

Analysis of Factors Influencing Website Conversion Rate

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Abstract—While designing the websites and determining the content for e-business, the conversion rate in terms of purchases done through the website is an important consideration. This paper attempts to analyze the various factors influencing the website conversion rate through a two stage approach with confirmatory factor analysis followed by multiple regression analysis. Data was collected through an online survey of Indian consumers. Attitude towards online shopping, price value, information quality of website, ease of navigation, and e-WoM were found to be significant factors influencing website conversion rate.

Keywords - Website conversion rate, e-WoM, Information quality, multiple regression

I. INTRODUCTION

The current era is known for its massive advancement in the field of information and communication technology (ICT). ICT has brought a new change in the lifestyle and economy of each country belonging to both developed and developing category. In this process, E-Business has become an effective alternative to traditional business. It involves buying and selling of goods and services over electronic networking, primarily using the internet facility. These transactions or exchange occur between both “Business to Customer” (B2C) and “Business to Business” (B2B).

Many businesses in the retail or offline sector went digital to improve their revenue stream by doing more sales online. Online businesses become successful if they are able to attract consumers/traffic to their websites which result in conversion of these website visits into purchase from the website [1].

Despite the importance of “conversion rate” (CR) in online sales, there has been little research or effort put into understanding the notion. Previous research has primarily focused on online consumer behaviour, with the assumption that purchase intent is the most important factor for the consumption of products [2].

The focus of this paper is to examine the effect of various factors influencing the conversion rate of e-commerce websites by analysing data from a cross section survey of online consumers in India. Using constructs from previous literature and integrating them into a comprehensive model, this study aims to investigate the effect of these factors on the purchase intention of consumers which translates

into the conversion rate for the website. The relative importance of each of the factors is analysed with the help of multiple regression analysis.

II. LITERATURE REVIEW & RESEARCH FRAMEWORK

Digitization created new possibilities of transactions and processes, which in turn generated new forms of value creation [3]. With the growing success of new digital businesses, marketing and organizational research has focused on the elements that contributed to this success. Given the essence of conversion rates in sales, research into them is essential. Despite the importance of “conversion rate” in online sales, there has been little research or effort put into understanding the notion.

The “CR” is considered the single most important factor when it comes to growth of the online business. It is defined as number of transactions received for given set of visitors visiting the website. Given the huge growth of online users, most of the online websites have historically seen low CR, and any increase in the conversion rate can greatly bring profits to the online vendor [4].

Zeithaml et al. (2002) [5] suggest that dimensions to measure e-service quality should include: information availability and content, ease of use or usability, privacy/security, graphic style, and fulfilment. Mohapatra and Sahu (2012) [6] found that perceived ease of use and trust are essential antecedents in determining online consumer behaviour through behavioural attitude and perceived behavioural control.

This research contributes to the research on conversion rate for e-commerce websites using the various factors identified from previous literature as the theoretical framework and thereby fills the gap in literature by combining these factors into an integrated model for measuring their effect on the purchase intentions which lead to conversion rate for e-commerce websites.

The research model for this study comprises of six independent variables namely – attitude, price value, information quality, ease of navigation, electronic Word of Mouth (e-WoM) and trust. These variables have been identified from a rigorous literature review and through that the major factors covered by most of the previous studies

have been integrated into the model. The effect of these independent variables has been assessed on the dependent variable of purchase intention which leads to website conversion rate.

Attitude is defined as the degree to which a person has a favourable or unfavourable evaluation of the behaviour under consideration [7]. In the context of online shopping, attitude refers to an individual's perception regarding the idea of online shopping on a website in either positive or in negative light. Several studies have found the attitude to be a significant predictor of behavioural intentions further leading to the actual behaviour [8].

Price value refers to consumers' perceived trade-off between the benefits of a technology and the monetary cost for using it [9]. The price value derived from use of a technology has a positive influence on the usage of that technology [10]. In the context of an e-commerce website, if the consumers feel that the value they are receiving for the money they spend on purchases from a website is high, they tend to purchase more from that website.

e-WoM has been found to be impactful in marketing online [11,12,13]. Consumers explore the reviews and information posted by previous customers, in order to be assured before making purchases from a website [14]. A favourable e-WoM is expected to have a positive effect on purchase intentions from the website and thus its conversion rate [15].

Information quality plays an important role in usage of websites [16]. When customers find that a website provides high quality information, they tend to trust the website more [17] as they can go through the information, they need to take decisions regarding purchasing the products. This leads to higher purchase intention and conversion rate. The usefulness and exactness of information provided on the website determines how important the consumer perceives it to be in making purchase decisions [18].

If the information presented on the website is found to be useful by the customer, he will develop trust for the website and subsequently online purchase intention from it [19]. On the other hand, if the customers perceive the information to be vague or incomplete, the customer tends to leave the website without purchase [20] leading to low conversion rates.

The ease of navigation is an important feature of the website which increases the conversion rate. If the consumers feel that the website has a convenient and user-friendly layout and appealing appearance, where it is easy to find the required information as per need, customers trust that website more and further have a higher intention to purchase from such websites [21].

Trust as a variable has three different aspects, namely – ability, integrity, and benevolence [22]. Trust in Ability is the belief that the trustee will be able to fulfil the needs of the trustor. Trust in Integrity refers to the belief that the trustee will honour the commitments made. Trust in Be-

nevolence refers to the belief that the trustee will take care of the trustor's benefit.

In the context of online shopping from a website, trust can be defined as the willingness to accept the possibility of occurrence of an unfavourable situation during a shopping transaction on the website with the expectation that the website will act according to what is in the best interest of the consumer [23]. Trust has thus been suggested to be a significant factor in influencing purchase intentions [24,25].

The purchase intention has been taken as the dependent variable for estimating the measure of website conversion rate. Ease of navigation has also been found to be significant in affecting website conversion rate by increasing the purchase intention of consumers [6].

III. METHODOLOGY

A. Data & Analysis Methods

Purposive sampling technique was used to gather data from an online survey using a structured questionnaire based on 5 point Likert Scale. All scale items were adapted from prior literature. A total of 223 responses were gathered.

The analysis is done using multiple regression with purchase intention as the dependent variable and six independent variables of attitude, price value, information quality, ease of navigation, e-WoM and trust. All the scale measures were checked for reliability and validity using confirmatory factor analysis before proceeding for regression analysis.

Cronbach's alpha is used to see if multiple-item Likert scale are reliable. Convergent validity and discriminant validity were the 2 subsets of construct validity that were examined. Convergent validity assesses the relationship of items of the same construct and discriminant validity shows significant differences between the characteristics of different constructs.

Convergent validity was established by measuring the Average Variance Extracted (AVE) [26] of the constructs and Discriminant Validity was established using Fornell-Larcker Criterion [27].

B. Results

The Cronbach's alpha and AVE value for the variables are given in Table 1.

Table I. Reliability and Convergent Validity

Construct	Cronbach's Alpha	AVE
Attitude	0.821	0.848
Price Value	0.945	0.834
Information Quality	0.963	0.846
e-WoM	0.925	0.817
Ease of Navigation	0.847	0.766
Trust	0.724	0.529
Purchase Intention	0.891	0.748

Internal consistencies of all variables are considered acceptable since the Cronbach's Alpha values exceeded .70, signifying acceptable reliability. The average variance extracted (AVE) of each construct was higher than the standard 0.5, which indicated good convergent validity for the scale [26].

The Fornell-Larcker criterion is one of the most popular techniques used to check the discriminant validity of measurements models. According to this criterion, the square root of the average variance extracted by a construct must be greater than the correlation between the construct and any other construct. According to the Fornell-Larcker criterion, the constructs' discriminant validity was established.

Table II. Discriminant Validity

	ATTD	PVAL	IQUAL	eWOM	EON	TRUST
Attitude	0.921					
Price Value	0.422	0.906				
Information Quality	0.506	0.731	0.92			
e-WoM	0.594	0.626	0.695	0.933		
Ease of Navigation	0.537	0.569	0.581	0.633	0.875	
Trust	0.448	0.765	0.63	0.547	0.543	0.727

Result of the multiple regression analysis shown in Table II gives the coefficients of the independent variables: Attitude, Price Value, Information Quality, e-WoM, Ease of Navigation, and Trust all of which have positive and significant standardized (beta) coefficients except that for trust which is positive but significant only at 10%. From the standardized coefficients it can be seen that the most important factor relatively is the information quality available on website followed by attitude and ease of navigation. R square and Adjusted R square were found to be greater than 0.6 which implies that more than 60% of variance in purchase intention is being explained by independent variables that were taken in the model exhibiting satisfactory explanatory power.

Table III. Multiple Regression Results

Independent Variable	Coefficient	T Statistics	P Values
Attitude	0.244**	3.768	0.000
Price Value	0.194*	2.785	0.034
Information Quality	0.317**	3.218	0.001
e-WoM	0.219**	3.151	0.002
Ease of Navigation	0.227*	2.349	0.023
Trust	0.087	1.018	0.076
R Square	0.612		
R Square Adjusted	0.601		

** & * denote significant at 1% and 5% respectively.

IV. CONCLUSION

Results of the analysis exhibit that there exists a significant positive relationship between purchase intention and all the independent variables in the model except trust. Therefore, the attitude of people towards online shopping, price value, information quality, e-WoM, and ease of navigation provided on the website can enhance the purchase intentions and in turn the website conversion rates. The findings of this study will directly benefit the website designers and the engineers who develop the codes for the websites with an expected outcome of providing high conversion rates through the navigation ease and information presentation on the website using search queries.

Findings are also useful for the online merchants who can get their websites designed and programmed in keeping with the most important factors that drive purchase intentions and thus conversion rates from the website leading to higher revenue generation through their websites.

As the attitude towards online shopping has been found to be significant in influencing the purchase intentions in line with previous studies like Pavlou (2012) [28], it is important that the e-commerce websites have a general information section on their websites which clarifies the doubts in the minds of the visitors regarding online shopping and explains the benefits thereof while trying to disseminate information regarding security features and facilities of return, cash on delivery option and the like for developing a positive attitude among the customers.

Price value has been found to have a significant influence on purchase intention in line with the results of Venkatesh et al. (2012).[9] This implies that discounts and comparison of prices with other websites should be highlighted on the website and it should be easy to search the information related to prices because information quality and ease of navigation were also found to be a significant factor in driving the consumers towards purchase from the website. Therefore, while designing the website and coding for the search algorithms, it is imperative to take into consideration the factors that influence the customer's

purchase intentions in order to achieve a high website conversion rate.

The e-WoM is also found to have a significant impact on customers' purchase intentions from the website. Thus, it is recommended to have a feedback mechanism built into the website to get first hand feedback from the customers and improve service quality in line with the feedback so that the customers give positive reviews about the website online which will have a favourable effect on potential buyers and drive up the conversion rate of the website.

Trust was found to have a less significant effect but nevertheless it was found to be positive. The reason for insignificant direct effect may be that trust is derived from information quality and e-WoM and hence the indirect effect may be stronger than the direct effect. This calls for further research on the topic incorporating both direct and indirect effects of various independent variables to provide greater insights into the area of study.

The significance of this study is to provide computer science professionals, IT companies and online merchants with information related to consumers' online purchase behaviour and traits that will help them improve their business by helping them understand the market and users better and will help them provide desired services to their respective clients. The results provide insights about consumers in India as well as other developing economies where online businesses are in an expansion phase and consumer incomes are growing.

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