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Electronic Retail (E-Tail) Image Components and their Association with Variety Seeking and Avid Shoppers

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Abstract

An examination of image attributes important to on-line customers of a major Australian retailer identified three e-tail store image dimensions; core demands, institutional factors and information. The three dimensions were further examined against variety seeking and avid shopper measures. Results indicated institutional factors were associated with variety seeking and avid shoppers and information with avid shoppers. From this result, it is suggested that e-tailing stores need to build their reputation and brand image via conventional media based promotional activities in order to attract variety seeking and avid shoppers and provide variety laden shopping experiences to retain variety seeking consumers. It is also suggested that in on-line environments there has been a merging of consumer perceptions regarding merchandise and service attributes, as evidenced in the dimension core demands, requiring retailers to vary product and service offerings between e-tail and retail environments.

Introduction and Literature Review

A parallel may be drawn between traditional retail outlets and e-tail stores (Hart et al. 2000) with "electronic shopping incorporating many of the same characteristics as normal shopping such as departmental product organisation and browsing possibilities" (Spiller and Lohse, 1997-8). Hence store image theory has frequently been applied to the e-tailing environment (Phau and Poon, 2000; Ward and Lee, 2000; Rowley, 1998).

However it is apparent that image components of importance to consumers in retail and e-tail stores will differ, with Raijas (2002) finding that convenience, ease and speed of task were the most important attributes to electronic grocery store customers. Similarly, convenience was also found to be of significant importance by Sim and Koi (2002), while transaction security and product and seller reliability also appeared as important attributes. Nevertheless, while researchers have sought to identify important attributes, only two identified studies (Spiller and Lohse, 1997-8; Lohse and Spiller, 1999); both with significant limitations including the determination that dimensions including store atmosphere and institutional factors are irrelevant within the e-tailing environment and a failure to measure retail store image attributes on actual customers; have specifically sought to validate retail store image dimensions in an e-tailing environment.

Hence, given the lack of knowledge regarding e-tail image attributes, this research aimed to determine the dimensions of retail store image important to consumers within an e-tailing environment, following an approach supported by Hansen and Deutscher (1977-8, p. 61-2) who stated that "the retailer's customers [should]…be the one's who provide the measure of attribute importance". Specifically, two types of shoppers who like shopping were examined in this study, namely one type of shopper that is oriented towards newness in terms of offerings, a

“variety seeking” shopper, and one that can be characterised as being an “avid” shopper. Hence the second aim that was addressed was how any identified e-tailer image dimensions would relate to the preferences of variety seeking and avid shoppers.

Method

The image dimension survey was comprised of a number of semantic differential questions to be rated on a 1 to 7 scale with anchor words of “not important” and “very important.” In addition, three other Likert type questions were used to distinguish those customers who were variety seeking shoppers (two questions) and those who were avid shoppers (one question). These answers were rated on a scale of 1 to 7 with anchor words of “strongly disagree” and “strongly agree”. Demographic information on respondents was also collected. An internet-based questionnaire was selected on the basis that it aligned itself closely with previous studies into consumers' behaviour within the e-tailing environment (Morganosky and Cude, 2000; White, 1996).

An approach was made to a large Australian-based retailer who gave permission for an information letter outlining the research to be sent to 600 registered on-line shoppers via e-mail. This letter also requested their response to a questionnaire that had been set up on an internet website, following a procedure similar to that used in previous internet based surveys (Swoboda, 1997; James, Wotring and Forrest, 1995; Anderson and Gansneder 1995). The sample was comprised of what the electronic retailer termed 'loyal' customers - those consumers who had shopped on-line more than three times in six weeks. 600 introductory e-mails were distributed. Immediately thereafter, 39 e-mails were received indicating that the e-mail address to which the introductory letter had been sent no longer existed. Therefore, the study had an effective sample size of 561. Completed questionnaires totalled 104, with two duplications. Thus 102 completed surveys were used in the analysis providing a response rate of 18.2%.

Results

The mean values of the responses to the different image attribute questions were used to identify those attributes that were considered to be of importance to respondents and all attributes that reflected a mean score of greater than 4.5 were used in an exploratory factor analysis aimed at identifying the e-tailing image dimensions of importance to respondents. The measure of sampling adequacy (MSA) for this set of items was 0.8, which is stated by Hair et al (1995, p. 374) to represent a ‘meritorious’ case for exploratory factor analysis. The factor analysis of the 23 items was performed using a principal components method followed by an oblique factor rotation (SAS, 1999). Maximum likelihood factorisation was not feasible as this indicated a Heywood case. Factorisation using unweighted least squares analysis was also conducted and produced the same results as those that were obtained from the use of the principle components method. Three factors were identified based on the scree plot and also from comparison with a random number dataset factorisation as suggested by Montelli and Humphreys (1976). One variable, namely PRICE, did not load significantly on

any of the factors although it was correlated to a minor extent with all three factors. Since this variable had been identified as being an attribute of importance it was concluded that it represented a single effect which did not have high levels of correlation with any of the other variables. It was therefore used as a single attribute item in the subsequent regression analysis. The mean values are shown in Table one together with the factor loadings and Cronbach alpha values.

Table 1: Factor Loadings

Attributes	Core Demands	Institutional Factors	Information	Communality
Delivery care	**0.85**	0.02	0.28	0.75
Delivery promptness	**0.79**	0.20	0.24	0.64
Confidential	**0.78**	0.14	0.24	0.62
Secure transaction	**0.70**	0.08	0.15	0.51
Ease of return	**0.71**	-0.01	0.32	0.54
Speed of site	**0.73**	0.38	0.30	0.57
Large selection	**0.74**	0.30	0.36	0.57
Product quality	**0.70**	0.28	0.46	0.54
Ease of navigation	**0.67**	0.39	0.42	0.53
Well known brands	**0.53**	0.45	0.28	0.40
Price of products	0.40	0.37	0.30	0.25
Reputation of parent	0.05	**0.86**	0.12	0.77
Branded web site	0.04	**0.76**	0.11	0.61
On-line reputation	0.21	**0.78**	0.32	0.61
Search by brand	0.26	**0.63**	0.41	0.45
Search by product	0.35	**0.58**	0.31	0.40
Search facilities	0.41	**0.54**	0.29	0.38
Visually appealing	0.09	0.39	**0.74**	0.62
Product descriptions	0.13	0.25	**0.68**	0.48
Consistency	0.35	0.26	**0.74**	0.56
Salesclerk via phone	0.36	0.22	**0.71**	0.51
Salesclerk via email	0.39	0.09	**0.68**	0.50
See on-line	0.41	0.08	**0.56**	0.37
Mean factor value	**6.47**	**6.22**	**5.68**	
Cronbach alpha	**0.90**	**0.80**	**0.78**	
Eigenvalues	**7.41**	**2.84**	**1.91**	
Cumulative explained variance	**32.2**	**44.6**	**52.9**	

Extraction Method: Principal Components. Rotation Method: Promax.

The dimensions identified were labelled as follows:

"Core demands" This dimension consisted of 10 items and included the items: delivery care, delivery promptness, confidentiality, secure transaction, ease of return, speed of site, large selection, product quality, ease of navigation, and well known brands.

"Institutional factors" This dimension consisted of 6 items and included the items: corporate reputation (parent company), branded web site, on-line reputation, search by brand, search by product and search facilities.

"Information" This dimension consisted of 6 items and included the items: ability to contact a salesclerk via e-mail, ability to contact a salesclerk via phone, see products on-line, visually appealing, consistency and product descriptions.

The three dimensions and the PRICE variable were then regressed against the ratings for the variety seeking shopper (sum of two rating scores) and the avid shopper in order to explore any relationships that might exist. The results obtained in these two regression analyses are shown in Table two.

Table 2: Regression Analysis of Variety Seeking and Avid Shopper Orientations

Dependent Variable = Variety seeking orientation					
Source	DF	SS	Mean Square	F-value	p-value
Model	4	115.60	28.90	5.67	<0.01
Error	97	494.71	5.10		
Corrected Total	101	610.31			
R- Square	0.16				
Dimension	DF	Parameter Estimate	Standard Error	t - value	p-value
Core Demands	1	-0.14	0.25	-0.58	0.56
Institutional Factors	1	0.81	0.23	3.52	<0.01
Information	1	0.53	0.25	2.15	0.03
PRICE	1	0.14	0.22	0.62	0.53
Dependent Variable = Avid orientation					
Source	DF	SS	Mean Square	F-value	p-value
Model	4	49.20	12.29	4.54	<0.01
Error	97	262.76	2.71		
Corrected Total	101	311.96			
Adj R Sq	0.12				
Dimension	DF	Parameter Estimate	Standard Error	t - value	p-value
Core Demands	1	-0.16	0.18	-0.91	0.37
Institutional Factors	1	0.61	0.17	3.64	<0.01
Information	1	0.24	0.18	1.32	0.19
PRICE	1	-0.23	0.16	-1.46	0.15

Both regression analyses reflected significant relationships at $p < 0.01$. The level of variance explanation was relatively low in the case of both types of shoppers with an adjusted percentage R-square value of 15.6 in the case of the variety seeking shoppers and 12.3 in the case of the avid shoppers. Neither type of shopper showed a significant relationship to the PRICE variable at the 95% level. However, there was a suggested relationship between PRICE and avid shoppers at the 85% level. This suggested that PRICE might adversely affect

the avidity of such shoppers, with increasing prices leading to a reduction in shopper avidity. At the 95% significance level, the variety seeking shopper type was related to both "institutional factors" and "information" with the stronger association being with "institutional factors" while the avid shopper type was solely associated with "institutional factors".

Finally there was no evidence of a relationship between shopper typology and "core demands", while at the same time this dimension of e-tail store image was the most important to respondents (mean value = 6.47). This suggests that attributes underpinning core demands do not show any specific pattern of association with either avid or variety seeking shopper types.

Discussion and Conclusions

The results of this study indicate that e-tail store image is built upon a number of traditional and new attributes and components and those relationships between attributes differ in each environment. This suggests that marketers must reconsider the means by which they manage retail image, particularly when they are operating in both traditional and e-commerce environments.

In addition, it is suggested that traditional retailers that have an established and positive image, have significant advantages over their start-up e-commerce competitors due to the importance of institutional factors including brand name and reputation to avid and variety seeking shoppers. Further, the difficulties associated with satisfying the variety seeking needs of shoppers has been identified as a major strategic challenge that needs to be addressed through in-house or alliance based competition that keeps consumers within a cyber-network. The primary limitation of the study relates to its generalisability. This is an issue given the sample population is drawn from one e-tailer's customers, while the ratio of cases to variables is below the cut-off recommended by Hair (1995) of five, which increases the chances of factors being derived that are sample specific. However, the results do build on retail store image studies from bricks-and-mortar environments and provides a basis for an expanded investigation into e-tail store image by researchers in other contexts. In addition, it is suggested that there is a need for further investigation into a number of the propositions outlined in the discussion. Researchers need to ascertain the extent to which traditional retailers have an advantage over start-up e-tail competitors and the role played by traditional media in overcoming issues such as perceived risk. In addition, the validity of strategies aiming to retain on-line customers within an in-house or alliance network demands detailed assessment given the significance of customer retention to market share and profitability.

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