The relationship between consumer characteristics and attitude toward online shopping

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Electronic commerce, Consumer behaviour, Consumer attitudes, Internet, Shopping

Abstract
The purpose of the experiment reported here was to examine Internet user concerns and perceptions of online shopping. The attitude of Internet users toward online shopping was measured using the Fishbein model. The relative factors influencing user attitudes toward online shopping and the relationship between the attitude and the influence factors were explored. The results show that the Fishbein model can effectively measure consumer attitudes and the examined consumer characteristics were important influence factors on consumer attitudes and online shopping decisions.

Introduction

The Internet has been widely cited in the popular press (Miyazaki and Fernandez, 2001). Reports in 2000 stated that over half of all American adults used the Internet (Sefton, 2000). Moreover, approximately half of the current Internet users have purchased products or services online (Sefton, 2000). Ernst & Young (2000) reported that 79 percent of non-buyers planed to purchase via the Internet, resulting in increasing online sales. Unlike traditional media, the Internet encompasses the entire sales process. Marketing campaigns can create awareness then drive consumers all the way through the process to actually making a purchase online (Goodwin, 1999).

Attitudes, perceptions and motivations are not apparent from clicks on banners or online purchases, but are an important part of the success or failure of online marketing strategies (Goodwin, 1999). A person's buying choices are further influenced by four major psychological factors: motivation, perception, learning and beliefs and attitude (Armstrong and Kotler, 2000). This is central to a buyer's purchase behavior process. These are the tools people use to recognize their feelings, gather and analyze information, formulate thoughts and opinions and take action (Wells and Prensky, 1996). That means that, through motivation, perception and learning, attitudes are formed and consumers make decisions. Thus, attitudes directly influence decision making. Attitudes serve as the bridge between consumers' background characteristics and the consumption that satisfies their needs. Attitudes describe a person's relatively consistent evaluations, feelings and tendencies toward an object or idea. Attitudes put people into a frame of mind for liking or disliking things, for moving toward or away from them (Armstrong and Kotler, 2000). Because attitudes are difficult to change, to understand consumer attitudes toward online shopping can help marketing managers predict the online shopping rate and evaluate the future growth of online commerce. However, attitudes are developed from personal experiences and learning with reality, as well as from information, from friends, salespeople and news media. They are also derived from both direct and indirect experiences in life (Loudon and Della Bitta, 1993).

It is thus important to recognize that numerous factors precede attitude formation and change. Consumer background characteristics are the innately stable characteristics of a consumer's life based on the consumer's cultural background, values and demographics, psychological, and social attitudes (Wells and Prensky, 1996). The object of this research was to explore the consumer characteristics influencing consumer attitudes toward online shopping. The results from investigating the relationships among online shopping levels, attitude and the relative influence factors are presented.

This study begins with an examination of Internet user concerns and perceptions regarding online shopping. The attitudes of Internet users toward online shopping are then measured. The relative factors influencing consumer attitudes toward online shopping are then explored. The relationship between the attitudes and influence factors are discussed with in concert with the policy issues that surround these attitude influence factors.

Attitude measure method

Attitude surveys are widely used throughout marketing today. One of the most influential

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and widely researched models in the literature is Fishbein's behavioral model (Burnkrant and Page, 1982). Many marketers and consumer behaviorists have given more attention to the Fishbein model (e.g. Woodside and Clokey, 1974; Bass and Talarzyk, 1972; Mazis *et al.*, 1975; Etter, 1975). Etter (1975) examined the relationship between Fishbein's attitude model and decision theory models. Lutz (1977) reported on two laboratory-type experiments designed to investigate the causal relationships within the Fishbein model. Fishbein's position was that people form attitudes toward objects on the basis of their beliefs (perceptions and knowledge) about these objects. Fishbein's model was constructed so that a person's overall attitude toward some object could be derived from his beliefs and feelings about various attitudes about the object. The Fishbein model can thus be used as a multi-attribute attitude measurement model.

Fishbein's attitude model can be expressed in equation form as (Fishbein, 1967a, b):

$$A_o = \sum_{i=1}^{n} b_i e_i,$$

where:

A_o = the person's overall attitude toward object o.

b_i = the strength of his belief that the object is related to attribute i (such as the strength of the belief that online shopping is convenience).

e_i = evaluation or intensity of feelings toward attribute i.

n = the number of relevant beliefs for that person.

The strength (b_i) of each belief can be measured on a scale such as the following:

Online shopping is convenience

Likely						Unlikely
(True)	5	4	3	2	1	(False)
	(2)	(1)	(0)	(−1)	(−2)	

After obtaining the belief score, the consumer would be asked to indicate their evaluation (e_i) of each product or service attribute for which a salient belief exists.

The convenience of online shopping is:

Good						Bad
(Important)	5	4	3	2	1	(Unimportant)
	(2)	(1)	(0)	(−1)	(−2)	

Each of the consumer's belief scores (b_i) is now multiplied by its respective evaluation score (e_i) and all of the scores for the product or service attributes are then added, producing the consumer's overall attitude regarding this product or service.

New modeling efforts were necessary to account for the additional complexity introduced by more factors. Fishbein responded with the behavioral intentions models. Many researchers used this model to measure and account for consumer behavior. Harrell and Bennett (1974) reported on a comprehensive physician drug prescribing behavior study using a national sample of private practicing physicians. The Fishbein behavioral intentions model was tested and cross-validated in this study. Evans (1977) applied Fishbein's behavioral intention model and path analysis to the subject of message content assessment. The results indicated that the evaluative message was the most effective and had the most influence. Burnkrant and Page (1982) empirically examined issues relevant to the construct validity of Fishbein's behavioral intention model. The results supported a model in which a single attitude construct and single normative construct were antecedents of intention.

Because one of the attitude models stated that the conceptual foundation for marketing studies is the Fishbein model (Ahtola, 1975; Fishbein, 1963, 1965, 1967a, b; Fishbein and Raven, 1962), this study measured the attitudes of Internet users toward online shopping using the Fishbein model and explored the relative factors which influenced consumer attitude toward online shopping. The attitude model proposed by Fishbein is somewhat similar to the subjectively expected utility models. In this model the attitude is a sum of the evaluative reaction to a salient property of the product or service and the strength of the belief connecting this property to the object or event across all salient properties (Ahtola, 1975): for example, if in a pilot study some subjects say: "online shopping is very safe". The problem with this approach is that when the belief strength (b_i) is measured by scales like: "probable-improbable", "true-false", or "likely-unlikely", the evaluation (e_i) of this is measured by scales like: "good-bad", "very important-not important at all". In this model the overall attitude is a sum of the evaluative reaction to a salient property and the strength of belief connecting that property to the attitude, object or event across all salient properties. When the consumers' overall attitudes are acquired, the relationship between the consumer's characteristics and the attitudes toward online shopping can be explored.

Consumer characteristics and attitude

Consumer purchases are influenced strongly by cultural, social, personal and

psychological characteristics. For the most part, marketers cannot control such factors, but they must take them into account (Armstrong and Kotler, 2000). The external influences upon consumer behavior include demographic, economic, social, situational and technological factors. The internal factors, such as beliefs and attitudes, learning, motives and needs, personality, perception, and values are involved. The lifestyle is between the external and internal influences on consumer buying behavior, because it truly involves elements of both. Although external factors have a substantial effect on the behavior of buyers, no less important are the internal factors (Keegan *et al.*, 1992). Wells and Prensky (1996) divided these underlying factors into two broad components that were the key parts of the framework for consumer analysis: consumer background characteristics, and behavioral processes. Consumer background characteristics are an innate part of a consumer's makeup. These are the things that consumers are – the way that individuals describe themselves and the way they label others. These characteristics are stable aspects of a consumer's life that cannot be changed. Demographic characteristics, such as gender, age, or ethnic background, are examples of background characteristics. Behavioral processes are the motivational, perceptual, learning, attitude formation, and decision-making tools consumers use to complete the activities that satisfy their needs. Unlike background characteristics, behavioral processes can be affected by a person's environment because they are applied on specific occasions. The background characteristics are the influence factors of behavioral processes. Marketers and public policy actors are particularly interested in these processes because they offer opportunities for them to exert their influence over consumers. Because attitudes are easier to change than beliefs or values, they are often the focus of marketing efforts to get consumers to buy.

According to the above theory and viewpoint, this study arranged and combined the influence factors of attitude and identified the consumer characteristics using four areas that are: consumer demographics, consumer purchase preference, consumer benefit perception, and consumer lifestyle. Consumer demographics are the external influence factors that include the consumer's gender, age, occupation, education, income, interest, and living area, etc. Consumer purchase preferences belong to internal factors that include the consumer's purchase motivation and preference. The consumer benefit perceptions are the sum of online shopping advantages or satisfactions that meet an individual's needs or wants. Consumer lifestyle is defined as a person's pattern of living. It involves measuring the consumers' major AIO dimensions: activities, interests and opinions. These four areas are all important influence factors toward a consumer's attitude and purchase decisions.

Methodology

Framework

The conceptualization of the relationship construct is shown in Figure 1. This particular framework for consumer attitude is affected by the consumer characteristics and directly affects the shopping decision.

According to this framework, the four parts of consumer characteristics extend influence upon the consumer's attitude toward online shopping and direct consumer purchases. These consumer characteristics have a significant relationship with the attitude toward online shopping and the attitude toward online shopping has a significant relationship with the online shopping rate. The following hypotheses are offered with assumed consumer' evaluations of the relationship between the attitude toward online shopping and the other influence variables:

H1. The attitude toward online shopping is significantly different based on the various consumer demographics.

H2. The attitude toward online shopping is significantly different based on the various consumer purchase preference.

H3. The attitude toward online shopping has a significant relationship with the consumers' benefit perception.

H4. The attitude toward online shopping has a significant relationship with the consumer lifestyle.

H5. The attitude toward online shopping is significantly different based on the various online shopping rates.

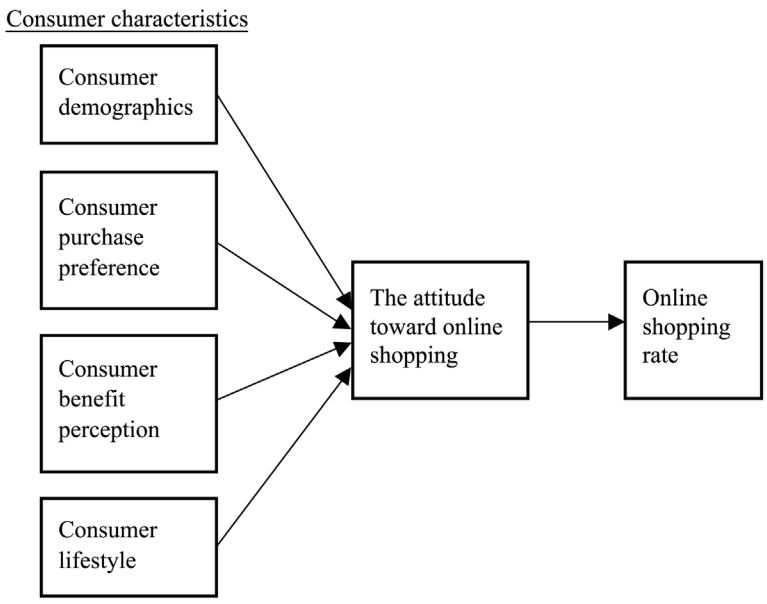
Measure

An initial focus group with ten potential customers was conducted to collect original consumer needs and attitudes associated with online shopping. About 150 descriptions of benefit needs were collected. All possible and non-redundant needs obtained from the first focus group were recorded as primary needs. The second focus group, with ten customers, was used to combine and reduce the number of primary needs. The results generated 40 representative items about the

respondents' benefit need perceptions and attitudes toward online shopping. A third focus group, composed of ten Internet users, was used to verify the descriptions in order to design a questionnaire concerning the benefit needs and attitudes for online shopping. Finally, 38 items concerning benefit needs and attitudes were obtained and put into a questionnaire for a random sampling survey. The SRI value and lifestyles (VALS) Program (Piirto, 1991) was used to design and acquire 26 lifestyle questions. Lifestyle was defined as a person's pattern of living. It involves measuring consumers' major AIO dimensions: activities, interests and opinions. In this study, consumer benefit needs were measured using a five-point semantic difference scale, lifestyle were collected using a five-point Likert scale. Consumer purchase preferences, demographic data and the online shopping rate were assessed using a nominal scale.

Attitude beliefs toward online shopping were measured using 38 semantic difference items on benefit needs and attitudes that respondents evaluated with true/false responses on a five-point scale. Attitude toward online shopping in general was measured with 38 five-point semantic differential items requesting respondents to evaluate whether their attitude toward online shopping was important/unimportant (Craig *et al.*, 1994). For example, each subject rated profiles with the form:

Figure 1
Consumer characteristics, attitude and online shopping



Online shopping is cheap

True	___	___	___	___	___	False
	5	4	3	2	1	
Important	___	___	___	___	___	Unimportant
	5	4	3	2	1	

Online shopping is effective

True	___	___	___	___	___	False
	5	4	3	2	1	
Important	___	___	___	___	___	Unimportant
	5	4	3	2	1	

Respondent evaluation scores were multiplied by each of the consumer belief scores and all 38 items were added, producing the consumer's overall attitude.

Sample

The primary data from this research were collected using a survey of 600 Internet users through personal interviews. Members were randomly selected in Taiwan. Because some responses were not usable, the final sample was 539 for an effective response rate of 89.83 percent. Respondent ages ranged from 15 to 40 years old. Gender was almost equally balanced (49.9 percent male, 50.1 percent female). Education levels ranged from junior high school to graduate degree. Monthly individual gross income ranged from US$0 to US$550 to over US$2,251. Respondent occupations were engineers (32.84 percent) or students (32.10 percent) followed by businessman (11.50 percent). Their interests were variant and most lived in the city (58.07 percent) followed by villages (30.06 percent). These demographic characteristics were similar to those of Internet users.

Analysis of data

This study used analysis of variance to provide evidence that consumer attitudes toward online shopping had significant differences based on consumer demographics. The results showed that the attitude toward online shopping had significant differences in all the items of the consumer demographics ($p < 0.05$), as shown in Table I. This supports *H1*.

Using analysis of variance, the online shopping attitude was shown to have significant differences on two items in the consumer purchase preference ($p < 0.05$). It was shown that the attitude toward online shopping had a significant relationship with these two consumer purchase items, number of times and payment method. This supports *H2* partly, as shown in Table II.

The consumer benefit needs data were submitted to a principal component factor analysis with a varimax rotation. Using an eigenvalue greater than 1 as a selection criterion, nine factors emerged. These factors were:

Table I
Analysis of variance for consumer demographics

Consumer demographics item	Attitude mean	*F*	*p*	Scheffe test
Gender				
1. Female (50.1 percent)	446.84	8.972	0.003**	
2. Male (49.9 percent)	477.44			
Age (years)				
1. 15-20 (21.0 percent)	480.93	8.920	0.000**	(1,3)(1,4)
2. 21-25 (18.0 percent)	487.16			(2,3)(2,4)
3. 26-30 (19.0 percent)	428.41			(3,1)(3,2)(3,5)
4. 31-35 (21.0 percent)	423.07			(4,1)(4,2)(4,5)
5. 36-40 (21.0 percent)	490.68			(5,3)(5,4)
Education				
1. Junior high school (20.41 percent)	470.56	3.425	0.017*	(1,4)
2. Senior high school (32.1 percent)	463.99			(2,4)
3. College (42.67 percent)	464.91			(3,4)
4. Graduate School(4.82 percent)	390.19			(4,1)(4,2)(4,3)
Occupation				
1. Student (32.1 percent)	484.57	2.283	0.027*	
2. Soldier (1.86 percent)	500.80			
3. Government employees (4.45 percent)	464.38			
4. Financial worker (5.57 percent)	443.23			
5. Engineers (32.84 percent)	444.88			
6. Businessmen (11.50 percent)	477.29			
7. Housewife (8.53 percent)	440.44			
8. Others (3.15 percent)	425.35			
Income monthly (US$)				
1. below 550 (34.51 percent)	483.88	5.314	0.000**	(1,2)
2. 551-1,150 (42.49 percent)	437.84			(2,1)(2,3)
3. 1,151-1,700 (9.46 percent)	498.88			(3,2)
4. 1,701-2,250 (7.42 percent)	455.20			
5. above 2,251 (6.12 percent)	460.27			
Interest				
1. Sports (19.85 percent)	480.37	14.122	0.000**	(1,2)
2. Reading (16.14 percent)	389.13			(2,1)(2,4)(2,5)(2,6)
3. Music (22.82 percent)	437.30			(3,6)
4. Internet (11.69 percent)	476.62			(4,2)
5. Travel (15.96 percent)	488.83			(5,2)
6. Watching TV (13.54 percent)	520.53			(6,2)(6,3)
Living area				
1. City (58.07 percent)	448.43	5.023	0.007**	(1,3)
2. Suburban (11.87 percent)	478.73			
3. Village (30.06 percent)	482.15			(3,1)

Notes: * $p < 0.05$; ** $p < 0.01$

1 effectiveness and modern;
2 purchase convenience;
3 information abundance;
4 multiform and safety;
5 service quality;
6 delivery speed;
7 homepage design;
8 selection freedom; and
9 company name familiarity.

These nine factors accounted for 71.05 percent of the variance. Cronbach's α of all factors was greater than 0.52, as shown in Table III. Examining the correlation between attitude and the nine factors of benefit perception tested *H3*. As shown in Table IV, there was positive association in every case ($p < 0.05$). This supports *H3*. Thus, all of the consumer benefit perception factors were shown to have a positive influence on attitude toward online shopping.

There were 26 lifestyle variables employed in a principal component factor analysis with varimax rotation, using eigenvalues greater than 1 as the criterion. Eight lifestyle factors were successfully retained. The eight

Table II
Analysis of variance for consumer purchase preference

Purchase behavior item	Attitude mean	*F*	*p*	Scheffe test
Purchase times				
1. Once a month (20.76 percent)	547.00	3.422	0.024*	(1,4)
2. Once every three months (24.53 percent)	523.15			
3. Once every six months (26.41 percent)	503.64			
4. Once a year (28.30 percent)	434.53			(4,1)
Payment method				
1. Credit card (36.18 percent)	509.33	25.083	0.000**	(1,2)(1,3)(1,4)
2. Cash (23.19 percent)	442.06			(2,1)(2,4)
3. Transfer account (36.36 percent)	443.43			(3,1)(3,4)
4. Check (4.27 percent)	331.23			(4,1)(4,2)(4,3)
Delivery				
1. Sent to home (73.47 percent)	468.74	2.304	0.101	
2. Take at store (8.53 percent)	447.63			
3. Mail (18.0 percent)	442.21			

Notes: * $p < 0.05$; ** $p < 0.01$

Table III
Factor analysis and reliability for benefit perception

Benefit factor	Eigenvalue	Cumulative percentage of variance	Cronbach's alpha
1. Effectiveness and modern	15.2807	39.95	0.9298
2. Purchase convenience	2.2481	45.87	0.8460
3. Information abundance	1.9507	51.00	0.8138
4. Multiform and safety	1.7709	55.66	0.8191
5. Service quality	1.3427	59.19	0.8079
6. Delivery speed	1.2481	62.48	0.6373
7. Homepage design	1.1377	65.47	0.5181
8. Selection freedom	1.0780	68.31	0.7044
9. Company name familiarity	1.0420	71.05	0.6084

Table IV
Correlation analysis between attitude and consumer benefit perception

Benefit factor	Attitude (Pearson correlation coefficient)	*p*
1. Effectiveness and modern	0.537	0.000**
2. Purchase convenience	0.244	0.000**
3. Information abundance	0.246	0.000**
4. Multiform and safety	0.182	0.000**
5. Service quality	0.110	0.010*
6. Delivery speed	0.129	0.003**
7. Homepage design	0.242	0.000**
8. Selection freedom	0.216	0.000**
9. Company name familiarity	0.302	0.000**

Notes: * $p < 0.05$; ** $p < 0.01$

common factors account for 64.19 percent of the total variance. Based on the corresponding factor loads for each variable, the eight lifestyle factors are named in Table V. They are:

1 leadership;
2 actively;
3 knowledge searcher;
4 like computer;
5 fashion;
6 attach to appearance;
7 spend time at home; and
8 regular life.

Examining the correlation between attitude and the eight factors of lifestyle tested *H4*. As shown in Table VI, there was positive association in three cases ($p < 0.05$). This supports *H4* partly. Thus, it shows consumer's lifestyle factors "like computer", "attach to appearance", and "regular life" were a positive influence on attitude toward online shopping.

Through analysis of variance, this study confirmed that consumer attitude toward online shopping showed significant differences based on the various consumer online shopping rate ($p < 0.05$). Consumers shopping on online who had a significantly higher attitude mean score than consumers who were not shopping online, as shown in Table VII. This supports *H5*.

Results

The results of this study supported nearly all of the hypotheses. It was shown that consumers who shop online have higher attitude scores and this higher attitude score is directly related to online purchase decisions. The group with the higher attitude score should be the target market. The consumer demographic items all had a significant relationship with the attitude toward online shopping. The mean attitude

score for males was significantly higher than that for females. Consumers 36 to 40 years old had the highest attitude scores. Consumers with a junior high school education and the following occupations: soldiers, student, who like to watch TV, with a monthly income from US$1,151 to US$1,700 and live in villages, have higher attitude scores. Consumers who like computers, are attached to their appearance and have regular life activities have higher attitude scores. Thus, the group with the above consumer characteristics is a target segment for online shopping. Marketing managers could design a marketing strategy to focus on this group. The marketing strategist must emphasize the benefits of online shopping, effectiveness and modern, company name familiarity, purchase convenience, information abundance and selection freedom etc., then design an excellent homepage to catch the attention of consumers and meet the consumer's information needs.

Table V
Factor analysis and reliability for lifestyle

Lifestyle factor	Eigenvalue	Cumulative percentage of variance	Cronbach's alpha
1. Leadership	4.9407	19.00	0.7051
2. Actively	2.7998	29.77	0.5341
3. Knowledge searcher	2.0005	37.47	0.7094
4. Like computer	1.6255	43.72	0.6344
5. Fashion	1.5153	49.55	0.6337
6. Attach to appearance	1.4273	55.04	0.4527
7. Spend time at home	1.3298	60.15	0.5364
8. Regular life	1.0504	64.19	0.4784

Table VI
Correlation analysis between attitude and lifestyle factor

Lifestyle factor	Attitude (Pearson correlation coefficient)	*p*
1. Leadership	0.014	0.753
2. Actively	–0.059	0.173
3. Knowledge searcher	–0.074	0.088
4. Like computer	0.110	0.010*
5. Fashion	0.058	0.179
6. Attach to appearance	0.171	0.000**
7. Spend time at home	0.046	0.284
8. Regular life	0.123	0.004**

Notes: * $p < 0.05$; ** $p < 0.01$

Table VII
Analysis of variance for online shopping

Item	Attitude mean	*F*	*p*
Online shopping			
1. Yes (9.83 percent)	497.87	5.289	0.022*
2. No (90.17 percent)	458.27		

Note: * $p < 0.05$

Conclusion

The purpose of the experiment was to examine Internet user concerns and perceptions of online shopping and measure the attitude of Internet users toward online shopping using the Fishbein model. The relative influences factors on attitude toward online shopping and were explored and the relationship between the attitude and the influence factors was presented. The results showed that the Fishbein model could effectively measure consumer attitudes and the important consumer characteristics that influence online shopping attitude and shopping decisions. Future research can use the Fishbein intention model to account for the additional complexity introduced by more factors. It should be a more effective research tool to measure and account for consumer behavior.

Reference

Ahtola, O.T. (1975), "The vector model of preferences: an alternative to the Fishbein model", *Journal of Marketing Research*, Vol. XII, pp. 52-9.

Armstrong, G. and Kotler, P. (2000), *Marketing*, 5th ed., Prentice-Hall, Englewood Cliffs, NJ, pp. 153-4.

Bass, F.M. and Talarzyk, W.W. (1972), "An attitude model for the study of brand preference", *Journal of Marketing Research*, Vol. 9, February, pp. 93-6.

Burnkrant, R.E. and Page, T.J. Jr (1982) "An examination of the convergent, discriminant, and predictive validity of Fishbein's behavioral intention model", *Journal of Marketing Research*, Vol. XIX, November, pp. 550-61.

Craig, A.J., Durvasula, S. and Netemeyer, R.G. (1994), "Testing the cross-national applicability of US and Russian advertising belief and attitude measures", *Journal of Advertising*, Vol. 23 No. 1, pp. 71-85.

Ernst & Young (2000), "Global online retailing: a special report", available at: www.ey.com/GLOBAL/gcr.nsf/International/Global_Online_Retailing_-_RCP (accessed August 20, 2000).

Etter, W.L. (1975), "Attitude theory and decision theory: where is the common ground?", *Journal of Marketing Research*, Vol. XII, pp. 481-3.

Evans, R.H. (1977), "Planning public service advertising messages: an application of the

Fishbein model and path analysis", *Journal of Advertising*, Vol. 7 No. 1, pp. 28-34.

Fishbein, M. (1963), "An investigation of the relationships between beliefs about an object and the attitude toward that object", *Human Relations*, Vol. 16 No. 3, pp. 233-40.

Fishbein, M. (1965), "A consideration of beliefs, attitudes, and their relationship", in Steiner, I.D. and Fishbein, M. (Eds), *Current Studies in Social Psychology*, Holt, Rinehart and Winston, New York, NY, pp. 107-20.

Fishbein, M. (1967a), "A consideration of beliefs and their role in attitude measurement", in Fishbein, M. (Ed.), *Readings in Attitude Theory and Measurement*, John Wiley & Sons, New York, NY, pp. 257-66.

Fishbein, M. (1967b), "A behavior theory approach to the relations between beliefs about an object and the attitude toward the object", in Fishbein, M. (Ed.), *Reading in Attitude Theory and Measurement*, John Wiley & Sons, New York, NY, pp. 389-400.

Fishbein, M. and Raven, B.H. (1962), "The AB scales: an operational definition of belief and attitude", *Human Relations*, Vol. 15, pp. 35-44.

Goodwin, T. (1999), "Measuring the effectiveness of online marketing", *Journal of the Market Research Society*, Vol. 41 No. 4, pp. 403-7.

Harrell, G.D. and Bennett, P.D. (1974), "An evaluation of the expectancy value model of attitude measurement for physician prescribing behavior", *Journal of Marketing Research*, Vol. XI, pp. 269-78.

Keegan, W., Moriarty, S. and Duncan, T. (1992), *Marketing*, Prentice-Hall, Englewood Cliifs, NJ, pp. 191-205.

Loudon, D.L. and Della Bitta, A.J. (1993), *Consumer Behavior*, 4th ed., McGraw-Hill, New York, NY, p. 425.

Lutz, R.J. (1977), "An experimental investigation of causal relations among cognitions, affect, and behavioral intention", *Journal of Consumer Research*, Vol. 3 No. 4, pp. 197-208.

Mazis, M.B., Ahtola, O.T. and Klippel, R.E. (1975), "A comparison of four multi-attribute models in the prediction of consumer attitudes", *Journal of Consumer Research*, Vol. 2, pp. 38-52.

Miyazaki, A.D. and Fernandez, A. (2001), "Consumer perceptions of privacy and security risks for online shopping", *The Journal of Consumer Affairs*, Vol. 35 No. 1, pp. 27-44.

Piirto, R. (1991), "VALS the second time", *American Demographics*, July, p. 6.

Sefton, D. (2000), "Daily Web surfing now the norm", *USA Today*, June 7, available at: www.usatodat.com/life/cyber/tech/cth591.htm

Wells, W.D. and Prensky, D. (1996), *Consumer Behavior*, John Wiley & Sons, New York, NY, pp. 44-6.

Woodside, A.G. and Clokey, J.D. (1974), "Multi-attribute/multi-brand models", *Journal of Advertising Research*, Vol. 14, October, pp. 33-40.