Performance Assessment in E-Business for Automobile Accessories Websites

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ABSTRACT

Internet and technological advancement have revolutionized the businesses now-a-days. A drastic change has been observed in method of doing business from traditional to electronic form of business. Selling services and products online is in trend these days. E-commerce is the latest growing sector of the global economy. The growth of e-commerce would be a great business opportunity, but only for those firms who know how to get more customers to their site and how to hold them. Expanding turnover of e-commerce in the world points out to the evaluation of different websites on the basis of content, unique visitors of the day, daily page reviews, accessibility, back links, rank, and marketing of the website. Our research is focusing on finding the popularity of the automobile accessories websites on the basis of four factors -content, accessibility, marketing and technology. The result of our research accepts our hypothesis that these factors affect the customers when they buy products from different websites.

Keywords: E-commerce, hypothesis, factors, automobile accessories websites.

I. INTRODUCTION

E-commerce is one the growing sector in India. E-commerce mainly is the sector which deals with conducting a business over network mainly through the internet. Now-a-days people have developed a craze for online shopping which reflects the growth and establishment of e-retailing business. It has been realized that major growth is due to rapid technology adoption by an at most increase in the use of smart phones, tablets, internet over broadband. Many factors like greater flexibility, easy to use and handle, lower cost, easy transactions, broader view of variety, more discounts are leading to the development of e-commerce sector. E-Commerce is a platform which has replaced the traditional methods of shopping and business in other fields as well. If the companies have to survive in this competitive market scenario, it is vital to understand and analyze the customer needs and meet all their demands which the customers desire. Customer satisfaction can be the primary key to customer loyalty. Also, if the company wants to authenticate the transaction, various security technologies should be implemented. In India, it is a well known fact that every second three internet users are being added and if we talk in terms of global estimate then India is the second largest internet market. "We now increase our 2020 estimate (of India's commerce market) from $102 billion to $119 billion," Morgan Stanley Research said in a report. "This takes our estimate of the total Indian Internet market size from $137 billion to $159 billion (now including online food aggregation business)." [1]
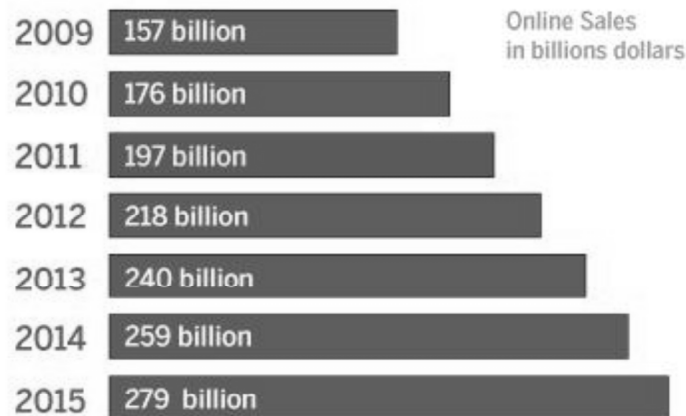
Indian companies are also focusing mainly on expanding their sellers and innovating customers by providing what all services they want. By 2016 a number of 653 million people in Asia Pacific region are expected to buy goods and services online, a figure which translates into over 48 percent of internet users in Asia Pacific region purchasing the goods online. [2]

E-Commerce has deeply affected both the society and the economy in many ways. It has changed the relevance of time for the people. E-Commerce offers total transparency to its users, providing details they

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need. The competition among the enterprises online has obviously in all ways benefitted the customers with more satisfying products. Here is the growth of commerce over the last few years. [3]

Year	Online Sales in billions dollars
2009	157 billion
2010	176 billion
2011	197 billion
2012	218 billion
2013	240 billion
2014	259 billion
2015	279 billion

II. LITERATURE REVIEW

It has been widely observed from the past studies, the Internet has changed the fundamental ways of business and we can observe a perfect competitive market for doing e-business (Ankita Pahuja, 2007). Ecommerce is the fastest growing sector globally because of smart phones, easy access to internet and improvement in online transactions (Siemer and Associates, 2013). Srinivasan (2002) identified eight factors and developed scales to measure these factors for investigating the customer loyalty in an online business that comes from the popularity of that particular website. The online automobile accessory industry is the biggest segment now-a-days due to the urban population and has private players like autofurnish.com, cardekho.com, jazzmyride.com, autotrends.in, etc. (Cristopher, 2014). Nikhashemi (2013) discuss the influence of customer satisfaction for competitive e-business. Cox (2001) investigates the applicability of the factors and compared it with e-commerce environment. Madu (2002) gives the study which determines the factors used by the customers to ascertain the quality of an e-commerce websites. Stiakakis (2009) investigates the similarity and differences in the factors that an e-service provider and e-customer perceives to be essential for a good shopping experience. Donlon (1999) highlighted the impact of internet on the business and how electronics and network helped to expand the business online. Naresh Malhotra (1987) enlighten the factors that maintain the customers on a website. Lee, discusses the perception of the customers for the e-services. Hans van der Heijden (2001) identified the factors responsible for the usage of websites. Kim (2009) highlighted why customers are attracted to the website and the relationship between the purchasing intent and overall customer satisfaction.

III. AUTOMOBILE AND E-COMMERCE

Almost every sector has gained the momentum in the league of ecommerce. E-Commerce has paved the way for the automobile industry as well. Automobile industry not only focuses on selling or buying of cars and other vehicles. It also includes business of automobile accessories, vehicle loans, insurances, exchange offers, etc. which are sometimes hindrances in growth of and development of this sector, but e commerce services have taken up these challenges. Many automobile accessories companies, marketers are tied up with many e commerce portals like autofurnish.com, jazzmyride.com, etc, to sell their products online. In comparison with traditional catalogue and methods, more buyers are being convinced with the simplicity and ease of buying online simply by ordering. The internet might not be the medium to buy or sell sometimes but it may be the medium to influence [10]. Many dealers now think that if they are not on the web then they might miss out the business. Today, many private investors and capital firms are there who are ready to invest in this automobile accessories online market as they see India as the fastest growing economy. It has

been observed that in the last few years that the use of e-commerce technology has helped the automobile accessories retailers to improve their efficiency and competitive position in the market [10]. For having more business (say more customers) we have studied few automobile accessories websites like *www.autofurnish.com, www.jazzmyride.com, www.autotrends.in.* We analyzed these websites on the basis of the accessibility, content, marketing and technology using the site beam tool to find which site is more popular among the customers and performed ANOVA test to check that whether these parameters affect the popularity of the websites or not.

IV. ABOUT THE WEBSITES

1) Www.autofurnish.com

- The company was established in the year 2012 and is mainly engaged in manufacturing, trading, exporting and supplying various automobile utilities. [4]

- Best auto care products (accessories) at best value are available at this online forum. Products are sold at low rates to both consumers as well as retailers. The main aim of the company is –"our customers, co-workers and contractors". It is a quality driven organization. The company ultimately tries to satisfy its consumers and thus want the loyalty of their customers.

- Products are available under various categories like interior and exterior accessory products for safety and protection or bike accessories. The company allows its customers to shop these auto products of various brands. Variety of products within international standards are available.

- If we look at the website of the company, lot many discount coupons are available to fetch more customers for new registrations, free shipping coupons for its loyal customers or discount coupons. It has been analyzed that the products are manufactured and designed within the industrial norms and supreme quality raw material is used with latest technology. Before the manufacturing, all the raw material undergoes various quality tests in order to satisfy the customers in quality aspect. The company is able to attract and draw the attention of many customers in the market due to attractive designs of the products, perfect finishing and accurate dimensions with excellent efficiency and longer service life.

- The company gives its customers the privilege to get their products customized and available in every possible size. The latest high tech technology and online services enable the customers to buy more products from *www.autofurnish.com.*

- E-business services provided by the auto furnish has given it a respectable place in automobile industry online. The website has a good visual appeal; many consumers are impressed with the appearance of the site. The website is designed with consistency to interface, with the hyperlinks and search functions available.

- The company provides quick transportation facilities with a wide network of distribution and timely delivery is a good indicator of maintaining their goodwill among customers.

- Other services for easy payment modes like cash on delivery, demand drafts, check, online banking, etc. are also available for the customers. Consumers are also satisfied with the return facility available in case of faulty delivery of assignments. The firm also ensures the security of online database of the customers, it only uses the customer's details for transaction and delivery purpose.

2) www.jazzmyride.com

- This website is operated by storejipvt.ltm. Jazzmyride is India's largest online seller for auto, car and bike accessories. It was established in the year 2011 and in year 2014 got registered as trademark as most innovative and best in car and bike accessories. [5]

- The company's main aim is "fun, life, excitement" and "add jazz to your life". It has been analyzed that this company has the largest collection of auto accessories online for Indian cars and bikes.

- The company offers more than 10000 products from more than 52 brands. World's best brands are associated with jazzmyride.com like Turtle Wax of U.S, ABRU OF U.S.A, Xenos. The company power more than top 15 e-commerce portals of India. To increase online sales, the website designed is quite interactive and can easily be accessed by the consumers. To fetch the customers' variety of price offers is available for shopping online.

- Sometimes it happens that after getting the product the customer is not satisfied with the deal may be due to faulty consignment or may be the product is not according to their wish then they want to return the product, the company also provides the option to return which is seen on the website.

- The company offers various services to its users, which include issuing of coupons and vouchers that attracted new customers and maintain the loyalty of the customers. Customers are given with a password and account that is solely responsible for all transactions and products from the site which gives the best deal offers with best price and the best products.

- The company says, " Be it our path-breaking discovery of unique auto aftermarket products or our unmatchable personalized customer service and of course the great prices that we offer, everything we do revolves around our obsession with providing the enthusiast riders with best-in-class products and services."[5]

3) www.autotrends.in

- Autotrends has been in business since 1983 serving the Central Jersey area. Joseph Forcella (the founder of Autotrends) has put together an incredible Team of Product Specialist and Technicians since its beginning in 1983 under the name of Autosound and Sun Unltd. Inc [6]

- Autotrends is Indian's one of the online store for car interior accessories, exterior styling, car perfumes, spare parts, etc. The company provides a wide range of products of different reputed brands to the customers. Autotrends is a subsidiary venture of Ace Bearing Corporation. The main goal of the company is to provide the finest customer experience in the Automotive Accessory and Mobile Electronics Industry. The company tries to give knowledge to their customers and inform that they maintain the highest level of satisfaction in terms of customer services.

- It gives its customers quick shipping facility in case of emergency and urgent need. The company charges Rs 75/- extra for cash on delivery mode. The company gives its customers the privilege of returning and exchanging or even cancellations of the orders. Autotrends secures the customer's information; no third party can use the details of any customer. It also has the option of storing the direction and address of the customer.

V. FACTORS DESCRIPTION AND DATA

After studying the above websites we find that there are many factors like website traffic, services, content, unique visitors of the day, daily page reviews, accessibility, back links, rank, marketing, customer relationship, security, technology, customization, etc. which are responsible for making a website popular [11] [13]. In this paper, we are studying only four factors which are accessibility, marketing, content and technology. The data collected and studied using site beam is as preceded. [7]

Parameters\websites		Autofurnish.com	Jazzmyride.com	Autotrends.in
(1)	Accessibility	7.2	7.8	6.4
(2)	Content	7.2	6.2	6.2
(3)	Marketing	6.7	6.5	6.5
(4)	Technology	5.6	7.2	7.1

Figure 2: Data Table

Description of above defined factors is as below:

1) Accessibility: It mainly refers to the convenience offered to the customer for successful completion of tasks on the website. It is one of the important factors in customer satisfaction for shopping online [10]. If the customer will not be satisfied or will face any problem in accessing the website content he/she will never try to get back for the same website. Thus, it is an important factor for maintaining the e-loyalty of the customer [9]. The website should be simple and user friendly, making the information and the products easily visible to the customers and accessed too. If the website has good accessibility then it will surely provide faster transactions and will reduce the customer's effort. If the website is more simple and convenient to use it will satisfy more and more customers and attract new customers to the website as well.

2) Content: The content of the information provided by the website plays an important role in the venture of e-commerce as it attracts customers to the website. It mainly refers to the information provided by the website that is desired by the customers. The content that is included in the website should be free from errors, easily readable and fresh [9]. It should include appropriate and correct contact details. The information should be simple, reliable and transparent to the customers.

3) Marketing: Marketing generally involves how popular the website is, how often the website is shared on social media sites that is how facebook, twitter, the arts contribute in bringing traffic to the site [7]. Higher the number of links, the higher is the rank of website which means that more customers or users are interacting with the sites. Marketing not only includes social marketing, mouth to mouth marketing, but it also requires the optimization of the sites. The table below gives the date of optimization of sites using SEO: [8]

Factors (→) / Websites (↓)	Backlinks	Keywords
Autofurnish.com	23	100
Jazzmyride.com	1520	105
Autotrends.in	20	100

Figure 3: SEO Details

4) Technology: Technology refers to the design and built in on the website. How creative and impressive the design is directly influencing the reputation of the website in the minds of people. The website should be designed in such a way that the user may not get confused while accessing it for shopping or transactions. Cascading Sheet Styles preferred style for the website. The technology includes all the inputs such as text, graphics, style, colors, background, logos, slogans or themes in the website. It is an important factor as it makes the site interesting for the people surfing on it and helps to bring more traffic to the site.

VI. METHODOLOGY AND ANALYSIS

Here we performed ANOVA to check whether the accessibility, content, marketing and technology influence the popularity of the website.

Step 1. To set the hypothesis.

H0 (null hypothesis): Accessibility, content, marketing and technology affect the popularity of the websites.
H1 (alternative hypothesis): These parameters do not affect the popularity of the website.

Step 2. Calculate individual mean and combined mean.

Parameters\websites	(A) Autofurnish.com	(B)Jazzmyride.com	(C)Autotrends.in
(1) Accessibility	7.2	7.8	6.4
(2) Content	7.2	6.2	6.2
(3) Marketing	6.7	6.5	6.5
(4) Technology	5.6	7.2	7.1
MEAN	X (A) =6. 675	X (B) =6. 925	X (C) =6. 55

Grand Mean, X (A, B, C) = 6.716

Step 3. We calculate the sum of squared differences between the groups and within the groups which come out be 0.2916 and 4.3985 respectively.

Step 4. Then we constructed the ANOVA table as follows:

Source of variation	Sum of squares (SS)	Degree of freedom	Mean squares (MS)	Calculated F value
Between the samples	SSC	C-1	MSC=SSC/C-1	F=MSC/MSE
Within the samples	SSE	C (R-1)	MSE=SSE/C (R-1)	
Total	SST	CR-1		

Where,

SSC = Sum of squares for columns.

SSE=Sum of squares in rows.

SST=Sum of squares for total.

C=Number of columns.

R=Number of rows.

MSC=Mean squares in column.

MSE=Mean squares in rows.

Now the ANOVA table for our calculated values is as follows:

Source of variation	Sum of squares (SS)	Degree of freedom	Mean squares (MS)	Calculated F value
Between the samples	0.2916	2	0.7038	F=1. 440
Within the samples	4.3985	9	0.4887	
Total	4.6901	11		

F (calculated) = 1.440

Step 5. We then find the critical value of F from F-test table at 5% significance level with (2, 9) as degrees of freedom.

F (critical) = 4.2565

We compared the critical and calculated F values.

VII. RESULT

As the value of F (critical) > F (calculated), we accept the null hypothesis that the above taken factors-accessibility, content, marketing and technology are essentially needed for the popularity of the websites. After performing the test it becomes valid that if the website is designed and built with latest technology, easily accessed and the content of the website is genuine with plenty of keywords and backlinks then it would be more popular among the users.

VIII. CONCLUSION

We have studied three automobile accessory websites and it's seen that every company is trying to further improve its services to increase the customers and satisfy their needs. In this paper we analyzed few factors affecting the popularity of website in detail for satisfying customers. After performing ANOVA, the null hypothesis was proved correct and valid. Thus, with the help of automobile accessory e-commerce venture, we conclude that the above taken factors-content, accessibility, marketing, technology are responsible for the popularity of the website among the customers which led to satisfaction and loyalty of the customer. In this competitive market no one wants to lose their customers, no one wants their customer to switch to other sites thus, a customer will retain on the website if he/she is fully satisfied with the access and choices on the website and for that a website has to be interactive with the customer, simple and intuitive and should have a positive reputation in the market. A customer gets attracted to the appearance or the design of the website, next he looks that how interactive the website is, how easily and comfortably he can shop and access it. Thus, these factors become essential to have more traffic and favoured by the customers.

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