Influence of Retail Infrastructure Stimuli on In-Store Customer Experience

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ABSTRACT

Under competition from e-retailers, the conventional brick and mortar stores are coming up with various retail strategies. In-store shopping infrastructure offers retailers with a differentiation tool which can be used to drive and enhance customer's shopping experience. Since the in-store infrastructure is a controllable factor, various influencing stimuli are being researched along with their impact on sales or intention to shop. Selected stimuli or the physical environment in general had been studied by various researches in particular retail settings and formats. This paper aims at studying selected in-store controllable retail infrastructure stimuli and their influence on customer experience in three different product categories. Further, within the product categories variation in in-store customer experience between demographic compositions of the population has been studied.

Key Words: In-store customer experience, Retail infrastructure stimuli, Physical environment, Atmospherics.

1. Introduction

In 2012-13 retail in India was Rs 25286 billion Industry. Organized retail contributed 7% of total retail standing at Rs 1,767 billion. Online retail contributed Rs 139 billion to the overall retail trade which is 7.9 % of the organized retail and 0.5% of the overall retail. (Crisil, 2014). While food and grocery contributed 60% of the total organized and unorganized trade followed by 11% and 8% of the total organized trade in India in footwear and apparels. It is projected that the organized retail would contribute approx 20% of the retail trade by 2020 (Delloite, 2013).

Although India has slipped down to 14th rank in 2013 from 1st in 2009 yet, it was ranked 5th worldwide for the foreign direct investment confidence in 2013 (AT Kearney, 2013).

Various online retailers like Flipkart, Snapdeal, Myntra, Jabong and International players like ebay, amazon etc. are creating a dent to the brick and mortar outlets. With the advent of internet complimented by mobile telephony the online retail platforms of shopping are getting popularity. This has eroded the sales per square feet and conversion ratio of the footfall in the conventional retail outlets. Accenture's study revealed that 78 percent of the U.S. shoppers had webroomed (browsing online and then going to store to make their purchase). The touch and feel benefit which the pure play retailers provided was no longer important for the buyers. Still we look for recommendations and customer reviews for booking a hotel online. Customers look for seamless shopping experience which is effortless and on their own terms.

Physical stores do not identify shopper as frequent shopper and further does not track the shopping patterns. Even the loyalty programs/cards do provide patronage. If the shopping process offers benefits other than exposure to products, the retail innovations that attempt to reduce "shopping effort" (vending machines, mail orders or home delivery) may have a dim future for some product categories. Retailers need to re examine and reconfigure their talent, physical space and store operations to meet or exceed customer expectations. Shopper's Stop in 2008 went online to become multi channel retailer. I-phone owners can select and buy the items online and pick them from the nearest Apple store. Retailers are combining e commerce with in-store shipping to create connected retail customer experience. Thus, the aim should not be to think online or offline but seamless customer experience. IT infrastructure can make stores as efficient fulfillment centers while the in-store customer experience can be improved by making stores as social destinations. The goal of the in-store customer shopping experience should be to inspire customer to dream. Consumer having a good store experience have significantly more favorable shopping intentions that those having a bad shopping experience (Swinyard, 1993). "Internal Store Environment" relates to all the elements playing part in an agreeable shopping atmosphere. These elements include the shop's layout, aisle to facilitate movement, the store's cleanliness, uncluttered product displays and interior decoration (Terblanche, 2006). For making in-store customer experience more intuitive, retail infrastructure strategy needs to be reworked for the joy of shopping.

2. Theoretical Background and Hypothesis

The growth of research on leisure, entertainment and the arts reflects the shift of attention toward the experimental side (Holbrook, 1982). As the lifestyle changes in terms of travel, clothing, hygiene etc shopping environments have created new expectations even at the points of shopping. Such expectations generate interest in doing shopping in various categories and format of outlets. (Sathish & Venkatesakumar, 2011). Multichannel shopping behavior has posed a challenge for effective knowledge management for enhancing customer experience (Chakravorti, 2011). Many companies excel in individual

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interactions with customers, but they fail to apply adequate attention to the customer's complete experience on way to purchase and after. (Rawson et. al. 2013)

The term "consumption experience" given by Holbrook in 1982, signifies that the conventional research where the information processing model of the consumer behavior was studied in detail needs to be re evaluated. Customer experience is the internal and subjective response customers have to any direct or indirect contact with a company. The expectations of the customers in terms of what they require need to be assessed in terms of the hedonic aspects as well. Customer experience management locates places to add offerings in the gaps between expectations and experience. (Meyer and Shwager, 2007). Store shopping experience emerges from a consumer's interaction with a store's physical surrounding, personnel and customer related policies and practices (Kerin, 1992). Superior customer experience is increasingly becoming a differentiator not to mention an important factor in generating customer loyalty. (Chakravorti, 2011).The retailers should define their businesses around social and recreational appeals (Tauber, 1972).

Ever since atmospherics (Kotler 1973) became an important point for discussion in the academic literature, various attempts have been made to study underlying motives of customer shopping experience and the retail strategy. Customer experience encompasses facets like atmospherics, facilities, information, sounds, lighting, music and so on (Sathish & Venkatesakumar, 2011). The strategic view of retail environment (figure 1) classifies atmospheric design in five categories: exterior, general interiors, layout and design, POP and decorations, and human factors as a key element of atmospheric design (Turley and Chebat, 2002). They further stressed that the small changes in the retail environment can have an impact on sales and shopping behavior. Further, these are controllable factors and can be modified to suite the requirements of the general customers as a whole.

For this research we considered certain controllable atmospheric design stimuli which were earlier researched upon and having influence on in-store customer experience like Music (Milliman,1982; Milliman,1986; Areni & Kim, 1993; Matilla & Wirtz, 2001; Eroglu, Machleit & Chebat 2005), Product display and Shelf space (Cox,1970; Gagnon & Osterhans, 1985; Bawa, Landwehr and Krishna, 1989; Kotzan & Evanson, 1996; Chandon, Hutchinson, Bradlow and Young, 2009), In-store signage (Chevalier 1975; Woodside and Waddle 1975), Atmospheric color (Bellizz & Hite, 1992; Brogman, 2004), Window display (Edwards & Shackley, 1992), Odour (Hirsch, 1995; Matilla & Wirtz, 2001; Teller & Dennis, 2012; Vaccaro, Ahlawat, Yucetepe and Lee, 2012), Design and décor (Wakefeild & Blodgett, 1999)
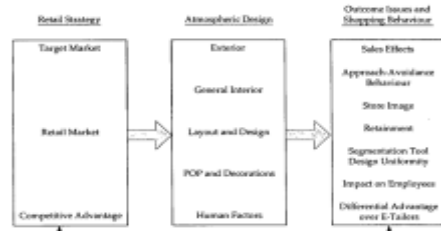

Figure 1. A Strategic View of the Retail Environment

etc. We propose to study the overall in-store customer experience created by these stimuli in three different product categories namely, consumer electronics, groceries and fashion apparels being top three retail categories in terms of sales in Indian market . Further, we studied how in-store customer experience stimuli influence certain demographic variables. The following hypotheses are designed to serve the purpose of the study.

H0a: Overall in-store customer experience is same across all three product categories.

H0b: Overall in-store customer experience does not vary between genders across three product categories.

H0c: Overall in-store customer experience does not vary between married and singles across three product categories

H0d: Overall in-store customer experience does not vary between education level of shoppers across three product categories.

H0e: Overall in-store customer experience does not vary between age groups across three product categories

H0f: Overall in-store customer experience does not vary between income level of shoppers across three product categories.

3. Methodology

The data has been collected using self administered questionnaire to the residents of Dehradun city who had exposure to shopping across these product categories. The sampling is purely judgmental with a sample size of 98 respondents. In all, total of 110 questionnaires were being circulated out of which 105 completely filled questionnaires were received. Seven questionnaires were rejected due to incomplete information leading to overall response rate of 89%. In all 68.4% of the respondents were male and 31.6% were females with mean age of respondents being 31.6 years.

Responses of the influence of individual stimuli were measured on a scale of 1 to 10 where 1 being very unpleasant and 10 being highly pleasant. Adding the individual score of all stimuli under each product category a composite score for each respondent was calculated for responses given to consumer electronics, groceries and fashion apparels. .

4. Hypothesis Testing & Findings

Shapiro-Wilk test is used to test the normality of the data as it is the most sensitive normality test, this rejects the null hypothesis of normality at the smallest sample sizes compared to other tests, at all levels of skewness and kurtosis (Ahad et.al. 2011). Table 1 shows the result of test it is significant for consumer electronic category (W(98)=0.963, p<0.05), grocery (W(98)=0.954, p<0.05) and for fashion apparels (W(98)=0.21, p<0.05). Table 2 shows the result of Levene's test, it shows that the variances were equal for consumer electronics (F(1,96)=1.226, p>0.05), groceries (F(1,96=2.469, p>0.05) and fashion apparels (F(1,96)=0.902, p>0.05) product categories. As such, these data are not normally distributed, and the groups have homogeneous variances.

Table 1: Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
CE	.070	98	.200*	.963	98	.007
Groc	.056	98	.200*	.954	98	.002
FA	.416	98	.000	.210	98	.000

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Table 2: Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
CE	1.226	1	96	.271
Groc	2.469	1	96	.119
FA	.902	1	96	.345

4.1 Product Categories Hypothesis

Friedman two way ANOVA was used to compare the mean ranks of the product categories to check the significance at =0.05. The test statistics (Table 3) show that overall in-store customer experience varies significantly across the three product categories $x^2$2)= 82.52, p<0.05.

Table 3: Test Statistics[a]

N	98
Chi-Square	82.548
Df	2
Asymp. Sig.	.000
Exact Sig.	.000
Point Probability	.000

a. Friedman Test

4.2 Gender Hypothesis

Mann Whitney U test was conducted to statistically check the H0b. As shown in table 4, in-store customer experience in male and female respondents did not differ significantly in case of consumer electronics U= 907.5, z=-1.001, p>0.05, groceries U=984.5, z=-0.413, p>0.05, and fashion apparels U=901.5, z=-1.047, p>0.05,

Table 4: Test Statistics[a]

	CE	Groc	FA
Mann-Whitney U	907.500	984.500	901.500
Wilcoxon W	1403.500	3262.500	3179.500
Z	-1.001	-.413	-1.047
Asymp. Sig. (2-tailed)	.317	.680	.295
Exact Sig. (2-tailed)	.319	.683	.298
Exact Sig. (1-tailed)	.160	.341	.149
Point Probability	.001	.001	.001

a. Grouping Variable: Gender

4.3 Marital Status Hypothesis

Mann Whitney U test was conducted to statistically check the H0c. As shown in table 5, in-store customer experience between married and unmarried respondents did not differ significantly in case of consumer electronics U= 1057.5, z=-0.933, p>0.05, groceries U=1009, z= -1.279, p>0.05, and fashion apparels U=953, z=-1.68, p>0.05.

Table 5: Test Statistics[a]

	CE	Groc	FA
Mann-Whitney U	1057.500	1009.000	953.000
Wilcoxon W	2542.500	2494.000	2438.000
Z	-.933	-1.279	-1.680
Asymp. Sig. (2-tailed)	.351	.201	.093
Exact Sig. (2-tailed)	.354	.202	.093
Exact Sig. (1-tailed)	.177	.101	.047
Point Probability	.001	.001	.000

a. Grouping Variable: M_Status

4.4 Education Level Hypothesis

The respondents were classified as graduates (25) and post graduates (73). Mann Whitney U test was conducted to statistically check the H0d. As shown in Table 6, in-store customer experience between married and unmarried respondents did not differ significantly in case of consumer electronics U= 859, z=-0.436, p>0.05, groceries U=752, z= -1.309, p>0.05, and fashion apparels U=790, z=-0.995, p>0.05.

Table 6: Test Statistics[a]

	CE	Groc	FA
Mann-Whitney U	859.000	752.000	790.500
Wilcoxon W	1184.000	1077.000	3491.500
Z	-.436	-1.309	-.995
Asymp. Sig. (2-tailed)	.663	.191	.320
Exact Sig. (2-tailed)	.666	.193	.323
Exact Sig. (1-tailed)	.333	.096	.161
Point Probability	.001	.001	.001

a. Grouping Variable: Education

4.5 Age Group Hypothesis

The respondents were classified in five age groups namely, less than 20yrs (7), 21 to 30 yrs(45), . 31 to 40 yrs(34), 41-50 yrs (7) and greater than 50 years (5).There is no difference in the in-store customer experience of customers of different age groups in all three product categories (Table 7) namely consumer electronics (H4)=3.915, p>0.05, groceries (H4)=3.68, p>0.05 and fashion apparels H(4)=5.864, p>0.05.

Table 7: Test Statistics [a,b]

	CE	Groc	FA
Chi-Square	3.915	3.680	5.864
Df	4	4	4
Asymp. Sig.	.418	.451	.210
Sig.	.421[c]	.463[c]	.204[c]
Monte Carlo Sig. Lower Bound	.408	.450	.194
99% Confidence Interval Upper Bound	.434	.476	.214

a. Kruskal Wallis Test
b. Grouping Variable: Age Group
c. Based on 10000 sampled tables with starting seed 2000000.

4.6 Monthly Family Income Hypothesis

Monthly family income groups have been divided in four groups with range of less than Rs 30000, Rs 30001 to 45000, Rs 45001 to 50000 and Rs 50001 and above. There is no difference in the in-store customer experience across the family income category in all three product categories (Table 8) namely consumer electronics (H3)=0.67, p>0.05, groceries (H3)=2.52, p>0.05, and fashion apparels H(3)=0.507, p>0.05.

Table 8: Test Statistics [a,b]

	CE	Groc	FA
Chi-Square	.670	2.518	.507
Df	3	3	3
Asymp. Sig.	.880	.472	.917
Monte Carlo Sig.			
Sig.	.880[c]	.477[c]	.917[c]
99% Confidence Interval Lower Bound	.872	.464	.909
Upper Bound	.889	.490	.924

a. Kruskal Wallis Test
b. Grouping Variable: Monthly family income
c. Based on 10000 sampled tables with starting seed 1314643744.

5. Discussion and Implications

5.1 Discussion

The results of the study show that the in-store customer experience as its influence on the shopping behavior and in term on the sales outcome. Further, it can be noted from the study that the influence of various stimuli of in-store infrastructure in not same across the different product categories under the study namely consumer electronics, groceries and fashion apparels. The difference in the customer experiences can not be attributed to the differences in the demographic variables like gender, age, income, education and marital status.

5.2 Implications

The researchers and marketers need to understand that the brick and mortar retailers need to restrategise in terms of the customer experiences that they offer to the customer in various retail categories and hence the controllable physical environment can not be generalized. Further, it should be noted from the study that there must be some influencing variables specific to product category, to attract the customers.

Future research may be conducted in the field of understanding the interaction of retail infrastructure and the in-store customer experience amongst the various types of shoppers like economic, personalizing, ethical, recreational, apathetic etc. Further, the degree to which a particular stimuli, and its relative weightage in building the atmospherics of the store could be explored across more product categories. Apart from retailers' private in-store infrastructure, the influence of the public infrastructure like transport and travel on the customer experience can also be studied. This study is limited to Dehradun and s small sample, covering more cities and with a large sample a comprehensive study could be carried.

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