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Selecting a Web Portal for Online Shopping: A Conceptual Approach Using Interpretive Structural Modeling

Sanjeev Prashar*, T. Sai Vijay**, Chandan Parsad***

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Abstract

Purpose – The present study examines interrelationships among antecedent factors defining consumer behavior in selecting online shopping websites.

Research design, data, and methodology – The study identified factors from existing literature and used Interpretive Structural Modeling (ISM) to propose a conceptual approach to explain consumer website selection behavior. Through extensive discussions among industry and academia experts, qualitative assessment of the relationship between various factors was determined.

Results – According to the model, eight congregating factors do not converge directly for website selection, rather, they operate following a hierarchy of influence. The ISM and MICMAC analysis reveal that information on a website and website aesthetics play key roles in influencing website selection. However, convenience and the value proposition also play very significant roles.

Conclusions – The study's findings can help the e-commerce industry, especially online retailers. The findings can be used to enhance e-retailer ability to attract, communicate, engage, achieve, monitor, and evaluate web traffic and design appropriate strategies. The study's prime contribution is the application of Interpretative Structural Modeling (ISM) to the field of website selection.

Keywords: Online shopping; web aesthetics; value proposition; interpretive structural modelling (ISM) MICMAC Analysis.

JEL Classifications: M10, M30, M31.

* Professor, Dr., Indian Institute of Management (IIM), OldDhamtari Road, Sejbahar, Raipur-492015, Chhattisgarh (India), Tel: +91-90-39 03-9499. E-mail: dr.sanjeev.prashar@gmail.com

** Doctoral Scholar, Indian Institute of Management (IIM), Old Dhamtari Road, Sejbahar, Raipur-492015, Chhattisgarh (India), E-mail: tsaivijay@gmail.com

*** Doctoral Scholar, Indian Institute of Management (IIM), Old Dhamtari Road, Sejbahar, Raipur-492015, Chhattisgarh (India), E-mail: chand anparsad@gmail.com

1. Introduction

Business transactions have always had a deep impact of technological innovations, even before the dawn of the internet era. As automatic teller machines revolutionized consumers'banking experience, internet has been able to transform the way business is done. The newest way of commerce is the one that can be performed on the internet. Its emergence has changed the way people shop and purchase goods and services, and has progressed into a universal phenomenon in a very short span of time. The buyer and seller can geographically be at different places (countries), may not even speak the same language, but are able to connect with each other through E-commerce which has become a limitless business medium in this age of globalization.

With the goal of reducing marketing costs involved, firms are using e-commerce. They are also using internet to express, connect, communicate and spread information to the current and prospective consumers and to receive feedback about the satisfaction/dissatisfaction with their products and services. For consumers, e-commerce has been a blessing in disguise as they not only can purchase products online, but can also compare prices, features, benefits and the after-sales services that the firms are offering.

Online shopping provides many benefits to consumers including easy access to wide range of products, services and information. It is one of the most convenient methods of shopping and also provides functional as well as practical benefits (Donthu & Garcia,1999Chen & Chang, 2003). One of the most common advantages perceived by consumer while buying through internet, is the possibility of availability of products and services at a lesser price as compared to the offline stores. The possible reason for the lesser price comes from the fact that online stores incur less cost as compared to offline/traditional stores.

Not so long ago most of the consumers visited neighbourhood brick and mortar retail stores for their shopping needs,

these areas presented a picture of negligence. Starting with parking problems, weather issues, long queues, non-friendly salesmen etc. Then e-commerce came as a saving grace, people were not so comfortable using their cards and giving their personal information online. Things have changed very quickly. All over the world online shopping has been growing exponentially. Online retail sales in USA are expected to reach $262billion by the end of 2014 and is expected to reach $370billion by 2017. In Europe the revenues were expected to reach $160billion in 2014 and $240billion by 2017 [1]. US Online Retail Sales to Reach $370B By 2017; €191B in Europe, http://www.forbes.com/sites/forrester/2013/03/14/us-online-retail-sales-to-reach-370b-by-2017-e191b-in-europe/, accessed on November 19, 2014. Shopping through an online medium is catching up fast in India. With a vibrant youth populace and an affluent middle class fuelling rise in consumption levels, India has offered a huge business opportunity for retailers from across the world. Increasing penetration of smartphones and easy access to internet has fuelled the growth of e-commerce in India. The current online market size which is estimated to be around $4billion in 2014 is expected to touch $45 billion by 2020 [2].Indian online shopping industry to touch $45 bn by 2020 vs $4 bn in 2013: Report, http://www.business-standard.com/article/companies/indian-online-shopping-industry-to-touch-45-bn-by-2020-vs-4-bn-in-2013-report-114110501052_1.html, accessed on November 19, 2014.

Shopping through internet is going to become more and more popular as time goes by and consumers around the world become comfortable about security of transaction and on-time delivery of their purchases. It has been posited in numerous researches that consumers'web portal selection for shopping online is manifested owing to various antecedent factors. Also, there exists inter-relationship between many of these factors. However, it is imperative to understand the exact nature of the relationship between those factors in terms of 'antecedent-consequent'relationship and decipher the hierarchy of influence on web portal selection. The objectives of this study was; identifying the relative significance of various factors choice of online shopping portal interpreting the nature and direction of relationship between different factors that influence choice of online shopping portal; developing a conceptual model of web portal selection using interpretive structural modelling technique and to deliberate on the effect of this research for the managers and suggest directions for future research.

2. Literature Review

An inter-organisational information system that allows the participating buyers and sellers to exchange information about product offerings and prices is referred to as electronic market (Bakos, 1991). Online shopping, as described by Liu &Arnett (2000) is "a way of conducting business by companies and customers performing electronic transactions through computer networks." E-commerce thus is a form of retailing which relies on using an electronic medium that connects a retailer and consumer, enabling them to enter into a transaction giving benefits to both of them.

The preference for online buying website over traditional stores has been attributed to the fact that many consumers are convenience oriented (Donthu & Garcia, 1999). Convenience has been found to be the main motivation for consumers to buy online. It has become more significant because of prevalence of many constraints in going to a store (Morganosky & Cude, 2000). Convenience itself has many forms which may be based on time or space (Gehrt et al., 1996). The advantages of shopping from home also form an important factor along with convenience (Eastlick & Feinberg, 1999). Shopping from home forms an important factor for its association with convenience (Eastlick & Feinberg, 1999). Constantinides (2004) defined convenience as easy and speedy information browsing, shopping and settling of the online transaction. In their study, Thomson & Laing (2003) identified three reasons of consumers opting for online shopping – drastic reduction in shopping time; freedom and flexibility to shop whenever they want; and the need of very little physical exertion for shopping.

Other than convenience, competitive price showed no difference across all demographic variables, which meant that all online shoppers were concerned about price. And they believed that online medium provides goods/services at very competitive price (Shergill & Chen, 2004). Customers' perceived usefulness of an online store and the perceived ease-of-use of the online website was found to have significant positive impact on repurchase intention at the same online store (Aren et al.). Quite contrary to the above findings, Kim & Stoel (2004) had reported that ease-of-use did not have any significant impact in determining customer satisfaction. Their study reported that content and transaction related qualities of a website were more important for customer satisfaction, whereas design qualities were not significant.

Since online shopping provides consumers with the benefits of easier comparison of products'features and prices, the amount of time a consumer spends on the portal becomes an essential factor (Rowley, 1996). According to (Wolfinbarger & Gilly, 2003), frequent purchasers consider the website design as the most important aspect of judging the quality of the products at the online store. There exists a positive effect of website design on customer satisfaction. On-time and proper delivery of goods are found to have a significant positive impact on customer satisfaction (Xia et al., 2008). The provision of warranty was found irrelevant and did not have any influence on the buyers'satisfaction or trust (Sonia & Carmen, 2009). Transaction capability of the web portal and its receptiveness were found to have substantial influence on consumer satisfaction with respect to online shopping (Kim & Stoel, 2004). This study also confirmed the positive impact of adequacy of information available on the website. Xia et al. (2008) established the influence of proper transaction ability and payment on customer choice of an online web portal. However, they did not find any impact of rapid response time on customers' satisfaction.

The quality of services being provided by an online web

store is a strong determinant in customers' satisfaction and loyalty towards an e-commerce website (Grace & Chia-Chi, 2009; Sonia & Carmen, 2009). The buyers' intention of purchasing goods from a specific online store is determined by the perceived value he/she gets from that portal (Ching-Wen & Hsi-Peng, 2007). Proper transaction ability and payment were found significantly impact customer satisfaction (Xia et al., 2008). Kim & Stoel (2004) also found that transaction capability had significant impact on customer satisfaction from online shopping. The ability of the website to respond quickly had strong positive significant impact on buyers'satisfaction (Kim & Stoel, 2004). On the contrary Xia et al. (2008) did not find any impact of rapid response time on customers' satisfaction.

Online shopping customers who felt that the information provided by the online store website is adequate for their task were found to be satisfied (Kim & Stoel, 2004). Another study (Park & Kim, 2003) reported that buyers were likely to be committed to online stores when there would be satisfaction from the information provided and any relational benefit. Further it was found that product and service information quality significantly impacts information satisfaction and relational benefit. Information provided by the online stores was found to be an important factor that determines the customers'loyalty towards any online store and their buying behavior. A study conducted by Miyazaki & Fernandez (2001), stated that consumers were highly sceptical about the online security of their transactions as well as their personal information. Though this concern was less for people having considerable amount of online shopping experience than the new consumers. Consumers' who are better educated, are more likely to spend time online, and so are less concerned regarding internet privacy and transactional systems security (Hui & Wan, 2006).

To gain trust of the online shoppers, website portals use compatible terms and conditions, which is an important factor. The simplified process and easy return policy was found to be most important in developing trust in an online buying environment (Tan 1999; Wang et al., 2004). Research had identified that clear communication regarding the policies of return and compensation to customers does have an impact on customers'selection of online portal. Also elements like guarantees and warranties, which are considered as augmented services were found to be important. Guarantees given on products do become a source of competitive advantage for a particular website over others (Constantinides, 2004)

Various factors have been discussed in the literature which can have impact on customers'selection of web portal for online shopping. These factors have been identified in different research studies across different nations. The further sections talk about the methodology of ISM and identification of relationship existing between these factors which would impact consumers' choice of online portals.

<Table 1> Variables Identified through Literature Review

S.No	Variables influencing Website Selection	References
1	Transaction Security	Xia et al. (2008)
2	Delivery Terms	Donthu and Garcia (1999); Xia et al. (2008)
3	Transaction terms	Kim and Stoel (2004); Sonia and Carmen (2009)
4	Ease of use	Aren et al. 2013; Kim and Stoel (2004)
5	Information	Kim and Stoel (2004)
6	Value proposition	Wolfinbarger and Gilly (2003); Shergill and Chen (2004)
7	Web aesthetics	Wolfinbarger and Gilly (2003)
8	Convenience	Eastlick & Feinberg, (1999); Constantinides (2004)

3. Research Methodology

The study began with scanning of existing literature to identify factors that influence consumers' choice of web portal selection. The list of ten variables that were identified from past research was shared with expert panel that comprised of seven members – three practicing consultants and two researchers in the field of shoppers' behavior and two academicians with research background related to buying behavior. These experts were presented with agenda on:

- Shortlisting the variables that contribute to impulse buying;
- Through qualitative assessment, endorse the presence of relationship between each pair of contributing variables; and
- Postulate the accompanying direction of relationship between these variables.

After deliberations, the expert panel grouped shortlisted variables into eight factors –(ease of use, web aesthetics, transaction terms, value proposition, transaction security, convenience, delivery terms and information available on the website). To measure the impact of these eight independent variables on web siteselection, the later was considered as a dependent variable. The panel further discussed to arrive at definite order and direction to qualitative interrelationship between these overall nine factors. Interpretive Structural Modelling (ISM) technique was applied to analyse the observations received from the panel.

3.1. Interpretive Structural Modelling–Introduction

A group-learning process, Interpretive Structural Modelling (ISM) facilitates in defining a problem or an issue by summarizing inter-relationships among various variables contributing to the intricate problem (Sage, 1977; Mandal & Deshmukh, 1994; Jharkharia & Shankar, 2004; Ravi & Shankar, 2005; Faisal et al., 2006; Soti & Shankar, 2010). By imposing specific order and direction on relationships of different and directly related elements of the system, this technique converts a complex sys-

tem into simple and well-defined structure (Warfield, 1974; Sage, 1977). It defines and summarizes relationship between variables, irrespective of their varying order of complexity (Jyoti & Deshmukh, 2010).

The present study involves the identification of factors contributing to web portal selection for online shopping and analysis of interrelationship among these factors using the interpretive structural modelling approach. To capture the users'best perceptions of the situation, this method involves creation of a directed-graph that can be converted to a structural model (Malone, 1975). This resultant directed-graph, also known as digraph shows the inter-relationships of the factors, in the form of their dependencies and driving power (Sage, 1977). With the explanation of relevant contexts, these diagraphs become final interpretative structural models.

This technique helps in reducing computational efforts. While it converts imprecise and loosely articulated depictions of a system into rationally defined, sequential and comprehensive systematic models, it also extends scope to review judgments (Thakkar et al., 2007). Recognizing experts'collective knowledge, it facilitates in generating solution to the complex systems. There have various areas in the field of managerial decision making, where ISM has been used. It provides ground for understanding of complicated\complex situation, as well as provide framework for solving the problem. Not much of applications of ISM have been noticed in the area of marketing.

3.2. Process of Constructing ISM Model

Using an ISM technique, constructing a model involves number of steps (Warfield, 1974; Farris & Sage, 1975; Malone, 1975; Warfield, 1976; Sage, 1977; Watson, 1978; Janes, 1988).

The simple concept of ISM is to use professionals' and experts'practical experience and knowledge to break a complex system into numerous subsystems (elements) and construct a multi level structural model. The ISM also provided a sense of relationship between the various items and helped identify the drivers and the dependents.

3.3. Structural Self-Interaction Matrix

The items or elements or factors are to be defined first; the related relationships between them has to be then determined. Depending on the relationship under contemplation, the structural self-interaction matrix (SSIM), reachability matrix, the lower triangular format of reachability matrix, digraph for interpretive structural model, and the interpretive structural model are developed (Saxena et al., 2006). To identify the key elements (variables) defining shopping experience, the issue was discussed with domain experts as is suggested by ISM methodology. The experts deliberated upon the initial list of variables provided to them. They examined the presence/absence of relationship between different factors and also the direction of relationship.

Following the steps, <Table 1>, with Structural Self-Interaction Matrix was constructed. This requires depicting dependence among all possible pairs of elements by choosing a contextual relationship showing which elements lead to which other element. Factor 1 i.e. ease of use focuses on how simple and easy it is for the consumers'to use the web portal for their online shopping purposes, which would be able to achieve factor 9 namely, web site selection. Hence the relationship is shown as "V" in <Table 2>. The factor delivery terms (factor 4) would be helped by information available regarding the terms and conditions of delivery. Hence the relation is "A". Factor 3 and 8 are unrelated. Transaction security (factor 3) is does not have an impact nor it is impacted by value proposition(factor 8). Thus, "O" represents their relation in table 1. Factor 3, namely transaction security and factor 5, viztransaction terms have bidirectional relationship as each factor helps in achieving the other factor. Therefore "X" depicts the relationship.

<Table 2> Structural Self-Interaction Matrix (SSIM)

	Factors	9	8	7	6	5	4	3	2
1	Ease of Use	V	O	V	A	V	O	X	A
2	Web Aesthetics	V	O	O	X	O	V	V	
3	Transaction Security	V	O	V	O	X	O		
4	Delivery Terms	V	V	V	A	O			
5	Transaction Terms	V	V	X	O				
6	Information Available on Website	V	O	O					
7	Convenience	V	O						
8	Value Proposition	V							
9	Web Site Selection								

Prepared by the authors

3.4. Arriving at final reachability matrix

As shown in the flow chart, after execution of transitivity, Final Reachability Matrix is created as reflected in <Table 3>. It also reflects "Driving Power" and "Dependence" of the factors for the resultant web portal selection. The 'driving power' of an individual factor is the summation of the number of factors (including itself), which it helps in achieving. The rank of a factor is directly proportional to its driving power. Here, factor – information has highest driving power of 6, and hence these is ranked first. The 'dependence'is calculated by the total number of factors, which support for realizing it. The dependence and driving power for each factor is used in MICMAC Analysis subsequently.

<Table 3> Final Reachability Matrix with Driving Power and Dependence

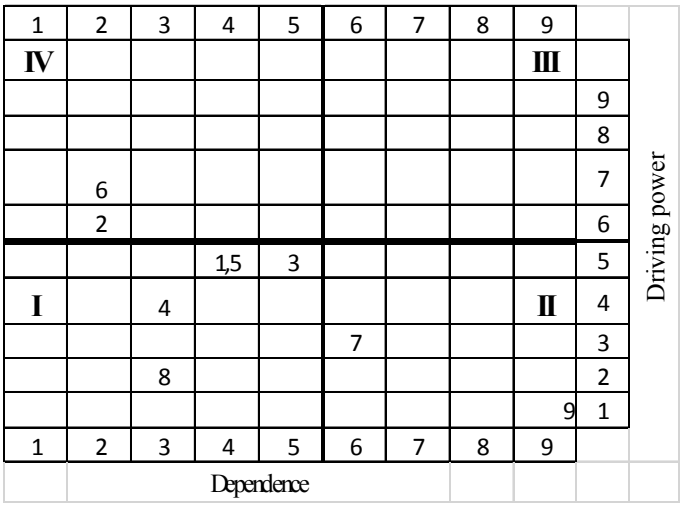
	Factors	1	2	3	4	5	6	7	8	9	Driving power	Rank
1	Ease of Use	1	0	1	0	1	0	1	0	1	5	III
2	Web Aesthetics	1	1	1	1	0	1	0	0	1	6	II
3	Transaction Security	1	0	1	0	1	0	1	0	1	5	III
4	Delivery Terms	0	0	0	1	0	0	1	1	1	4	IV
5	Transaction Terms	0	0	1	0	1	0	1	1	1	5	III
6	Information Available on Website	1	1	1	1	0	1	1	0	1	7	I
7	Convenience	0	0	0	0	1	0	1	0	1	3	V
8	Value Proposition	0	0	0	0	0	0	0	1	1	2	VI
9	Web Site Selection	0	0	0	0	0	0	0	0	1	1	VII
	Dependence	4	2	5	3	4	2	6	3	9		

Prepared by the authors

4. Analysis

Classification of Elements: MICMAC Analysis

To analyse the driving and dependence power of the factors contributing to the issue, a tool known as Matrix Multiplication Applied to Classification (MICMAC) is used (Duperrin & Godet, 1973). The factors involved are categorized on the basis of relationship between them and the scale of influencing capability (Sharma et al., 1995; Kanungo et al., 1999; Hu et al., 2009). Using the figures of driving power and dependence, from table 2, MICMAC has been drawn <figure 1>.



Source: Prepared by the authors

<Figure 1> MICMAC Analysis

Group I: Autonomous
Group II: Dependent
Group III: Linkage
Group IV: Independent

These nine factors are divided into four distinct groups. Group 1 is referred to as 'autonomous group'. With weak driving power and weak dependence, this group contains factors that are relatively disconnected from the system. Factors 1, 3, 4, 5, and 8 in the study were identified to be autonomous elements. Group-II comprises of factors with low driving power but high dependence and is known as 'dependent group'.

Web site selection and convenience were found to be in this category. Known as 'linkage group,' Group-III contains elements with high driving and high dependence power. The factors in this group are most unstable and any attempt to manipulate these factors has huge impact on others factors, with feedback effect on them. None of the factors from the study were found to be in this category. Factors with high driving power and low dependence fall in Group-IV. This group is labelled as 'independent group' as it has low dependence property. The factor information and web aesthetics were found to be in this group.

4.1. Level partition

Partitioning of Reachability Matrix is done on the basis of Reachability Set and Antecedent Set (Warfield, 1976). While reachability set contains factor itself and other factors that it may help realize, antecedent set has factor itself and other factors that may help realize this factor. Intersection of these two sets for each factor is arrived at. The factor(s) with same reachability and intersection set, is top level factor in the hierarchy of ISM (Refer <Table 3>). After deleting this factor, the process is continued for next levels (Appendix). This iteration process is continued till the level of last remaining element is derived from the process <Table 4>. The objective of obtaining the levels of all elements is to build the digraph and the final model.

<Table 4> First Iteration to Get Top Factor of Hierarchy

Iteration 1

	Factor	Reachability set	Antecedent set	LEVEL
1	Ease of Use	1,3,5,7,9	1,3,7	
2	Web Aesthetics	1,2,3,4,6,9	2	
3	Transaction Security	1,3,5,7,9	3,5	
4	Delivery Terms	4,7,8,9	4	
5	Transaction Terms	3,5,7,8,9	3,5,7	
6	Information Available on Website	1,2,3,4,6,7,9	3,5,6	
7	Convenience	5,7,9	1,3,5,7	
8	Value Proposition	8,9	4,8	
9	Web Site Selection	9	1,2,3,4,5,6,7,8,9	LEVEL 1

Prepared by the authors

<Table 4> shows the level of factors influencing website selection. The levels recognized helps in building the final model of ISM. From the tables it can be seen that factor 9 is at level 1 (dependent).

<Table 5> Iterations I-IV Levels

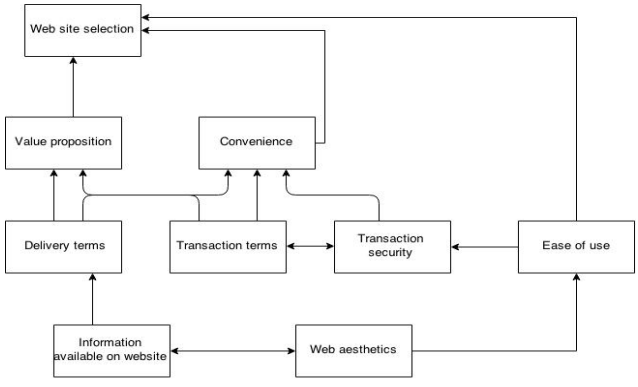
	Factors	Reachability set	Antecedent set	LEVEL
Iteration 2	1	1,3	1,2,3,6	L3
Iteration 2	2	2,6	2,6	L4
Iteration 3	3	1,3	1,2,3,6	L3
Iteration 3	4	4	2,4,6	L3
Iteration 3	5	3	1,3	L3
Iteration 2	6	2,6	2,6	L4
Iteration 2	7	5,7	1,3,5,7	L2
Iteration 2	8	8	4,8	L2
Iteration 1	9	9	1,2,3,4,5,6,7,8,9	L1

Prepared by the authors

Thus, it would be positioned at the top of the ISM hierarchy. Similarly, factors 7 and 8 are found at level 2. Level 3 consists of factors 1, 3, 4 and 5 respectively. And factor 2 (aesthetics) and 4 (information) which are at level 4 will form the base of the model. All these factors at different levels stimulate the web portal selection.

4.2. Formation of ISM-based model

From Final Reachability Matrix (table 2) a structural model is prepared. This model comprises of nodes and lines joining these nodes. The lines or connectivity represents contextual relationship. Here the top level factor is positioned at the top of the digraph, followed by second level factor at second position and so on. The bottom level is placed at the lowest position in the digraph. The resultant graph is called directed graph. The digraph is converted into an ISM Model by replacing nodes of the elements with statements as shown in <figure 2>.



Source: Prepared by the authors

<Figure 2> ISM Based Model

5. Discussion

As is the case with shopping in offline stores, there are many factors which have an impact on consumers when opt for online shopping. It is equally pertinent to understand the ambitions and motivations of consumers, especially in the context of online shopping. The conceptual model arrived at using ISM technique indicate that online shopping portal selection is a multi-layered construct. Eight factors are arranged in a hierarchy of four layers which are the antecedents to online shopping. The base of the model consist of factors web aesthetics and information available on the website. Online retailers should have a website that is attractive to the e-shopper. Also the site should provide good amount of information about the products and services that they are offering. The next level consists of factors transaction security, ease of use, transaction terms and delivery terms.

There are the pre-requisites for a consumer to decide whether to visit a particular web portal for online shopping and would also work as important ingredients in the strategic planning.

Along with ease of use other factors which are important from consumers'point of view are security and delivery. Security in terms of the safety of their credit/debit card details, as well as the safety of personal information. The portal should have good security systems which cannot be hacked easily. Most often online shoppers seem to be highly anxious about the payment security during online transactions and hence trust is an important factor based on which a consumer decides to select a particular website. This can be achieved only when the online retailer assures and provides fool-proof security to the transaction of the consumer. Apart from providing good security to the transactions, the website should also ensure that, transaction is hassle free and convenient to the consumer. Trust towards the web portal also builds up when the retailer has good brand image or the consumer had positive previous online experience.

The basic reason for a consumer to shop online rather than going out to a retail store and shopping, is the fact that he/she is looking for convenience. They are too busy in their office or do not want to enter the hassle that is a part of offline shopping. So any consumer who is thinking of shopping through an online portal is looking for convenience. Also, since consumer wants shopping to be convenient, they would be looking for a portal which is quite simple and easy to use. Any complex portal where the usage needs some learning process would not be preferred as it would become inconvenient for the consumer. Value addition comes from the advantage the consumers are getting though online shopping.

Our research findings suggest that consumers' attitude about online shopping depends on the various factors that enable them to select an appropriate website which can be trustworthy, gives perceived value and ease of use attributes. These results are quite similar to the conclusions of other researchers who propose that internet buying behavior is influenced by consumers'perceptions regarding the various important factors asso-

ciated with the website like experience, trust, assurance, ease of use etc. (Fenech & O'Cass, 2001; Ha & Stoel, 2009). Many other studies have suggested that consumers inclination towards e-commerce to a large extend depends on information quality, functionality, responsiveness, usefulness, and web site quality and features (Devaraj, Fan, & Kohli, 2002; Pires, Stanton, & Eckford, 2004; Ahn et al., 2004; Trabold, Heim, & Field, 2006; Lee et al., 2011).

Variables pertaining to payment and delivery related aspects were similar to the results of the study by Xia et al. (2008) (i.e., delivery has a positive impact, payment was considered to be an important factor and transaction capability was found to have strong positive effects). This was also related to trust and internet trustworthiness as discussed by many researchers. Online shoppers seem to be highly anxious about the payment security during online transactions (Rudolph et al., 2004). Aren et al. (2013) reported that trust was important factor based on which a consumer decides to select a particular website.

6. Conclusion and Future Scope

Once a web portal is successful in gaining the consumers'attention by building trust and providing good value for the goods and services, the second level comes into play. The second level factors consist of terms & conditions of shopping, extent and type of information being provided to the consumer and pricing of the products. The biggest risk of online shopping lies in the lack of physical evaluation of the products and hence products returns becomes an important aspect for any online retailer. The policies and procedures for returning the products should be very clearly mentioned in the terms and conditions of the website. Also the web portal should be able to provide detailed information on the products/services being offered on their portals.

Just attracting the consumer to the website is not enough, the retailer must be able to influence his/her purchase decision. The shopping experience on the website should be so superior that it creates a different experience for consumers' and they are willing to visit the website again and shop. It becomes necessary to understand and take into account these factors, the relative importance associated with each factor and also the relationship existing between each factor and its significance. Owing to the very high marginal value of Indian rupee, one of the main concerns for the Indian consumer is their apprehension regarding transaction security and delivery issues. Websites must identify strategies to address this concern and communicate with consumers. The endeavour has to cater to the augmented needs of consumers like brand image, discounts and promotional offers, return and exchanges, etc. and these values to consumers must be communicated these values to them in a clear and precise manner. The lack of touch and feel of the product is another impediment. Marketers may stimulate the cognition by providing a good amount of information related to all the products and services, besides having physical display centres in proximity.

Structural equation modelling (SEM) can be used to statistically test the model presented in this study. As SEM is a technique equipped to test such models and has been widely used. To compare the techniques of ISM and SEM, model developed through ISM can be regarded as an initial model, whereas SEM cannot prepare an initial model but can statistically validate an already developed model. So, because of the complementary aspects of both the methods, future researchers may combine both of them in order to test the validity of the proposed ISM model by using the SEM technique.

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<APPENDIX>

Initial Reachability Matrix

	Factors	1	2	3	4	5	6	7	8	9
1	Ease of Use	1	0	1	0	1	0	1	0	1
2	Web Aesthetics	1	1	1	1	0	1	0	0	1
3	Transaction Security	1	0	1	0	1	0	1	0	1
4	Delivery Terms	0	0	0	1	0	0	1	1	1
5	Transaction Terms	0	0	1	0	1	0	1	1	1
6	Information Available on Website	1	1	0	1	0	1	0	0	1
7	Convenience	0	0	0	0	1	0	1	0	1
8	Value Proposition	0	0	0	0	0	0	0	1	1
9	Web Site Selection	0	0	0	0	0	0	0	0	1

Prepared by the authors

Iteration Process

	Iteration 2 Factor	Reachability set	Antecedent set	LEVEL
1	Ease of Use	1,3,5,7	1,3,7	
2	Web Aesthetics	1,2,3,4,6	2	
3	Transaction Security	1,3,5,7	3,5	
4	Delivery Terms	4,7,8	4	
5	Transaction Terms	3,5,7,8	3,5,7	
6	Information Available on Website	1,2,3,4,6,7	3,5,6	
7	Convenience	5,7	1,3,5,7	LEVEL 2
8	Value Proposition	8	4,8	LEVEL 2

Prepared by the authors

	Iteration 3 Factor	Reachability set	Antecedent set	LEVEL
1	Ease of Use	1,3	1,2,3,6	LEVEL 3
2	Web Aesthetics	1,2,3,4,6	2,6	
3	Transaction Security	1,3	1,2,3,6	LEVEL 3
4	Delivery Terms	4	2,4,6	LEVEL 3
5	Transaction Terms	3	1,3	LEVEL 3
6	Information Available on Website	1,2,3,4,6	2,6	

	Iteration 4 Factor	Reachability set	Antecedent set	LEVEL
2	Web Aesthetics	2,6	2,6	LEVEL 4
6	Information Available on Website	2,6	2,6	LEVEL 4

Prepared by the authors