

Cyber Atmospheric and its Impact on E-Retailing Buyer Behavior : A Factor Analysis

* *Sourabh Bhattacharya*
** *Bibhuti Bhusan Mishra*

Abstract

E-Commerce is booming in India. A number of industries are emphasizing on it to increase their sales. Fuelled by VC money, E-retailing companies are sacrificing profitability to acquire more consumers. Amazon has already emerged as a leader in terms of visitors followed by Flipkart and SnapDeal. E-retailers are creating superb conducive cyber atmospheric to attract more consumers. The present study attempted to assess the impact of cyber atmospheric on buyer behavior in terms of reliance, contentment, and adhesion. A survey on 300 individuals was conducted for this. Factor analysis on the survey generated interesting insights like emphasis of consumers on reasonable prices ; superb online ambience in terms of design, color, font, size; presence of options; and facilities for feedback sharing through social media. Factor analysis also found that importance is given by consumers to contentment in engaging with an electronic retailer in the long term. The results generated have immense managerial implications as a number of new domestic and international entrants are very eager to have complete knowledge of the pulse of Indian consumers.

Key words: cyber atmospheric, factor analysis, consumer adhesion, consumer contentment consumer reliance

JEL Classification: M100, M130, M150, M190, M300, M310

Paper Submission Date : November 18, 2015 ; **Paper sent back for Revision :** January 17, 2016 ; **Paper Acceptance Date :** February 7, 2016

In India, entrepreneurs are giving the highest amount of priority for carrying out business over the Internet. Internet is benefitting both the seller and buyer because of its omni-presence and also consumer contentment, reliance, and adhesion. The disruptive power of e-commerce has given birth to a large number of new businesses fuelled by VC money. The factors affecting this growth are growth in Internet usage, plastic money, devices, and higher disposable income (Bhattacharya & Mishra, 2015). Industries like airlines, retailing, banking & financial services, tourism are exploiting Internet usage to have more connectivity with consumers.

At present e-commerce is acting as a strong multiplier in a gloomy world economy. A number of activities like loyalty management, CRM, procurement, order processing, logistics management, business process management are taking place in the electronic retailing space. The entry of MNCs like Amazon, E-Bay, Soft Bank, Alibaba is bringing a great metamorphosis in the Indian electronic retail industry.

All of the Indian e-retailing players are trying all the tricks from the book to increase their customer base. All of them are very eager to get a critical mass in the user base. But the greatest emphasis has been put on atmospheric. Just like offline retailers, online players are also trying to create excellent and conducive atmospheric in their e-stores. They hope to create consumer reliance, contentment, and adhesion by doing this. As services marketing is

* *Full Time Research Scholar*, Faculty of Management Science, Siksha 'O' Anusandhan University, Bhubaneswar, Odisha.
E-mail: sourabhb82@yahoo.com

** *Assistant Professor*, Faculty of Management Science, Siksha 'O' Anusandhan University, Bhubaneswar, Odisha.
E-mail: bibhutibhusanmishra@soauniversity.ac.in

based on experience, electronic retailers feel that satisfied and loyal consumers will spend more time in stores and purchase products.

The present paper is based on extensive literature review and factor analysis. It has attempted to assess the impact of cyber atmospherics on consumer behavior. It tries to find out which cyber atmospheric variables are preferred by consumers with respect to reliance, contentment, and adhesion. The probable reasons of consumers not preferring cyber atmospheric variables have also been explained.

Literature Review of Cyber Atmospherics

Cyber Atmospherics is the application of atmospheric variables in the cyber world. Different variables are required to understand cyber atmospherics (Donovan & Rossiter, 1982 ; Havlena & Holbrook, 1986). Emmet (1930) proved that departmental stores spend a great deal of money and time to create a superb, conducive environment for customers. Donovan and Rossiter (1982) showed that atmosphere impacts buyer emotion, which, in turn, pushes buyers towards more purchase, time spending, and engagement with a store. Eroglu, Machleit, and Davis (2001, 2003) extended the concept of stimulus-organism-response (S-O-R) from offline retailing to e-retailing.

With the help of empirical evidence Sautter, Hyman, and Lukošius (2004) proved that atmospheric dimensions has a great impact on the attitude of customers, their interactions, and aspects of approach and avoidance.

The two main types of environments playing in an online retail space are: (a) physical environment, in which interaction is taking place between human beings and computers outside the online store environment, (b) The virtual or the online store environment.

Interactive shopping can reduce the cost of shopping as consumers don't need to visit multiple brick and mortar retail stores (Childers, Carr, Peck, & Carson, 2001). Because of paucity of time, consumers ask for lesser time and cost of searching their desired items. Cyber atmospherics immensely impacts buyer behavior towards more purchases (Dailey, 2004). Also, navigation in the electronic store provides more entertainment to consumers (Vrechopoulos, O'Keefe, Doukidis, & Siomkos, 2004).

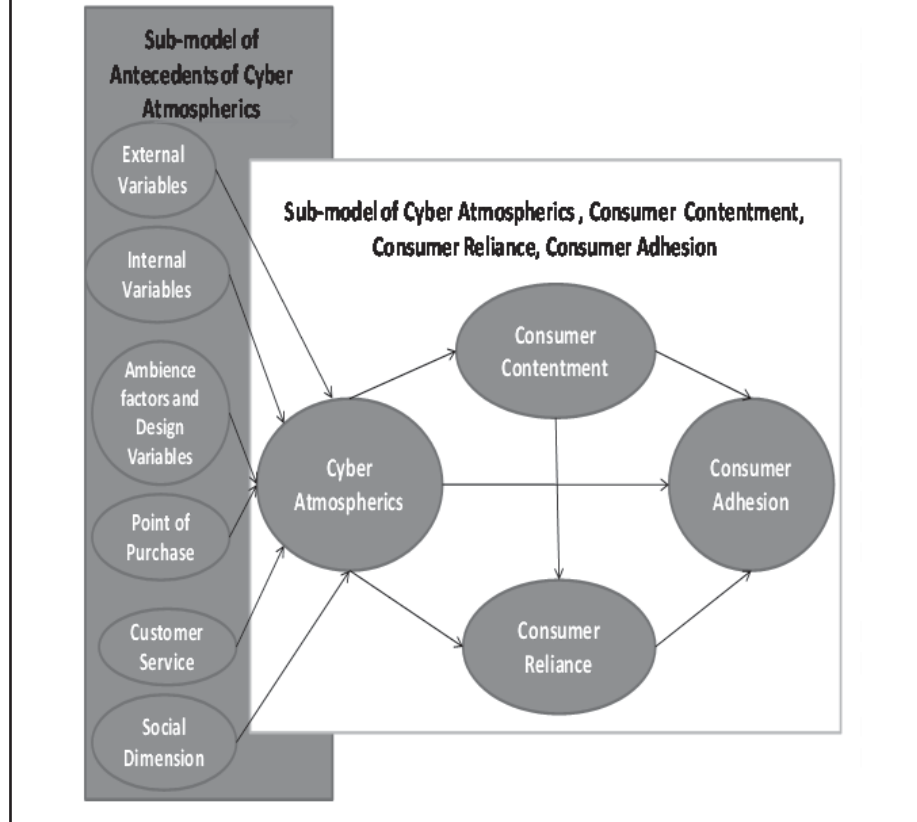
Bitner (1992) tried to study the connection between approach behavior and 'servicescapes'. Consumer's behavioral objectives and electronic store quality have a strong and positive correlation as proved by Lynch and Ariely (2000). Web background colors have a significant impact on products and gender also plays a very important role in consumers' attitude towards different background colors. Beauty of a website builds up its overall impression (Schenkman & Jönsson, 2000). Positive sense of aesthetics leads to positive sense of usefulness, ease of use of the site (Cai, Xu, & Yu, 2008; Heijden, 2003) and increased perception of usability (Lavie & Tractinsky, 2004).

Presence of animation and graphics plays a greater impact during browsing rather than during searching (Hong, Thong, & Tarn, 2007). Typography, images and colors encourage consumers in taking a positive purchase decision (Lavie & Tractinsky, 2004).

Colors properly applied with icons, button and boxes draw positive response from consumers for an electronic store (Lee & Koubek, 2010, p.332). Images make a website very attractive for consumers (Thorlacius, 2002). Images bring in emotion, symbolism and aesthetic appeal (Vilnai-Yavetz & Rafaeli, 2006). Along with images the typography of a site also attracts consumers. That is why typography has to be attractive and perfectly readable (Lee & Koubek, 2010). A custom designed font can more favorably impact the mind of consumers than a standard font design (Thorlacius, 2002).

Schmidt, Liu, and Sridharan (2009) found that enhanced font size leads to more interaction and higher aesthetic levels. Graphics makes the website more enthusing and appealing (Rowley, 2002). 3D views of a product (Allen, 1999) improves presentation and reduces risk of misunderstanding information (Then & DeLong, 1999). 3D views increase the purchase intention of consumers (Park, Lennon, & Stoel, 2005). Park and Stoel

Figure 1. Conceptual Research Model of Cyber Atmospherics, Consumer Contentment, Consumer Reliance, and Consumer Adhesion



(2002) had concluded in their research that most electronic apparel retailers provide color related information.

Gonzalez (2010) concluded that consumers are right now accessing different e-commerce sites through social media. Facebook and Twitter have risen as crucial tools for monitoring consumer sentiment and for getting valuable feedback especially in the fashion industry (Funk, 2011). Research has pointed out that Twitter users are more likely to purchase online than to purchase from brick and mortar retailing. They also have the tendency to purchase a product from a retailer after watching a tweet related to that product (Griffith, Krampf, & Palmer, 2001). Taylor (2012) in his research also proved that Twitter users are more active in online retailing than non-Twitter users. Hou (2005) attempted to relate service quality elements with consumer behavior i.e. satisfaction, customer trust, and loyalty. McKinney (2004) carved out thirty six variables of cyber atmospherics. Kervenoael, Aykac and Bisson (2008) used these variables in their study on website content analysis perspective. Lastly, it is to be mentioned that Bhattacharya, Mishra, and Mishra (2015) in their study proposed a conceptual model to show that consumer behavior in the form of contentment, reliance, and adhesion gets influenced by cyber atmospherics. This study is a further progress of that study. The Figure 1 shows the conceptual model proposed by them.

Literature Review of Consumer Purchasing Behavior

(1) Consumer Reliance : The arrival of e-commerce has brought complications in the construct of consumer reliance. A number of studies have suggested the importance of studying various types of reliance in an online environment. Some of these are Mittal and Kamakura (2001), Grabner-Krauter and Kaluscha (2003), Corritore, Kracher, and Wiedenbeck (2003).

Based on the research of Lee and Turban (2001), McKnight and Chervany (2002), and Salam, Iyer, Palvis and Singh (2005) proposed that reliance is the thought which leads the consumer to believe that nothing wrong is going to happen by having confidence in the electronic retailer.

Time and again several studies have proved that consumers avoid those electronic retailers in whom they trust deficit, for example, Hoffman, Novak, Jarvenpaa and Tractinsky (1999) ; Pavlou (2003) ; Peralta (1999) ; and Reichheld and Scheffer (2000). Majority of electronic retailers are deserted due to trust deficit (Lee & Turban, 2001; Shankar, Urbana, & Sultan, 2002).

Cheskin (2000) in his research found out six factors which are crucial in the formation of online reliance. These are transactional security, information access, brand image, presentation of the right product and service information, updated technology, information processing, and issue resolution. Fogg, Marshall, Laraki, Osipovich, Varma, and Fang (2001) found that factors like expertise, ease of use, real-world feel, tailoring, and trustworthiness impact the credibility of a webstore. A feel of ownership and control, previous experience, and orientation with the site drive reliability of the consumer in an electronic store (Jarvenpaa & Tractinsky, 1999).

(2) Consumer Contentment : Studies on consumer contentment have taken place based on three themes as the background.

(i) Firstly, those who study the motivational factors related to consumer contentment. Here, the expected advantages are compared with the performance of the electronic retailer as per the perception of consumers (Vavra, 1997). Athanassopoulos and Iliakopoulos (2003), McColl-Kennedy and Schneider (2000), Szymanski and Hise (2000), and Szymanski and Henard (2001), evaluated the measurement model of consumer contentment.

(ii) Secondly, connection of consumer contentment with various business steps and technical processes because of which businesses keep a close connect with consumers (Oliver, 1980). One can say that the second theme has been used where studies tried to (a) find the determinants of consumer contentment, for example, in studies done by Churchill and Suprenant (1982), Levesque and McDougall (1996), and Jamal and Naser (2003) ; (b) relate consumer contentment with quality, for example, in studies done by Woodside, Frey, Daly (1989) ; Bitner and Hubbert (1994) ; Dabholkar (1995) ; Spreng and Mackoy (1996) ; and Caruana, Money, and Berthon (2000) ; (c) relate reliance with consumer contentment, for example, in studies done by Soderlund and Julander (2003) ; Balasubramanian, Konana, and Menon (2003) ; and Ranaweera and Prabhu (2003) ; and (d) relate adhesion with consumer contentment, for example, in studies conducted by Taylor and Hunter (2003) ; Anderson and Srinivasan (2003) ; Bennet and Rundle-Thiele (2004).

(iii) Thirdly, consumer contentment has been considered to be a very crucial factor in the long term success of a company in terms of sales, profitability, earnings per share, investor confidence, and market capitalization (Anderson & Fomell, 1994 ; Bitner & Hubbert, 1994 ; Caruana, 2002 ; Caruana, Money, & Berthon, 2000 ; Dabholkar, 1995 ; Kim & Stoel, 2004 ; Spreng & Mackoy, 1996 ; Woodside, Frey, & Daly, 1989). According to Harvey (1998), operation based consumer contentment measurement seems to be the best tool as it takes into consideration the quality of both the process and of the result.

(3) Consumer Adhesion : Loyal customers display positive response in the form of more profit, repeat purchase, positive word of mouth (WOM), getting less influenced by marketing of competitors and spending more (Baldinger & Robinson, 1996; Gremler & Brown, 1999; Hart & Johnson, 1999; Reichheld & Sasser, 1990; Zeithaml, Berry & Parasuraman, 1996).

Seeing so many advantages e-retailers are giving a lot of importance to consumer adhesion (Bowen & Shoemaker, 1998 ; Dowling & Uncles, 1997; Reichheld & Sasser, 2000).

According to researchers, adhesion can be conceptualized as an attitude of providing favor to a certain seller. It can be also explained as consideration of the seller as first preference to purchase products or services (Mattila, 2001; Ostrowski, O'Brien & Gordon, 1993; Zeithaml, Berry & Parasuraman, 1996), recommending the seller to others (Butcher, Sparkes & O'Callaghan, 2001; Javalgi, 1997), and possessing emotional involvement to a brand, product and company (Fournier, 1998). Also, positive WOM (Dick & Basu, 1994; Riel & Semeijn, 2003) and commitment (Day, 1969) are to be considered as the greatest indicators of consumer adhesion.

Commitment had also been considered as the consequent construct of consumer adhesion (Edvardsson, Johnso, Garbarino, & Johnson, 1999; Guiltinan, 1989; Gustafsson & Strandvik, 2000; Klemperer, 1995; Luam & Lin, 2003; Morgan & Hunt, 1994; Ranaweera & Prabhu, 2003).

When consumer adhesion takes place with shared thoughts and values as the emphasis, it definitely has a positive impact on consumer adhesion (Fullerton, 2003). Even consumer retention can be analyzed and explained on the basis of consumer adhesion construct (Boulding, Kalra, Staelin, & Zeithaml, 1993; Zeithaml et al., 1996). Consumer adhesion acts as a catalyzing effect for consumer retention (Pritchard & Howard, 1997).

Several studies also concluded that switching barriers exist in terms of higher cost in switching to another seller (Bansal & Taylor, 1999; Chen & Hitt, 2002; Gremler & Brown, 1996; Lee, Lee, & Feick, 2001; Ranaweera & Prabhu, 2003).

Research Methodology

(1) Sampling : We collected the sample for this study from multiple sources to get diverse feedback. Firstly, students were surveyed in the colleges of a large university. Secondly, questionnaires were also sent to online student respondents through mail and social media. Thirdly, student customers from other universities and colleges also filled up questionnaires in a number of malls. Though malls are a channel of offline retailing, it has been observed and in today's world, most of the customers first come to malls to check out products (window shopping) as it gives them an opportunity to touch and feel the products. Later, they order these products on electronic retailing sites so to take advantage of shipping and lesser price. time period of the study was from January - October 2015.

Numerous researches in the field of electronic retailing have established the use of students as samples (Aladwani & Palvia, 2002; Barnes & Vidgen, 2001; Bhattacharjee, 2002; Chen & Wells, 1999; Childers et al., 2001; Griffith et al., 2001; Jarvenpaa, Tractinsky, & Vitale, 2000; Liang & Lai, 2002; Lin & Lu, 2000; Loiacono, 2000; McKinney, Yoon, & Zahedi, 2002; McKnight & Chervany, 2002; Ribbink, van Riel, Liljander, Streukens, 2004; Torkzadeh & Dhillon, 2002; Zhang & Vorn Dran, 2002). The Table 1 provides a detailed breakup of the respondents numbering 300 based on gender, age, educational qualification, family earnings, purchase frequency, and preferred product category.

(2) Reliability Analysis : Reliability was assessed on the basis of Cronbach's alpha (Cronbach, 1951). According to Churchill and Suprenant (1982) and Nunnally (1978), an alpha value of more than 0.7 can be accepted as viable. Now, let us get into Cronbach's Alpha score of data under each construct.

(i) External Variables (EV) Reliability Analysis

No. of Cases = 300

No. of Items = 9

Cronbach's α = .7094

(ii) Internal Variables (IV) Reliability Analysis

No. of Cases = 300

Table 1. Demographics Characteristics of the Respondents
(Total number of respondents: 300)

Demographic features	Classifications	Numbers	Percentage
Gender	Male	135	45%
	Female	165	55%
Age	18-19	35	11.67%
	20-21	96	32%
	22-23	72	24%
	24-25	51	17%
	Above 25	46	15.33%
Educational Qualification	Secondary	0	0%
	Senior Secondary	44	14.67%
	Graduate	115	38.33%
	Post Graduate	141	47%
	Doctorate	0	0%
Family Earnings	₹ 20000 - ₹ 35000	55	18.33%
	₹ 35000 - ₹ 50000	59	19.67%
	₹ 50000 - ₹ 65000	67	22.33%
	₹ 65000 - ₹ 80000	80	26.67%
	More than ₹ 80000	39	13%
Frequency of online purchase	More than once a week	20	6.67%
	Once a week	31	10.33%
	2-3 times in a month	72	24%
	Once a month	104	34.67%
	Less than once a month	73	24.33%
Preferred product category	Books/Magazines	59	19.67%
	Clothing/Shoes/Accessories/Hobby	95	31.67%
	Entertainment/Travel/Spa	49	16.33%
	Food/Beverage/Grocery	22	7.33%
	Consumer electronics/ IT hardware/software	75	25%

No. of Items = 7
Cronbach's α = .7031

(iii) Ambience Factor and Design Variables (AV) Reliability Analysis

No. of Cases = 300
No. of Items = 5
Cronbach's α = .8243

(iv) Point of Purchase(PP) Reliability Analysis

No. of Cases = 300
No. of Items = 4
Cronbach's α = 0.8792

(v) Customer Service (CS) Reliability Analysis

No. of Cases = 300
No. of Items = 11
Cronbach's α = 0.7292

(vi) Social Dimension(SD) Reliability Analysis

No. of Cases = 300
No. of Items = 6
Cronbach's α = 0.8127

(vii) Overall Reliability of the Model of the Variables of Cyber Atmospheric

No. of Cases = 300
No. of Items = 42
Cronbach's α = 0.9199

(viii) Cyber Atmospheric (CA) Reliability Analysis

No. of Cases = 300
No. of Items = 4
Cronbach's α = 0.7732

(ix) Consumer Reliance(CR) Reliability Analysis

No. of Cases = 300
No. of Items = 10
Cronbach's α = 0.8074

(x) Consumer Contentment(CC) Reliability Analysis

No. of Cases = 300
No. of Items = 5
Cronbach's α = 0.8925

(xi) Consumer Adhesion(CA) Reliability Analysis

No. of Cases = 300
No. of Items = 9
Cronbach's α = 0.7849

(xii) Overall Reliability of the Model of the Variables of Cyber Atmospheric

No. of Cases = 300
No. of Items = 28
Cronbach's α = 0.9012

Cronbach's Alpha is more than 0.7 in all the constructs, suggesting the presence of good consistency internally among items within each construct and reliability of the constructs.

Analysis and Results

(1) Factor Analysis : Factor analysis was conducted on the proposed 10 constructs as was carried out by Parasuraman, Zeithaml, and Berry (1988) in their study. Factor analysis was conducted using SPSS. Factor analysis is a common method for studying the factor structures of constructs as is clear from several studies, such as Garson (2005) and Widaman (1993). The objective of this analysis is to analyze the dimensionality of scales used in the research. Generally, there is a traditional viewpoint that contentment and reliance are one and the same thing. The combination of contentment and reliance builds up combined consumer evaluation (Ranaweera & Prabhu, 2003). However, other researchers have treated them as different factors coupled with strong relationships (for example, Garbarino & Johnson, 1999; Geyskens, Steenkamp, Scheer & Kumar, 1996; Yoon, 2002). Factor analysis was conducted step by step. Item with low factor loadings (< 0.5) (Comrey, 1973), item-to-total correlations (less than 0.3), and high cross loadings (> 0.4) (Janda, Trocchia & Gwinner, 2002) got deleted from the factor matrices.

The sequence of iterations ultimately resulted in a final pool of 37 items representing the six variables of cyber atmospherics, that is, External Variables (EV), Internal Variables (IV), Ambience and Design (AD), Point of Purchase (PP), Customer Service (CS), Social Dimension (SD); and 25 items representing Cyber Atmospherics (CA), Consumer Contentment (CC), Consumer Reliance (CR), Consumer Adhesion (CA).

(2) Factor Analysis of Six Variables of Cyber Atmospherics : Before getting into the analysis, let us have a glance of important facts related to the factor analysis (see Table 2(a)).

Table 2(a). KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure		0.79122
Bartlett's Test of Sphericity	Approx. Chi-Square	18367.1
	Df	861
	Sig. Bartlett	0

For details of abbreviated forms included in Table 2(b), kindly refer to Appendix 1. To start with the factor analysis of the variables of Cyber Atmospherics that are given in the Table 2, let us get into analysis of KMO and Bartlett's test conducted on the items. The KMO and Bartlett's test shows the results with the objective of interpreting the adequacy of data for factor analysis. Kaiser-Meyer-Olkin measure is a measure to assess sampling adequacy and its value should be more than 0.6 (Pandya, Bulsari, & Sinha, 2012) for the items to be adequate for factor analysis. Not only that, the p -value of Bartlett's test should be less than 0.05 (Pandya et al., 2012). In this study, the Kaiser-Meyer-Olkin Measure is 0.79122 (more than 0.6) and the p -value of Bartlett's test is .000 (less than 0.05). So, the conclusion is that factor analysis can be conducted on this data.

After finding proof of data adequacy for factor analysis, let us delve deeper into factor analysis variable by variable. When we look at the factor loadings of External Variables, we see that out of nine items, seven items have got loaded. The items which have not been loaded are 'Special offers and coupons' and 'Site map for direct access to right products, brands'. The first one got dropped as it may not be so much important for an Indian consumer. The reason is that all of the Indian e-retailers are playing a fierce price war among themselves as consumers being price conscious, are hungry for deals. The second one got dropped as Indian consumers may not think that site map is essential for their shopping needs as most e-retailers have the same navigation path (categories > subcategories > brands > price > range > style, color) on their websites. Thus, Indian consumers can get their desired products by following this navigation path. So, they may not need a sitemap.

When we look into the factor loadings of Internal Variables, we note that out of seven items, only one item :

Table 2(b). Factor Analysis of the Variables of Cyber Atmospherics

Items	External Variables	Internal Variables	Ambience & Design	Point of Purchase	Customer Service	Social Dimension
RETINFO	0.939					
PARTNERS	0.868					
CUSTSERV	0.851					
MAILSUBS	0.704					
SECURITY	0.691					
STORELOC	0.640					
SITEMAP	-0.607					
UPCMPROD		0.945				
SPECSIZE		0.943				
FITGUIDE		0.943				
BRAND		0.911				
MERCHDEP		0.891				
BESTSELL		0.860				
TEXT			0.947			
GRAPHICS			0.868			
INFOPLAC			0.860			
SPACE			0.858			
COLOR			0.630			
OPTION				0.949		
PRICERES				0.943		
TOTLCOST				0.941		
SUGGESTN				0.940		
GIFTSUGG					0.946	
SHIPOPTS					0.943	
CATALOG					0.942	
PERSINFO					0.941	
SAVEOPTN					0.939	
ANOADDRS					0.933	
GIFTWRAP					0.920	
TOLLFREE					0.545	
GIFTVOUC					0.515	
FAQS						0.920
LOADING						0.900
EASYUSE						0.840
CHATMAIL						0.817
AVATARS						0.772
NEWSGRP						0.515

Extraction Method: Principal Component Method. Rotation Method:Varimax with Kaiser Normalization. Rotation converged in 25 iterations. For details of abbreviations, refer to Appendix 1.

'detailed description of products' has been dropped. Consumers may expect detailed description of products as their right and it has to be on the website. It has got dropped with lesser factor loading.

In the case of Ambience Factor and Design and Point of Purchase, we find that none of the items got dropped, showing the conceptual strength of these items in the electronic retailing scenario. When we look at the loading pattern of Customer Service, we observe that out of 11 items, nine items got loaded. The items which haven't got loaded are 'Facility of fast checkouts by frequent shoppers' and 'Order confirmation via email'. In case of the first

Table 3(a). KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure...		0.82856171
Bartlett's Test of Sphericity	Approx. Chi-Square	6602.5269
	Df	378
	Sig. Bartlett	0

Table 3(b). Factor Analysis of Cyber Atmospheric, Consumer Reliance, Consumer Contentment, Consumer Adhesion

Items	Cyber Atmospheric	Consumer Reliance	Consumer Contentment	Consumer Adhesion
SERVENV	0.895			
EXCENV	0.864			
HGQLENV	0.594			
CONSPERF		0.881		
FULLCOMM		0.867		
CREDCARD		0.852		
GOODSERV		0.834		
SERVDEL		0.826		
INTEREST		0.822		
PROMISES		0.752		
TRUST		0.701		
TRUSTINF		0.560		
RIGHTDEC			0.919	
WISE			0.914	
SATSFIED			0.899	
OVERSAT			0.678	
OVEREV			0.671	
FAMILY				0.919
IDENTIFY				0.907
PURMORE				0.751
FIRSTCHC				0.705
PRICEINC				0.636
AFFIRMTH				0.603
RECOMM				0.564
NOSHIFT				0.548

Extraction Method: Principal Components Method. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 25 iterations. Refer to Appendix 2 for details of abbreviated forms.

item, the consumers may not think that it is important as unlike offline retailing, in case of electronic retailing, there is no queue of consumers. Everything depends mostly on the speed of the Internet in the Indian scenario. So, the said item may not have got importance from consumers. In the case of the second item, consumers may think of order confirmation via email as a standard facility given by e-retailers. That is why it got dropped. Lastly, all of the items got loaded from Social Dimension, showing the great importance given by consumers to this aspect in this age of social media. Electronic retailers must harness the great potential of social dimension variables to have close connect with consumers.

(3) Factor Analysis of Cyber Atmospheric, Consumer Reliance, Consumer Contentment, and Consumer Adhesion : Results of factor analysis of Cyber Atmospheric, Consumer Reliance, Consumer Contentment, and Consumer Adhesion is presented in Table 3(a) and Table 3(b). Let us get into analysis of KMO and Bartlett's test conducted on the items. Kaiser-Meyer-Olkin Measure is 0.82856171 (more than 0.6) and the p -value of Bartlett's test is .000 (less than 0.05). So, the conclusion that can be drawn is that factor analysis can be conducted on this data.

When we look at the factor loadings of Cyber Atmospheric, we find that one item, that is, 'Superb overall environment for shopping' did not get loaded. The probable reason for this is that consumers being rational, they do not tend to give their opinion supporting terms like "superb environment". Consumers generally don't select "superb environment" at the first instance. At first, they want to get sure of the idea of superb environment by going through the entire questionnaire. Then only they make an opinion about the environment.

When we study the factor loadings of Consumer Reliance, we see that one item, that is, 'Private information can be given to this electronic retailer' didn't get loaded. The probable reason is the unease of consumers in sharing their private information with an electronic retailer. A fear psychosis regarding loss of privacy has also played an important role in this regard. In the case of Consumer Contentment, all the items got loaded, showing great importance of contentment for consumers in the electronic retailing scenario. Lastly, in the case of Consumer Adhesion, we can see that one factor, that is, 'I provide encouragement to my friends and relatives to purchase from electronic retailers' didn't get loaded. The probable reason is that before this item, consumers have already given their opinion on the item 'I recommend the electronic retailer to people seeking suggestions'. Thus, the succeeding item may have been deemed additional or unnecessary by consumers.

Managerial Implications

This study has great managerial implications in today's world. It has attempted to study cyber atmospheric variables and their impact on consumer behavior in the form of contentment, reliance, and adhesion. The booming electronic retailing industry needs these insights very badly to have a strong positioning in the minds of consumers.

(1) When products, brands, style, color, and design are same, or when these parameters are same, electronic retailers turn to atmospheric to have top of the mind recall among consumers. In all probability, this study is the first factor analysis on cyber atmospheric variables. Therein lies its great value for managers in e-retailing companies.

(2) A number of global electronic retailers are entering India. They want to understand Indian consumer behavior. They also want to study the impact of cyber atmospheric on Indian consumers. This study will help them by showing the impact of cyber atmospheric on Indian consumers.

(3) The study has taken all of the cyber atmospheric variables into consideration. So, depending on consumer segment, e-retailers can have different cyber atmospherics based targeting and positioning strategies.

(4) The right online atmospherics can generate positive consumer behavior which further leads to increased sales and margins. This study can help e-retailers in bringing in profitability in operations, particularly when venture capitalists are putting immense pressure on e-retailers to turn profitable.

(5) Consumers generally have different moods and temperaments during different times of the day. E-retailers can make changes in their cyber atmospherics to suit the mood of consumers in order to have an emotional connect with them.

(6) Most of the sales of Indian e-retailers are taking place in North, West, and South India. The players are eager to study more about consumer behavior in East India. Thus, this study conducted in the East Indian cities of Kolkata and Bhubaneswar has great relevance.

Conclusion

This research can assist online retailers in understanding how consumers can shop effectively in a cyber atmosphere environment. The cyber atmospheric variables can drive electronic retailers towards providing excellent virtual atmospherics, thus leading to reliance, contentment, and adhesion in the minds of consumers. The results from using these constructs can be further utilized in studying the wider relationships of these constructs. The findings of this research have immense managerial implications. The basic tenet of this study is that electronic retailers must know the different variables of cyber atmospherics and how they influence different aspects of consumer behavior namely, adhesion, reliance, and contentment. By analyzing the results of this study, electronic retailers can devise their own strategies so that the consumers can spend more time on their websites.

Limitations of the Study and Scope for Further Research

The limitations of the study are :

(1) The study was conducted in cities such as Kolkata and Bhubaneswar. A study in cities like Delhi, Bangalore, and Mumbai would have brought more diversity.

(2) The study was conducted considering five categories: (a) books/magazines, (b) clothing/shoes/accessories/hobby, (c) entertainment/travel/spa, (d) food/beverage/grocery, (e) consumer electronic/IT hardware/software. This has limited the scope of the study. If more categories were included, it would have created wider understanding of consumer behavior.

(3) Another important point to be noted is that consumer behavior gets impacted not only by atmospherics, but also by other factors such as brand equity, customer relationship management, product quality, and design in case of apparel. These were not due consideration in this study.

(4) The study was carried out on students. Introduction of other age groups comprising of businessmen, professionals, and other salaried class would have generated more interesting results.

A significant amount of scope exists for further research in the field discussed.

- (1)** Relation between cyber atmospherics and crucial India specific factors like price, connectivity, payment mode can be studied further. These factors play a very important role in the final buying decision of Indian consumers.
- (2)** Relation between cyber atmospheric variables and business model, that is, inventory led model or market place based model can be studied further.
- (3)** In a developing country like India, there are some unique issues like connectivity, internet speed, use of feature phones, cash on delivery, and mode of payment. Studies can be conducted to know whether these factors bring in positivity such as consumer reliance, consumer contentment, and consumer adhesion to consumer behavior.
- (4)** The study was conducted only in five categories. So, studies can be conducted to know whether the results of this study are consistent across categories or not.
- (5)** Last, but not the least, the conceptual model mentioned in this study can be further studied and analyzed for impact of cyber atmospherics on consumer behavior.

References

- Aladwani, A. M., & Palvia, P. (2002). Developing and validating an instrument for measuring user-perceived web quality. *Information and Management*, 39 (6), 467-476.
- Allen, C. (1999). *See it in 3D*. Retrieved from www.clickz.com/mkt/precis_mkt/article.php/816841
- Anderson, E. W., & Fomell, C. (1994). A customer satisfaction research prospectus. In R. T. Rust & R. L. Oliver (Eds.), *Service quality: New directions in theory and practice* (pp. 241-268). Thousand Oaks, CA: Sage Publications, Inc. doi: <http://dx.doi.org/10.4135/9781452229102.n11>
- Anderson, R. E., & Srinivasan, S. S. (2003). E-satisfaction and e-loyalty: A contingency framework. *Psychology and Marketing*, 20 (February), 123-138. doi: 10.1002/mar.10063
- Athanassopoulos, A. D., & Iliakopoulos, A. (2003). Modeling customer satisfaction in telecommunications: assessing the effects of multiple transaction points on the perceived overall performance of the provider. *Production and Operations Management*, 12 (2), 224-245. doi: 10.1111/j.1937-5956.2003.tb00502.x
- Balasubramanian, S., Konana, P., & Menon, N. M. (2003). Customer satisfaction in virtual environments: A study of online investing. *Management Science*, 49 (1), 871-889. doi.org/10.1287/mnsc.49.7.871.16385
- Baldinger, A. L., & Robinson, J. (1996). Brand loyalty: The link between attitude and behavior. *Journal of Advertising Research*, 36 (6), 22-34.
- Bansal, H. S., & Taylor, S. F. (1999). The service provider switching model (SPSM): A model of consumer switching behaviour in the service industry. *Journal of Service Research*, 2 (2), 200-218. doi: 10.1177/109467059922007
- Barnes, S., & Vidgen, R. (2001). An evaluation of cyber-bookshops : The webqual method. *International Journal of Electronic Commerce*, 6 (1), 11-30. doi: 10.4018/978-1-878289-89-6.ch002
- Bennet, R., & Rundle-Thiele, S. (2004). Customer satisfaction should not be the only goal. *Journal of Services Marketing*, 18 (1), 514-523. doi.org/10.1108/08876040410561848

- Bhattacharya, S., & Mishra, B.B. (2015). Evolution, growth and challenges in E-commerce Industry: A case of India. *Sumedha Journal of Management*, 4 (1), 45 - 58.
- Bhattacharya, S., Mishra, B.B., & Mishra, U.S. (2015). Impact of cyber atmospherics on buyers of different e-retailing sites: Literature review and conceptual model proposal. *Mediterranean Journal of Social Sciences*, 6 (6), 260 - 266. doi: 10.5901/mjss.2015.v6n6p260
- Bhattacharjee, A. (2002). Individual trust in online firms: Scale development and initial test. *Journal of Management Information Systems*, 19 (1), 211-241. doi: 10.1080/07421222.2002.11045715
- Bitner, M. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*, 56 (2), 57-71. doi: 10.2307/1252042
- Bitner, M. J., & Hubbert, A. R. (1994). Encounter satisfaction versus overall satisfaction versus quality. In R. T. Rust & R. L. Oliver (Eds.), *Service quality: New directions in theory and practice* (pp. 72-94). Thousand Oaks, CA: Sage.
- Boulding, W., Kalra, A., Staelin, R., & Zeithaml, V. (1993). A dynamic process model of service quality: From expectations to behavioral intentions. *Journal of Marketing Research*, 30 (1), 7-27. doi: 10.2307/3172510
- Bowen, J. T., & Shoemaker, S. (1998). Loyalty: A strategic commitment. *Cornell Hotel and Restaurant Administration Quarterly*, 39 (1), 12-25. doi: 10.1177/001088049803900104
- Butcher, K., Sparkes, B., & O'Callaghan, F. (2001). Evaluative and relational influences on service loyalty. *International Journal of Service Industry Management*, 12 (4), 310-327. doi.org:10.1108/09564230110405253
- Cai, S., Xu, Y., & Yu, J. (2008). The effects of Web site aesthetics and shopping task on consumer online purchasing behavior. *CHI '08 Extended Abstracts on Human Factors in Computing Systems*, Florence, Italy. DOI: 10.1145/1358628.1358877
- Caruana, A. (2002). Service loyalty: The effects of service quality and the mediating role of customer satisfaction. *European Journal of Marketing*, 36(7/8), 811-828. DOI: 10.1108/03090560210430818
- Caruana, A., Money, A. H., & Berthon, P. R. (2000). Service quality and satisfaction: The moderating role of value. *European Journal of Marketing*, 34 (11/12), 1338-1353. doi.org:10.1108/03090560010764432
- Chen, P.U., & Hitt, L.M. (2002). Measuring switching costs and the determinants of customer retention in Internet-enabled businesses: A study of the online brokerage industry. *Information Systems Research*, 13 (3), 255-274.
- Chen, Q., & Wells, W. D. (1999). Attitude toward the site. *Journal of Advertising Research*, 39 (5), 27-37.
- Cheskin (2000). *Trust in the wired Americas*. Retrieved from <http://www.cheskin.com/think/studies/trust2.html>
- Childers, T. L., Carr, C. L., Peck, J., & Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behavior. *Journal of Retailing*, 77 (4), 511-35. DOI: 10.1016/S0022-4359(01)00056-2
- Churchill, G. A., & Suprenant, C. (1982). An investigation into the determinants of customer satisfaction. *Journal of Marketing Research*, 4 (November), 491-504. DOI: 10.2307/3151722
- Comrey, A. L. (1973). *A first course in factor analysis*. Retrieved from <http://www.nypress.com/>

- Corritore, C. L., Kracher, B., & Wiedenbeck, S. (2003). On-line trust: Concepts, evolving themes : A model. *International Journal of Human-Computer Studies*, 58 (6), 737-758. DOI:10.1016/S1071-5819(03)00041-7
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16 (3), 297-334. doi: 10.1007/BF02310555
- Dabholkar, P. A. (1995). The convergence of customer satisfaction and service quality evaluations with increasing customer patronage. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 8, 32-43. DOI:10.1080/02614360306572
- Dailey, L. (2004). Navigational web atmospherics: Explaining the influence of restrictive navigation cues. *Journal of Business Research*, 57 (7), 795–803. doi:10.1016/S0148-2963(02)00364-8
- Day, G. S. (1969). A two-dimensional concept of brand loyalty. *Journal of Advertising Research*, 9 (3), 29-36.
- Dick, A. S., & Basu, K. (1994). Customer loyalty: Toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*, 22 (Spring), 99-113. DOI: 10.1177/0092070394222001
- Donovan, R.J., & Rossiter, J.R. (1982). Store atmosphere: An environmental psychology approach. *Journal of Retailing*, 58 (1), 34-57.
- Dowling, G., & Uncles, M. (1997). Do customer loyalty programs really work. *Sloan Management Review*, 35 (4), 71-82.
- Edvardsson, B., Johnson, M. D., Gustafsson, A., & Strandvik, T. (2000). The effects of satisfaction and loyalty on profits and growth: Products versus services. *Total Quality Management*, 11 (7), 917-927. DOI:10.1080/09544120050135461
- Emmet, B. (1930). *Department stores: Recent policies, costs and profits*. Retrieved from <http://www.sup.org/>
- Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2001). Atmospheric qualities of online retailing : A conceptual model and implications. *Journal of Business Research*, 54 (2), 177-84. DOI: 10.1016/S0148-2963(99)00087-9
- Eroglu, S.A., Machleit, K.A., & Davis, L.M. (2003). Empirical testing of a model of online store atmospherics and shopper responses. *Psychology and Marketing*, 20 (4), 139 - 150. DOI: 10.1002/mar.10064
- Fogg, B. J., Marshall, J., Laraki, O., Osipovich, A., Varma, C., & Fang, N. (2001). What makes websites credible? A report on a large quantitative study. *Conference: Proceedings of the CHI 2001 Conference on Human Factors in Computing Systems*, Seattle, WA, USA, 3(1), 61-67. doi: 10.1145/365024.365037
- Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of Consumer Research*, 27(March), 343-373.
- Fullerton, G. (2003). When does commitment lead to loyalty? *Journal of Service Research*, 5 (4), 333-344. doi: 10.1177/1094670503005004005
- Funk, T. (2011). *Social media playbook for business*. California, CA, 250 - 261.
- Garbarino, E., & Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing*, 63 (April), 70-87. DOI: 10.2307/1251946
- Garson, G. D. (2005). *Factor analysis*. Retrieved from <http://www2.chass.ncsu.edu/garson/pa765/factor.htm>

- Geyskens, I., Steenkamp, J., B. E. M., Scheer, L. K., & Kumar, N. (1996). The effects of trust and interdependence on relationship commitment: A trans-Atlantic study. *International Journal of Research in Marketing*, 13(4), 303-317. doi: 10.1016/S0167-8116(96)00006-7
- Gonzalez, A. M. (2010). *New media influencing fashion*. Retrieved from <http://austin.ynn.com/content/news/269733/new-media-influencing-fashionindustry>
- Grabner-Krauter, S., & Kaluscha, E. A. (2003). Empirical research in on-line trust: A review and critical assessment. *International Journal of Human-Computer Studies*, 58 (6), 783-812. doi:10.1016/s1071-5819(03)00043-0
- Gremler, D. D., & Brown, S. W. (1996). The loyalty ripple effect: Appreciating the full value of customers. *International Journal of Service Industry Management*, 10 (3), 271-291. DOI: 10.1108/09564239910276872
- Gremler, D. D., & Brown, S. W. (1996). Service loyalty: Its nature, importance, and implications. In S.C. Norgsen (Chair), *Advancing service quality: A perspective. Conference conducted at the meeting of the International Service Quality Association*, New York City, New York State, USA.
- Griffith, D. A., Krampf, R. F., & Palmer, J. W. (2001). The role of interface in electronic commerce: Consumer involvement with print versus on-line catalogs. *International Journal of Electronic Commerce*, 5 (4), 135-153. DOI:10.1016/j.im.2015.05.005
- Guiltinan, J. P. (1989, February). A classification of switching costs with implications for relationship marketing. In Terry. L. Childers (Chair), *AMA Winter Educators' Conference: Marketing Theory and Practice*. Conference conducted at Chicago, Illinois.
- Hart, C. W., & Johnson, M. D. (1999). Growing the trust relationship. *Marketing Management*, 5(1), 8-19.
- Harvey, J. (1998). Service quality: A tutorial. *Journal of Operations Management*, 7 (5), 583-597. DOI: 10.1016/S0272-6963(97)00026-0
- Havlena, W., & Holbrook, M. (1986). The varieties of consumption experience: Comparing two typologies of emotion in consumer behavior. *Journal of Consumer Research*, 13 (3), 394 - 404. doi.org/10.1086/209078
- Heijden, H. V. D. (2003). Factors influencing the usage of websites: The case of a generic portal in the Netherlands. *Information & Management*, 40(6), 541-549. DOI:10.1016/S0378-7206(02)00079-4
- Hoffman, D. L., Novak, T. P., & Peralta, M. (1999). Building consumer trust online. *Communications of the ACM*, 42(4), 80-85. doi: 10.1145/299157.299175
- Hong, S., Thong, J. Y. L., & Tarn, K. Y. (2007). Understanding continued information technology usage behavior: A comparison of three models in the context of mobile internet. *Decision Support Systems*, 42 (3), 1819-1834. Doi:10.1016/j.dss.2006.03.009
- Hou, Y. (2005). *Service quality of online apparel retailers and its impact on customer satisfaction, customer trust and customer loyalty*. Retrieved from www.unc.edu
- Jamal, A., & Naser, K. (2003). Factors influencing customer satisfaction in the retail banking sector in Pakistan. *International Journal of Commerce and Management*, 13 (2), 29-53. doi: 10.1108/eb047465

- Janda, E., Lehmann, K., Killisch, I., Jechlinger, M., Herzig, M., Downward, J., & Grünert, S. (2002). Ras and TGF β cooperatively regulate epithelial cell plasticity and metastasis dissection of ras signaling pathways. *The Journal of Cell Biology*, 156 (2), 299-314.
- Jarvenpaa, S. L., & Tractinsky, N. (1999). Consumer trust in an Internet store: A cross- cultural validation. *Journal of Computer-Mediated Communication*, 5 (2). DOI: 10.1111/j.1083-6101.1999.tb00337.x
- Jarvenpaa, S. L., Tractinsky, J., & Vitale, M. (2000). Consumer trust in an Internet store. *Information Technology and Management*, 7 (Jan/Feb), 45-71. DOI: 10.1023/A:1019104520776
- Javalgi, R. (1997). Service loyalty: Implications for service providers. *Journal of Services Marketing*, 11 (3), 165-179. doi.org/10.1108/08876049710168663
- Kervenoael, R., Aykac, D., & Bisson, C.(2008).The influence of social E-Atmospherics in practice: A website content analysis perspective. In Jean-Claude ANDREANI (Chair), *7th International Congress, Marketing Trend*. Conference conducted at Venice, Italy.
- Kim, S., & Stoel, L. (2004). Apparel retailers: Website quality dimensions and satisfaction. *Journal of Retailing and Consumer Services*, 11 (2), 109-117. DOI: 10.1016/S0969-6989(03)00010-9
- Klemperer, P. (1995). Competition when consumers have switching costs: An overview with applications to industrial organization, macro economics, and international trade. *The Review of Economic Studies*, 62 (4), 515-539. doi: 10.2307/2298075
- Lavie, T., & Tractinsky, N.(2004). Assessing dimensions of perceived visual aesthetics of web sites. *International Journal of Human-Computer Studies*, 60 (3), 269-298. DOI:10.1016/j.ijhcs.2003.09.002
- Lee, J., Lee, J., & Feick, L. (2001). The impact of switching costs on the customer satisfaction-loyalty link: Mobile phone service in France. *Journal of Services Marketing*, 15 (1), 35-48. DOI: 10.1108/08876040110381463
- Lee, M. K. O., & Turban, E. (2001). A trust model for consumer Internet shopping. *International Journal of Electronic Commerce*, 6 (1), 75-91. DOI:10.1023/A:1019104520776
- Lee, S., & Koubek, R.(2010). The effects of usability and web design attributes on user preference for e-commerce website. *Computers in Industry*, 61 (4),329–341. DOI: 10.1016/j.compind.2009.12.004
- Levesque, T., & McDougall, G. H. G. (1996). Determinants of customer satisfaction in retail banking. *International Journal of Bank Marketing*, 14 (7), 12-20.DOI: 10.1108/02652329610151340
- Liang, T., & Lai, H. (2002).Effect of store design on consumer purchases: An empirical study of on-line bookstores. *Information and Management*, 39 (6), 431-444. Doi:10.1016/S0378-7206(01)00129-X
- Lin, J. C., & Lu, H. (2000). Towards an understanding of the behavioral intention to use a web site. *International Journal of Information Management*, 20 (3), 197-208.
- Loiacono, E. T. (2000). *WebQual™: A website quality instrument*. Retrieved from <http://www.uga.edu/>
- Luam, P., & Lin, H.-H. (2003). A customer loyalty model for E-service context. *Journal of Electronic Commerce Research*, 4 (4), 156-167. doi:10.1016/j.im.2005.08.001
- Lynch, J., & Ariely, D.(2000).Wine online: Search costs affect competition on price, quality and Distribution. *Marketing Science*, 19 (1), 83-103. doi.org:10.1287/mksc.19.1.83.15183

- Mattila, A. S. (2001). The impact of relationship type on customer loyalty in a context of service failures. *Journal of Service Research*, 4 (2), 91-101 DOI: 10.1177/109467050142002
- McColl-Kennedy, J., & Schneider, U. (2000). Measuring customer satisfaction: Why, what and how. *Total Quality Management*, 11 (1), 883-896. DOI:10.1080/09544120050135434
- McKinney, N. (2004). Creating a satisfying internet shopping experience via atmospheric variables. *International Journal of Consumer Studies*, 28 (3), 268-283. doi:10.1016/S0022-4359(01)00064-1
- McKinney, V., Yoon, K., & Zahedi, F. M. (2002). The measurement of web-customer satisfaction: An expectation and disconfirmation approach. *Information Systems Research*, 13 (3), 296-315.
- McKnight, D. H., & Chervany, N. L. (2002). What trust means in e-commerce customer relationships: An interdisciplinary conceptual typology. *International Journal of Electronic Commerce*, 6 (2), 35-59.
- Mittal, V., & Kamakura, W. A. (2001). Satisfaction, repurchase intent and repurchase behavior: Investigating the moderating effect of customer characteristics. *Journal of Marketing Research*, 3 (February), 131-142. doi.org:10.1509/jmkr.38.1.131.18832
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58 (3), 20-38. DOI: 10.2307/1252308.
- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill, New York, 180– 195.
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 4 (November), 460-469. DOI: 10.2307/3150499
- Ostrowski, R L., O'Brien, T., & Gordon, G. (1993). Service quality and customer loyalty in the commercial airline industry. *Journal of Travel Research*, 32 (1), 16-24.
- Pandya, K., Bulsari, S., & Sinha, S. (2014). *SPSS in simple methods* (2nd ed). New Delhi : Dreamtech Press.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64 (1), 12-40.
- Park, J. H., & Stoel, L. (2002). Apparel shopping on the Internet: Information availability on US apparel merchant web sites. *Journal of Fashion Marketing and Management*, 6 (2), 158-176. doi.org:10.1108/13612020210429908
- Park, J., Lennon, S. J. & Stoel, L. (2005). On-line product presentation: Effects on mood, perceived risk, and purchase intention. *Psychology and Marketing*, 22 (9), 695-719. DOI: 10.1002/mar.20080
- Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7 (3), 101-134.
- Pritchard, M. P., & Howard, D. R. (1997). The loyal traveler: Examining a typology of service patronage. *Journal of Travel Research*, 35 (4), 2-10. doi: 10.1177/004728759703500417
- Ranaweera, C., & Prabhu, J. (2003). The influence of satisfaction, trust and switching barriers on customer retention in a continuous purchasing setting. *International Journal of Service Industry Management*, 14 (4), 374-395. doi.org/10.1108/09564230310489231
- Reichheld, F. F., & Sasser, W. E. (1990). Zero defections: Quality comes to services. *Harvard Business Review*, 68 (September-October), 105-111.

- Reichheld, F. F., & Schefter, P. (2000). E-Loyalty: Your secret weapon on the Web. *Harvard Business Review*, 75 (4), 105-113.
- Ribbink, D., van Riel, A. C. R., Liljander, V., & Streukens, S. (2004). Comfort your online customer: quality, trust and loyalty on the Internet. *Managing Service Quality*, 14(6), 446-456. doi.org:10.1108/09604520410569784
- Riel, A. C. R. V., & Semeijn, J. (2003). *Online travel service quality: Towards delighted and loyal customers*. Retrieved from <http://www.ou.nl/mfo/managementwetenschappen/onderzoek/pdf%20Mw%20papers/GR03-05.pdf>
- Rowley, J.E. (2002). *E-business: Principles and practice* (pp. 266-282). Basingstoke : Palgrave Macmillan.
- Salam, A. F., Iyer, L., Palvia, P., & Singh, R. (2005). Trust in E-commerce. *Communications of the ACM*, 48 (2), 72-77. doi: 10.1145/1042091.1042093
- Sautter, P., Hyman, M.R. & Lukosius, V. (2004). E-tail atmospherics: A critique of the literature and model extension. *Journal of Electronic Commerce Research*, 5 (1), 14-24. DOI: 10.7763/IPEDR. 2012
- Schenkman, B. N., & Jönsson, F. U. (2000). Aesthetics and preferences of web pages. *Behaviour & Information Technology*, 19(5), 367 - 377. DOI: 10.1080/014492900750000063
- Schmidt, K., Liu, Y., & Sridharan, S.(2009). Webpage aesthetics, performance and usability: design variables and their effects. *Ergonomics*, 52 (6), 631–643. doi: 10.1080/00140130802558995
- Shankar, V., Urban, L., & Sultan, F. (2002). Online trust: A stakeholder perspective, concepts, implications, and future directions. *The Journal of Strategic Information Systems*, 11(3-4), 325-344.
- Soderlund, M., & Julander, C.R. (2003). The variable nature of services: An empirical examination of trust and its effects on customers' satisfaction responses to poor and good service. *Total Quality Management*, 14(3), 219-304. DOI: 10.1080/1478336032000046616
- Spreng, R. A., & Mackoy, R. D. (1996). An empirical examination of a model of perceived service quality and satisfaction. *Journal of Retailing*, 72 (2), 201-204. DOI: 10.5937/sjm.v7i2.1245
- Szymanski, D. M., & Henard, D. H. (2001). Customer satisfaction: A meta-analysis of the empirical evidence. *Journal of the Academy of Marketing Science*, 29(1), 16-35. doi: 10.1177/009207030102900102
- Szymanski, D. M., & Hise, R. T. (2000). E-satisfaction: An initial examination. *Journal of Retailing*, 76(3), 309-322.
- Taylor, S. (2012). *Twitter and Compete study: How Tweets impact online shopping*. Retrieved from <https://blog.twitter.com/2012/twitter-and-compete-study-how-tweetsimpact-online-shopping>
- Taylor, S. A., & Hunter, G. (2003). An exploratory investigation into the antecedents of satisfaction, brand attitude, and loyalty within the (B2B) eCRM Industry. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 16, 19-35.
- Then, N. K., & DeLong, M. R. (1999). Apparel shopping on the web. *Journal of Family and Consumer Sciences*, 91 (3), 65-68. doi.org:10.1108/13612020210429908
- Thorlacius, L. (2002). *Visuel Kommunikation på websites*. Retrieved from <http://www.kommunikationsforum.dk/default.asp?articleid=10728>

- Torkzadeh, G., & Dhillon, G. (2002). Measuring factors that influence the success of Internet commerce. *Information Systems Research*, 13 (2), 187-204.
- Traxler, D. (2012). *Twitter for ecommerce merchants*. Retrieved from <http://www.practicalecommerce.com/articles/3921-Twitter-for-Ecommerce-Merchants>
- Vavra, T. G. (1997). *Improving your measurement of customer satisfaction: A guide to creating, conducting, analyzing, and reporting customer satisfaction measurement programs*. Retrieved from http://www.academia.edu/6763743/THEORIES_OF_CUSTOMER_SATISFACTION
- Vilnai-Yavetz, I., & Rafaeli, A. (2006). Aesthetics and professionalism of virtual servicescapes. *Journal of Service Research*, 8 (3), 245-259. doi: 10.1177/1094670505281665
- Vrechopoulos, A. P., O'Keefe, R. M., Doukidis, G. I., & Siomkos, G. J. (2004). Virtual store layout: an experimental comparison in the context of grocery retail. *Journal of Retailing*, 80 (1), 13-22. DOI: 10.1016/j.jretai.2004.01.006
- Vrechopoulos, A., & Evagelos, A. (2009). Web banking layout effects on consumer behavioural intentions. *International Journal of Bank Marketing*, 27 (7), 524-546. doi: <http://dx.doi.org/10.1108/02652320911002340>
- Widaman, K. F. (1993). Common factor analysis versus principal components analysis: Differential bias in representing model parameters? *Multivariate Behavioral Research*, 28 (3), 263-311. DOI: 10.1207/s15327906mbr2803_1
- Woodside, A. G., Frey, L. L., & Daly, R. T. (1989). Linking service quality, customer satisfaction, and behavioral intention. *Journal of Health Care Marketing*, 9 (4), 5-17.
- Yoon, S.-J. (2002). The antecedents and consequences of trust in online purchase decisions. *Journal of Interactive Marketing*, 16 (2), 47-63. DOI: 10.1002/dir.10008
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioural consequences of service quality. *Journal of Marketing*, 60 (April), 31-46. DOI: 10.1080/07359683.2015.1000706
- Zhang, D., Vorndran, S., Russo, J. M., Gordon, M., & Kostuk, R. K. (2012). Ultra light-trapping filters with broadband reflection holograms. *Optics Express*, 20 (13), 14260-14271. DOI: 10.1364/OE.20.014260

Appendix 1

Abbreviated Form Description of Factors of Cyber Atmospheric Variables

ABBREVIATED FORM	ITEM IN QUESTION	LOADED OR NOT
EXTERNAL VARIABLES		
MAILSUBS	Facility to subscribe to promotion related mails	Yes
SECURITY	Access to information for my privacy and security	Yes
STORELOC	Store locator for offline store address	Yes
OFFERS	Special offers and coupons	No
PARTNERS	Access to e-retailer's partners/alliances for different options regarding brand, product, style,color etc.	Yes
SITEMAP	Site map for direct access to right products, brands	Yes
CUSTSERV	Good customer service	Yes
DEPTLIST	Listings based on departments/brands	No
RETINFO	Information of returning purchased products if required	Yes
INTERNAL VARIABLES		
MERCHDEP	Facility to shop by merchandise department	Yes
BRAND	Facility to shop by brand name	Yes
SPECSIZE	Facility to shop by special sizes in case of apparel, footwear	Yes
BESTSELL	Listing of best sellers	Yes
UPCMPROD	Listing of upcoming products	Yes
DETAILS	Detailed description of products	No
FITGUIDE	Size charts/fit guides for apparel, footwear	Yes
AMBIENCE FACTORS & DESIGN VARIABLES		
COLOR	I like the color scheme of the e-retailer	Yes
GRAPHICS	I like the graphics/photos/images of the e-retailer	Yes
INFOPLAC	I like how right information is placed at the right point by the e-retailer	Yes
TEXT	I like the text size and color used by the e-retailer	Yes
SPACE	Space allocation with regard to proper placement of information is satisfactory	Yes
POINT OF PURCHASE		
PRICERES	The price of the merchandise of the e-retailer is reasonable	Yes
TOTLCOST	Total cost of merchandise comes out to be within budget	Yes
OPTION	Option to delete a previously selected item is present in the site	Yes
SUGGESTN	Provision of suggestions/recommendations for additional purchase	Yes
CUSTOMER SERVICE		
GIFTVOUC	Payment option through gift cards and gift vouchers	Yes
TOLLFREE	Toll free customer care number	Yes
ANOADDRS	Option to ship to another address	Yes
SAVEOPTN	Option to save for later purchase	Yes
FSTCHECK	Facility of fast checkouts by frequent shoppers	No
GIFTWRAP	Gift wrapping options	Yes
MAILCONF	Order confirmation via email	No
CATALOG	Catalogue requisition	Yes
SHIPOPTS	Multiple shipping options	Yes
GIFTSUGG	Gift suggestions	Yes
PERSINFO	Facility of storing personal contact information in the site	Yes
SOCIAL DIMENSION		
NEWSGRP	Social media based newsgroup for feedback sharing	Yes
CHATMAIL	Chat/email facilities	Yes
FAQS	Frequently Asked Questions	Yes
EASYUSE	Easy to use site	Yes
LOADING	Satisfactory loading of site	Yes
AVATARS	Virtual salesmen or avatars for suggestions or query handling	Yes

Appendix 2

Abbreviated Form Description of Factor Analysis Cyber Atmospherics, Consumer Reliance, Consumer Contentment, and Consumer Adhesion

ABBREVIATED FORM	ITEM IN QUESTION	LOADED OR NOT
CYBER ATMOSPHERICS		
SUPERENV	Superb overall environment for shopping	No
HGQLENV	High quality shopping environment	Yes
SERVENV	Service oriented environment of a high standard	Yes
EXCENV	Excellent environment in every way	Yes
CONSUMER RELIANCE		
TRUST	My electronic retailer can be trusted	Yes
CONSPERF	This electronic retailer has consistent performance in case of shopping	Yes
PROMISES	Promises and commitments are kept by this electronic retailer	Yes
INTEREST	I have reliance on this electronic retailer as they keep my best interests in mind	Yes
SERVDEL	I can trust the service delivery of this electronic retailer to be good	Yes
CREDCARD	I am willing in giving my credit card information to this electronic retailer	Yes
PVTINFO	Private information can be given to this electronic retailer	No
GOODSERV	I think that good service will be provided to me by this electronic retailer in the future.	Yes
TRUSTINF	I trust the information provided to me by this electronic retailer	Yes
FULLCOMM	The electronic retailer has full commitment towards my satisfaction	Yes
CONSUMER CONTENTMENT		
RIGHTDEC	In my opinion it was the right decision for me to use this electronic retailer for making my purchase	Yes
WISE	I was wise in choosing to use this electronic retailer firstly ahead of others	Yes
SATSFIED	I feel satisfied with this electronic retailer based on its consistent performance in service delivery	Yes
OVERSAT	I have contentment with the decision to use this electronic retailer from an overall point of view	Yes
OVEREV	Based on my overall evaluation the products provided by this online retailer are very good	Yes
CONSUMER ADHESION		
AFFIRMTH	I say affirmative things about the electronic retailer	Yes
RECOMM	I recommend the electronic retailer to people seeking suggestion	Yes
ENCOURAG	I provide encouragement to my friends and relatives to purchase from the electronic retailer	No
FIRSTCHC	For purchase this electronic retailer is my first choice of consideration	Yes
PURMORE	I will purchase more from this electronic retailer in the future	Yes
NOSHIFT	I don't want to shift from this electronic retailer in proximate future	Yes
PRICEINC	In the event of price increase also I will purchase from this electronic retailer	Yes
IDENTIFY	I identify myself strongly with this electronic retailer	Yes
FAMILY	As a consumer of the electronic retailer I feel like a family member	Yes