

ANTECEDENTS OF ON-LINE BUYING IMPLICATIONS FOR THE BUSINESS-TO-CONSUMER E-COMMERCE

Versha Mehta Khajuria*
Alka Sharma**

ELECTRONIC Commerce has opened a new universe for consumers and organizations. Companies are trying to exploit the potential of the Internet not only for acquiring the customers but also for retaining them with a long-lasting relationship. New business models have emerged that try to take products and services right into the customer's home and empower him in a way so that products and services can be demanded to meet his need with the click of the mouse. The present paper seeks to investigate the purchase intent of buying on-line amongst students, who are perceived as being the front-runners in the use of technology and the Internet. The analysis of data collected reveals that there exists a very positive intent among the respondents for making on-line purchases. Utilitarian and social outcomes are the most significant factors contributing towards the acceptance of on-line model for purchase. This is followed by the social influences that turn non-buyers into buyers. Hedonic outcomes have been found to be the least significant factor in the acceptance of B2C e-commerce.

Key words: E-Commerce, B2C, Buying Behavior, E-Consumer.

Introduction

It is now widely recognized that, if exploited properly, e-commerce has the potential to increase corporate profit, and provide competitive advantage, through better customer acquisition and retention. However, its effective exploitation requires anticipation of technological and consumer behavioural changes and demands new management approaches. Accordingly, companies are now re-designing their strategies, products and business processes in order to develop cohesive approaches while responding to the new opportunities and competitive challenges faced by them (Kalakota and Winston, 1997). To address these generic issues, the customer is now increasingly becoming the central focus of attention. Researchers and practitioners are finding new ways of understanding this central agency, i.e., 'the customer' and then building and developing answers for the other generic questions in the context of this 'central agency'. Thus, it has become crucial to understand as to why, where and when electronic commerce is important.

A study of contemporary literature suggests that Electronic Commerce is becoming critical in three inter-related dimensions. These are: the customer to business dimensions, intra-business dimensions, and the business to business dimensions. The major challenge, however, lies in the customer to business dimension, wherein; electronic commerce is enabling the customer to have an increasing say in what products/services are made, and how services are delivered. It is facilitating an organizational model that is fundamentally different from the past, one that is characterised by the shift from a hierarchical command and control organization to the information based organization.

* Reader, Department of Management Studies, University of Jammu, Jammu, J&K, India.

** Senior Lecturer, Department of Management Studies, University of Jammu, Jammu, J&K, India.

With this shift towards the empowerment of consumers and their increasing involvement in how products are made and services are delivered, the retailers are re-evaluating every aspect of their operations from customer service to advertising; merchandising to store design; and, logistics to order fulfilment. Furthermore, in response to the pressures of the retailers, suppliers too are assessing technology based solutions to drive down costs (labour, delivery, production) and become more efficient producers of goods and services. The traditional models, wherein the customer went to the store and located the product, are being challenged (Kalakota, 1997). In the online model, it is the retailers who seek out the customer (e.g., catalogue retailing).

Early predictions about the adoption and use of telephone proved to be false as it has proved to be a necessity rather than a luxury in most homes today. Likewise, early assessments about the adoption and use of PC's and thereby the use of e-commerce in homes are quickly proving to be false (Venkatesh, 1996). Increasingly, PC's powered by the ability to deliver internet services (eg., e-mail and *www*) and support activities from home are being touted as an innovation that will have an impact similar to telephone. While a number of surveys conducted by NASSCOM, indicate that B2C e-commerce has been growing in India, little systematic research has been conducted to understand the determinants of the adoption and diffusion of electronic commerce in Indian homes. The current work, therefore, seeks to provide an understanding of the households that participate in the business to consumer (B2C) e-commerce market. As per the estimates for the B2C segment, such projects have earned a revenue of \$ 83 billion in the year 2000 and 5% of the global transactions. It is, therefore, also important to study the factors leading to adoption and/or participation in the e-commerce activities, as understanding the adoption patterns and attitudes, and, perceptions of the home users, may provide a useful mechanism for managing information technology resources associated with organizational e-commerce initiatives.

Objectives of the Study

The paper seeks to address the following objectives:-

1. To identify the factors which determine the diffusion of B2C E-Commerce in homes.
2. To examine the relationship of these factors with the formulation of the purchase intent.
3. To suggest strategies for the companies for the future growth of B2C e-commerce in India.

Hypotheses

The following hypotheses have been formulated:

H0: There is a significant buying intent among the e-consumers.

H1: There is no significant buying intent among the e-consumers.

Framework of the Study

In order to study the diffusion of B2C e-commerce in homes, a model has been developed from established bases of research in the fields of information systems, marketing, psychology, and sociology. An extensive study of the existing literature base for the purpose of developing a guiding framework for the study provided a number of perspectives on the issue. Firstly, it appears that not much work seems to have been done in India which explains on-line purchasing in the Indian households with respect to the differing backgrounds of consumers, in terms of the settings and belief structures in which they operate. Secondly, though lot of literature is available on adaptation and diffusion of information technology per say, especially in foreign journals, the focus is mainly seen to be on the adoption and diffusion of technologies in the work settings. Some of the important theories that exist on the subject of adoption at individual level in organizations include the theory of reasoned action (Ajzen, Fishbein 1980; Davis et. al. 1989); the technology acceptance models (e.g. Davis et. al. 1989); theory of planned behaviour (Taylor and Todd, 1995) and innovation diffusion

theory (e.g. Aggarwal and Prasad, 1997, 1998; Brancheau and Wetherbe, 1990; Rogers, 1995). However, none of these theories focus on usage from home or for personal use or a mechanism to connect to, and explore, the internet (Kraut, et. al., 1996). Since this paper seeks to specially focus on the use of information technology for personal use rather than organizational one, care has been taken to select work that has a focus on individuals (Davis et. al., 1989).

The driving factors in respect of home penetration of e-commerce are further expected to be different from those affecting the work place settings due to the personal value of expense and the goals for such a usage. Therefore, since some solid theoretical foundation is a prerequisite for the purpose of conducting the study we looked at the theories that have been proposed by western researchers on the individual adoption of new technologies in the organizational settings (discussed above). Out of the theories that have been listed above, theory of planned behavior and reasoned action has been chosen as it has been considered to be the most befitting with the overall objectives of our study. This theory, it has been found during the literature review, has also been used to explain the adoption and diffusion of personal computers in homes (Venkatesh, Brown, 2001). In addition, the theory of planned behaviour TPB has been successfully applied to explain behavior in a wide variety of domains (Ajzen, 1991) including technology adoption (Matheison 1991; Taylor and Todd, 1995), and also provides a framework for drawing from rich research basis in technology adoption, consumer behaviour and psychology, the key domains/ fields of the current work.

According to the theory of planned behavior, supported by the decomposed theory of planned behaviour:

$$BI = A + SN + PBC \text{ (Venkatesh and Brown, 2001)}$$

Where,

BI = Behavior Intention;

A = Attitude Towards Behaviour;

SN = Subjective Norm;

PBC = Perceived Behavioural Control;

A, which is the attitude towards behaviour, is defined as the persons favourable / unfavourable evaluation of the behavior in question.

SN, Subjective Norm, it is the perceived social pressure to conform to the behavior in question.

PBC, the perceived behavioral control, is the extent to which the person believes he/she has a control on the personal or external factors that may facilitate or constraint the performance of behaviour.

In our case, since we are talking about the purchase behaviour of e-customers for their personal use (rather than organizational use, which gives the users leverage to adopt or not to adopt), it would be pertinent to modify the above construct to suit to the desirability of our deliverables.

$$PBI = A + SN + PBC$$

Where PBI = Purchase Behaviour Intention;

A = Attitude towards purchase Behaviour;

SN = Social Pressures to adopt or conform to the behaviour of adopting online buying;

PBC = Perceived Behavioural Control.

Further, it would be pertinent to reiterate that PBI is a reasonably good indicator for measuring the purchase behaviour especially in the light of the fact that the intention is most proximal influence on behavior. Typically intention predicts behaviour quite well unless there are constraints beyond individuals control that shadow intention to some or more extent (Schifter and Ajzen 1985)

Purchase Intent and Behavior

From the experiences of the prior research that has been done to study consumer innovators, it has been found that consumers who indicate willingness to try new products tend to be the consumer innovators (as measured by their actual purchase of new products). On the other hand, the consumers who express reluctance to try new products are less likely to purchase new products. Therefore, intent seems to be an effective barometer of actual innovative behavior (Schiffman, Kanuk, 1997).

Prior research has found that the intention - behavior co-relations range from 0.19 to 0.84 across a wide range of behaviors (Ajzen, 1991; Ajzen and Fishbein, 1980). Also, consistent with the overall findings in psychology and marketing research, the research on technology adoption too provides evidence to suggest that intention is a fairly good predictor of self reported usage behavior. (Davis et. al., 1989; Taylor and Todd, 1995). Issues of control, however, are reported to have a direct effect on behavior over and above the intention. As already mentioned, if the consumer researches were solely interested in predicting behavior, they would directly measure intention (i.e. use an intention to act scale). However, if they were interested in understanding the underlying factors that contribute towards intention, then looking behind intention becomes imperative. In other words, researchers would need to focus on the factors that lead to intention i.e., the consumer's attitudinal beliefs, subjective norm and the control belief structures.

Attitudinal belief structure

Attitude towards behavior can be directly measured as an effect i.e., a measure of overall favourability towards the act of on-line buying. Further, as with intention, we can get behind the attitude to its underlying dimensions.

The attitudinal belief structure, as a prerequisite to judge the affect to the purchase behaviour intention, would be governed by the motivational factors, i.e., if the motivation is there, attitudinal beliefs would be positively effected otherwise not. We know from the theories of motivation that there are two main classes of motivators: extrinsic and intrinsic. Extrinsic motivation pertains to achievement of specific goal whereas intrinsic motivation is the pleasure and satisfaction derived from specific behaviour. In the context of e-commerce adoption, extrinsic motivators will be viz. utilitarian and social outcomes and intrinsic motivators will be hedonic outcomes. The e-commerce will have a utilitarian outcome if the person believes that purchasing online will have utilitarian benefits or solve a utilitarian goal. In the work place settings, the utilitarian goal of online purchasing can be directly linked with productivity whereas in homes the utilitarian benefits would depend upon how online purchasing enhances the effectiveness of household activities.

A Social outcome is the 'public recognition' that would be achieved by an act or behavior. Available evidence indicates that consumer innovators are more socially accepted and socially involved than non-innovators. A number of studies have also shown that consumer innovators are more socially integrated in community than non-innovators. Specifically, innovators are found to be better accepted by others and to have more social involvement with other members of the community than non-innovators (Robertson, 1949). This greater social acceptance and involvement of consumer innovators may in part explain why they function as effective opinion leaders.

In addition to the utilitarian outcomes, many people would buy online for hedonic outcomes. New generation tech savvy individuals and innovators might be influenced by the hedonic outcomes i.e., they might derive pleasure from online buying. Further, they provide an opportunity to escape from the physical world into a new on-line world thus exhibiting characteristics consistent with hedonic perspective (Foxall 1992, Lacher and Mizerski, 1994).

Subjective Normative Belief Structures

These are concerned with the social pressures on the consumers to adopt or conform to a norm. Social influence will be the extent to which members of a social network influence one another's behaviour (Rice et. al, 1990). In contrast to social outcomes, social influence is the perceived pressure to perform the behaviour in question. It is known that diffusion of new product takes place in a social setting i.e., physical, cultural and social environment to which people belong and within which they function. The orientation of a social system, with its own special values or norms, is likely to influence the acceptance or rejection of an idea, concept or technology. If the society is modern in orientation, the acceptance of innovation (online buying in our case) is likely to be high or at least intent for the same will be high. Further, the orientation of a social system may be national in scope i.e., influence the whole country or influence those who live in specific regions or communities. Companies have to consider that the social system's orientation influences the acceptance of new innovations.

The importance of social influence as the determinant of behaviour has also been highlighted in prior researches (eg. Ajzen, 1985, 1991; Ajzen and Fishbein 1980; Taylor and Todd, 1995; Thompson et al., 1991; Warshaw, 1980).

Although there are mixed evidences available on supporting the role of social influences on the individuals at the workplace, the influence of social system in one's personal setting cannot be ignored.

Apart from the social influences, the decision of online buying will also be affected by the influences from the secondary sources such as mass media. The innovators especially will be influenced by the messages coming from media and this would affect their purchase decision. The early adopters being the opinion leaders are expected to exercise a greater influence on the buying decision of the future adopters of on line buying.

Control Belief Structures

This is the third parameter of adjudging the purchase intent and is concerned with the extent to which the person believes he/she has a control on the personal and external factors that may facilitate/inhibit the behavior in question (purchase in this case). Accordingly, the degree of risk that consumers perceive, and their own tolerance for risk are the factors that would influence consumer's purchase strategies that is, the consumers are influenced by the risk they perceive. As per this school of thought, the consumer's perception of the 'risk' plays a great role in deciding whether to buy on-line or not. There can be numerous risks that can be perceived eg. functional risks, physical risks, financial risks, social risks, psychological risks and time risks. Another school of thought is provided by the theory of planned behavior (TPB), according to which, the factors that inhibit the formation of intent (e-buying in this case) are namely knowledge, difficulty of use and cost (resources) (Mathieson, 1991; Taylor and Todd, 1995). The awareness and exposure to technology is expected to have positive influence on the degree to which the risk shall be perceived.

The studies of risk perception among adolescents have found that adolescents who engage in high risk consumption activities differ significantly from those who do not engage in frequent high risk activities. Also, a study on the adoption of in-house computers found that perceived risk and self-confidence were the variables that significantly differentiated between those adopting early and those adopting late. Extending the findings of the study to the one that involves adoption of online purchasing, it can be

somewhat stated that the perceived risk and confidence also play pivotal role in determining the on-line buying behavior of the consumers. However, perceived risks that may tend to vary from time to time, situation to situation, person to person, and may thus become difficult to ascertain. On the other hand, we can say that the knowledge of technology, difficulty of its use and costs of the on-line are the parameters that are very general in nature and, in a given time and space matrix, can capture the general perceptions of the respondents very well. These can be considered to ascertain the impediments in the adoption of e-commerce by the consumers.

Sample for the Study

For the purpose of the study, the students have been chosen, since the population of the study intends to have the respondents who had a fair amount of familiarity with the online buying technology. The students have been chosen from the university departments and the affiliated institutions on random basis.

Construct Validity

The construct builds upon the conceptual framework (William, O. Bearden, Netemeyer, Richard, 1999) which has measures of utilitarian and the Hedonic Consumer attitudes. As already discussed in the preceding paragraphs, the utilitarian attitudes determine the functional consequences of product usage, Hedonic are based upon the affective/ emotive gratification derived from the experience /brand /product. Similarly, social outcomes and social influences are vital for the on-line buying. It together forms a hypothesised four – dimensional structure (Utilitarian, hedonic, social outcomes, social influences). The construct reliability has been tested with convergence validity test. The co-relation coefficients (item to total) were 0.53, 0.51, 0.85 and 0.76 which has shown a high co-relation of each factor with the total, i.e., purchase intent (Table 1).

Table 1: Purchase Intent Dimensions

Factor	Corelation Coefficient r	r ²
Utilitarian	0.53	28%
Hedonic	0.51	26%
Social Influence	0.85	72%
Social Outcomes	0.76	57%

Coefficient of determination suggests that any change in social influence accounts for 72% of the change in the purchase intent of the e-consumers followed by the next contribution made by the social outcomes. This is quite in line with the perception that since online buying is a relatively new phenomenon, social influences can have a significant impact on the purchase decisions and authenticate the benefits thereof.

In order to test the hypothesis, i.e. there is an above average purchase intent among the young aware consumers, t-test has been applied. The result of the test at 0.10 confidence interval with 16 degrees of freedom is 3.14. Single tail test (left sided) has been applied for accepting any value of mean equal or above 3.

The hypotheses are H₀: Me_{au}=3 and H₁: Me_{au}<3

Null hypothesis has been accepted and the standard deviation of the sample mean has been computed at 0.37 and the standard error at 0.089. The hypothesis testing has suggested that there is an above average purchase intent amongst the students.

Drivers of the Purchase Intent

Using the data collected, we examined the respondents on a four-factor basis i.e. utilitarian, hedonic, social outcomes and social influence. As can be seen below (Table 2), that there are above average scores on all the dimensions, however, it is evident that the people like to shop on-line more for utilitarian reasons, followed by the social outcomes they have from this. All the same, the contribution made by the other two factors i.e., the people buy on-line due to the social Influences and that doing this results in positive hedonic outcomes in terms of fun and pleasure, has also been quite significant.

Table 2: Drivers of Purchase Intent

Factor Code	Description	Mean
U	Utilitarian	3.41
H	Hedonic	3.1
SO	Social Outcomes	3.2
SI	Social Influence	3.17
	Mean Avg	3.22

From the co-relation analysis of each factor with the overall purchase intent, it has been observed that, though, U and SO factors have higher averages, SI and SO seem to be responsible for more variability in the purchase intent among e-buyers. That is any change in SI and SO (as perceived by the respondents) shall cause considerable variation in the formation of the purchase intent (PI). In case of the U and H factors, the co-relation coefficients have been measured at 0.53 and 0.51 respectively. In nutshell this means that the companies which only target at the utilitarian and Social outcomes of on-line buying would be making an error of judgement if they don't include the influences of the other two factors, mainly social influences, which as already pointed out account for the major variation in PI (refer Table 3: factor definitions).

Table 3: Factor Definitions

Belief	Factor	Definition	Code Structure
Attitude	Utilitarian Outcomes	The extent to which on-line buying Enhances the effectiveness of the Households	U
	Hedonic Outcomes	The pleasure derived from buying Online	H
	Social Outcomes	The perceived change in the status that comes with buying on-line	SO
Subjective Norm	Social Influences	The extent to which the members of the social network influence each other	SI
Perceived* Behavioural Control	Barriers	Factors inhibiting adoption	B

Source: Venkatesh and Brown, *MIS Quarterly*, March 2001.

*not taken in the present study due to the preliminary nature of work and the fact that the factor emerged during the coding process and will be scoped for future work.

Purchase Intent and the Utility of Buying On-line

The utility of buying on-line has been parameterized along five dimensions (Table 4) with a general feeling among the respondents that the on-line buying has a lot of utilitarian value, and that it is useful, latest products can be obtained which are not yet available in the market, it saves lot of time for otherwise busy students and professionals and can also enhance productivity at work. However, it has been felt that despite its usefulness it is not a very essential thing to do. The data also scores high in terms of flexibility it offers because of which the respondents get more leverage to perform and choose activities as per the need and desire.

Table 4: Utilitarian Dimensions of On-line Buying

Code	Utilitarian Dimensions	Mean (Mh i = 0, 5)	Rank (Ri = 1, 5)
U0	Usefulness	4.00	R1
U1	Essential	3.18	R5
U2	Flexible	3.65	R4
U3	Work Productivity	3.76	R3
U4	Time Saving	3.76	R3

In fact on-line buying has scored well on all the dimensions of utility with the lowest score that the respondents feel that it is not very essential thing to do. It could be due to the alternate buying options that are available to them off line and also that unless on-line buying targets and tries to meet the utilitarian criteria, people will continue to associate online buying with fun and perceive that it is not very essential kind of thing for them. The companies need to target e-customers such that on line buying provides better, convenient and speedier options in order to enable customers to see its essentiality. The perception that on-line buying is not essential is also due to the fact that it is a new concept and under process of evolution.

On-line Buying and the Hedonic Outcomes

Some people shop for ‘Hedonic’ reasons. In order to judge the antecedents of buying on-line, for the said purpose, four dimensions have been used (Table 5). The mean values have also been tabulated. Online buying has been associated with its being a delightful experience.

We find it a delightful experience to see so much information packed together. It is an exciting activity to do!

Table 5: On-line Buying and Hedonic Outcomes

Code	Hedonic Dimensions	Mean (Mh i = 0, 3)	Rank (Ri = 1, 3) (in order of importance)
H0	Exciting	3.3	R2
H1	Delightful	3.6	R1
H2	Pleasant	3.3	R2
H3	Fun Filled	2.6	R3
	Average Mean (MS avg.)	3.1	

On-line buying has also been rated fairly high on other dimensions as well. They felt that it is exciting, delightful and pleasant way to shop. They were, however, not convinced that it is only

filled with 'fun'. Low speed of internet access, frequent disruptions have been cited to be the main cause of distress among on line buyers. Since the respondents (students in our case) find this mode of shopping exciting, delightful and pleasant, the e-commerce companies need to pay considerable attention to improving the speed of access, so that it becomes a 'fun filled' experience too. Overall mean score for the 'Hedonic' factor (M=3.01) suggests that despite the higher values (MH0=3.3, MH1=3.6, MH2=3.3) attributed to the first three parameters, the problems encountered on account of speed and the quality of access wane the intent of the consumers who want to shop online for fun and excitement (MH3=2.6).

Based upon the co-relation analysis, the co-relation coefficient (r) between the hedonic factor and the overall purchase intent has been estimated at 0.51, which indicates that there exists a positive co-relation between the two. The coefficient of determination ($r^2 = 0.26$) suggests that any change in the hedonic dimensions will account for 26% change in the formation of the PI. Any company that fails to see and include the hedonic reasons as a part of their e-strategy would make a serious error of judgement.

On-line Buying and the Social Outcomes

There is also a large base of the customers who would like to shop on-line because of the perception that doing so would make them more 'socially elite' and 'stand out'. Respondents feel that this (buying on-line) is a 'cool thing' these days (MSO0=4.1), and is a smart thing for people to do (MSO1=3.5). They also believe that it makes them feel important amongst their peer groups as they can contribute more positively by remaining up to date with latest technology (Table 6).

Table 6: On-line Buying and the Social Outcomes

Code	Social Outcomes Dimensions	Mean (MSO i = 0, 4)	Rank (Ri = 1, 5) (in order of importance)
SO0	"Cool Thing"	4.1	R1
SO1	Smartness	3.5	R2
SO2	Friends count on me	3.06	R5
SO3	Status	2.29	R3
SO4	New generation thing	3.12	R4
	Average Mean (MS avg.)	3.12	

"Friends count on me for telling them the latest things about online buying. I would like to contribute more by telling them latest and being the first one to know about an offer"

"I like when my friends depend upon me for telling them some thing new about it"

Very few respondents felt that it enhanced their 'status'. (MSO3=2.29) before their peers but they associated it with coolness and smartness (MSO0=4.1, MSO1=3.5).

"It means more of street smartness for me rather than the status stuff. Even the people coming from the mediocre backgrounds would consider it smart to use net for buying things"

Buying on the internet has come to get associated with what a new generation ought to do. The respondents felt (MSO4=3.12) that the new generation has to be more technologically savvy, competitive and sensitive towards the 'time' factor. On-line buying, it is perceived, will come to stay with generation next who look at it favourably and also associate themselves with it. An average

overall score for the social outcomes (MS avg=3.12) does, however, indicate a moderate impact, which can improve if the companies can formulate their strategies in such a way that instead of giving on line buying a ‘status’ appeal can target at it as being cool smart and latest thing of new generation. This would create a match between what consumers perceive it as and what companies try to target it as.

The coefficient of co-relation of the social outcomes with the overall PI (0.85) indicates a high degree of positive co-relation. Coefficient of Determination ($r^2 = 0.72$) indicates that social outcomes account for 72% change in the formation of purchase intent. It shows that factor is quite significant and can not be ignored as apart of the company’s e-strategy. Many banks are making efforts to make on-line/home banking appealing to the customers by specifically providing visual graphics, which show, smart families and smart people. The e-customer must feel that the social outcomes of on-line buying are positive and that there should be positive reinforcements that should come from the advertisement campaigns and the company brochures and web sites in this direction. In fact, the coefficient of determination has been higher for the social outcomes ($r^2 = 0.72$) as compared to utility ($r^2 = 0.28$) and hedonic ($r^2 = 0.26$). The social outcomes, therefore, have a predominant influence on the formulation of purchase intent in the Indian setting as compared to the utility and hedonic outcomes. Thus, this should also form a significant part in the company’s e-strategy.

On-line Buying and the Social Influences

Customers can be influenced by their peer groups and the media, in the adoption of e-commerce in the B2C segment. In order to see how respondents perceive these influences and feel as to what extent these influences have an impact upon their decisions to buy on the net, a set of three parameters were chosen and administered, and the respondent’s responses tabulated thereof (Table 7).

Table 7: On-line Buying and the Social Influences

Code	Social Influence Dimensions	Mean (MSI i = 0, 2)	Rank (Ri = 1, 3)
SI0	Friends	3.06	R2
SI1	Media, Secondary Sources	3.40	R1
SI2	Relatives	2.53	R3
	Average Mean (MS avg.)	3.17	

There is a great social influence coming from the media and enabling the formulation of the purchase intent among customers (MSI0 = 3.4). Majority of the respondents either read about it or saw it somewhere that it is trendy to e-shop and that according to them initiated them into it. Relatives had a very less role (MSI2 = 2.53) in influencing and, therefore, in the formulation of the intent. It is an interesting fact because in a similar study that was conducted for personal computers (Venkatesh and Brown, 2001), it was seen that in case of the purchase of personal computers, friends and relatives were forming a sizable chunk in influencing the intenders and the secondary sources were not contributing at all in the formulation of purchase intent among buyers of computers. In case of B2C e-commerce, positive reinforcements coming from the media contribute more significantly than the influences from families and relatives. Company’s strategies that incorporate dissemination of information on the growth of e-commerce, its pattern, strengths, and trends would immensely contribute in positioning B2C e-commerce and thereby positively influencing the intent formation. Relatives seem to be having an even lesser role than friends in influencing (MSI2 = 2.53). So a word of mouth publicity that has been responsible for diffusion of computers into Indian homes will not be applicable in this scenario but rather a more systematic and comprehensive strategy on part of the companies to educate and aware the customers about the strengths of on-line buying is what is required.

Another interesting fact that emerges out of the discussion is that the diffusion of personal computers in various settings emerged more as a result of necessity, coupled with the backing and experience of friends and relatives, whereas e-commerce diffusion needs necessity coupled with backing of the media publishing and reporting the trends extensively. Any attempt to treat the e-commerce diffusion as personal computer diffusion would end up in debacle.

Coefficient of co-relation of the social influence with overall purchase intent ($r=0.76$) indicates a strong positive co-relation. Coefficient of determination ($r^2=0.57$) suggested that any variation in social influences would account for 57% variation in the purchase intent. This also indicates the importance of the factor. Average mean score (MS avg =3.17) further indicates that the effect of the social influence has been found to be average. However, more important than the overall mean is to look at the individual contributions whose analysis has already been detailed out.

Purchase Intent and On-line Buying

There has been positive overall purchase intent amongst the respondents, with utility factor (MS avg =3.41), social outcomes (MS avg =3.2), Social influence (MS avg =3.17) and Hedonic Criterion (MS avg =3.1) all contributing positively towards the formation of the purchase intent (Table 8). Respondents perceive that utility value and the social outcomes are very important for them to turn them from non-buyers to buyers. Besides, the e-consumers are positively affected by the impressions they form from media analysis and reports that appear from time to time. On-line buying for the purpose of fun is significant but lower in ranking as compared to other factors.

Table 8: On-line Buying and the Purchase Intent

Code	Purchase Intent Dimensions	Mean (MS)	Rank (Ri = 1, 3)
U	Utilitarian	3.41	R1
H	Hedonic	3.1	R4
SO	Social Outcomes	3.2	R2
SI	Social Influence	3.17	R3
U4	Average Mean	3.22	

Social outcomes and the social influences ($r^2=0.57$ and $r^2=0.72$) contribute towards the variation in the purchase Intent among e-customers more significantly than the hedonic and utilitarian factors ($r^2=0.26$ and $r^2=0.28$). It does not, however, mean that the latter are not important or do not contribute to the formation of the Intent but it only means that the former account for more variability in the formation of intent. The overall PI is above average (3.22).

The findings of the study have been useful, as these have suggested a hope for the e-retailing companies. After the dot com bubble busted in 1999 and many virtual companies could not see the light of the day, the on-line companies have been trying to find a niche in the market. Apart from these virtual companies, many brick and click companies also need to formulate strategies to cater for the new generation hybrid customer who is a centaur (Wind, Mahajan, 02), half man half horse, who would like to keep diverse buying options with him, both on and off line. The companies will have no choice but to follow him where ever he chooses to be.

The existence of a positive purchase intent also gives a green pasture to the companies to graze upon. The study suggests that the companies should not only look at the utilitarian aspect of B2C e-commerce but also apart from that, provide customers with lot of fun, give the customers positive reinforcements that online buying would make him socially acceptable and competitive. The

companies should also provide lot of information through the secondary sources about e-buying and its trends and strengths.

The study, however, has limitations because it has been done on a student population. Many positive results that have come could be due to the fact that younger generation is more aware and willing to use technology and is also ready to experiment and innovate. It is possible that the same may not be the case with the population comprising of the other age groups. However, the study forms a basis for further scope of research. It could be seen as to whether there is a difference in the intent formulation of the young and the older age groups. In addition, the results could be averaged out to see the overall intent among general masses or across different age groups and cultures. The present study, thus, forms an important base for further research in the otherwise naïve area of B2C e-commerce research in India.

References

- Agarwal, R. and Prasad J. (1997), "*The Role of Innovative Characteristics and Perceived Voluntariness in the Acceptance of Information Technologies*", *Decision Sciences*, (28; 3), Summer, 57-582.
- Agarwal, R., and Prasad J. (1998), "*A Conceptual and Operational Definition of Personal Innovativeness in the domain of Information Technology*", *Information Systems Research* (9:2) June, 204-215.
- Ajzen, I. and Fishbein, M. (1980), "*Understanding Attitude and Predicting Social Behaviour*", Prentice Hall, Englewood Cliffs, NJ.
- Ajzen, I. (1985), "*From Intention to Action: A Theory of Planned Behaviour*", In J. Kuhl and J. Beckmann (Eds), *Action Control: From Cognition to Behaviour*, Springer Verlag, New York, 11-39.
- Ajzen, I. (1991), "*The Theory of Planned Behaviour*", *Organization Behaviour and Human Decision Processes* (50:2), 179-211.
- Brancheau, J.C. and Wetherbe J.C. (1990), "*The Adoption of Spreadsheet Software: Testing Innovation Diffusion Theory in the Context of end user Computing*", *Information Systems Research*(1:2), 115-143.
- Davis, F.D. (1989), "*Perceived Usefulness*", *Perceived Ease of Use and User Acceptance of Information Technology*, *MIS Quarterly* (13:3), 319-340.
- Davis, F.D., Bagozzi R.P and Warshaw, P.R. (1989), "*User Acceptance of Computer Technology : Acomparison of Two Theoretical Models*", *Management Science* (35:8) August, 982-1003.
- Foxall, G.R. (1992), "*The Behaviour Perspective Model of Purchase and Consumption : From Consumer Theory to Marketing Practice*", *Journal of Academy of Marketing Science*(20:2), 189-198.
- Kalakota, R. and Whinston A.B. (1997), "*Electronic Commerce – A Managers Guide*", Pearson Education Asia Pvt. Ltd., second reprint.
- Kraut R., Scherlis, W., Mukhopadhyay T., Manning J. and Kiesler, S. (1996), "*The Home Net Field Trial of Residential Internet Services*", *Communications of the ACM* (39:12), Dec. 55-63.
- Lacher, K.T. and Mizerski, R. (1994), "*An exploratory Study of the Responses and Relationships involved in the evaluation of and in the Intention to Purchase New Rock Music*", *Journal of Consumer Research* (21:4), 366-380.
- Matheison, K. (1991), "*Predicting User Intentions: Comparing the Technology Acceptance Model with the Theory of Planned Behavior*", *Information Systems Research*, 173-191.
- Rice, R.E., Grant, A.E., Schmitz J. and Torobin, J. (1990), "*Individual and Network Influences on the Adoption and Perceived Outcomes of Electronic Managing*", *Social Networks* (12:1), 27-55.
- Robertson and Arndt (1949), "*Purchase Sequence Responses and Role of Product related Conversations*", 293, Quoted in Schiffman L.G. Kanuk L. (1997), "*Consumer Behaviour*", Prentice Hall India , Sixth Ed., 615.
- Roger, E.M. (1995), "*Diffusion of Innovation (4th Ed.)*", Free Press, New York.
- Schiffman, L.G , Kanuk, Leslie L. (1997), "*Consumer Behavior*", Prentice Hall India, 6th Ed. 235.
- Schifter, D.B. and Ajzen, I.M. (1985), "*Intention, Perceived Control and Weight Loss: An Application of Theory of Planned Behavior*", *Journal of Personality and Social Psychology* (49:4), 843-851.

- Taylor, S. and Todd, P.A. (1995), "*Understanding Information Technology Usage : A test of Competing Models*", *Information Systems Research* (6:2), June, 144-176.
- Thompson, R.L., Higgins, C.A. and Howell J. M. (1991), "*Personal Computing: Towards a Conceptual Model of Utilization*", *MIS Quarterly* (15:1), March, 124-143.
- Venkatesh, A. (1996), "*Computers and other interactive Technologies for the Home*", *Communications of the ACM* (39:12) Dec, 47-54.
- Venkatesh, A. and Brown S.A. (2001), "*A Longitudinal Investigation of Personal Computing in Homes : Adoption Determinents and Emerging Challenges*", *MIS Quarterly* (25:1), March, 71-90.
- Warshaw, P.R. (1980), "*A New Model for Predicting Behavioural Intention : An alternative to Fishbein*", *Journal of Marketing Research* (17:2), 153-172.
- William, O. Bearden and Netemeyer, R. (1999), "*Handbook of Marketing Scales*", Multi-item Measures for Marketing and Consumer Behaviour Research, 2nd Ed., Sage, Scale developed by Holbrook and Hirschman, Batra & Athola, Spanberg, Voss & Crowley.
- Wind, Y., Mahajan, V. and Gunther, R.E. (2002), "*Convergence Marketing: Strategies for Reaching New Hybrid Consumer*", Prentice-Hall Inc., Upper Saddle River, NJ.