Purchase Intention of Indian Luxury Consumers with Respect to Store Attribute Preferences.

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ABSTRACT

Retail store attributes are instrumental in shaping the image of the store in the mind of the consumer (James, Du Rand, & Dreeves, 1976) which is a major influence on purchase behaviour especially with respect to luxury or status brands. The study focuses on identifying the purchase intention of Indian luxury consumers market based on their preference for various store attributes and how these attributes drive their purchase decision using logistic regression analysis. A survey was conducted on 200 respondents who had purchased from major luxury shopping destinations across different cities of India like Emporio Mall in Delhi, UB City in Bangalore, etc. The variables which were submitted to logistic regression were based on high loading factors from a previous factor analysis and further variable with high correlations were eliminated. The variables finalized as predictors to be included in the model were made to measure facility, loyalty card membership, lighting, and invites. Logistic Regression method has been used for purchase intention determination.

Keywords: Retail, Purchase Intention, Store Attributes, Luxury

1. BACKGROUND

Indian luxury market is growing at the compounded annual growth rate (CAGR) of about 25% and has crossed \$20 billion. According to a recent KPMG-ASSOCHAM study, the market size was estimated to be around \$14.7 billion in 2015 (Smart Research Insights, 2015). In the year 2013, the size of the luxury market in India was \$8.5 billion (Arpels, 2014). India is currently estimated to be amongst one of the 10 largest luxury markets globally (Niwash, 2015). In a recent luxury conclave, it was projected that the luxury market has the potential to grow from to \$50 billion by 2020 and to \$180 billion by 2025 (Agarwal, 2016). Indian luxury market has shown a huge potential for luxury retail. Retail store attributes are instrumental in shaping the image of the store in the mind of the consumer (James, Du Rand, & Dreeves, 1976) which is a major influence on purchase behaviour especially with respect to luxury or status brands. This study is focussed towards the identification of important store attributes with respect to luxury consumers and how they affect the purchase intention.

2. LITERATURE REVIEW

There are several ways in which store image has been defined by researchers and the focus of these definitions has been different but complementary. While some researchers have defined store image in terms of individual attributes (Arons, 1961; Lindquist, 1974; Pessemier, 1980) some have defined it in form of overall experience or impression (Keaveney, 1992). Store image is a composite which defined in consumers mind as a total of functional and psychological attributes

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(Martineau, 1958). These characteristic attributes help a customer in differentiating one store from others. While functional attributes are an assortment of merchandise, layout, location, price, value, relation, and service which may be directly used to compare a store objectively with others; psychological attributes include factors such as how attractive and luxurious a store is.

It is important for a retailer to determine the unique market segments he wants to target and accordingly develop a store image to successfully tap the segments (Berman & Evans, 1995). The purchase decision process is affected to a large extent by store attributes but reference towards different store attributes varies considerably with the type of store (Westbrook, 1981). Quality of merchandise, ease of shopping and post-transaction satisfaction are very important factors when it

comes to department stores. Grocery shoppers are more concerned about merchandise mix, ease of shopping, location, and cleanliness. Several studies also suggest that for hyper market price and assortment become more important criteria for store choice in comparison to convenience (Seiders & Tigert, 2000). Price to quality aspect and satisfying property of merchandise were also considered important by some researchers (Lumpkin, Hawes, & Darden, 1986). Numerous studies have suggested that store attributes are contributory in helping consumers decide where to shop(Shim & Mahoney, 1992). Some of these attributes were merchandise and some service related, specifically quality, assortment, return policy, delivery, etc. which determine the target consumer satisfaction.

Table 1: Studies conducted on store attributes

S.No	Researcher	Concepts given
1.	(Martineau, 1958)	One of the initial researchers who pointed out that attributes such as layout, architecture, symbols colours, advertising and sales personnel determine the image of a store.
2	(Kunkel & Berry, 1968)	They concluded that product, convenience, and service are the most important store related factors that shape the store image after going through key elements of store image from 19 researchers' outputs
3	(Lindquist, 1974)	They highlighted the importance of institutional factors and post-transaction satisfaction in determining the store image.
4	(Peter & Olson, 1990)	The unique attributes acknowledged included elevators, lighting, air-conditioners, toilet, the layout of the store, aisle space, carpet area, architectural style, etc.
5	(Sheth & Mittal, 2004)	They stated that store image is also determined by the store ambience, advertising, and store personnel.
6	(James, Du Rand, & Dreeves, 1976)	They came up with several important store attributes which have an impact on the store image, the prominent ones included credit availability, store return policy, at-home delivery option, social class appeal, etc.
7	(O'Connor, 1990)	Emphasized on convenience attributes such as location, convenience, parking, etc. other than merchandise and service related attributes.
8	(Visser, Preez, & Noordwyk, 2006)	They gave two novel categories of attributes including institutional factors associated with brand image etc. and post-transaction satisfaction.

9	(Varley, 2005)	They identified a variety of factors including merchandise, physical facilities, services, atmospherics, etc. and stated that store attributes play an important role in modelling the store image which in turn becomes an important criteria for store choice.
10	(Kaul, Sahay, & Koshy, 2010)	They stated that if a store has contemporary equipment, ease in transactions and decenthygienic physical facilities, it can exhaust the best possibilities for store sales.

Diverse demographics, differing consumer & lifestyle characteristics are the reason for differences in the prominence given to particular store attributes (Haynes, Pipkin, Black, & Cloud, 1994). Hence a study of important store attributes with respect to purchase intention of luxury consumers seems crucial.

3. OBJECTIVES

- The study is focussed towards fulfilling the following objective:
- To identify the relative weightage of various store attribute affecting the purchase intention of luxury consumers and ascertaining the individual importance of the same.

4. METHODOLOGY

The research design chosen for the study was conclusive and the research was quasiquantitative in nature. Both primary& secondary sources of data were used to conduct the research. For this study, primary data was collected through the quantitative survey on 200 respondents based in several cities of India at major luxury shopping destinations including Emporio Mall Delhi, Palladium Mumbai, UB City Bangalore, Quest Kolkata, etc.A questionnaire was designed to study the important store attributes which luxury consumers value which consisted mostly closed ended multiple choice questions. The respondents were requested to rate around fifty store attributes on a Likert type scale from 1 to 5 (1= Strongly Disagree, 2= Disagree, 3= Neither Agree nor Disagree, 4= Agree, 5= Strongly Agree). Furthermore, in the second stage, a few more questions were designed to study the consumer buying behaviour and purchase preferences. The research aimed at predicting the purchase intention of luxury shoppers based

on the presence or absence of selected store attributes. In the stated method both categorical and quantitative variable determinants may be used to predict a binary categorical variable (Menard, 2000) (Chatterjee & Price, 1997). The variables with higher factor loadings were subjected to the analysis, after eliminating those with higher correlations.

4.1. Variable Selection & Data collection

Around fifty store attributes have chosen as variables for the study. The store attributes were identified after the literature review in the previous section and included map to trace store location, value of the products, style, size, colour options, availability of new products (Paulins & Geistfeld, 2003), parking facilities, proximity to ATM, location, ease of payment, seating area, ease of movement, lift or escalators (Oates, Shufeldt, & Vaught, 1996), mobile charging points, comfortable restrooms, ease in billing, online purchasing facility, ease of finding items, convenient and fast checkout(Bearden, 1997), store personnel assistance, alteration facilities, home delivery, made to measure facilities (Chang & Tu, 2005), communication regarding new arrivals and discounts, in-store promotions, loyalty cards, gift vouchers, invites, store reputation, return policy, sales promotion offers, carry out facility, phone in facility (Haynes, Pipkin, Black, & Cloud, 1994), ambience, lighting, music, fragrance, fixtures, signage readability (Hornik, 1989), un-crowded store, quality, price, variety, assortment, colour story, location of various sections within store, store entrance, cash counter design and temperature (Chiagouris, 1991). Factors such as Map to trace location or the directory for the mall, comfortable restrooms, ease of payment, seating area, ease of movement, lift or escalators, ease of finding

items, ease in billing, mobile charging points etc. have been considered as an important parameter in various store attribute studies primarily those conducted on elderly and female customers (Bearden, 1997). Various other variables such as style, size, colour options, availability of new products, value of the products with respect to the investment made in the product in terms of money, time and efforts, etc. have been deemed important by customers belonging to all classes (Chang & Tu, 2005).

A survey was administered in shopping destinations like Emporio Mall in Delhi, UB City Mall in Bangalore, Quest Mall in Kolkata, Palladium Mall in Mumbai and various other prime luxury shopping destinations. Around fifty store attributes listed in the previous section were subjected to a five-point Likert scale. Later on, the attributes were reduced using factor analysis to five factors.

As a result of the survey, factors with highest loadings on conducting factor analysis were obtained which included loyalty cards, music, fragrance, assortment, made to measure facilities, invites and lighting (Mishra & Banerjee, 2014). But to finalize the variables to be inserted in the study, first correlations were observed, then factors with high correlations were eliminated and then the variables finalized as predictors to be included in the model were made to measure facility, loyalty card membership, lighting and invites.

Logistic Regression Model has been used for purchase intention determination.

5. ANALYSIS & INTERPRETATION

Logistic Regression method is an advanced method applied in research for non-metric categorical dependent variables (Chatterjee & Price, 1997). The dependent variable responses are essentially recorded in dichotomous form, for example, yes-no, member-non-member, etc. Usually, in this method, the dependent variables are categorical and dichotomous in nature. In a multiple regression model, the dependent variables and their corresponding weights are used to determine a value for the dependent

variable whereas in the logistic regression method the independent variables are put together to determine a probability from 0 to 1 to determine whether or the subjects fall in a particular category (Gonick & Smith, 1993). For example, if a researcher wants to determine the odds whether a customer will purchase from a particular retail store:

Odds (Purchase) = $[Prob (Yes)] \div [Prob (No)]$

But there are several important advantages associated which make the analysis a widely accepted method. There are various advantages of the logistic regression model (Schulman, 1998) which have been elaborated as below:

- In a logistic regression method, a linear relationship between the dependent and independent variables is not presumed.
- It is acceptable if the independent variables are not interval, do not hold a normal distribution, have a non-linear relationship and/or don't have equal variances within each group.
- Since the data collected has no requirements of linearity, normality or equal variances as stated above logistic regression is extremely popular and well accepted method of analysis (Hair, Anderson, Tatham, & Black, 2005).

The step by step analysis for logistic regression is detailed as under:

Correlations: First a correlation was run in the variables; we can see that they are all positively correlated; positive correlation score of the predictor variable is more likely to indicate a positive purchase intention. Negative variables cause a suppressive effect; it tends to cancel out the predictive ability of a variable showing a positive correlation which affects the positive prediction of the equation, i.e. consumers with positive purchase intention. Thus positive correlations are desirable but not extremely high values of correlation between correlations.

Table 2: Correlations

		Made to measure	Loyalty card	Lighting	Invites	Purchase Intention
Made to measure	Pearson Correlation Sig. (2-tailed)	1	.344** .000	.411** .000	.478** .000	.240** .001
	N	200	200	200	200	200
Loyalty card	Pearson Correlation Sig. (2-tailed)	.344**	1	.412** .000	.293**	.181* .010
	N	200	200	200	200	200
Lighting	Pearson Correlation Sig. (2-tailed) N	.411** .000 200	.412** .000 200	1 200	.315** .000 200	.178* .012 200
Invites	Pearson Correlation Sig. (2-tailed) N	.478** .000 200	.293** .000 200	.315** .000 200	200	.193** .006 200
Purchase Intention	Pearson Correlation Sig. (2-tailed) N	.240** .001 200	.181* .010 200	.178* .012 200	.193** .006 200	1 200

^{**.} Correlation is significant at the 0.01 level (2 tailed).

Next, the Binary Logistic Regression was run using the Enter Method which uses all the variables together. Hosmer–Lemeshow Goodness of fit was selected which explains how well the model fits the data, how well it is going to predict the outcome. The confidence interval of 95% was selected as the default for the odds ratio. The detailed statistics have been explained next.

Classification Table in the beginning block is referred to understand how good our model is (Menard, 2000). This table is like the null hypothesis. If there were no predictor variables available, this is what the prediction would bewhich means that around 88 out of 200 people would not purchase in absence of predictor variables.

Table 3: Classification Table^{a,b}

Observed	Predicted			
		Purchase	Percentage Correct	
		No	Yes	Correct
Purchase Intention	No	0	88	.0
	Yes	0	112	100.0
Overall Percentage				56.0

a. Constant is included in the model.

This model will be able to predict who is going

to buy or not with 56% accuracy without any

^{*.} Correlation is significant at the 0.05 level (2-tailed).

b. The cut off value is .500

predictor variables involved. Next step would be to see if the percentage of accuracy is increased from 56% in the model which may be referred to as our null hypothesis (Mittlbock & Schemper, 1996).

Table 4: Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Made to measure	11.485	1	.001
		Loyalty Cards	6.546	1	.011
		Lighting	6.348	1	.012
		Invites	7.447	1	.006
	Overall Statistics		15.271	4	.004

Variables not in the Equation: Next the variables not in the equation can be analysed. All the variables were chosen as the explanatory variables, what if they were not in the model? How strongly will they create or will be able to

create a significant model (Witte, 1985)? All these values have p-value lesser than .05 which means that these variables can be significant predictors, and they have significant individual predictive ability for purchase intention.

Table 5: Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	15.778	4	.003
	Block	15.778	4	.003
	Model	15.778	4	.003

Omnibus Tests of Model Coefficients: Now, in the next step it is analysed how the predictor variables work together for the model (Schulman, 1998). Block one is where all the variables have been entered simultaneously in the model (McFadden, 1974). The first stage is the Omnibus test of Model Coefficients. It compares the predictive model with the null hypothesis with the chi-square values (Fox, Levin, & Harkins, 1993). The significance

levels in the model are all less than 0.05 which means that the model is significant. Thus, the inference is that the model containing only the constant has a poor fit and that the predictors do have a significant effect and they will create a different model. In this table the chi-square statistic is the same for step, block and model i.e.15.778, this because only enter method was used.

Table 6: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	58.594°	.576	.702

a. Estimation terminated at iteration no. 4 as parameter estimates changed by less than .001.

Model Summary: The model summary table helps in estimating the significance of the predicted model. The Cox and Snell statistic indicates that 58% of the variance in the dependent variable can be explained by the Logistic model. Nagelkerke R Square statistic is considered more reliable than Cox and Snell's method as its values range from 0-1(Tjur, 2009). It also helps in predicting how much of the variance in the dependent variable in the model is caused by the predictor variables (Mittlbock & Schemper, 1996). Here about 70 percent of the variance in outcome is explained by the predictor or the independent variable, which is acceptable.

Hosmer and Lemeshow Test Statistic

-This statistic also predicts how the model fits (Weisberg, 1985). Here if the p-value is greater than 0.05, then that indicates that the model is good. Inversely, if the p-value is lesser than 0.05 then the model is not as good. As per the results of the analysis, the p-value obtained is 0.512>0.05. This desirable outcome of non-

significance indicates that the model prediction does not significantly differ from the observed (Press & Wilson, 1978).

Table 7: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	7.228	8	.512

The Contingency Table for Hosmer and Lemeshow Test- This statistic asserts how well the model predicts the dependent variable (Campbell, 1994). The model here predicts regarding the purchase intention of the shoppers i.e. whether or not they will be willing to purchase luxury apparel to be answered as a dichotomous i.e. yes or no.

It breaks the subjects into groups and then progressively tries to fit the model to the actual outcome. Upon observation of the last step in the table, the observed no of yes in a subject group is 15 and the model predicted about 15 of those, which is extremely desirable. The closer the observed and expected values are the better is the model (Cragg & Uhler, 1970).

Table 8: Contingency Table for Hosmer and Lemeshow Test

		Purchase Intention = No P		Purchase Into		
		Observed	Expected	Observed	Expected	Total
Step 1	1	16	13.633	5	7.367	21
	2	10	11.856	10	8.144	20
	3	12	11.250	8	8.750	20
	4	11	10.209	9	9.791	20
	5	7	9.275	13	10.725	20
	6	8	8.296	12	11.704	20
	7	5	7.460	15	12.540	20
	8	10	6.546	10	13.454	20
	9	5	5.401	15	14.599	20
	10	4	4.074	15	14.926	19

Classification Table- The next step is the analysis of the classification table. This table explains how good the model was in predicting

the actual outcome. It can be seen here that the model was able to predict more than 71 % of the categories.

Table 9: Classification Table^a

	Predicted				
	Purchase	e Intention			
Observed	No	Yes	Percentage Correct		
Step 1 Purchase Intention No	62	26	70.5		
Yes	31	81	72.3		
Overall Percentage			71.4		

a. The cut value is .500

This statistic is higher than the null hypothesis value which was 56% as recorded from the Classification Table obtained from the beginning block which consisted of the model

without entering the predictor variables. Hence it is considered to be a model with very good predictive ability (Johnson & Wichern, 1982).

Table 10: Variables in the Equation

							95.0% C.I.forExp(B)	
	В	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1 ^a Madetomeasure	.024	.013	3.242	1	.007	1.024	.998	1.051
Loyalty cards	.014	.013	1.187	1	.028	1.014	.989	1.041
Lighting	.010	.014	.525	1	.047	1.010	.983	1.038
Invites	.015	.015	1.041	1	.031	1.015	.986	1.046
Constant	-1.606	.527	9.293	1	.002	.201		

a. Variable(s) entered on step 1: Made to measure, Loyalty cards, Lighting, Invites.

Variables in the Equation

The table 10 shows from where the actual beta coefficients or the constants are obtained for the regression equation to predict the dependent variable (Kleinbaum & Klein, 2010). Exp (B) column depicts the odds ratio and higher the values of the odds ratio over 1, greater are the chances of consumers having a positive purchase intention "yes". For example, if a respondent has a high made to measure facility score then he has 1.02 times more likely

to purchase luxury apparel. Each of these odds ratios has been determined at a 95 percent confidence interval.

A Wald's test is used to test the statistical significance of each coefficient B in the model(Kvalseth, 1985). Mathematically, the test first calculates a Z-statistic by dividing the coefficient B by the standard error and then squaring the value $[Z^2 = \{(\beta) \div (S.E.)\}^2]$. The value thus obtained is the Wald's Statistic yielding a chi-square statistic(Kerlinger &

Pedhazur, 1973). The Wald's values can be assessed by looking at the significance values, and if p < 0.05, then we reject the null hypothesis, which means the predictor variable makes a contribution to the dependent (McFadden, 1974). Hence the values with p < 0.05 can be included in the Logistic regression model and rest can be left out. For all the variables made to measure, loyalty cards, lighting and invites p < 0.05, hence all of these would be a part of the equation. The 'B' values are the logistic coefficients from which a predictive equation depicting the logistic regression can be formed. We got a binary outcome predicted by numerous categorical or numerical predictive variables. Hence, in this case, the equation would be:

P= <u>e</u> {(.024(Made to measure)+ (.014 (Loyalty cards) + .010(Lighting)+ .015(Invites)-1.606}

1+e{(.024 (Made to measure)+ (.014 (Loyalty cards) + .010(Lighting)+.015 (Invites)-1.606}

A test of the full model consisting of both constant and predictor variables against a constant only model was statistically significant, indicating that the predictors as a set consistently differentiated between luxury consumers with positive and negative (i.e. yes and no) purchase intention (chi-square = 15.778, p=.003 with degrees of freedom = 4). Nagelkerke's R² of .702 indicated a moderately strong relationship between prediction and grouping. Prediction success overall was 71.4 % (72.3 % for yes and 70.5 % for no). The Wald criterion demonstrated that all the variablesmade to measure, loyalty cards, lighting and invites made a significant contribution to prediction (p<.05). Exp.(B) value indicates that if a respondent has a high made to measure facility score then he has 1.02 times more likely to purchase luxury apparel and likewise

6. MARKETING IMPLICATIONS

It can be inferred that the relevant store attributes of a retail store should be given prominence to attract the target consumers. The study has been conducted keeping in focus the

luxury consumers. For the categorical variable purchase intention which may be responded to in yes or no, the consumers responded with the importance scores they attribute to the independent variables made to measure, loyalty cards, lighting, and invites. Hence it may be inferred from the logistic regression analysis and also from unstructured personal interviews that personalized service such as made to measure was an extremely important parameter when it came shaping purchase intention of the luxury consumers. Similarly, invites received by luxury consumers from a luxury brand regarding their fashion shows collection launches, etc. also played an important role. Such events generate interest in the shoppers regarding the merchandise collection and draw the consumers to the store. Also, the sense of belongingness is enhanced. Loyalty cards tend to increase repeat purchases from the brand and hence shape the purchase intention. Lighting, although the least important criteria amongst the four independents, still was considered important by respondents in shaping the purchase decision especially by the consumer in older age groups.

7. CONCLUSION

This study was concentrated on the impact of store attributes on purchase intention of luxury consumers and was based on the results of a multi-stage structured questionnaire survey conducted across some of the prime luxury destinations of the Indian market. As a part of the research, logistic regression was establish which can determine the purchase intention of luxury consumers based on their store attribute preferences. Finally, a logistic regression equation was established which could predict the purchase intention (yes/no) based on the predictor variables- made to measure, loyalty card, lightning, and invites. By analysing the odds ratios of the predictor variables it was observed that made to measure facility score was the highest i.e. 1.024 which suggests that if a store has made to measure facility then the consumers are 1.02 times more likely to buy luxury apparel. As a result, the above binary outcome in the form of a logistic regression predicted by numerous categorical or numerical predictive variables was obtained.

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