

Website Quality and Consumer Online Purchase Intention of Railway Tickets in India

Dr Ashutosh Nigam

Associate Professor,
Vaish College of Engineering, Rohtak, Haryana (India)
drashutoshnigam@gmail.com

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Abstract

With the help of a website, organizations can provide voluminous information to their customers to create purchase intent towards their product and services. But to stay competitive in this fast growing world, it is necessary to provide high quality online service. In this study five website quality factors: usability, website design, information quality, trust and empathy as antecedents of online purchase intention of railway ticket. IRCTC website is considered for given research. A self-administered questionnaire was used and 326 usable responses were collected in National capital Region Delhi. Correlations and regressions were used to analyze the data. The findings showed that empathy and trust are the most direct influential factors in predicting online purchase intention. The implication of the present study is that the Indian Railways should focus on the quality of its website for increased user satisfaction and leading to customer purchase intension.

Keywords: *Website, Online Purchase, Railway Tickets.*

Introduction

With the exponential growth of internet users, Indian companies have started channeling their focus and resources towards the virtual environment. The website of IRCTC (Indian Railway Catering and Tourism Corporation) is explored for the study which is offering wide range of services related to travel and tourism producing gigantic revenue figures. IRCTC is a subsidiary of the Indian Railways, is the first ever application of e-commerce in India. The online passenger reservation system facilitates the public to book their tickets from anywhere and at any time in the country just with a click and through easy payment. (Mukkelli, n.d.). As the number of users through online web based interface is increasing IRCTC is facing service gaps on various levels of ticket booking. Indian payment

gateways have an unusually high failure rate in comparison to global standards. E-business companies using Indian payment gateways are losing out on business, as several customers do not attempt making payment again after a transaction fails (Kumuthadevi, 2013). Both Registered and Unregistered Users, face many difficulties while booking ticket online on I.R.C.T.C. The Indian Railway Catering and Tourism Corporation's (IRCTC) website www.irctc.co.in is the government (Shetty, 2014) website basically used for booking Railway tickets in India. It is one of the biggest ecommerce sites in the asia pacific region. It is the website having one of the most visited pages in India. It charges a commission on every ticket booked through its portal. In 2006, IRCTC has tied up with the foremost IT companies TCS (Tata Consultancy Services) to design its system. In 2008 the online booking went up to 40,000. Number of tickets booked through IRCTC website during the year 2010-11 went up to 9.69 crores tickets as against 7.20 crores tickets booked during 2009-10. The company sold about 12 crores rail tickets in FY 11-12, amounting to a gross value of Rs 10,000 crores a growth of 20% over the last financial year. IRCTC earned a service charge of Rs 160 crores out of the ticket booking business. However, at present, in terms of online money transactions with online ticket selling around Rs. 10 crores a month and after completing more than a decade, today IRCTC has emerged as a largest in the country with more than 4 lakhs booking per day in terms of online ticketing, leaving behind several high-profile e-commerce sites worldwide. Rightly said so, IRCTC website comprises more than 45% of all visitors to travel websites in India and 19% of total Internet audience. (Source: www.iamwire.com). Present study focuses to explore parameters which affect users majorly and

by which service gap deterrent in purchase intension of railway tickets online. By understanding such service GAPs, I.R.C.T.C. website can be more effective as compare to its market leading websites in the same business. It is necessary to identify, what the customers expect from a website. Ignoring this dimension of flawless website surfing for sales of railway tickets may lead to decreased customer satisfaction(R. K. Jain & Rangnekar, 2015).

Railways is 2nd largest network in the world for transportation through the country. Indian Railways, a premier public sector enterprise of the country is the largest rail network in Asia and the worlds' second largest network of employees under the one management. Indian Railways is a multi-gauge, multi-traction system covering a total of 108,706 km of track. This track includes 86,526 KM route of broad gauge (1676 mm) line of which 16,001 km has been electrified. It has 18,529 km of meter gauge (1000 mm) line, and 3,651 km of narrow gauge (762/610 mm) line. Indian Railways runs around 11,000 trains every day, of which 7,000 are passenger trains. It has 7566 locomotives, 37,840 coaching vehicles, 222,147 freight wagons, 6853 Stations, 300 Yards, 2300 Good sheds, 700 Repair shops, and 1.54 million work forces. (R. K. Jain & Rangnekar, 2015) . While going and upgrading with latest technological aspects of web world, there is a facility of booking tickets in India by online way. Present study tried to analyze the IRCTC website that provides multiple services like SMS booking, Flights, tour Packages etc. IRCTC is a government of India Enterprise. Recent trends of online buying mode of railway tickets for long distance tours or travels show a paradigm shift from the traditional booking pattern through the railway reservation counters. In India, the process and formalities of online transactions are still perceived by the majority of members as complex, uncomfortable, and a secondary option to the traditional purchase process.(Sahney, Ghosh, & Shrivastava, 2010). When a website provides such services, it's natural that it faces enormous amount of traffic on day to day basis. IRCTC faces issues regarding service quality when demand of railway tickets increases beyond the capacity of the server. The customers are not able to login the website or even when they are able to login the speed of the website is relatively slower as per customer expectation. More and more users are moving towards online platform of tickets reason being the adoption of this technique lies in the attractive online

websites, user friendly interface, bulky online stores with new fashion, easy payment methods, no bound on quantity & quality, wide choice regarding the items based on size, color, price, etc(Mukkelli, n.d.). The website need to be focused on four dimension(Singhal, 2012)

- 1. Communication:** It means delivery of information. For example email.
- 2. Process Management:** It covers the automation and improvements to the business process.
- 3. Service Management:** It is used to improve the quality of services.
- 4. Transaction Capabilities:** It provides the facility to buy tickets and other services on the internet.

Collett & King (1999) demonstrate that nearly 78% of the online shoppers never make it to the checkout line. Getting customers to the website of a company is one thing, making them to purchase is just another. The service industry plays an increasingly important role in the economy of many countries. In today's global competitive environment delivering quality service is considered as an essential strategy for success and survival. Even the public sector organizations have come under increasing pressure to deliver quality services and improve efficiencies(Sahoo, 2007). Customer needs and expectations are changing when it comes to governmental services and their quality requirements. However, service quality practices in public sector organizations is slow and is further exacerbated by difficulties in measuring outcomes, greater scrutiny from the public and press, a lack of freedom to act in an arbitrary fashion and a requirement for decisions to be based in law . Chang and Arnett (2000) identified factors associated with website success in the context of electronic commerce. The factors identified were information and service quality, system use, playfulness, and system design quality. According to Zeithaml and Bitner (1996), website represent the organization and can directly influence customer satisfaction, they perform the role of marketers. Whether acknowledged or not, websites are performing marketing functions. They can perform these functions well, to the organization's advantage, or poorly, to the organization's detriment. Continuous connectivity, quick response and help whenever needed, ease of access, options to pay, buy, & search, content usefulness, ease of navigation,

simple to use and properly structured, confidence & clarity of data generated, privacy & security of user, aesthetics, and customization/personalization are important in accessing the website (R. K. Jain & Rangnekar, 2015) The basic element of an effective website is its navigability. "Good navigation in a website is comparable to a good road map." With excellent navigation, right combination of contents, customer would know where they are, where they have visited, and how they can get to a target from their existing position. Navigation is an important design element, allowing users to acquire more of the information they are seeking and making the information easier to find (M. S. P. Jain & Kumar, 2011). Avery (2000) reported that the quality and the usability of the site determine the turning of visitors into buyers. Study identified that web quality and usability are key factors in differentiating companies doing business on the web for every dissatisfied customer who complains and tell negative word of mouth. Companies must address issues of quality and usability on their sites, this will help in ensuring customers return to websites.

Research Framework and Hypotheses

Usability

Perceived usefulness for online purchase can be defined as the prospective consumer's subjective probability that using the internet will efficiently facilitate his or her purchasing. At the same time, perceived ease of use for online purchasing refers to the degree to which the prospective consumer expects the online purchases to be free of effort.(Fazli & Sam, 2008).

H1: Usability of online website IRCTC is positively associated with consumers' online purchase intention to purchase railway tickets.

Website Design

The websites should also focus on its content as it has been identified as one of the main factors contributing to repeat visits. Content on the web includes text, pictures, graphics, layout, sound, motion and, someday, even smell, making the right web content decisions are critical to effective web design.(Fazli & Sam, 2008)

H2: Website Design of IRCTC is positively associated with consumers online purchase intention to purchase railway tickets.

Information Quality

Information quality refers to the amount, accuracy and the form of information about the products and services offered on a web site (Nusair et al., 2008)

H3: Information quality of website IRCTC is positively associated with consumers online purchase intention for railway tickets

Trust

These characteristics are reflected in an online transaction, where customers cannot see the seller face to face, physically examine the merchandise or collect the merchandise upon payment. The expectation of getting the right delivery is based on belief in the merchant's technical competence, goodwill and past experience with the online retailer. The social exchange theory believes that people form exchange relationship on the basis of trust.(Elise & Donthu, 2006)

H4: Trust of website IRCTC is positively associated with consumers online purchase intention towards railway tickets

Empathy

Empathy is a non direct human element interaction that deals with the provision of caring and individualized attention to customers such as e-mail communication. This includes providing individualized attention to customer concerns and request rather than a generic auto reply (Momaya & Gupta, 2008)

H5: Empathy feature of online service of IRCTC is positively associated with consumers online purchase intention.

Purchase Intention

Purchase intention is defined as the probability that the consumer will purchase the product. According to Theory of Planned Behavior (TPB), an individual's

performance of a certain behavior is determined by his or her intent to perform that behavior. Intent is itself informed by attitudes toward the behavior, subjective norms about engaging in the behavior, and perceptions about whether the individual will be able to successfully engage in the target behavior (Fazli & Sam, 2008). Measuring purchase intention can increase the accessibility of the respondent's attitude

toward the product category and increases the accessibility of attitudes toward the most salient brands offered (Nedungadi, 1990;)

This study adapted the Barnes & Vidgen's (2006) model which focusing on usability, website design, information quality, trust and empathy as website quality factors.

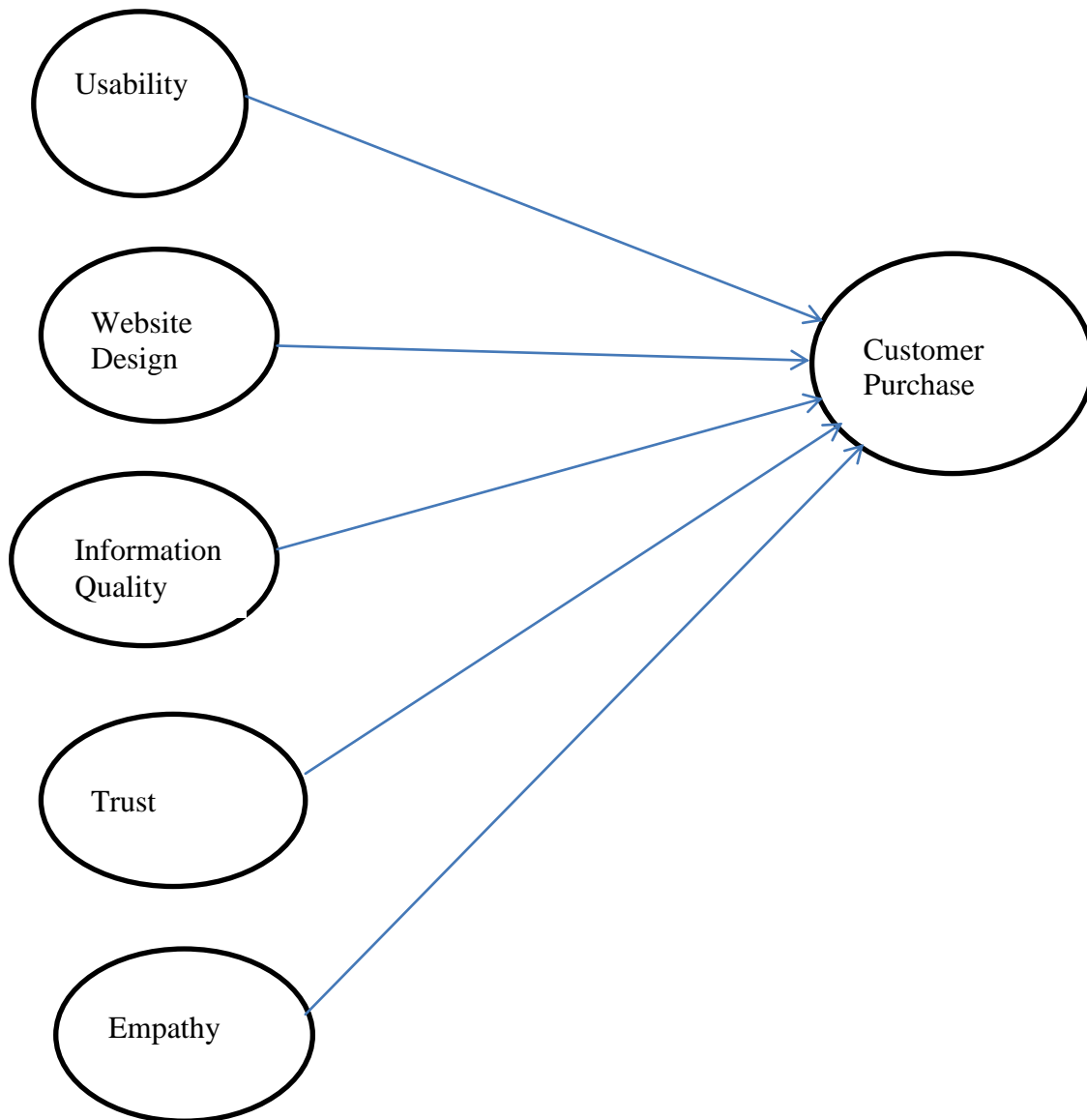


Figure 1: Proposed Framework of Research

Research Methodology

The present study is descriptive in nature. The sample consists of online users, both students and working adults in National Capital Region Delhi. Students were chosen because they had experience of browsing and purchasing products online. In general, college students are more likely than older adults to use the internet. However, type of usage varies by age. The justification of selecting this website is that one of the most swiftly growth services which has been provided through internet is travel related services (such as I-ticket and E-ticket). In travel related services IRCTC's website is most successful ecommerce website in India. The feedback responses collected by IRCTC during the month of March 2016 is being used. A sum of 326 usable questionnaires was collected. The questionnaires were first checked for any missing items and data of some respondents the data was cleaned statistically. It was ensured that all respondents have experienced browsing the IRCTC website. Of the 326 respondents, 51.4 percent were females and 48.6 percent were males; Respondents were reluctant to give personal information particularly data on financial status and credit facilities to the internet due to the fact that there is no direct eye-contact and thus, consumers are concerned about unauthorized use of their private information that could cost them considerable financial loss.

Measurement

The structure questionnaire consists of construct like usability, website design, information quality, trust, perceived risk, empathy, online purchase intention and demographic information. It includes 26 questions, covering the constructs proposed in Figure 1. A 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) is used as a measurement scale. Measurement items of website quality dimensions were adapted from few studies. Usability and empathy are adopted from Barnes and Vidgen's (2006) measurement instruments. Information quality and website design are adopted from Su et al.'s, (2008) model. Trust and purchase intention measurement items are adapted from Chang and Chen's (2008).

Data Analysis

The collected data was input into Statistical Package for the Social Sciences (SPSS) software 21 version for analysis. In order to test the reliability and internal consistency of each factor, Cronbach's alpha scores were calculated shown in table 1. These are above the minimum acceptable level of 0.8 (Momaya & Gupta, 2008).

Table 1: Reliability Statistics

Construct	Cronbach's alpha	No of Items
Usability	0.923	3
Website Design	0.942	4
Information Quality	0.892	5
Trust	0.941	4
Empathy	0.892	4
Purchase Intension	0.947	5

Source: Field data

Pearson's product moment coefficients of correlations were calculated as initial statistical analysis to examine the relationship between website quality dimensions and online purchase intention.

Correlation coefficient is generally used to measure two random variables of a sample which are linearly associated and has properties closely related to those of straight-line regression (Momaya & Gupta, 2008).

Table 2: Correlation between Website Quality Factors and Online Purchase Intention

	Usability	Website Design	Information Quality	Trust	Empathy	Purchase Intension
Usability	1					
Website Design	0.65	1				
Information Quality	0.453	0.467	1			
Trust	0.484	0.482	0.532	1		
Empathy	0.262	0.324	0.453	0.267	1	
Purchase Intension	0.434	0.432	0.456	0.478	0.454	1

Source: Field Data

Table 2 refers to the hypothesis that being used in this research that's correlates between the website quality factors and online purchase intention towards the railway users

Results and Discussion

Multiple regressions were then conducted to test the hypotheses. The overall model fit for the multiple regressions was assessed by F statistics. From Table

3, it is obvious that 66.3 percent of the variance in online purchase intention is explained by the overall model ($F = 26.3$, $p < 0.05$). Two independent variable; trust and empathy had statistically significant relationship with online purchase intention at 0.05 level. The empathy dimension possesses stronger impact on purchase intention. Usability was significantly related to purchase intention at alpha level of 0.10. Thus, all 5 hypothesis are supported

Table 3: Multiple Regression Result of Website Quality Factors Predicting the Level of Online Purchase Intention

Model Summary				
R	0.692			
R Square	0.4788			
Adjusted R Square	0.4211			
F	26.3			
Sig	.000			
Coefficient				
Independent Factor	B	Std error	t	Sig
Constant	16.278	0.375	45.099	0.000
Usability	0.217	0.054	1.98	0.050
Website Design	-0.013	0.086	-0.141	.888

Information Quality	0.143	0.75	1.672	.005
Trust	0.192	0.54	2.123	.331
Empathy	0.225	0.058	3.256	0.000

Note: Output Generated in SPSS

From the results, there are possibility that both trust and empathy play a mediating role in the relationship between the other independent constructs (usability, website design, empathy and information quality) and dependent construct (online purchase intention). This assumption is made on the basis that trust and empathy which is affective components of attitudes might mediates the cognitive or perception of consumers towards its website quality factors which would later influenced the consumers online purchase intention. In the study, there is a significant and positive relationship between empathy and online purchase intention.

Implication of Research

Initiating this cash on delivery system rail ticketing, IRCTC can target those customers who are reluctant to use their credit or debit cards as well as those who don't have net-banking facility(Mukkelli, n.d.) online shopping has become a trend in India and the reason behind the adoption of this technique lies in the attractive online websites, user friendly interface, bulky online stores with new fashion, easy payment methods, no bound on quantity & quality, wide(Mukkelli, n.d.). IRCTC should constantly upgrade their website for user friendly and should encourage users to use mobile to book tickets that have to face struggle for hours, often unsuccessfully, to book tickets online. Technology should be upgraded for handling more booking per minute(Directory, Publishing, Opportunities, & J-gage, 2013) Managers should concentrate on making navigation as simple as possible. The starting point to reserve a ticket should be clearly visible. It should be on the home page.(M. S. P. Jain & Kumar, 2011)a rail ticket can be booked online and get it delivered at home where the payment can be made. Websites provide an opportunity for enhancing service quality therefore Indian Railways should continuously strive to find ways to improve quality of its Website. It is not enough to register Web presence in today's networked environment, but as the study suggests quality Web service and experiences during the Web

encounter are equally important.(R. K. Jain & Rangnekar, 2015)

Conclusion

The results of this study suggest that there are possibility that both trust and empathy plays a important role in the relationship between the four constructs (usability, website design, information quality and empathy) and online purchase intention. Therefore future research should examine the mediating effect of affective features (trust and empathy) on purchase intention. By focusing on overcoming technical glitches, enhancing more user friendly interface, with comprehensive plans to tie up with more banks and to offer new services in new areas, constantly innovating in tune with new age websites and providing a positive and enriching customer experience (Shetty, 2014).Additionally as this survey has demonstrated that there should be a mechanism in place to monitor the satisfaction of Indian railways website users. Any dissatisfaction among users of website should be seriously addressed. Though ticketing through web is an added facility in the form of new channel and has nothing to do with the main function of providing transportation utility to its customers but as the survey suggests people expect reasonably good browsing experience.

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