Modelling Consumer Evaluation of Online Reviews on Conversion Rates:

The Case of Hotel Bookings

by Reema Bhagat [a] & Shailesh V Karadi [b]

Abstract

With the advent of Internet Era, customer generated content has become the most powerful and reliable source of information to evaluate purchase decisions. Customers are more likely to trust e-word-of-mouth communication when making choices about tourism products. The purpose of this research paper is to carry out an empirical study on “Modelling Consumer Evaluation of Online Reviews on Conversion Rates”. It examines the persuasive effect of online user reviews with special reference to hotel bookings. Findings are based on primary data collected through questionnaire survey method for a sample of 642 customers residing in Bangalore. Results indicate that online reviews and recommendations significantly affect how potential customers perceive about the hotel and thus have become a key contributor in conversion rates where conversion rate is the rate at which website visitors turn into actual purchasers. It also examines the feasibility of this powerful resource to be explored as a new marketing strategy in the digital era.

Keywords: Conversion Rates, Online Reviews, marketing strategy, customer generated content, Electronic word of mouth, consumer evaluation, e-commerce.

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1. Introduction

E-Commerce industry is growing rapidly and electronic retailing is emerging as revolutionary and rapidly developing channels for day-to-day shopping among consumers in India. Accessibility to information via internet has transformed how the travel is bought and sold. Travelers seek information to make transactions online. With growth of E-tailing as an opportunity of new revenue stream, online reviews are emerging as a new marketing strategy for the businesses. Consumer use online reviews as they trust peer-group feedback more than experts in that field. This emerging technique is frequently used by young consumer to make purchase decision. Forrester (2006a) reports that about 70 percent of adults currently use consumer product ratings and reviews. More than 80% of web shoppers said they use other consumers’ reviews when making purchasing decisions (Forrester, 2006b). eMarketer (2007c) reports that nearly six out of ten consumers prefer Web sites with peer-written reviews, and that Web sites with reviews experience greater conversion rates.

Post-purchase evaluation has always been critical in benchmarking the future purchase intentions. Online reviews are the result of the post-purchase evaluation that sets the acceptance, rejection or neutral behavior.

“On the basis of premise that decision-making is somewhat more formalized multistage process, one of the interpretative framework model is the model proposed by Woodside and Macdonald that gives an insight into how decisions, interactions between members of a travel party and activities occurring during trips relate to each other and lead to other activities”. The model assumes that the activation of initial travel choices spreads over time to other travel choices.
Framework Of Customer Choice Decisions Of Tourism Service

Source: Woodside and MacDonald’s general systems framework of customer choice decisions of tourism service. https://issuu.com/dr.samehreafat/docs/1_decision_making_through_online_re

“Word-of-mouth has been recognized as one of the most influential resources of information transmission since the beginning of society, especially for experience goods”. Every customer would like to reduce their risk factor through indirect experience.

“However, conventional interpersonal word-of-mouth communication is only effective within limited social contact boundaries, and the influence diminishes quickly over time and distance”. However the advancement in information technology has changed the way information is transmitted and has surpassed the traditional challenges and limitations of word-of-mouth. Consumers have easy accessibility to free information, can exchange opinions on an unprecedented scale in real time.

“Aano bhadraa krathavo yanthu vishwathaha" - Let the noble thoughts come to all from all directions. Page No.3

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Does review really matter?

Of course they do, both in travel planning by the potential customer and the businesses in marketing arenas. Many hotels have especially designated staff to keep up with online chatter and to analyze and reply to the reviews. “Recent studies found that reviews have a significant impact on hotel conversion rates and how much they are willing to pay for a room. Given equal pricing, guests are 3.9 times more likely to choose the hotel with the higher reviews. In addition, even if the hotel with great reviews has higher pricing, travellers are still willing to pay more for booking in that hotel”12.

Online reviews are crucial to handle as the hotel guests and potential travelers can read and write reviews anytime and businesses can’t have control what gets posted and become visible to everyone. Hence one needs to be careful of what people are saying about your hotel, so that one can respond to negative reviews and minimize their impact on conversion rates.

PhoCusWright, a global travel market research organization, found:

- 87% of survey participants agreed that an appropriate management response to a bad review improved their impression of the hotel.
- 62% agreed that seeing the hotel's response to reviews generally influenced them positively to booking at that hotel.
- Roughly 50% of global travelers do not book a room until they’ve read peer reviews online.

Impact of Reviews on purchase decision

![Pie chart showing the distribution of review ratings.](image)

Source: Author’s Analysis
Online reviews have a significant direct impact on conversion rates as consumers trust peer groups more than brands so more reviews brings more trust for that product. Nearly 47% consumers highly accepted that reviews influence their purchase decision whereas 50% said that it affects their decision moderately.

Conversion rates = the rate at which website visitors turn into purchasers.

2. Review of Literature:

Gretzel and Yoo, “Use and Impact of Online Travel Reviews” (2008), the authors clearly stated that Consumer-generated content (CGC) is growing in importance. Especially online travel reviews written by consumers are ever more available and used to inform travel-related decisions. A Web-based survey of users of the most prominent travel review site, TripAdvisor, was conducted to investigate how other travellers’ reviews inform the trip planning process. Since current CGC statistics show generational and gender differences, the study also aimed at examining whether those carry over into the realm of travel review use. The results show that reviews are used mostly to inform accommodation decisions and are currently not used much for en route travel planning.

Singh and Torres, “Hotel Online Reviews and Their Impact on Booking Transaction Value” (2015), have further emphasized that online reviews have captured the attention of scholars and industry professionals alike. Often times the focus of attention is purchase decision-making and the building a positive online image. Research findings have contributed to the field of knowledge by discovering and quantifying the impact of online reviews on hotel revenues and to explore the impact that a hotel’s firm rating, relative ranking, and the overall number of reviews have on the average value of each booking transaction.

Duan, Gu and Whinston, “Do online review matter?” (2008), The authors stated that with the help of the internet, everyone can share their thoughts with millions of internet users and influence others decisions through online reviews. The advances of information technology have profoundly changed the way information is transmitted, and have transcended the traditional limitations of word-of-mouth. Consumers can now easily and freely access information and exchange opinions on companies, products and services on an unprecedented scale in real time.

Sparks and Browning, “The impact of online reviews on hotel booking intentions and perception of trust” (2010), Authors have corroborated that consumers seem to be more
influenced by early negative information, especially when the overall set of reviews is negative. However, positively framed information together with numerical rating details increases both booking intentions and consumer trust. The results suggest that consumers tend to rely on easy-to-process information, when evaluating a hotel based upon reviews.

Pnmg.com, “Online reviews effect conversion rates”(2013), Consumers are 50% more likely to purchase goods or services from a company that has several reviews online. That’s a big number, and data continues to confirm this. For the last few years, research has consistently shown that consumer trust in brands is declining, while trust in peers is growing significantly. The conversion rate is the proportion of visitors to a website who take action to go beyond a casual content view or website visit, as a result of subtle or direct requests from marketers, advertisers, and content creators.

In examining the existing literature on this nascent research area, three main areas were identified. First, some academicians have focused on the impact of online reviews on the consumer decision making process (Sparks & Browning, 2011; Williams et.al. 2010; Vermeulen&Seegers, 2009; Pavlou&Damoka, 2006). Second, others have been concerned about the impact that consumer generated feedback has on a hotel’s reputation (Schmallegger& Carson, 2007; O’Connor, 2010. Finally, a third stream of research emphasizes the operational uses of online reviews (Torres, et al., 2013).

Despite of monitoring online feedback in hotels and the amount of time and efforts scholars have devoted in conduct of the research, little is known about the impact of reviews on conversion rates. Consequently, the present research objective is to contribute to the knowledge pool by quantifying the consumer evaluation of online reviews on conversion rates.

3. The following research objectives and hypotheses are proposed:

It is an attempt to investigate, evaluate and highlight the factors leading to the impact of online reviews on purchases and the role it can play in context of emerging digital Indian consumers and economy.

In another words, the objectives are stated as follows:

1) Examine the impact of online user reviews on conversion rates with special reference to hotel bookings.

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2) Understanding the factors affecting the consumer trust in online reviews for purchase decisions.

3) Examine the feasibility of this tool to be used as a new marketing strategy by businesses.

4) Does a review influence the prices to be charged & paid.

Based on extensive literature review and objectives, the following research hypothesis are developed and tested in this work.

H01: There is no significant impact of word of mouth on conversion rate towards hotel booking.

H02: There is no significant impact of frequency of posting on conversion rate towards hotel booking.

H03: There is no significant impact of online reviews on reducing risk.

H04: There is no significant impact of online reviews on price modulation.

H05: There is no significant impact of online reviews on credibility factor.

H06: Online reviews cannot be used as a potential marketing strategy.

H07: There is no significant impact of incentives on number of reviews towards hotel.

4. Research Methodology:

To accomplish the objectives an explorative research method is proposed to know various relevant evaluative factors of online reviews that contribute to the overall impact on conversion rates.

Primary data collection- The consumers who are 20 and above, who may or may not have booked the hotels online were the sample unit. The sample size is 642 and convenience sampling technique was used. Data collection was done using the questionnaire administered through online survey and also by intercepting young people (professionals, Teachers and post graduate students) at different places in Bangalore. The time of study was May-June 2016.

The use of the questionnaire survey method provided an indicative tool to gauge how respondents perceive the online reviews and how their purchase decision is influenced, the factors that encourages them to book online as well as the main information that they look for in
the reviews. The responses from the questionnaire survey would be essential inputs to identify the determinants for consumer purchase decision and future prospect of its significance.

**Secondary data collection**- was collected from, but not limited to journals, articles, websites and books related to E-commerce, online reviews, E-tailing, and the successful E-tailing websites.

The proposed antecedents for the stated phenomenon are shown in the conceptual model.

Source: Author’s conceptual model

5. Analysis & Discussion

Table 5.1 Summary of Variables

<table>
<thead>
<tr>
<th>S.No</th>
<th>Factors</th>
<th>Numbers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Male</td>
<td>352</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>290</td>
<td>45</td>
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<td>Educational Level PG/UG</td>
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<td>3</td>
<td>Online Users</td>
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<td>4</td>
<td>Impact of Reviews on purchase decision</td>
<td>623</td>
<td>97</td>
</tr>
<tr>
<td>5</td>
<td>Trust on Reviews</td>
<td>610</td>
<td>95</td>
</tr>
<tr>
<td>6</td>
<td>Price Sensitivity</td>
<td>488</td>
<td>76</td>
</tr>
<tr>
<td>7</td>
<td>Frequency of posting</td>
<td>430</td>
<td>67</td>
</tr>
</tbody>
</table>

Source: Author’s Analysis

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Table 5.2. Descriptive Statistics

Source: Author’s Analysis

Analysis: The summary of consumer ratings from survey on significant dimensions of online reviews on conversion rate is as follows, of electronic word-of-mouth communication (Q9, M= 1.08), means majority of respondents selected its impact to be very high on their purchase decision. Impact of online reviews in reducing risk (Q10,M=1.62), imply that majority of respondents believe that it partially reduces the risk factor, credibility factor (Q11, M=3.81), means consumers believe that online reviews increase the credibility factor by 60%-80%. Frequency of posting (Q12,M= 3.98), means majority of respondents agree that more the number of reviews, more is the conversion rate. Potential marketing strategy (Q14,M= 2.28), means consumers post the reviews in both the circumstances of being satisfied or dissatisfied both, hence it can be used as a medium to create awareness. Incentivized posting (Q15,M=1.13), means people are not much affected by incentives towards posting of reviews. Price modulation (Q16,M=1.23), means consumers strongly agree that hotels vary their prices depending on the reviews.

Tools used for hypotheses testing:

H01: There is no significant impact of word of mouth on conversion rate towards hotel booking.

Table 5.3

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p-value</th>
<th>F crit</th>
</tr>
</thead>
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<td>9.38496</td>
<td>11</td>
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<td>2.05E-2</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>73.50885</td>
<td>225</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

"Aano bhadraa krathavo yanthu vishwathaha" - *Let the noble thoughts come to all from all directions*. Page No.9

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F is greater than F-critical (13.86>3.88), so we reject the Null Hypotheses and accept the Alternate that there is significant impact of word-of-mouth communication on conversion rates.

**H02**: There is no significant impact of frequency of posting on conversion rate towards hotel booking.

**Table 5.4**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
</tr>
</thead>
<tbody>
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<td>Between Groups</td>
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<td>13.38496</td>
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<td>4.183307358</td>
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<td>Within Groups</td>
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<td>224</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>73.50885</td>
<td>225</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F is greater than F-critical (11.86>4.18), so we reject the Null Hypotheses and accept the Alternate that there is significant impact of frequency of posting on conversion rate towards hotel booking.

**H03**: There is no significant impact of online reviews on reducing risk.

**Table 5.5**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>13.38496</td>
<td>1</td>
<td>10.18196</td>
<td>16.86753</td>
<td>11</td>
<td>1.183307358</td>
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<tr>
<td>Within Groups</td>
<td>60.12389</td>
<td>224</td>
<td>0.26841</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>73.50885</td>
<td>225</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

F is greater than F-critical (10.18>1.18), so we reject the Null Hypotheses and accept the Alternate that there is significant impact of online reviews on reducing risk.
**H04**: There is no significant impact of online reviews on price modulation.

**Table 5.6**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
<th>F crit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1.597345</td>
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<td>1.597345</td>
<td>4.707965</td>
<td>0.031075</td>
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</tr>
<tr>
<td>Within Groups</td>
<td>76</td>
<td>224</td>
<td>0.339286</td>
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<tr>
<td>Total</td>
<td>77.59735</td>
<td>225</td>
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</tr>
</tbody>
</table>

F is greater than F-critical (4.70>3.88), so we reject the Null Hypotheses and accept the Alternate that there is significant impact of online reviews on price modulation.

**H05**: There is no significant impact of online reviews on credibility factor.

**Table 5.7**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
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<td>344.4292</td>
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<tr>
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</tr>
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<td>225</td>
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<td></td>
</tr>
</tbody>
</table>

F is greater than F-critical (12.17>3.88), so we reject the Null Hypotheses and accept the Alternate that there is significant impact of online reviews on credibility factor.

**H06**: Online reviews cannot be used as a potential marketing strategy.

**Table 5.8**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
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<td>1.383481</td>
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<td>0.040626</td>
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<tr>
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<td>338</td>
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</tr>
</tbody>
</table>
F is greater than F-critical (3.23>3.02), so we reject the Null Hypothesis and accept the Alternate that online reviews can be used as a potential marketing strategy.

**H07**: There is no significant impact of incentives on number of reviews towards hotel booking.

**Table 5.9**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>SS</th>
<th>Df</th>
<th>MS</th>
<th>F</th>
<th>P-value</th>
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<tr>
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</table>

F is smaller than F-critical (2.61<3.03), so we accept the Null Hypothesis that there is no significant impact of incentives on number of reviews towards hotel booking and reject the Alternate.

6. **Summary of Findings**

A total of six hundred and ninety questionnaires were received from the prospective respondents. Out of which, forty eight were not considered due to insignificant responses. This is an approximately ninety three percent found usable and rest were discarded due to incomplete data. The frequencies and percentage of the respondent-customers divided according to gender, age, income, profession, if they book hotels online, for what purpose, do they compare reviews online before booking, websites they prefer to book hotels online etc.

Specifically, the final sample consisted of 352 male and 290 female with an average age of 30 years (range 25-35). Majority of the respondents are well educated so they generally use online mode to search the options in hotel booking. Respondents evaluate their decision on the basis of reviews and pricing more with respect to facilities, convenience and availability, they are sometimes ready to pay even higher for the hotel having more number of positive reviews. Table 5.8. clearly reject the alternate hypothesis that if consumers are given incentives for writing the reviews, they will write more number of reviews.
Comparing the means of various factors considering their relevance for conversion rates clearly indicates that more number of consumers consider booking a hotel where frequency of posting is higher than other. The second most relevant factor considered by consumers is that online reviews increases the credibility rating of the hotel with respect to another, hence their preference of selecting and booking would be high where they see more number of positive reviews. Consequently, impact of online reviews is significantly high on conversion rates.

From the data analysis of the responses, it is reinforced and concluded that online reviews strongly impact the conversion rates in the hotel businesses.

7. Concluding Thought

This research paper emphasizes the online reviews and its impact on conversion rates. It is emerging as a potential marketing strategy to create awareness and credibility to increase the sales. This business model is cost effective, easily accessible and profitable in many functional areas. Consumers and hotel businesses both desire safe, simple and comprehensive travel experience that will truly realize the power of the Internet.

This findings further establishes the positive influence of consumer generated content on conversion rates due to various factors like increasing broadband internet and 4G penetration, favourable demographics, increasing urbanization, nuclear families, seeking peer reviewed information amid consumers, growing trust and credibility on shared reviews, preference for evaluation before making decisions and higher aspirations are other factors which will drive this model to generate more revenues in India. Busy E-commerce travel websites in India are currently dominated by Trip advisor and Makemytrip. Investors believe that online websites have successfully created a parallel platform of booking channel apart from the traditional mode.

Exponential growth has been observed in internet driven businesses. As a developing economy and early-stage e-commerce market, India faces several development hurdles like secure payment processing remains a challenge, India has a very low percentage of consumers with a credit or debit card compared with other countries such as the U.S. and Europe. E-tailing serves as an integrator of technology, complement the growth of traditional mode and creates a relatively efficient marketplace for vendors and consumers both. Thus, findings imply that online booking has a huge potential to grow in future as consumers significantly consider reviews to reduce the risk and hence there is significant impact of online reviews on conversion rates.

“Aano bhadraa krathavo yanthu vishwathaha”- “Let the noble thoughts come to all from all directions”. Page No.13
8. Future Research

The study is envisioned to become contributory to anyone who wants to get his or her hotel listing online. Particularly, it aims to provide key reasons why consumers evaluate reviews before purchase of their travel arrangements. This online mode could be strategically used to broaden customer base and increase revenue by the new and existing hotel businesses. The area of study related to the impact of reviews on conversion rates is very widespread and it is impractical to research on the whole spectrum of travel businesses from both sides of consumers and businesses. This study with modified sampling units has to be replicated in further larger samples before a parallel can be drawn for wider acceptability. The basic question needs to be deeply probed are- will high knowledge consumer base their evaluations on wide range of travel products. Next question can be from the businesses perspective if they encourage their guests to write transparent reviews. This medium can be further evaluated as a marketing tool from the businesses perspective and is open for further research.

9. References


10) Gretzel, U., & Yoo, K.H., Use and Impact of Online Travel Reviews, Laboratory for Intelligent Systems in Tourism Department of Recreation, Park, and Tourism Sciences Texas A&M University, USA.


