al. (2009), brand experience is quite different from concepts such as brand attitude, brand personality, brand involvement and brand attachment due to its involving cognition, sensation and feelings whereas other variables involve general assessments. However, researchers verify brand experience dimensions for several kinds of products (cars, laptops and sneakers) and explained their impact on brand loyalty through affective commitment (Iglesias et al., 2011). The concept of brand experience has been an interesting topic and many studies suggest that brand experience captures the real essence of customer-brand relationship (Brakus et
higher behavioral intentions (Brady et al., 2008; Sengupta et al., 2015). In this study, the brand experience and its perceived reputation make the audiences believe this failure will not happen again in the future and cause service with their customers loyalty based on the past experiences and satisfaction. The brand experiences with consumers (Gounaris & Stathakopoulos, 2004). However highly reputed brands easily cope with the failure of products (Brakus et al., 2009) while the past experience with a product or brand leads to enhanced recall of brand memories. Starting from this point of view, the experience helps anyone to develop trust, commitment, and preference through the brand (Ha & Perks, 2005). However there are some characteristics seen in brand experience: it could be positive or negative, short-term or long-term, and have a positive effect on customer satisfaction, customer loyalty, and brand association; especially brand personality (Zarantonello & Schmitt, 2010). An experience on brand is subjective and internalized by a relation to the consumer’s actual use of products (Brakus et al., 2009) while the past experience with a product or brand leads to enhanced recall of brand information (Mikhailitchenko et al., 2009; Delgado-Ballester et al., 2012; Baumann & Conlon, 2015) Experiences can be conceptualized through social media and the content of any brand announced in social media has much more easily been understood by the owners efforts (cf. Simon, 1969; Lury, 2004). Thus, brand owners are able to articulate the brand and configure particular readings, and therefore experiences.

The experience economy theory involves experience marketing in general. According to Pine and Gilmore (1999), the customer participation and connection with the brand forms the economic value that lies in co-producing staged experiences. The dimensions of the brand experience consist of four first order constructs: sensory, affective, behavioral and intellectual experiences (Brakus et al., 2009, p. 52). Brand experience appropriates specific sensations, feelings, cognitions and behavioral responses; however, in Brakus et al. (2009) brand experience is proposed to be an antecedent of brand personality (Ishida & Taylor, 2012). To position a brand in individual’s/consumer’s mind as an image, Hulten (2011) consider the companies to apply sensorial strategies which might differentiate and position a brand. Brand experience should affect not only past-directed satisfaction judgments but also future-directed consumer loyalty (Keng et al., 2013).

Beside the brand experience, positive brand reputation is becoming increasingly important for both academics and practitioners to be successful and hence profitable (Herbig & Milewicz, 1995). Reputation is defined as aggregate perception of noticeable features of a brand/company from the perspective of external environments (Fombrun & Rindova, 2000). While the brand reputation satisfies the consumer, the brand’s acquisition over time also helps observers rank the brand in the market character (Veloutsou & Moutinho, 2009). Having a good reputation will help attracting more customers but if it is repeatedly unsuccessful and cannot meet its stated aims or marketing signals, it will develop a negative reputation (Milewicz & Herbig, 1994). Consumers perceive brands and companies as private affairs like celebrities or personalities that have their own character (Veloutsou & Moutinho, 2009). The prediction about a brand will be much easier if the brand’s current reputation is known by the target audience. There will be a damage of reputation when mixed signaling (saying one thing and doing another) occurs on a brand. When a brand does not deliver what it promises, customers will not perceive it as reliable and credible (Herbig & Milewicz, 1995). Prior studies point out that constructive brand reputation protects the company during the crisis by creating a buffer or shelter (Hess, 2008). The service literature has extensive reinforcement about brand reputation and it has absolutely a positive effect in behavioral intentions of consumers (Gounaris & Stathakopoulos, 2004). However highly reputed brands easily cope with the failure of service with their customers loyalty based on the past experiences and satisfaction. The brand experiences with its perceived reputation make the audiences believe this failure will not happen again in the future and cause higher behavioral intentions (Brady et al., 2008; Sengupta et al., 2015). In this study, the brand experience and
reputation relation is examined focusing on the smartphone brands as implementation area. Accordingly it is hypothesized that;

H1: Sensory brand experience positively related to brand reputation.
H2: Affective brand experience positively related to brand reputation.
H3: Behavioral brand experience positively related to brand reputation.
H4: Intellectual brand experience positively related to brand reputation.

2.1 The Moderating Role of Technology Turbulence

Among dimensions of environmental uncertainty, technology turbulence is the most effective on the relationship between experience and reputation of a brand. It is defined as the rate of change in the composition of customers and their preferences by Jaworski and Kohli (1993). Managers of brands trying to be technology-oriented should be responsible of succeeding the correct signals of customers’ latent needs. (Levitt 1969, Webster 1988, Jaworski and Kohli 1993). In order to have responsiveness in customers’ changing preferences, organizations have to modify their products and services consistently if they operate with a more turbulent technology. Contrarily, in stable markets, an organization’s products and services don’t require any modification and the preferences of customers do not change very much. Therefore, brands operating in more turbulent markets like smartphone (evolving technology-intensive) sector are likely to have a greater need to be market and technology-oriented, compared to brands in stable markets (Jaworski and Kohli, 1993). Thus H5 is developed as:

H5: Technology turbulence shows a moderating effect between the relationship of brand experience and brand reputation.

3. Research Design and Measures

To test the above hypotheses, multi-item scales have been developed or adopted from prior studies for the measurement of variables. 5-point Likert scales ranging from “strongly disagree” (1) to “strongly agree” (5) have been used to measure all variables. The appendix includes the measures used in the study, followed by a summary of the measures. For the brand experience variable, the questionnaire items from Brakus et al. (2009) have been modified. Brand reputation is captured using three items based on Veloutsou and Moutinho (2009).

After developing the new questionnaire items in English, three academics from US-based universities evaluated the content and significance of the items to establish face validity. They did not note any difficulty in understanding the items or scales. The questionnaire items were then translated into Turkish by a bilingual researcher. During the translation process, the researchers discussed and calibrated our views and interpretations of the measurement items to generate a common conceptual basis. Then, we tested the suitability of the Turkish version of the questionnaire with 12 part-time graduate students who use smartphones and lots of applications on their phones. Respondents did not demonstrate any difficulty in understanding the items or scales.

The research’s conceptual model, based on previous studies, is given in Figure 1, showing the impact of four antecedent factors—sensory brand experience, affective brand experience, behavioral brand experience and intellectual brand experience—on brand reputation. Brand experiences of smartphone consumers and its dimensions are hypothesized to have a direct influence on brand reputation. Technology turbulence is also hypothesized to moderate the relationship between brand experience and brand reputation.
3.1 Sampling

After developing the new questionnaire items in English, two academics from US-based universities evaluated the content and significance of the items to establish face validity. They did not note any difficulty in understanding the items or scales. These new and adopted questionnaire items were first translated into Turkish by a translator and then retranslated into English by a second translator using the parallel-translation method. The two translators then jointly reconciled all differences. A draft questionnaire was developed and then evaluated and revised in discussions with two academics from Turkey who has the knowledge of brand management as expert judges. Prior to the main survey activities, a pilot study was conducted with 35 respondents. The main survey, conducted in the Istanbul, Turkey focused on smartphone user consumers. Respondents were asked which smartphone brands they have any experience with (e.g., Apple iPhone, Samsung, LG, etc.) prior to filling in the questionnaire. Using a convenience sampling method, a total of 181 questionnaires were collected and of these 15 were excluded due to incomplete or missing items. 48.0% of the respondents were males and 52% females. 28% of the respondents were between 16 and 25 years old, 21% between 26 and 35.25% between 36 and 45.14% between 46 and 55.10% between 56 and 65, and 2% over 65. On the other hand 46% of the respondents were Apple iPhone users, 30% Samsung, 8% LG, 5% Nokia, 3% Blackberry, 2% Sony and 6% other brands.

3.2 Measure Validity, Reliability and Hypothesis Testing

After data collection, the reliability and validity of measures is evaluated by employing a purification process (Anderson & Gerbing, 1988). Given the fact that brand experience scale is new, we first conducted an exploratory factor analysis including 20 measured items of three variables, using a principle component with a varimax rotation and an eigenvalue of 1 as the cutoff point. We found that the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was 0.88, and the Bartlett test of sphericity was significant at p < .01, indicating the suitability of these data for factor analytic procedures. The result of the factor analysis suggests a six factor solution: sensory, affective, behavioral and intellectual brand experience, brand reputation and technology turbulence. Results reveal that Cronbach’s Alphas for reliability are above the acceptable levels of .70 (Hair et al., 2006; Pallant, 2007).

After exploratory factor analysis, the reliability and validity of our variables is evaluated using confirmatory factor analysis (CFA) (Fornell and Larcker, 1981). To assess unidimensionality, measures were divided into three subsets of theoretically related variables: (1) the four brand experiences measures (i.e., sensory, affective, behavioral, intellectual), (2) technology turbulence and (3) brand reputation as recommended by Zarantonello & Schmitt (2010), Veloutsou and Moutinho (2009) and Kohli and Jaworski (1993). After eliminating the problematic items through a step-by-step procedure, results indicated that three models fit adequately for the brand experience variables ($\chi^2 = 428.70$, CFI = .92, RMSEA = .08), technology turbulence variable ($\chi^2 = 463.02$, RMSEA = .07).
CFI = 90, RMSEA = 0.07), brand reputation ($\chi^2 = 165.38$, CFI = 0.91, RMSEA = 0.05). Also, all reliability estimates, including coefficient alphas, average variance extracted (AVE) for each construct, and AMOS-based composite reliabilities, are well beyond or close to the threshold levels suggested by Fornell and Larcker (1981). The reliabilities of the multiple-item, reflective measures are reported in Table 1, along with construct correlations and descriptive statistics for the scales. All reliability estimates are well beyond or close to the threshold levels suggested.

Table 1. Descriptive scales and construct correlations, and reliability estimates

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Brand Experience</td>
<td>4.21</td>
<td>0.58</td>
<td>0.850</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. D. of Sensory</td>
<td>3.87</td>
<td>0.74</td>
<td>0.559**</td>
<td>0.774</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. D. of Affective</td>
<td>3.28</td>
<td>0.87</td>
<td>0.149**</td>
<td>0.327**</td>
<td>0.660</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. D. of Behavioral</td>
<td>3.91</td>
<td>0.82</td>
<td>0.328**</td>
<td>0.182**</td>
<td>0.075</td>
<td>0.762</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. D. of Intellectual</td>
<td>3.71</td>
<td>0.82</td>
<td>0.264**</td>
<td>0.214**</td>
<td>0.130**</td>
<td>0.527**</td>
<td>0.926</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Brand Reputation</td>
<td>3.71</td>
<td>0.85</td>
<td>0.115*</td>
<td>0.203**</td>
<td>0.138**</td>
<td>0.261**</td>
<td>0.366**</td>
<td>0.876</td>
<td></td>
</tr>
<tr>
<td>7. Technology Turbulence</td>
<td>3.78</td>
<td>0.75</td>
<td>0.091</td>
<td>0.160**</td>
<td>0.074</td>
<td>0.238**</td>
<td>0.358**</td>
<td>0.511**</td>
<td>0.762</td>
</tr>
<tr>
<td>Cronbach Alfa</td>
<td></td>
<td></td>
<td>0.83</td>
<td>0.81</td>
<td>0.79</td>
<td>0.84</td>
<td>0.94</td>
<td>0.79</td>
<td>0.76</td>
</tr>
<tr>
<td>Composite Reliability(CR)</td>
<td></td>
<td></td>
<td>0.84</td>
<td>0.81</td>
<td>0.79</td>
<td>0.84</td>
<td>0.94</td>
<td>0.79</td>
<td>0.76</td>
</tr>
<tr>
<td>Average Variance Extracted (AVE)</td>
<td></td>
<td></td>
<td>0.51</td>
<td>0.52</td>
<td>0.53</td>
<td>0.68</td>
<td>0.63</td>
<td>0.59</td>
<td>0.57</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01

Notes. *p<0.1, **p<0.05, ***p<0.01; Path coefficients are standardized

Figure 2. Path-model results

To test the hypotheses, a structural equation modeling (SEM) analysis is carried out using AMOS 22.0. SEM requires sample sizes greater than 200 with five to ten cases per observed variable (Kline, 2005; Hair et al., 2006). The original dataset consisted of 20 cases meeting the data adequacy requirements for SEM. Subsequent analyses resulted in a final dataset of 181 cases still exceeding the minimum requirements for SEM. During the analysis, the parameters representing the covariances across brand experience contents, brand reputation and technology turbulence variables were allowed to be free, consistent with the marketing literature. It has been found that the covariances among the brand experience variables were all significant. This indicates that sensory, affective, behavioral and intellectual brand experiences occur simultaneously and affect each other. Figure 2 demonstrates the relationships among brand experience, technology turbulence and brand reputation. It shows that the conceptual model adequately fits the data. The incremental fit index and comparative fit index are...
beyond 9. The ratio ($\chi^2$/d.f.), the chi-square per degree of freedom, is 2.60, which is less than 5, suggesting a reasonable fit. The RMSEA is .08.

Regarding the role of brand experience contents in brand reputation, it is found that sensory brand experience ($\beta = .85, p < .01$), affective brand experience ($\beta = .28, p < .05$), behavioral brand experience ($\beta = .42, p < .01$) and intellectual brand experience ($\beta = .16, p < .01$) are positively associated with brand reputation, supporting H1, H2, H3 and H4.

Furthermore, the results in Figure 2 show that brand experience content variables explain 78% of variance ($R^2 = .78$) in brand reputation.

To test the moderating role of technology turbulence between brand experience and brand reputation (hypothesis H5), a moderated SEM analysis was used (Irwin and McClelland, 2001). Because of the possibility of multicollinearity, the technology turbulence, sensory, affective, behavioral and intellectual brand experience variables were mean-centered before performing the analysis, as suggested by Aiken and West (1991). Table 2 shows that the relationship between affective brand experience and brand reputation across low, medium, and high levels of technology turbulence ($\beta = .31, p < .05$) has an inverted U-shape (∩-shape). Also, the relationship between behavioral brand experience and brand reputation across low, medium, and high levels of technology turbulence ($\beta = .20, p < .01$) has an inverted U-shape (∩-shape). The last dimension of brand experience is intellectual brand experience and brand reputation across low, medium and high levels of technology turbulence ($\beta = .23, p < .01$) However, no moderating role of any technology turbulence variable is found between the sensory brand experience and brand reputation, partially supporting H5.

### Table 2. Moderating role of technology turbulence

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Technology Turbulence Path Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensory Brand Experience→ Brand Reputation</td>
<td>.22***</td>
</tr>
<tr>
<td>Affective Brand Experience→ Brand Reputation</td>
<td>.30***</td>
</tr>
<tr>
<td>Behavioral Brand Experience→ Brand Reputation</td>
<td>.24***</td>
</tr>
<tr>
<td>Intellectual Brand Experience→ Brand Reputation</td>
<td>.23***</td>
</tr>
<tr>
<td>Technology Turbulence→ Brand Reputation</td>
<td>.18**</td>
</tr>
<tr>
<td>(Technology Turbulance)$^2$→ Brand Reputation</td>
<td>-.04</td>
</tr>
<tr>
<td>Sensory Brand Exp.$^*$ (Tech. Turb)$^2$→ Brand Reputation</td>
<td>-.11</td>
</tr>
<tr>
<td>Affective Brand Exp.$^*$ (Tech. Turb)$^2$→ Brand Reputation</td>
<td>.031**</td>
</tr>
<tr>
<td>Behavioral Brand Exp.$^*$ (Tech. Turb)$^2$→ Brand Reputation</td>
<td>.20***</td>
</tr>
<tr>
<td>Intellectual Brand Exp.$^*$ (Tech. Turb)$^2$→ Brand Reputation</td>
<td>.23***</td>
</tr>
</tbody>
</table>

$\chi^2 (87) = 178.33, \chi^2$/d.f. = 2.05, CFI = .95 IFI = .95, RMSEA = .07

### Notes

Tech. Tub.: Technology Turbulence, Brand Exp.: Brand Experience; Path coefficients are standardized; *p<0.1, **p<0.05, ***p<0.01.

4. Discussion and Implications

First, this study empirically demonstrated the relationship between brand experience and brand reputation, enhancing the understanding of the niche of technology turbulence on this relationship. Given the fact that brand experience of smartphone users is conceptually distinguished from other brand attitude, they are more than general evaluative judgments including specific sensations, feelings, cognitions and behavioral responses through the smartphone brands. While previous studies focused on the role of brand experience on brand loyalty, consumer satisfaction, brand recall, brand trust, self image congruence, brand image (Brakus et al., 2009; Ishida & Taylor, 2012; Baumann, 2015; Heath, 2006), this study searches for any relation with the brand reputation. Brand reputation is a crucial indicator for the brand equity (Alam & Yasin, 2010). Thus, consumers frequently choose reputable smartphone brands based on their experience with the brand. If a smartphone brand (i) makes strong impression on consumer visual sense, appeals to consumer sense (i.e., sensory brand experience), (ii) induces feelings and sentiments, causes strong emotions through consumer (i.e., affective brand experience), (iii) results in bodily experiences and is action-oriented (i.e., behavioral brand experiences) and (iv) makes consumers think and stimulate their curiosity and problem solving, then, the consumers tend to see the brand more successful and valuable to purchase products continuously.

Specifically, when consumers have any experience with smartphone brands under the conditions of low or high technology uncertainty (i.e., more or less knowledge about the technology), the perceived image of the brand which called reputation is increases. However, when the technology turbulence is at a moderate level, consumers’ experience on a brand makes the brand’s reputation and equity stronger. Interestingly, contrary to the
hypothesis, it is found that behavioral brand experiences impact brand equity with a “U” shape. This finding shows that when the technology turbulence is at the moderate level, the affect of behavioral brand experience on the brand reputation is weak. However, when the consumer is exposed to too much or less technology turbulence, free expression of the behavioral brand experience strongly impacts a brand reputation.

Third, this study adds new insights to the brand management of the marketing literature. As mentioned before brand experience was associated with brand loyalty, brand image, and brand equity. This paper shows the importance of brand reputation as a brand management concept. This relation was measured by the moderating affect of technology turbulence on the smartphone brands. Future studies should be focused on other brand sectors and also can be related with other brand management issues such as brand heritage, communities, identification or advertising.

References


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