



# Consumer perceptions of internet-based e-retailing: an empirical research in western Uttar Pradesh

Mr. Vinod Kumar (Research Scholar – School of Commerce and Management, IIMT University)

Prof. (Dr.) Sandeep Kumar (School of Commerce and Management, IIMT University)

## Abstract

### Purpose

This paper aims to find out consumer perceptions on e-retailing towards retail market environment.

### Design/methodology/approach

This research includes market and social factors to examine the consumer attitude and behavior to use internet-based e-retailing based on the survey data collected from individuals in western UP.

### Findings

The realistic results suggest that ease of use and usefulness have positive impact on consumer attitude towards e-retail shopping. The accessibility of local retail market and the concern about risk in the current environment significantly affect consumer attitude and behavioral intention to use e-retailing. However, consumers may think for e-retailing if got influenced by a particular social groups.

### Research limitations

Further research can be carried out in the similar context to explore consumer behavior and of e-retail business in different geographical environments.

### Introduction

The internet together with the implementation of innovative business practices plays a fundamental role in the development of e-commerce. However, at the early stage, it was not uncommon that many virtual business models cannot achieve expected outcomes because of the misunderstanding of consumer behavior and the inconsistency with a particular market and social environment. Some service providers intensively promoted the benefit of e-commerce and assumed that individual consumers might be willing to use the services. Extant studies show that e-commerce is influenced by many variables in different market and social contexts, while individual consumers would rationally explore different innovative services

The retail market in Western UP is characterized by the availability of a variety of different goods and services in the metropolitan area. Many consumers enjoy shopping individually or with friends and relatives. Individual style, taste and shopping behavior can be easily influenced by fashion, in-group opinions and shared assumption in such a collective society. Thus, subjective norm might affect consumer perception and shopping behavior. The issue of social context being involved in the process of psychological adoption of technological innovation should not be overlooked in certain circumstances. Therefore, this paper aims to explore consumer perceptions of Internet-based e-retailing and examine the social context associated with e-retail business in Western UP. It begins with the descriptions of theories and hypotheses, followed by research methods. It then presents the empirical results and discusses the effects of several factors on consumer attitude towards e-retailing and behavioral intention to use e-retailing. Finally, it highlights the managerial implications and the direction for future research.

### Research methods

Our research methods include literature review, questionnaire design, pilot study, and survey and data analysis. We formulated our research framework upon the review of the existing literature. We also designed a questionnaire consisting of a number of question items in relation to perceived usefulness, perceived ease of use, perceived risk, local retail market environment, social influence, consumer attitude and behavioral intention. A pilot study was conducted to refine the question items. The survey was then carried out to elucidate consumer perceptions of various variables associated with the concerns mentioned in the previous section and to measure the likelihood of the respondents in making purchase decisions through e-retail business. A total of 500 questionnaire forms were randomly circulated to individual consumers. The respondents were requested to indicate their perceptions of different variables, attitude towards e-retailing and intention to use e-retailing, based on a seven-point Likert-scale, with 1 scoring the lowest point (not important or strongly disagree) to 7 scoring the highest point (very important or strongly agree). As a result, one hundred and ninety five useful responses were received for data analysis. The response rate was 39 percent. The demographics included 102 females and 93 males, while ages ranged from eighteen to over 60 years old.

The Statistical Package for Social Science (SPSS) has been used to test the survey data. In particular, the following multiple regression models have been employed to examine the hypotheses proposed in the previous section. Firstly, model I explores the effects of several attributes such as perceived usefulness, perceived ease of use, perceived risk, and local retail market environment on consumer attitude towards e-retailing. Secondly, model II examines the effects of consumer attitude and social group on behavioral intention to use e-retailing.

Model I: Equation 1 where:

$y_1$ : Attitude towards e-retailing.

$x_1$ : Perceived usefulness.

$x_2$ : Perceived ease of use.

$x_3$ : Perceived risk.

$x_4$ : Local retail market environment.

$\epsilon_1$ : Random error.

Model II: Equation 2 where:

$y_2$ : Behavioral intention to use e-retailing.

$y_1$ : Attitude towards e-retailing.

$x_5$ : Social influence.

$\varepsilon_2$ : Random error.

## Results

The empirical data collected from individual consumers have been examined using reliability test and multiple regression analysis. Firstly, the reliability test results in that the Cronbach alpha values are greater than 0.7 (Table I). Therefore, the items associated with a particular attribute are relatively consistent: perceived usefulness (0.817), perceived ease of use (0.803), perceived risk (0.828), local retail market environment (0.892), social influence (0.902), consumer attitude (0.860), and behavior intention (0.728). Secondly, multiple regression analysis is conducted to identify the effects of these attributes. As shown in Table II, the result of model I ( $F=41.038$ ,  $df=4,190$ ,  $p<0.001$ ,  $R^2=0.464$ ) suggests that model I has a significant explanatory power. It also shows that 46.4 percent of the variation of the endogenous variable ( $y_1$ ) can be significantly explained by the exogenous variables. The result actually suggests that our hypotheses are supported. Firstly,  $H1$  is strongly supported, because the coefficient ( $b x_1=0.648$ ,  $t=8.778$ ,  $p<0.001$ ) shows that the perceived usefulness has a significant and positive effect on consumer attitude towards e-retailing. Secondly,  $H2$  is supported, because the coefficient ( $b x_2=0.370$ ,  $t=5.833$ ,  $p<0.001$ ) indicates that perceived ease of use has a significant and positive effect on consumer attitude. Thirdly,  $H3$  is supported, because the coefficient ( $b x_3=-0.154$ ,  $t=-1.987$ ,  $p<0.05$ ) suggests that the perceived risk has a significant and negative effect on consumer attitude towards e-retailing. Moreover,  $H4$  is supported, because the coefficient ( $b x_4=-0.107$ ,  $t=-2.200$ ,  $p<0.05$ ) indicates that the highly accessible retail environment has a significant and negative effect on consumer attitude towards e-retailing.

The result of model II ( $F=96.280$ ,  $df=2,192$ ,  $p<0.001$ ,  $R^2=0.501$ ) suggests that model II has a significant explanatory power (Table II). It also shows that 50.1 percent of the variation of the endogenous variable ( $y_2$ ) can be explained by the exogenous variables. In particular,  $H5$  is supported, because the coefficient ( $b y_1=0.723$ ,  $t=12.993$ ,  $p<0.001$ ) suggests that individual attitude has a significant and positive effect on consumer behavioral intention to use e-retailing. Lastly,  $H6$  is supported, because the coefficient ( $b x_5=0.137$ ,  $t=2.263$ ,  $p<0.05$ ) indicates that social group has a significant and positive effect on consumer behavioral intention to use e-retailing.

Equation 1

$$y_1 = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + E_1$$

Equation 2

$$y_2 = b' + b_1' y_1 + b_2' x_5 + E_2$$

**Table I****Reliability test**

Table I Reliability test

Construct	Number of items	Cronbach's $\alpha$
Perceived usefulness ( $x_1$ ): competitive price, product variety, special goods, anytime, anywhere, fast delivery, efficiency, customer relationship, personalized service	9	0.817
Perceived ease of use ( $x_2$ ): ease of search, product directory, clear classification, presentation, simple procedure, helpful instruction	6	0.803
Perceived risk ( $x_3$ ): unauthorized use of credit card, release of private data, inaccurate information, inconsistent product delivered, unpredicted quality, difficult to get refunded, limited maintenance, poor after sale service	8	0.828
Local retail market environment ( $x_4$ ): convenient and attractive retail facilities	2	0.892
Social influence ( $x_5$ ): suggestion and behavior of relatives, friends, and colleagues	6	0.902
Attitude towards e-retailing ( $y_1$ ): positive to e-retailing, interested in e-retailing	2	0.860
Intention to use e-retailing ( $y_2$ ): willing to use e-retailing, plan to use e-retailing	2	0.728

**Table II****Multiple regression analysis**

Table II Multiple regression analysis

	Coefficients $b$	$t$	Sig.
<b>Model I: constant</b>	0.865	1.335	0.183
$x_1$	0.648	8.778	0.000
$x_2$	0.370	5.833	0.000
$x_3$	-0.154	-1.987	0.048
$x_4$	-0.107	-2.200	0.029
<b>Model II: constant</b>	0.407	1.408	0.161
$y_1$	0.723	12.993	0.000
$x_5$	0.137	2.263	0.025

**Notes:** Model I:  $F = 41.038$ ,  $df = 4, 190$ ,  $sig. < 0.001$ ,  $R^2 = 0.464$ ;  
 Model II:  $F = 96.280$ ,  $df = 2, 192$ ,  $sig. < 0.001$ ,  $R^2 = 0.501$

**Executive summary and implications for managers and executives**

*This summary has been provided to allow managers and executives a rapid appreciation of the content of the article. Those with a particular interest in the topic covered may then read the article in toto to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefit of the material present.*

Persuading new customers to take advantage of e-retailing, or increasing usage by those who have already taken the “plunge” into internet-based buying, is a challenge which has many well-known facets. On the plus side is the convenience of browsing sites from home when traditional stores might be closed or inconvenient to get to. On the minus side is the fear of the unknown – a concern that goods or services on offer might be inferior with no opportunity of going back to the shop to complain, or that the online financial transaction might not be as secure as it ought to be.

Emphasizing the pluses, and providing reassurances and guarantees about the perceived minuses, are just part of the routine of e-marketers. But how do they get people online when those could-be should-be customers live in a place which is so strongly rooted in traditional shopping that to switch to the internet would be a seismic social change?

Western UP, for instance, which is a highly accessible urban environment in which there are many retail stores and shops. Consumers can easily buy whatever they need within a reasonable time because many shops are in walking distance and open until late evening. Even window-shopping with friends has become a habit for many residents, because of limited outdoor facilities.

They might not easily change their shopping preferences and purchasing behavior which are based on values and beliefs which were developed in childhood and have been reinforced throughout their lives. Not least is the value placed on being able to feel, touch and try on fashionable goods in brick-and-mortar stores, which is not available in the virtual environment.

Ziqi Liao and Xiping Shi explore consumer perceptions of internet-based e-retailing in that highly-concentrated retail market environment which discourages consumers from considering buying online. Accepting that those whose habit is to do their shopping in bricks-and-mortar stores are unlikely to go for e-retailing for the time being (because it is a habit which cannot easily be changed and traditional retailing is continuously evolving in Western UP), it seems necessary for retailers to simultaneously operate e-storefronts together with their existing retail businesses. It is also important to provide consumers with useful information, quality products and excellent logistics services based on advanced information and communications technology.

Consumers may be interested in using e-retailing, in addition to visiting brick-and-mortar stores, if they have experience of savings from e-retailing. In order to compete with traditional brick-and-mortar stores, companies which have become involved in e-retailing should provide consumers with incentives by promoting products and services at competitive prices. They should also develop competitive marketing strategies to encourage consumers to purchase products that may not be available in traditional retail outlets. Some consumers may have unconventional demands and personal preferences to meet different circumstances. Therefore, e-retailers should develop websites that enable personalized and customized services.

In order to reduce consumer concerns about risk, detailed information on products and services should also be available on the websites – along with a reassuring explanation of online security.

In a collective society in which people tend to follow if friends, relatives, co-workers or classmates have a positive attitude towards e-retail business, word-of-mouth is important for spreading the image of branded products and services.

Considering the local retail market environment together with the social context, retailers are advised to concurrently operate retail business in dual tracks of brick-and-mortar and virtual stores. If the consumers have extensive computer knowledge and internet skills, they can easily browse the websites of different e-retailing outlets to search for products and services without a request for assistance from others.



At this stage it seems practical for e-retailing to focus on providing information and selling standardized products to encourage repetitive purchases. Retailers should utilize the internet to facilitate their traditional businesses. For instance, it would be useful to use e-advertising to promote products and services and provide consumers with online acknowledgement, order confirmation and other after-sale services.

Early users might be proud of being trend-setters and opinion leaders for making a wise decision in their selection of e-retailing as their preferred purchasing method. They might be more than willing to pass the information on to late users, resulting in an "information cascade." In order to encourage more consumers to use e-retailing, e-retailers should offer incentives to existing customers who would like to promote e-retailing to different social groups.

The repetitive use of e-retail services is critical to its sustainable development. Consequently it is essential to build a user-friendly and secure platform for the e-retail service to operate. Rational consumers are usually willing to take certain risks to gain expected benefits – a phenomenon that companies in the retail sector should capitalize on. They should work towards enhancing customer trust and confidence in e-retail through the delivery of quality products and the provision of excellent services.

## References

- Agarwal, R. and Prasad, J. (1999), "Are individual differences germane to the acceptance of new information technologies?", *Decision Sciences*, Vol. 30 No. 2, pp. 361-91.
- Ajzen, I. and Madden, T.J. (1986), "Prediction of goal-directed behavior: attitudes, intentions, and perceived behavioral control", *Journal of Experimental Social Psychology*, Vol. 22, pp. 453-74.
- Akinci, S., Aksoy, S. and Atilgan, E. (2004), "Adoption of internet banking among sophisticated consumer segments in an advanced developing country", *International Journal of Bank Marketing*, Vol. 22 Nos 2/3, pp. 212-32.
- Banerjee, A. (1992), "A simple model of herd behavior", *Quarterly Journal of Economics*, Vol. 107 No. 3, pp. 797-818.
- Bikhchandani, S., Hirshleifer, D. and Welch, I. (1992), "A theory of fad, fashion, custom, and cultural change as informational cascades", *Journal of Political Economy*, Vol. 100 No. 5, pp. 992-1026.
- Cheung, M.T. and Liao, Z. (2003), "Supply-side hurdles in internet B2C e-commerce: an empirical investigation", *IEEE Transactions on Engineering Management*, Vol. 50 No. 4, pp. 458-69.
- Cooper, D.N. (1997), "The future of work in the digital diaspora: economic restructuring and education", *Journal of Organizational Change Management*, Vol. 10 No. 2, p. 139.
- Cooper, L.K., Duncan, D.J. and Whetstone, J. (1996), "Is electronic commerce ready for the internet? A case study of a financial service", *Information Systems Management*, Vol. 13 No. 3, pp. 25-36.
- Cunningham, L.F., Gerlach, J.H., Harper, M.D. and Young, C.E. (2005), "Perceived risk and the consumer buying process: internet airline reservations", *International Journal of Service Industry Management*, Vol. 16 No. 2, pp. 357-72.

- Dabholkar, P.A. (1996), "Consumer evaluations of new technology-based self-service options: an investigation of alternative models of service quality", *International Journal of Research in Marketing*, Vol. 13 No. 1, pp. 29-51.
- Davis, F.D. (1989), "Perceived usefulness, perceived ease of use, and user acceptance of information technology", *MIS Quarterly*, Vol. 13 No. 3, pp. 319-40.
- Davis, F.D., Bagozzi, R.P. and Warshaw, P.R. (1989), "User acceptance of computer technology: a comparison of two theoretical models", *Management Science*, Vol. 35 No. 8, pp. 982-1003.
- Devaraj, S., Fan, M. and Kohli, R. (2002), "Antecedents of B2C channel satisfaction and preference: validation e-commerce metrics", *Information Systems Research*, Vol. 13 No. 3, pp. 316-33.
- Durkin, M. and O'Donnell, A. (2005), "Towards a model of adoption in internet banking: strategic communication challenges", *The Service Industries Journal*, Vol. 25 No. 7, pp. 861-78.
- Ellison, G. and Fudenberg, D. (1995), "Word-of-mouth communication and social learning", *Quarterly Journal of Economics*, Vol. 110 No. 1, pp. 93-125.
- Eriksson, K., Kerem, K. and Nilsson, D. (2005), "Customer acceptance of internet banking in Estonia", *International Journal of Bank Marketing*, Vol. 23 Nos 2/3, pp. 200-16.
- Gefen, D., Karahanna, E. and Straub, D.W. (2003), "Inexperience and experience with online stores: the importance of TAM and trust", *IEEE Transactions on Engineering Management*, Vol. 50 No. 3, pp. 307-21.
- Hasan, H. and Ditsa, G. (1999), "The impact of culture on the adoption of IT: an interpretive study", *Journal of Global Information Management*, Vol. 7 No. 1, pp. 5-15.
- Huizingh, E.K.R.E. (2000), "The content and design of web sites: an empirical study", *Information and Management*, Vol. 37 No. 3, pp. 123-34.
- Karahanna, E., Straub, D.W. and Chervany, N.L. (1999), "Information technology adoption across time: a cross-sectional comparison of pre-adoption and post-adoption beliefs", *MIS Quarterly*, Vol. 23 No. 2, pp. 183-213.
- Keeney, R.L. (1999), "The value of internet commerce to the customer", *Management Science*, Vol. 45 No. 4, pp. 533-42.
- Kiely, T. (1997), "Fear and shopping in cyberspace", *Harvard Business Review*, Vol. 75 No. 4, pp. 13-19.
- Lee, H.G. and Clark, T.H. (1996), "Market process reengineering through electronic market systems: opportunities and challenges", *Journal of Management Information Systems*, Vol. 13 No. 3, pp. 113-36.
- Liao, Z. and Cheung, M.T. (2001), "Internet-based e-shopping and consumer attitudes: an empirical study", *Information and Management*, Vol. 38 No. 5, pp. 299-306.
- Liao, Z. and Cheung, M.T. (2002), "Internet-based e-banking and consumer attitudes: an empirical study", *Information and Management*, Vol. 39 No. 4, pp. 283-95.

- Liao, Z. and Cheung, M.T. (2008), "Measuring consumer satisfaction in internet banking: a core framework", *Communications of the ACM*, Vol. 51 No. 4, pp. 47-51.
- Liao, Z. and Wong, W.K. (2008), "The determinants of customer interactions with internet-enabled e-banking services", *Journal of the Operational Research Society*, Vol. 59 No. 9, pp. 1201-10.
- Lohse, G.L., Bellman, S. and Johnson, E.J. (2000), "Consumer buying behavior on the internet: findings from panel data", *Journal of Interactive Marketing*, Vol. 14 No. 1, pp. 15-29.
- Moon, J.W. and Kim, Y.G. (2001), "Extending the TAM for a world-wide-web context", *Information and Management*, Vol. 38 No. 4, pp. 217-30.
- Morris, M.G. and Venkatesh, V. (2000), "Age differences in technology adoption decisions: implications for a changing work", *Personnel Psychology*, Vol. 53 No. 2, pp. 375-403.
- Novak, T.P., Hoffman, D.L. and Yang, Y.F. (2000), "Measuring the customer experience in online environments: a structural modeling approach", *Marketing Science*, Vol. 19 No. 1, pp. 22-42.
- Parasuraman, A. and Zinkhan, G.M. (2002), "Marketing to serving customers through the internet: an overview and research agenda", *Journal of the Academy of Marketing Science*, Vol. 30 No. 4, pp. 286-95.
- Schenkman, B.N. and Jonsson, F.U. (2000), "Aesthetics and preferences of web pages", *Behaviour and Information Technology*, Vol. 19 No. 5, pp. 367-77.
- Taylor, S. and Todd, P. (1995), "Assessing IT usage: the role of prior experience", *MIS Quarterly*, Vol. 19 No. 4, pp. 561-70.
- van der Heijden, H. (2003), "Factors influencing the usage of web sites: the case of a generic portal in The Netherlands", *Information and Management*, Vol. 40 No. 6, pp. 541-9.
- Venkatesh, V. and Davis, F.D. (2000), "A theoretical extension of the technology acceptance model: four longitudinal field studies", *Management Science*, Vol. 46 No. 2, pp. 186-204.
- Venkatesh, V. and Morris, M.G. (2000), "Why don't men ever stop to ask for direction? Gender, social influence, and their role in technology acceptance and usage behavior", *MIS Quarterly*, Vol. 24 No. 1, pp. 115-39.
- Vijayasathya, L.R. (2004), "Predicting consumer intentions to use on-line shopping: the case for an augmented technology acceptance model", *Information and Management*, Vol. 41, pp. 747-62.
- Vijayasathya, L.R. and Jones, J.M. (2002), "Print and internet catalog shopping: assessing attitudes and intentions", *Internet Research*, Vol. 10 No. 3, pp. 191-202.
- Williamson, O.E. (1975), *Markets and Hierarchies: Analysis and Antitrust Implications, A Study in the Economics of Internal Organization*, The Free Press, New York, NY.
- Williamson, O.E. (1985), *The Economic Institutions of Capitalism*, The Free Press, New York, NY.