

Review Article

THE POSITIVE & NEGATIVE IMPACT OF TECHNOLOGY IN RETAIL POINT OF CONTACT

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Abstract

Managers have to face milestones for better resource allocation, to ensure effective efficiency of production. Thus it is understood that practical influence is necessary, but previous survey examines word-of-mouth, retailer touchpoint and traditional methods such as separate approach as well as brand advertising. This is denoted six touchpoints such as retailer advertising, brand advertising, word-of-mouth, in-store communications, traditional method of marketing and peer observation (seeing other customers). The respondents comment on the impact of touchpoints by contemporary text message using the Realtime Experience Tracking (RET) method. The influence of touchpoints upon the change among customers to consider the brand is investigated in this study under four consumer categories such as soft drinks, technology products, electrical goods and mobile handsets. The balance customers' worthy responses to the touchpoints were both touchpoint frequency and touchpoint positivity. The effects of touchpoint may vary according to the category. A sample model suggests that the positivity of in-store communication, generally, seems to be highly impactful than other touchpoints, even the brand advertising. Peer observation, is also significant but a neglected touchpoint. Along with brand advertising the relative impact of retailers, social causes and third party endorsement is also essential. As compared to touchpoint frequency, touchpoint positivity explains and forecasts the change. The current study lists out the significance of methods that could track touchpoint perceptual response as well as frequency so as to compensate the present analytic approaches, for instance, media-mixed modelling on the basis of media spend or exposure alone

Keywords: Retailing, Advertising, Integrated Marketing Communications, In-store Communications, Word-of-mouth (WOM).

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INTRODUCTION

Naik and Peters (2009) opined that the managers receive crucial insights via research data that actually compares and contrasts the impact of different paid media that in turn helps in the determination of their whole expenses incurred on media and its allocation. But the brand owners face even more big challenges of allocating funds and time management for a wide range of touch points that exist in the decision making of customers (Court, Elzinga, Vetvik and Jørgen 2009). This wide range of touch points go surpassing the brand advertising that is usually called paid media or otherwise owned media in which the firm is not expected to pay directly. This is inclusive of traditionally-earned media such as editorial coverage. According to Stephen and Galak (2012), peer-to-peer encounters with Word-Of-Mouth (WOM) conversation is also observed as earned touchpoints. When it comes to consumer goods which are sold via retail players, the retailer at times need to advertise with the brand. Further, the store has all the products and even more than what is preferred by the customer in the past.

Various researchers (Court et al. 2009; Goodman, Broniarczyk, Griffin, and McAlister 2013) mentioned that new brands can be actively considered for purchase by the consumer through in-store presentation which may occur immediately or during subsequent visits though the channel of purchase may vary (Verhoef, Neslin and Vroomen 2007). In the touchpoints discussed, the influence of the brand owner has wide range of potentials and can control brand advertising. So there is a change in the challenging aspects i.e., from resource allocation to measurement challenge in order to assess the relative importance of these various touchpoints that may potentially invite the customer's attitude towards the brands/products.

Wiesel, Pauwels and Arts (2010) said that in spite of the fact that the customer's demands must be fulfilled at all the touchpoints,

the research centres mostly never agree on decisions regarding brand advertising, WOM and in-store communications. Such discussions are mandatory since it provides a thorough insight about the decision making strategies.

The managers must have an idea about the comparative effects of diverse touchpoints in order to strategize a complete marketing plan. Neslin et al (2014) opined that there may be even observation of all the touchpoints in the customer demand process which is inclusive of customer interactions with distribution channels till the final choice is made by the customer. This is because the search process is a repetitive one as the customers go through brand/channel utilities. Recently, it is observed that the brand managers are increasing their budget allocation in unmeasured media, for instance in-store communications, news media coverage etc., (Ailawadi, Beauchamp, Donthu, Gauri, and Shankar 2009, p. 50). This is the observation upon brand managers by fragments of the media.

Based on the available data, it has been hypothesized that there is a lack of empirical studies across a wide range of touchpoints. In the table 1, the researcher provided a list of illustrative research examples that examine the influence of different touchpoints. There are lots of individual data too available for retail transactions and promotions from consumer panels as well as from loyalty-card holders (Ngobo, 2011). However such sources of data have no reach upon the other part of the decision making factors such as word-of-mouth. Naik and Peters (2009) compared the aggregate-level to assess the impact of few private as well as public sector entities though it represented only irregular evaluation of customer responses. However few decisions, for instance peer-to-peer touchpoints, cannot be touched. Trusov, Bucklin and Pauwels (2009) mentioned that there are lots of automatic representative information available

online which can deduce the customer's decisions though there lacks identical data for offline brands. Wind and Lerner (1979) opined that the touchpoints can be inquired in a comprehensive manner via surveys, though the receivers find it challenging to remember accurate touchpoints. According to Aaker, Drolet and Griffen (2008), it is common for the successful or productive response to deteriorate at a faster rate and is poorly remembered. So, the brand tracking surveys are used by the managers only in case of advertisements or those touchpoints which are repeated periodically.

So, the current study is aimed at making three contributions to the literature in the areas of multichannel and brand choice. At first, the researcher would like to prove the role played by wide range of touchpoints in the development of perception about the brand. All the six touchpoints are effective under atleast three categories.

Though the results from 'relative touchpoint' could differ by its categorization, the in-store communication is suggested as the most practical one, in a combined model. This touchpoint seems to impact more when compared to other touchpoints, for instance brand advertising. Peer-observation, a touchpoint which is not relevant or discussed much, is more convincing as well as prevalent these days. In collaboration with brand advertising, the impact created by the retailers is proved well in addition to third party endorsements as well as social effects.

Secondly, the study emphasizes the role played by both frequency and positivity of the touchpoints. So, it is found that the positive response makes up the power of a model forecasting change on the basis of frequency. So, a limited media-mix modelling can be utilized as substitution for frequency. Thirdly, an RET-based approach is suggested utilizing which one can

measure both positivity and frequency of various touchpoints for number of categories and also one can find out other possible touchpoints too. The following segments details about the theoretical framework in which the data collection, analysis procedures are described in a precise manner with research findings. The study inferring for practical application as well as research possibilities are also discussed.

CONCEPTUAL FRAMEWORK

The customer purchase behaviour is influenced by a number of separate experiences at different touchpoints, for instance, WOM, advertisements and so on as per the **figure 1** published by Court et al (2009). Touchpoint can otherwise be termed as the process behind direct or indirect contact with the brand. Neslin et al (2006,p.96) defined that these touchpoints may include channels, but not limited with that as a customer contact point or a process which is used by the company to interact with a buyer. A conventional definition may be required since the interaction is predominantly one way such as television advertising while the organizational focus may not include brand experience such as WOM and the firm's involvement might not be personal.

The touchpoints that we focus stress the importance of breadth of the stakeholder touched by the buyer i.e., Peers (WOM and peer observation), brand owner (brand advertising), retailer (retailer advertising and in-store communications in addition to independent third parties, for instance editorial and expert reviews which are nothing but traditional media. So the subtypes are combined within each touchpoints as online or offline WOM. The current study model is based on the influence of these touchpoints on change in their decision making by considering the earlier experience.

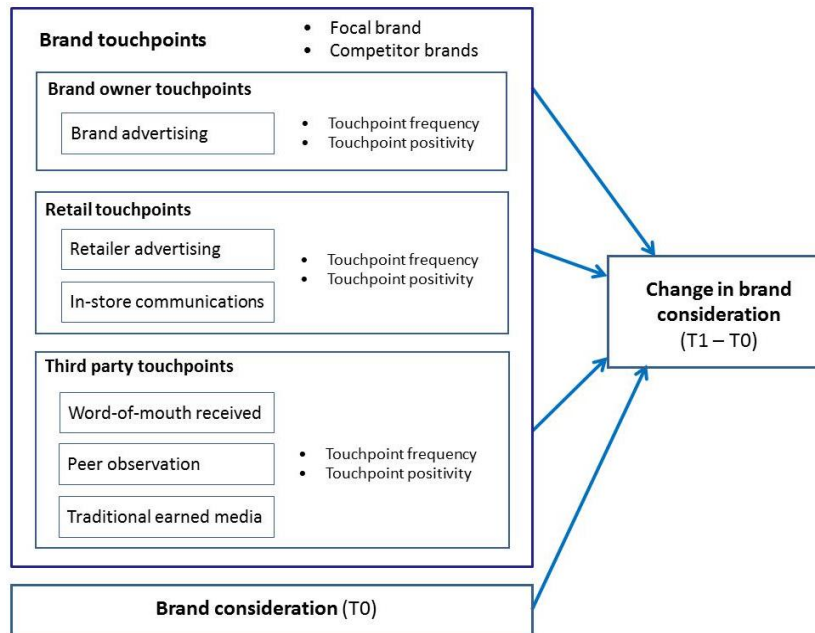


Figure 1: Conceptual framework

Touchpoint frequency and positivity

Thomas and Sullivan (2005) analyzed the different customers in touchpoint frequency. The frequency might have an influence on the brand experience through increasing the brand awareness among the customers (Yaveroglu and Donthu 2008). The study considered constant responses to the touchpoints. Though there are empirical results available that long-lasting ads influence the outlook of the customers (Briñol, Petty, and Tormala 2004) a number of models that focus on market data, especially the paid

media, stress the importance of frequency, since the intuitive response data seems to be scarcely available. It is challenging to reform this method. Based on WOM research inspirations, the emotional responses are compared with touchpoint positivity, defined otherwise as a combination of customer's effective response to the interaction (Kahn and Isen 1993).

The effective response of the seller usually impact the customer purchase patterns on spending and repeat-buying (Arnold and

Reynolds, 2009; Liu 2006). However, there are many ways present in which the effective response can be experienced (Chitturi, Raghunathan and Mahajan, 2008), for instance, various emotions can be related to unidimensional incorporation of an effective behaviour or positivity (Kahneman and Krueger, 2006; Westbrook and Oliver, 1991). The positivity is usually relevant to results in combination to variety seeking (Kahn and Isen 1993), satisfaction (Westbrook and Oliver 1991), commitment (Ahluwalia, Burnkrant and Unnava 2000) and consideration (Desai and Raju 2007). The positivity is assumed to meet the interests of model parsimony in the organization. A specific section of the customer's assessment reciprocation is created after touch-point effect. Westbrook and Oliver (1991) opined that the assessment reaction is retained in the memory and impact future brand-related awareness campaigns (Baumeister, Vohs, DeWall and Zhang, 2007). But there may not be proper remembrance of the effective reaction after some time span, denoting that it is made just for the sake of justification of oneself (Cowley, 2008). So, based on this, it can be concluded that the touchpoint positivity should be tested then and there after the experience and not to wait or reconsider the observation.

Brand consideration

Brand consideration is the core value for parsimony on one brand perspective. Roberts and Lattin (1997) defined consideration as the threshold upto which the buyer would be interested to buy the brand in the near future. So, it can be highly relevant to the purchase intention and however, it enables one to monitor the customers' mind about a set of brands which develops on the go. Neslin et al (2014) opined that the choice of customers then depend on the basis of how they compare the usefulness of the product. Priester, Nayakankuppam, Fleming and Godek (2004) provided help in mediating the assessment process that compares the developing attitude towards the brand on one hand and purchase on another hand. When there is no purchase data available, the brand consideration is a useful process in midway development though it changes now and then. The consumer's decision making process is a collaboration of various elements such as interaction with multiple touchpoints and the 'developing brand consideration' of the consumer. In this research, minuscule details of method description, peer-observation and other such touchpoints, touch frequency and positivity dissimilarities along with real-time data collection are added. One more reason to perform this analysis is it's predominantly usage among the professionals to determine their customer behaviour.

Touchpoints

The study information regarding the touchpoints is shown in the figure 1. At first, the advertisements published by the brand owner as well as retailer were surveyed separately. According to Naik and Peters (2009) the advertisements run by the media usually don't consider the model of retailer. At second, the in-store communications in addition to subtypes of touchpoint such as in-store posters as well as catchy display of the product in shelves were observed (Ailawadi et al., 2009). When it comes to food store or at a restaurant, these subtypes included the product's glimpse, beer mats, posters, pamphlets etc.

In peer-to-peer touchpoints, peer observation is one such entity. In the previous times, the impact created upon the customers in the market environment is scarcely discussed when compared to the interaction of customer with the organization. Borghini et al (2009) like qualitative studies and Sweeney and Soutar (2001) like quantitative studies provided a suggestion that other customers were able to impress on the brand attitudes via observation rather than the direct suggestion or criticism of WOM. According to Grove and Fisk (1997), when the peers are looked upon, it may influence the service satisfaction. In general, the consumers enhance their purchasing tendency when they see others (Thakor, Suri and Saleh, 2008) and when a consumer buys a product based on the support of existing customer, the relationship is meant to be a long-term one with specific brands (McAlexander, Schouten and Koenig, 2002). Bearden and Etzen (1982) opined that the impact of others is always high at public utility places. Word-Of-Mouth is the second peer-to-peer touchpoint in which an online or offline conversation that occurs between the individuals during which a brand name is discussed. According to East, Hammond and Lomax (2008), a number of studies already have focused the impact of WOM upon consumer purchase behaviour and is discussed separately from other touchpoints. However, WOM in social media seems to have been discussed only in the later period (Liu 2006; Archak, Ghose and Ipeirotis 2012).

Finally, Stephen and Galak (2012) termed the earned media as traditional earned media in order to differentiate the social media from editorial and news coverage. According to Goh et al (2011), such earned media forms the crux of few exclusive time series studies. Stephen and Galak (2012, p.626) reviewed a number of studies and published a report on earned media stating that "often only one source of publicity is examined, precluding comparisons between different types of channels". To conclude, the researchers would like to report that the "The effects of paid media on sales have been vastly covered in the marketing literature. The effects of earned media, however, have received limited attention as compared to the initial".

METHOD

Data collection approach and sample

See Figure 2 for the practical use of the RET method. Data was collected by The RET method's day-to-day application can be observed in the figure 2. Resonance, a market research organization collected the data which followed a method favoring a number of sponsored brand holders who were segregated into four different categories. North India and west India were the primary data collection locations and online survey method was followed to collect the data who use brand and brand observation for future competition. Once again, the respondents were requested to participate in the survey by weekend. Second, the consumers were requested to send a text message whenever purchasing a product during the individual timespan of 7 days. A message was sent to all the participants at the beginning of the survey with code frame as illustrated in figure 2 so that if at all they need any information, they can access it. This made sure the touchpoints were represented whenever occurred as well as the participant's real-time productive response in a positive manner.

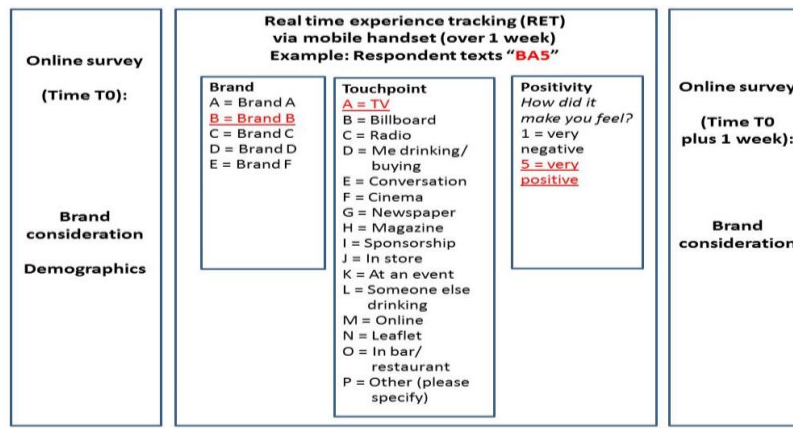


Figure 2: Method

Table 2: Sample Definition

	Electrical goods	Technology products	Mobile handsets	Soft drinks
Sample definition*				
Age	18-64	18-64	18-64	16-44
Number of encounters				
Brand advertising	4556	4327	3043	4298
Retailer advertising	7351	7013	1098	776
In-store communications	4304	7012	1790	5502
WOM	1142	1726	1603	669
Peer observation	2301	25689	2570	2793
Traditional earned media	785	2362	289	124
RESPONDENTS	4197	56432	1708	2465

* Either a current user or purchasing within the next few months, depending on the study.

As per the table 2, every category had a list of consumers recommended via an online panel since they expressed their wish to purchase in 3-12 months' timeline based on the category. Under soft drinks category, the consumers who consume carbonated drinks were included.

Several months of timeline was spent to collect the data based on the category whereas weekly samples were collected which included novel participants being surveyed every week. This method was deployed so as to assess whether the samples are capable enough for a market entry.

Each message recommended the brand through touchpoints and the real-time estimation touchpoint positivity of the consumer. The consumers were informed about the code language for the message supplemented with a letter for each brand, a letter for every touchpoint and likert-scale number to measure the positivity. For instance, CA1 represents 'Spirit' (name for confidentiality) and the touchpoint is a TV ad with a rating of 1

for positivity (in which 5 being very positive and 1 being the vice versa) on a 5-point scale. These coded messages aimed at easing the participation process. Figure 1 examines the broader touchpoints being collated under clusters, for instance, television, radio, billboards and so on were collated under brand advertising.

In order to emphasize this coding system's validity, the study participants were requested to track the responses, the texts which they sent were displayed, online for every two days during evening times as per their convenience. As a hard copy, the participants were requested to provide more details on the touchpoints via pull-down menu that had the subtypes of touchpoint. This way of noting down the data helped in cross-verification. For instance, a magazine touchpoint could be considered an ad from brand, retailer, as well as an editorial material.

The analysis results inferred that the researcher was denied from passing through the consumer samples where there is absence of both pre-consideration as well as post-consideration. The study also did not consider the respondents who had not reported brand consumption altogether since these participants lack interest and provide no substantial contribution to the study. In order to ensure the validity of the entries, the researcher cleaned the data. The participant's name was removed when there is an invalid code found while recording a touchpoint.

The participants list were deleted since the sample size was sufficient enough for a minimal loss of power. Of the total samples, the number of participants who were deleted in each category were 265% (6.0%) electrical goods, 62 (2.5%) soft drinks, 204 (10.7%) mobile handset and 260 (4.4%) technology products. Table 2 presents the base sizes for all the categories considered in which the highest being 5632 for technology products with least value for mobile phones i.e., 1709.

Measures

As per the article titled 'This is the only brand that I would consider purchasing' or 'I would definitely not consider purchasing it', the brand was determined using a 6-point scale which was similar to Bian and Moutinho (2009). Using a single likert-scale item, "How did it make you feel about the brand?", the positivity was measured on a 5-point scale anchored by 'very positive' and 'very negative', which were very similar to McFarland and Buehler (1998).

By counting a chosen type's touchpoints, the touchpoint frequency was determined. So, when a buyer have a look at two advertisements for the same brand in 7-days period, the touchpoint frequency is calculated as 2. In such case, 0 will be the value for positivity since it denotes neutral experience whereas +2 being very positive and -2 being very negative experiences.

These values were then added and average value was calculated for every consumer and type of touchpoint.

When a consumer fixes a value for one brand ad to be 4 whereas he values the other as 5, then the average positivity (post re-centering) becomes 1.5. When there is no report of a touchpoint from the participant (zero frequency), then the average positivity is coded as 0. So, in a reversion, the influence of neutral touchpoints (of when there is 0 average positivity) becomes equal with the influence of frequency. So, the influence of positivity can also be interpreted as the influence exceeding the neutral baseline of frequency, thus interpreting so. Powerful analyses on modeling frequency, positivity and the decision to code positivity as 0 when there is no touchpoint in a week are expected in the upcoming sections.

Models

In order to increase the sample size so that the generalizable results can be published, the data from all the four categories were combined together in an organized model. The data is

weighed as if every brand is equally symbolized in the data set in order to ensure that there is no bias towards the categories with such huge sample size. The model changes (T1 consideration minus T0 consideration) were considered at the level of customer for every brand with the help of existing (T0) demographics, brand consideration, brand dummies and time of year as control variables.

Further, the additional variability is also explained via the implementation of touchpoint frequency and positivity variables for both the brands such as the brand under focus and its competitor brands.

Based on the increasing number of responses from every customer (one response for every brand in their study), there may be chances of chaos and dissimilarities for every customer response caused. For instance, the unobserved covariates may face such challenges at the customer level. In order to make it accountable, the study included a respondent-level random intercept through a linear mixed-effects model.

Table 3: Correlation matrix: Pooled data

	Mean	Standard deviation	Consideration (Pre)	Age	Sex	Traditional earned	Brand advertising	WOM	Peer observation	In-store communications	Retailer advertising	Traditional earned	Brand advertising	WOM	Peer observation	In-store communications	Retailer advertising
Consideration (Post-Pre)	0.02	1.12	0.38**	0.02**	0.01*	0.02**	0.06**	0.02**	0.03**	0.07**	0.03**	0.05**	0.03**	0.05**	0.06**	0.08**	0.06**
Consideration (Pre)	3.79	1.17	1														
Age	37.11	11.41	0.04**	1													
Sex (Male)	43%		0.01	-0.01*	1												
Frequency																	
Traditional earned	0.04	0.23	0.04**	0	0	1											
Brand advertising	0.17	0.56	0.02**	-0.03**	0.03**	0.05**	1										
WOM	0.05	0.3	0.03**	-0.04**	0.02**	0.06**	0.1*	1									
Peer observation	0.1	0.43	0.03**	-0.05**	0	0.02**	0.05**	0.08**	1								
In-store communications	0.19	0.57	0.05**	0.01*	0	0.01**	0.03**	0.05**	0.08**	1							
Retailer advertising	0.16	0.56	0.07**	0.11**	-0.03**	0.02**	0.03**	0.02**	0	0.04**	1						
Average Positivity																	
Traditional earned	0.02	0.2	0.06**	0	-0.01*	0.54**	0	0.02**	0.01**	0.01**	0.01*	1					
Brand advertising	0.1	0.39	0.07**	-0.01*	0.01**	0.01	0.55**	0.03**	0.02**	0.02**	0.02**	0.01**	1				

WOM	0.0 3	0.2 5	0.0 6**	- 0.0 1**	0.0 1	0.0 2**	0.0 4**	0.4 4**	0.0 4**	0.0 4**	0.0 2**	0.0 3**	0.0 5**	1			
Peer observatio n	0.0 5	0.3 2	0.0 9**	- 0.0 2**	- 0.0 1**	0.0 3**	0.0 2**	0.0 4**	0.4 6**	0.0 4**	0	0.0 4**	0.0 2**	0.0 5**	1		
In-store communic ations	0.1 2	0.4 4	0.1 2**	0.0 4**	- 0.0 1**	0.0 2**	0.0 1**	0.0 4**	0.0 2**	0.5 2**	0.0 2**	0.0 4**	0.0 3**	0.0 6**	0.0 6**	1	
Retailer advertisin g	0.0 8	0.3 4	0.0 9**	0.0 7**	- 0.0 3**	0.0 1**	0.0 2**	0.0 1**	0	0.0 3**	0.4 8**	0.0 2**	0.0 5**	0.0 3**	0.0 3**	0.0 6**	1

Significant parameters: ** p < .01. * p < .05.

Table 3 has correlation matrix which denotes that there are no serious level multi-collinearity problems exist with the data. However, there seems to be high correlations exist between the frequency and positivity of every touchpoint which are detailed in the sections below.

As an additional check, the researcher assessed the VIF (Variance Inflation Factors) for explanatory variables in every model. **Table 4** has all the VIF values which fall in the range of 5 as recommended in literature (O'Brien 2007). This denotes that the multi-collinearity is never an issues.

Table 4: Model statistics

Model	AIC	BIC	r2 Marginal	r2 Conditional	Average VIF	Maximum VIF
Pooled data:						
Model 0: Null	2,48,999	2,49,027	0.00%	16.70%	NA	NA
Model 1: Baseline	2,35,861	2,36,186	14.60%	26.60%	2.02	2.49
Model 2: Frequency	2,33,931	2,34,330	16.70%	29.40%	1.91	2.6
Model 3: Positivity	2,31,244	2,31,717	19.40%	32.00%	1.92	2.62
Model 4: Competitor effects	230,905*	231,527*	19.60%	31.80%	1.84	2.67
Electrical goods: ¹						
Model 0: Null	26,029	26,051	0.00%	18.60%	NA	NA
Model 1: Baseline	24,584	24,705	17.10%	28.50%	1.44	1.82
Model 2: Frequency	24,337	24,513	19.80%	32.20%	1.37	1.86
Model 3: Positivity	24,036*	24,269*	22.70%	35.10%	1.55	2.04
Model 4: Competitor effects	24,068	24,414	23.30%	34.90%	1.55	2.08
Technology products: ¹						
Model 0: Null	19,241	19,262	0.00%	17.00%	NA	NA
Model 1: Baseline	18,152	18,253	17.80%	25.90%	1.3	1.62
Model 2: Frequency	17,962	18,117	20.60%	30.50%	1.3	1.81
Model 3: Positivity	17,734*	17,943*	23.80%	34.30%	1.61	2.18
Model 4: Competitor effects	17,737	18,055	24.80%	34.10%	1.62	2.22
Mobile handsets: ¹						
Model 0: Null	20,060	20,081	0.00%	15.40%	NA	NA
Model 1: Baseline	18,840	18,947	18.80%	30.10%	1.53	1.8
Model 2: Frequency	18,710	18,871	21.20%	33.30%	1.38	1.84
Model 3: Positivity	18,499*	18,715*	24.10%	36.20%	1.6	2.19
Model 4: Competitor effects	18,549	18,872	24.50%	36.00%	1.64	2.82
Soft drinks: ¹						
Model 0: Null	16,869	16,890	0.00%	19.60%	NA	NA
Model 1: Baseline	16,332	16,420*	9.60%	25.40%	1.39	1.71
Model 2: Frequency	16,300	16,442	10.70%	26.70%	1.4	1.9
Model 3: Positivity	16,243*	16,438	12.00%	27.60%	1.42	1.93
Model 4: Competitor effects	16,318	16,621	12.60%	27.70%	1.38	1.99

*Preferred Model. 1 1500 Bootstrap sample.

Our model formulation is as follows:

$$\text{ConsidPost}_{i,k} - \text{ConsidPre}_{i,k} = \alpha + \beta_1 \text{preConsidPre}_{i,k} + \beta_2 \text{brandBrand}_{i,k} + \beta_3 \text{timeQuarter}_{i,k} + \beta_4 \text{timeYear}_{i,k} + \beta_5 \text{demAge}_{i,k} + \beta_6 \text{demSex}_{i,k} + \sum_{j=1}^J \{ \beta_7 \text{freq}_{i,k,j} + \beta_8 \text{avgPos}_{i,k,j} + \gamma_j \text{freq}_{i,k,j} - \beta_9 \text{freq}_{i,k,j} \} + \epsilon_{i,k}$$

Where:

ConsidPost_{i,k} and ConsidPre_{i,k} are the consideration scores of individual i for brand k after and before the week of texting, respectively,

Brand_k is a dummy variable accounting for heterogeneity across brands,

Quarter_i and Year_i are dummy variables identifying when individual i was tracked,

Age_i and Sex_i are variables for the age and sex of individual i. Age is treated as a continuous variable and Sex is a dummy variable taking 1 for male and 0 for female, Freq_{i,k,j} and AvgPos_{i,k,j} are the frequency and average positivity of encounters individual i has through touchpoint j for brand k, and J is the total number of touchpoints in the model,

Freq_{i,k,j} and AvgPos_{i,k,j} are the frequency and average positivity of encounters individual i has through touchpoint j for all brands other than k (i.e. competitors to the focal brand).

Table 4 has the summary of model fit for each ones by sequentially building the model.

In the model 1, there are only control variables involved so that one can find out how considerations shifts can be measured via the respondents' data in order to enable a baseline for the future models 1.

Model 2: The second model, based on the anticipations that the changes in consideration may become a part of brand touchpoints, is built based on previous model through the addition of touchpoint frequency and a natural logarithmic decay.

Model 3: In the third model, the researcher then included the touchpoint positivity so as to differentiate the touchpoint frequency from touchpoint perceptual response.

Model 4: When compared to model 3 which consider only the same-brand effects, for instance, brand 'A's touchpoints influencing the consumer to consider brand A, the model 4 have an add-on component i.e., competitor touchpoint frequency and positivity. These may contribute negative effect on the brand which is focused and currently under consideration.

Model Selection

Based on the AIC (Akaike's Information Criterion) and BIC (Bayesian Information Criterion), the models compared and selected while the latter often choose simpler models with few parameters compared to the former. When there is improved model fit, it can be easily observed by the decreased information criterion among the models. But, no AIC or BIC

provides the absolute indication of fit (Burnham and Anderson, 2004).

As per Nakagawa and Schielzeth (2013), the marginal and conditional r² values were also utilized in order to have mixed-effect models. The amount of variability is demonstrated by the marginal r² whereas the former is explained only through the standard effects in the current study models. The conditional r² demonstrates the variability narrated by random as well as fixed effects.

The current study also analyzed the alternatives for 1-3 models in which the dependent variable was post-study consideration and not the change in consideration. In general, the pre-

consideration coefficient seems to be standard, positive valued one ((β ranges from 0.52 in electrical goods whereas it ranged in 0.71 in soft drinks in Model 3) since the pre-consideration plays as an initial estimate only, for post-consideration.

But significant results were achieved for the role played by touchpoint frequency and positivity whereas the coefficient magnitudes were found to be similar as reported herewith. This suggest that the model is robust based on the choice of dependent variable. So, the in-depth reporting is not proceeded further.

Also, the researcher assessed the model fit statistics for every isolated category in order to get an overview of the model which best suits the individual category data. Suppose when the full data needs to be taken for every category, then the categories will need to have more sample size for more complex models because of the formula used in the calculation of BIC and AIC. In order to get rid of this bias, the sample size is restricted to 1,500 respondents for every category while determining fit statistics. With the help of bootstrapping technique, random samples were taken with a replacement of 1,500 respondents from all the categories.

AIC, BIC and r² values were calculated using the data for the models, 1-4. A total of 5,000 iterations were done for this procedure from which average model statistics was considered further and is mentioned in table 4.

In case of both AIC and BIC for pooled data, the fourth model (model 4) is preferred. The fixed effects derive the variabilities (19.6%) found in the change in consideration of respondents. Further, an unobserved individual-level covariates (random intercept) that accounts for 12.2%. On the contrary, according to AIC, model 3 is the best choice for individual categories because of the least sample size compared to pooled data.

BIC further acts in favor for Model 3 whereas for soft drinks, it prefers Model 1. This might be attributed to the technology products, higher price-tag, extended purchase journey for electrical goods and mobile handsets when compared to soft drinks, more factors hence influencing consideration. With an assumption that r² is to increased up to model 3 in soft drinks, in order to keep it simple, the model 3 is preferred only while reporting individual category results.

Robustness checks

In order to test the robustness, the researcher conducted a check on various competing models and reformulations of frequency and positivity variables. Further, the decision of coding the positivity of non-occurring touchpoints to be 0 was also checked and these were in turn discussed.

Frequency

According to the above-discussed models, there is a natural log relationship present between frequency and change in consideration. This is to denote a person for communication wear out via over-exposure that may end up in reduced returns (Bass, Bruce, Majumdar and Murthi 2007). In order to test this frequency transformation, all the four competing models were attempted with different frequency formulation.

Model Freq1: With dichotomous variable (where at least one instance of the touchpoint occurs): $\beta_j \text{freq}_{i,k,j} > 0$

Model Freq2: With a linear term: $\beta_j \text{freq}_{i,k,j}$

Model Freq3: With a quadratic decay term: $\beta_1 \text{req}_{i,k,j} + \beta_2 \text{req}_{i,k,j}^2$

Model Freq4: With a natural log decay term: $\beta_j \text{freq}_{i,k,j} + 1$.

The fit statistics shown in the appendix deduce the log decay term (Model Freq4) to be the best fit.

Positivity

The current study assessed various pathways to incorporate positivity using different competing models as listed in the appendix. When the average positivity of model Pos1 is included, then it may result in the potential information loss. For instance, a negative individual (with -2, 0, 2) is treated equally with a neutral individual (0,0,0) encounters since both the items

average to 0 only. In order to assess this approach's robustness, a terminology was introduced for the variance of touchpoint encounters (Model Pos2) in alignment with Archat et al (2011).

Further, we differently separated the frequencies of negative, neutral and positive encounters (Model Pos3) in alignment with Liui (2006). The researcher also assessed a term for the positivity of the final touchpoint rather than the average positivity (Models Pos4 and Pos5). The study is thus concluded from the fit statistics that the highest efficient path to include positivity is always to make use of a simple average.

Positivity when no touchpoint occurs

During the instance, when a respondent has not encountered a specific touchpoint of a brand in 7-days period, then the frequency is numbered as 0. In all the 4 main models, the

positivity was coded as 0 in such case. But if we follow a different approach, then it would be mean imputation. We checked the above said two approaches in Model 4.

The AIC as well as BIC indicated that zero-coding provides the best model fit as listed in the appendix. Also, at the time of zero-coding, VIFs are given less than 5, the recommended cut-off whereas the mean imputation provides 6 VIF scores above this cut-off with 18.2, the largest value. So, zero coding seems to be the best approach in order to diminish the multi-collinearity and improve the model fit.

FINDINGS AND DISCUSSION

Table 5 shows the pooled data results for models 1 to 4. In **table 6**, the estimated model 3 is shown for every category. The study also reported the standardized coefficients for positivity to compare the relevant influence across the wide range of touchpoints, though the dummy and frequency (count) variables can be left unstandardized so that it is easy to interpret. These main results predominantly focused on Model 4 in pooled data is primarily focused prior to exploratory analysis.

Table 5: Touchpoint impacts on consideration change (pooled data)

	Model 1		Model 2		Model 3		Model 4	
	Beta	SE	Beta	SE	Beta	SE	Beta	SE
(Constant)	0.07**	0.02	-0.14**	0.02	-0.10**	0.02	0.01	0.02
Pre-consideration ¹	-0.39**	0	-0.40**	0	-0.43**	0	-0.43**	0
Frequency								
Traditional earned			0.14**	0.03	-0.01	0.03	0.02	0.03
Brand advertising			0.26**	0.01	0.08**	0.02	0.09**	0.02
WOM			0.18**	0.02	-0.03	0.02	-0.01	0.02
Peer observation			0.24**	0.02	0.05**	0.02	0.07**	0.02
In-store communications			0.29**	0.01	0.06**	0.02	0.10**	0.02
Retailer advertising			0.19**	0.01	0.06**	0.02	0.08**	0.02
Positivity ¹								
Traditional earned					0.04**	0	0.04**	0
Brand advertising					0.07**	0	0.07**	0
WOM					0.06**	0	0.06**	0
Peer observation					0.08**	0	0.08**	0
In-store communications					0.10**	0	0.10**	0
Retailer advertising					0.06**	0	0.06**	0
Competitor frequency								
Traditional earned							-0.02	0.02
Brand advertising							-0.04**	0.01
WOM							-0.06**	0.01
Peer observation							-0.05**	0.01
In-store communications							-0.08**	0.01
Retailer advertising							-0.04**	0.01
Competitor positivity ¹								
Traditional earned							-0.01*	0
Brand advertising							-0.01	0
WOM							0	0
Peer observation							-0.01**	0
In-store communications							-0.02**	0
Retailer advertising							-0.01	0

Significant parameters (p<0.05) are bolded. * p < .05. ** p < .01.

¹Standardized coefficients.

Table 6: Touchpoint impacts on consideration change by category (Model 3)

	Beta	SE	Beta	SE	Beta	SE	Beta	SE
(Constant)	-0.31**	0.02	-0.12**	0.02	0.02	0.04	0.06	0.04
Pre-consideration ¹	-0.45**	0.01	-0.45**	0.01	-0.46**	0.01	-0.33**	0.01
Frequency:								
Traditional earned	0.02	0.06	-0.02	0.04	-0.06	0.11	-0.02	0.14
Brand advertising	0.14**	0.03	0.14**	0.03	0.05	0.04	0.02	0.03
WOM	-0.13*	0.05	-0.04	0.05	-0.06	0.06	0.08	0.06
Peer observation	-0.07	0.04	-0.03	0.05	0.04	0.04	0.10**	0.03
In-store communications	0.04	0.03	-0.01	0.03	0.06	0.05	0.08**	0.02
Retailer advertising	0.06**	0.02	0.06*	0.03	0.1	0.07	-0.05	0.07
Positivity ¹ :								
Traditional earned	0.03**	0.01	0.06**	0.01	0.02*	0.01	0.02*	0.01
Brand advertising	0.08**	0.01	0.06**	0.01	0.09**	0.01	0.08**	0.01
WOM	0.05**	0.01	0.05**	0.01	0.09**	0.01	0.04**	0.01
Peer observation	0.09**	0.01	0.09**	0.01	0.10**	0.01	0.04**	0.01
In-store communications	0.12**	0.01	0.15**	0.01	0.09**	0.01	0.06**	0.01
Retailer advertising	0.08**	0.01	0.08**	0.01	0.02**	0.01	0.02	0.01

The non-touchpoint terms are discussed in brief sections. The prior consideration is noted to be in negative associated with the shift in consideration ($P < 0.01$, standardized $\beta = -0.43$ in case of pooled model which was in the range of -0.33 to -0.46 for category models). To be precise, it is an predicted regression to the mean effect since when the respondent's pre-consideration is higher, then any shift may get down rather than it goes up. The study primarily emphasized the brand neutral whereas some add-on explanatory power was gained by choosing some individual brands. There was a high correlation found with that of the coefficients of these dummy variables and prior consideration ($r = 0.84$). It can be explained as such when the consideration levels are high, it not only represents a more positive attitude, but it denotes higher attitude strength too that enables resistance against change to attitude (Priester et al. 2004).

As far as the temporal dummy variables are concerned, the respondents were found to report a high amount of shift in consideration at 2-4 quarters when compared to the first quarter. This might be due to post-Christmas dip during which, only few people are ready to spend discretely which results in low brand attention levels. It is also observed that the years 2011 and 2012 experienced a notable higher shift when compared to 2018 ($\beta = 0.08$ and 0.10 , respectively) which are coinciding with the increased consumer confidence after the recession period. Though few demographic predictors are present, it is of no focus.

Touchpoint frequency and positivity

As per the findings of pooled analysis, both positivity as well as the touchpoint frequency enact a role in shaping the consideration. In spite of the fact that the study may not be able to directly compare these coefficients, due to the different radical scale of data, it can be observed that the touchpoint positivity enhances notable explanatory power (Model 2 vs. Model 3). It can also be noted that there is a change in the coefficients of the touchpoint frequency between Model 2 and 3. Further, it seems that there is a correlation exists naturally between frequency and positivity which might be attributed to

the liking effects. While its separate effect, for example increase in the awareness, is over-estimated when no positivity was taken into account. This outcomes suggests that the advertisements with emotional appeals do have a strong effect upon the consumers though it is recalled rarely (Bülbül and Menon 2010). This further stresses the importance of supporting the traditional measurement methods which is purely based on the touchpoint frequency, for instance, respondent-level frequency approach (Havlena, Cardarelli, and de Montigny 2007) and media spend modeling (Naik and Peters 2009). These methods that assess the impact of touchpoint, are always challenged in teasing out the difference between an flawed execution and imperfect encounter due to choice of touchpoint and the study findings stress the importance of this difference. When applying practically, those measurement techniques that completely rely on touchpoint frequency, even in the presence of established validity problems associated with recall (Wind and Lerner, 1979), do not yield the expected specificity results provided by positivity-tracking techniques.

Relative touchpoint impacts

Further the study considered the relevant influence of various touchpoints through examination with the significant terms and through comparison of coefficients. In order to analyze the significance in second entity, the Wooldridge (2009, p.140-143) method was used. A new coefficient $\Delta\beta_{pq} (= \beta_p - \beta_q)$ is defined in this study denoting the variations of the positivity coefficients of touchpoints p and q. The null hypothesis is that $\Delta\beta_{pq} = 0$, i.e., no significant difference found the coefficients in opposition to the alternate $\Delta\beta_{pq} \neq 0$. The model is reparameterized in order to assure that $\Delta\beta$ is calculated as a coefficient using simple algebraic manipulation, thus allowing us to determine the standard error which is associated with the difference. This paved the way for p-value for the hypothesis test. **Table 7** compares and summarizes the derived coefficients in which a detailed results are shown for the pooled analysis as well as summarized results for the category-specific analysis. The touchpoints are positioned on the basis of influence of their positivity on consideration change.

Table 7: Comparative impacts of Touchpoint positivity

Pooled data: Coefficient differences (Model 4)														Category-specific: Rank (Model 3)			
Touchpoints	Rank	In-store communications		Peer observation		Brand advertising		WOM		Retailer advertising		Traditional earned		Electrical Goods	Technology products	Mobile handsets	Soft drinks
		ΔBeta	SE	ΔBeta	SE	ΔBeta	SE	ΔBeta	SE	ΔBeta	SE	ΔBeta	SE				
In-store communications	1	0.099**	0.004	-0.024**	0.006	-0.025**	0.006	-0.039**	0.005	-0.042**	0.006	-0.063**	0.006	1	1	1	1
Peer observation	2			0.075**	0.004	-0.002	0.005	-0.016**	0.005	-0.018**	0.006	-0.040**	0.006	2	2	1	3
Brand advertising	2					0.074**	0.004	-0.014**	0.005	-0.016**	0.006	-0.038**	0.006	2	5	1	1
WOM	4							0.060**	0.004	-0.002	0.005	-0.024**	0.006	5	5	1	3
Retailer advertising	4									0.057**	0.004	-0.022**	0.006	2	2	5	3
Traditional earned	6											0.036**	0.004	6	2	5	3

The current study too followed same process in order to measure the relevant influence of touchpoint frequency. When the tables 5 and 6 were assessed, there were only few touchpoints that expressed significant frequency coefficients in any case whereas when the coefficients were compared, it expressed only a few notable differences among these. So, the results were suppressed for brevity (though at some places, in text too) and the reader was referred instead to the frequency coefficients and significance levels in Tables 5 and 6.²

In table 7, the study started with the pooled model in which the touchpoints were considered in the decreasing order of positivity impact. Among the touchpoints, ‘in-store communications’ was placed at the top for which there was also significant frequency obtained. According to Van Nierop et al (2010), both the shelf and display in in-store communications ensure that the brand is familiar at POS which results in unplanned purchases (Cobb and Hoyer 1986). This is fueled by multi-sensory nature in addition to high attention levels in a store environment (Peck and Wiggins 2006). But this sales impact cannot be deemed as direct, but indirect via consideration (Van Nierop et al. 2010; Zhang 2006) and it remains the case not only for display, feature ads and other such in-store communications, but also for price-based promotions which plays a role in consideration set evolution. Van Nierop et al (2010) further mentioned that this is in addition to the role played by discounted price in the customer’s judgment of utility when finally choosing the product. It is found that there is inconsistency between the empirical importance of in-store communication as well as with the arguments placed about the importance of in-store touchpoints that influence consideration, irrespective of purchase making place or time (Court et al. 2009; Verhoef et al. 2007).

Two touchpoints such as peer observation as well as brand advertising are placed in second position. It is to be noted that though the brand advertising seems to be creating impact when determining the consideration via frequency and positivity effects, it doesn’t seem to be the sole influencing touchpoint when it comes to positivity. Neslin et al (2014) opined that this fuels the broader agenda for a touchpoint-neutral customer decision view and to be particular, a touchpoint-neutral approach to customer insight (Macdonald et al. 2012).

There was significant WOM positivity observed which is in alignment with the traditional social effect analysis. It is to be noted that the positivity of the sparsely investigated peer observation touchpoint is notably too influential. Further, the frequency coefficient is significantly higher when compared to that of the WOM ($\Delta\beta=0.07$, $SE=0.03$, $p<0.01$). When someone consumes a branded drink in soft drink category, it is common to stare at them. This findings induced novel marketing strategies for a sponsoring firm in order to enhance its frequency and positivity of such touchpoints, for instance, via prominence and brand positioning of the product.

There is also a significant role played by retailer advertising in complementary advertising as a brand wonder which influences the consideration via both positivity as well as frequency. Its influence through frequency seems to be insignificant to brand advertising ($\Delta\beta=0.01$, $SE=0.02$, n.s.). However the influence of its positivity seems to be lesser. Retailer advertising is most often missed by the practitioner’s media mix models because of the absence of data (Macdonald et al. 2012). But this results inferred that it plays a critical role which should be tracked.

At final, there is a significant role played by conventional earned media via the positivity touchpoint, though the researcher was not able to find the effect of frequency. In this aspect, the conventional earned media seems to be same alike WOM. The absence of frequency effect might be correlated to the least mean positivity of these dual checkpoints. In model 2, the positivity is not undertaken and both terms turn to be significant. From this, one can infer that excess care to be taken for both frequencies whereas positivity is needed in earned media assessment too so that one can assess and increase the impact created by earned media and also to strategize on which efforts to be taken.

Competitor effects

In model 4, the competitor touchpoint effects are accounted. The competitor frequency as well as the positivity variables assess any kind of influence from the director competitor on consideration of the brand under focus. It is found that the impact created by various competitor touchpoints is significant and as expected, it is negative directed on consideration change for the brand under focus. But, when compared with focal brand effects, the effect size seems to be moderate as denoted by medium-level coefficients and a modest increment to r².

In-store communication is critical again as the most impact-creating competitor touchpoint through both positivity as well as frequency. The consumer's capability to compare and contrast various brands at the same time in a store might help in this regard, as compared with touchpoints in which the brands are solely isolated. Further, as a focal brand, peer observation seems to be significant enough along with positivity having more influence than WOM. Further, the results emphasize the reason behind tracking and peer observation where feasible.

It seems that the frequency of advertising of the competitor (either it may be the brand or the retailers who advertises), is significant though its positivity is insignificant denoting the fact that just by an exposure rather than perceptual response may in fact diminish the focal brand consideration. But these are positioned at 4th and 5th positions only based on the influence of competitor touchpoint frequency, leaving aside the in-store communications and peer influence.

Comparing touchpoint impacts by category

This section considers the differences and similarities between pooled models as per category analyses. Tables 6 and 7 shows the category-specific ranks. The most important and consistent touchpoint across a wide range of categories in positivity is in-store communications. Its frequency is notable in the sector of rich opportunities i.e., soft drinks for brand encounters out of the home. In every category, the peer-observation positivity seems to be significant. This seems to be placed only next to brand advertising in case of soft drinks. The peer observation frequency seems to be obviously significant in this category under which the things are consumed readily. In general, the peer observation holds its critical nature across a wide range of categories.

The relative influence created by the brand advertising across all the categories seemed to be consistent and it is positioned the equal most influential touchpoint via positivity in dual categories such as soft drinks and mobile handsets and the most influential via frequency in others. There is a variation in importance provided to the retailer advertising during the positivity analysis. However, there was a higher coefficient present for the brand advertising in soft drinks and mobile headsets which was in consistency with pooled analysis. The reverse of the above statements remains true in case of technology products due to high margins that resulted in the powerful competition among the retailers.

Exploratory Analyses

Through three exploratory analyses, the extensions to model 4 were analyzed. The first analysis considered the possible association between positivity and touchpoint frequency and the second one assess the influence of pre-consideration upon touchpoint impact whereas the final one assess the influence of competitor touchpoints on the performance of brand touchpoint. The following sections briefly discuss this analysis.

Frequency/positivity interaction

In the first exploratory analysis, the possibility of interaction between touchpoint frequency and positivity was considered. For instance, Erdema and Keane (1996) opined that if there is a chance for the brand attitude to get influenced by a single message, then the attitude strength might also gets influenced by continuous positive (or in some cases, negative) messages. The interaction between the frequency and positivity of touchpoints, irrespective of whether focal or non-focal/competitor brands, do not results in the increase in model fit as determined by AIC or BIC (appendix). Further, there is a notable increase of VIF scores, predominantly via collinearity introduced through interaction terms. Having warned, the preliminary results are highlighted excluding the reports in full for the sake of brevity³. The research studies conducted in future may better separate these interaction effects in case if they are present. At first, the

interaction effects seems to be focusing on same direction only which is positive for focal brand whereas negative for competitors. Secondly, there is a significance found in competitor interactions such as in-store communications, WOM and retailer advertising. These three environments in which the multiple brands get experienced with close proximity may induce an even-more complex relationship among these i.e., consideration and touchpoints. At final, the **notable** focal brand interactions seems to be precisely that has significant frequency-only effects, namely peer observation, retailer advertising, in-store communications, and brand advertising. Here it is again suggested that there may be even more complicated relationships occur between frequency and the positivity. This results are in alignment with attitude strength-based study conducted by Erdem and Keane (1996) which respect positivity and frequency too by accounting it.

Touchpoint interaction with pre-consideration

In the second exploratory analysis (models Exp2a/b in Appendix), it is suggested that an individual's pre-disposition towards a brand might impact how the touchpoints' influence on her or his shift in consideration. Model Exp2b improves the model 4 which is shown in the appendix. This model is inclusive of interaction between focus brand consideration and the touchpoint variations for competitor as well as focal brands. But as the number of interactions were high, the VIF scores were also high.

Results tables for exploratory analyses are available from the authors on request.

(average 8.79). Based on the request, the author may be able to furnish the results **table** for exploratory analyses. The current study data suggests that there is an interaction present due to which the future research must be conducted to determine its actual strength and significance. However, there is no need to publish a detailed report of the results, though overview can be provided. Generally, when there is an increase in an individual's pre-consideration, there might be a decrease in the influence of touchpoint frequency and positivity on their change in consideration. It is suggested that the consumers, who are favored with the brand and gets predisposed, face little to no impact by brand encounters. This is a narrow down case of regression to the mean in which the consumers with positive opinion may scale down or retain their position, but may not climb up. This seems to be interesting as a manager since at the point of deciding targets for touchpoints such as the addressable media, specifically, the communication is attitudinal rather than directly behavioral.

When there is an increase in individual's pre-consideration, there is an increase found in the influence of competitor frequency and positivity i.e., the competitor has high pulling power upon those who already were pre-disposed to the focal brand. Further the study affirms this to be a regression to the mean effect.

Competitor effects on consideration

In the third exploratory analysis (Exp 3a/b/c/d), the current study is aimed at determining the indirect effect of competitor touchpoints on focal brand consideration through an interaction with focal brand touchpoints. The study analyzed the impact created by competitor clutter upon the performance of focal brand touchpoint performance (Danaher, Bronfer and Dhar 2008). An interaction term was included in this study between focal and competitor touchpoint frequency as per the study conducted by Danaher et al. (2008) who tried to balance the proportion of competitors. This is performance based on the reparameterization of:

where $I_{f(c)} = 1$ "if the statement $f(x)$ is true," i.e., "if respondent i has an experience with brand p through touchpoint j , and zero otherwise;" and B_i is the "total number of brands which

individual i was asked to report on "the proportion of the competitor brands were calculated in which the respondent i has experienced. The current study also assess whether competitor positivity ($AvgPos_{i,k_j}$) moderates focal touchpoint frequency, and further, the moderating effect on focal touchpoint positivity (a reparameterization of β). Appendix shows model fit for each of these explorations.

All the three models did not decrease the BIC. Among the models, Model Exp3b is the preferred choice over Model 4 by AIC though the r^2 doesn't expressed any real increase. In every model the significant interactions seemed to go in the negative direction. When the competitor touchpoints are increased either for frequency or positivity, it may end up in creating a local impact from focal brand touchpoints. In Model 3b, the competitor positivity diminishes the influence of focal brand frequency for all the four touchpoints such as retailer advertising, in-store communications, brand advertising and peer observation. These results are in alignment with Danaher et al (2008) who identified that when there is a concurrent advertisements run by competitors as well as the focal brands, it reduces the elasticity of the focal brand's advertising. From the e results, this should be extended to positivity as well as retailer advertising.

CONCLUSION

The current study track the influence of conventional touchpoints on brand consideration over a wide range of consumer goods domains segregated under four categories. The impact upon the brand consideration change of six touchpoints was evaluated. From the main pooled model 4 (please refer **table 5**), it is found that the touch point positivity notably impacted the consideration change in all the six touchpoints whereas the touchpoint frequency too in line with this, excluding WOM and traditional earned media. Further, we positioned the touchpoints based on touchpoint positivity coefficients (**Table 7**). From the **table**, it can be inferred that in-store communications seem to be the most impact-creating which is followed by peer observation, brand advertising, WOM and retailer advertising. At final, the conventional-earned media seems to be the least impact-creating entity. **Table 5** shows the impact of competitor touchpoints on a focal brand. Further, in-store communication seem to have full capability (in both frequency and positivity) and as with the focal brand, there was a significant effect by peer observation whereas the positivity was also significantly impact-creating than that of the WOM.

So, the current study had three contributions of which the first is, this is the first of its kind, with regards to the relative impact of brand, retailer, peer and earned touchpoints upon the brand relationship of the customer. To note, as per Grove and Fisk (1997), peer observation was the primary focus of qualitative research so far which seems to be influential as well as frequent concluding that this touchpoint needs the top most priority to be given by the scholars and practitioners. According to the research recent line (Risselada, Verhoef and Bijmolt 2014; Nitzan and Libai 2011), the importance of social connection upon consumer behaviour was discussed. The data-based study provide insights upon the mechanisms that underpin these social effects through data-based differentiation of WOM (either recommendation or criticism) from some simply observing peers.

Traditional earned media seems to express less impact though they are significant. When the retailer advertising role seems to be category contingent, once can observe the impact in in-store communications.

The second contribution of the study is the determination and implementation of the fact that whenever the touchpoints are evaluated, it needs to take touchpoint positivity as well as frequency into the account. It was found that positivity adds explanatory power in comparison to frequency alone at the time

of predicting brand consideration. The study findings were compared and contrasted with long-standing experimental advertising research done by (MacKenzie, Lutz and Belch 1986) to a multi-touchpoint context. Positivity, to go along with the definition, is nothing but a real-time affective response that can be called as imperfectly one and loaded with no significant biases (Aaker et al., 2008; Cowley 2008). Because of this, the survey undergoes problem since most of the behavioral measures do not capture the positivity entirely. One method was illustrated in this study for addressal via RET texting approach. So alternatives methods present. When it comes to real-time reporting, it takes control of mall intercept logics (whereas the variants such as exits surveys at the time of leaving) that generalizes it to challenge that the decision journals play out in real-time after diverse touchpoints.

The third contribution of the current study is that its objective to propose and exemplify an RET-based approach in which the influence of diverse touchpoints can be evaluated. This approach handles the touchpoints in a symmetrical fashion with the retailer, peers, brand owner and the media. So, the future research must focus on consumer decision journal which may prolong the firm-owned media channel contacts (Court et al. 2009; Ailawadi et al. 2009). The customers usually collaborate the learning across a wide range of sources so as to fulfill their objectives. (Neslin et al. 2014). In the current study, the touchpoints are in significant association with brand consideration included from the four stakeholders such as public media, brand owner, peers and the retailers. However, other stakeholders are also present who may be approached by the customer such as sponsors (Court et al. 2009) and service personnel (Grove and Fisk, 1997) and relevant touchpoints can be included in further investigations.

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