Impact of Online Product Reviews on Purchasing Decisions

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Abstract: Online consumer reviews, product and services recommendations and peer opinions play an increasingly growing role in the customer’s decision making process. The various online product review and recommendation platforms differ in their objectives, function and characteristics. The literature has so far paid little attention on function characteristics of these platforms as an element of customer adoption and preference. Given the importance of this form of customer generated content on business sales and profitability the monitoring and often responding to customer reviews by business organizations has become a major managerial challenge and an important reputation management issue. In order to respond efficiently to customer reviews companies need to identify consumer reviews platforms, understand their characteristics and continuously assess their impact on consumer purchasing decisions. This study identifies four main types of online review platforms: retail websites, independent reviewing platforms, video-sharing platforms and personal blogs. These platforms present product reviews in different formats with accent on various review function characteristics. An online survey analyzed consumer opinions about the various platforms and review mechanisms and the impact of those on consumer buying behavior. The results underline the importance of platform credibility and usability on consumer trust and reliance in reviews as input in the decision-making process.

1 INTRODUCTION

A new generation of online tools, applications and approaches, such as blogs, social networking sites, online communities and customer review sites, commonly referred to as Web 2.0 (Constantinides and Fountain, 2008) have transformed the internet from a “broadcasting” medium to an interactive” one allowing the wide technology-mediated social participation (Chua and Banerjee, 2015). The internet has become a platform facilitating the “social” customer electronic word of mouth (eWOM) and a major source of customer information and empowerment (Constantinides and Fountain, 2008). A fundamental element of the social eWOM is the Customer Generated Content or CGC (Huang and Benyoucef, 2012). Through CGC individuals share opinions and experiences on companies, brands, products or services and create large-scale word of mouth networks. This way consumers can make their personal opinions easily accessible to global communities or individual peers who use the information as an extra factor supporting their purchasing decisions (Dellarocas, 2003). Free and easy access to such information has weakened the power of marketing communication; Information provided by online peers influences customer perceptions, preferences and decisions much more than information provided by companies (Constantinides and Fountain, 2008). The interactive Web has made possible to easily compare market offerings or to search for purchasing related advice given by other consumers in the form of a product review (Floh et al., 2013). Online consumer reviews are subjective opinions and summarize experiences, attitudes, and opinions, expressed by consumers (Floh et al., 2013; Lu et al., 2014). Personal opinions and experiences for products and services in the form of online reviews have become one of the most valuable sources of information assisting users when making purchasing decisions (Chua and Banerjee, 2015; Dellarocas, 2003; Henning-Thurau and Walsh, 2003; Huang and Benyoucef, 2013).

The predominant audience on review platforms is comprised of consumers seeking product information about a prospective purchase and those writing the reviews. The acceptance of these platforms is substantial, and their influence on purchasing
decisions and communication behavior is increasing (Henning-Thurau and Walsh, 2003; Lu et al., 2014).

Consumers are substituting internet-based search for traditional ways of information search, whereby interactions with strangers often takes place (Klein and Ford, 2003). The eWOM networks reach larger audiences and building on internet’s low costs and multiple communication capabilities (Dellarocas, 2003). Control of marketers and companies on communication channels and messages migrates to consumers who become critical, more assertive and powerful, taking over control of the information they obtain about products, brands and companies. Consumers become co-creators of value as direct stakeholders (Burtona and Khammash, 2010). The information in consumer reviews is widely considered as more reliable than marketer-sponsored information (Bickart and Schindler, 2001). The changing nature of customer influence presents businesses with risks as well as opportunities (Henning-Thurau and Walsh, 2003). In order to mitigate threats on revenue or reputation, companies are forced to develop monitoring capabilities and quick responding in diverse review platforms (Becker and Nobre, 2014; Chua and Banerjee, 2015). To do this effectively, companies need to understand the dynamics of online consumer reviews and the impact of consumer review platforms where customer reviews and comments are posted.

These platforms can range from business retail websites to online communities, independent review sites and personal blogs with new platforms constantly emerging (Fan and Gordon, 2014; Lee and Youn, 2009). These platforms differ in several ways but have similar basic functions (Henning-Thurau and Walsh, 2003; Dellarocas, 2003) giving consumer a wide choice.

Previous studies mostly focus on effects of online reviews like promises and challenges (Dellarocas, 2003) or on explanations for reading and adopting review platform content (Burtona and Khammash, 2010; Henning-Thurau and Walsh, 2003). Other studies have focused on mechanisms of average online ratings and the characteristics (number, depth or length) of online reviews (Chua and Banerjee, 2015; Zhu and Zhang, 2010), on contextual factors like the content or variance of reviews and their impact on sales or purchasing behavior (Floh et al., 2013). Trust expressed in popularity of a blogger (Huang, 2015) or review helpfulness (Chua and Banerjee, 2015) have been also analyzed. Research also suggest the testing for moderating variables (Floh et al., 2013). Such moderating variables include brand strength and category maturity. Few studies have taken place in Europe (Floh et al., 2013; Burtona and Khammash, 2010). This study focuses on Western Europe and in particular The Netherlands and Germany with main items the identification of moderating variables of online reviewing platforms and their reviewing function characteristics are central.

A consumer survey is conducted in order to analyze the influence of review function characteristics on consumer purchasing decisions. The research problem in this study is “What characteristics of review functions in online review platforms have the most influence on consumer purchasing decisions”. The following questions guide the operationalization process: (1) What are the motives of consumers to search online reviews? (2) How do various online review platforms differ? (3) Which are the various characteristics of review functions influencing consumer purchasing decisions? (4) Which review function characteristics can be found on what platforms? (5) What online consumer review platforms consumers choose to use as a basis for their purchasing decision? (6) What review functions do consumers classify as most important with regard to their purchasing decision?

1.1 Methodology

The empirical data necessary for the study was collected by means of an online survey. The structure was based on five point Likert scale type questions, on frequency and closed questions including polar questions as well multiple response questions; the answers of the questionnaire were anonymous. The survey population was 422 respondents, with 50% of fully filled-in lists so the effective sample size was 211 responses. Convenience sampling was applied the survey was administered through email and online.

2 LITERATURE REVIEW

Former research has empirically validated the impact of eWOM on consumer purchasing decisions (Burtona and Khammash, 2010; Dellarocas, 2003; Floh et al., 2013; Zhu and Zhang, 2010; Henning-Thurau and Walsh, 2003).

2.1 Consumer Motives for Reading Online Reviews

Literature indicates four different motives for
consumers to seek online product reviews: Information seeking, Risk reduction, Quality seeking and Social belonging (Bickart and Schindler, 2001; Burtona and Khammash, 2010; Henning-Thurau and Walsh, 2003; Klein and Ford, 2003; Schmidt and Spreng, 1996; Zhu and Zhang, 2010).

Information search, which can be defined as the phase of the decision-making process wherein consumers actively collect and integrate information from numerous sources (Schmidt and Spreng, 1996), can be identified as one of the motives. Online consumer reviews are considered as a low cost approach for making more informed purchasing decisions (Klein and Ford, 2003). Further, consumers show uncertainty about their purchasing decision. Next to perceived brand image or purchase experiences, customers can seek information from other consumers in order to reduce the risk of their purchase (Burtona and Khammash, 2010). Consumers perceive the source of consumer opinion reviews as trustworthy and less risky than marketer information.

Zhu and Zhang (2010) claim that consumers are seeking to discover product quality by consulting customer reviews. Consumer review platforms can serve to maximize rationally the ratio of the perceived products' benefits and quality to its costs (Goldsmith and Horowitz, 2006).

Finally, belonging to a virtual community and bonding with this community is of interest and importance to certain consumers as enabler of social belonging (Henning-Thurau and Walsh, 2003; Bickart and Schindler, 2001).

2.2 Online Review Platform Types

2.2.1 Online Retail Websites

E-Shops and other forms of online retail sites are mainly focused on sales of goods and services but often offer customers the possibility to write comments or product reviews helping other customers to decide about buying the product (Fan and Gordon, 2014). Amazon.com is the one of the first online businesses that initiated this practice but this approach is adopted by more online retailers. The content of reviews on retail websites can be in the form of aggregated, numerical star ratings and open-ended customer-authored comments about the product in the format of a written text. A product review function includes a scoring system which allows to vote on review helpfulness and places the most voted conspicuously. Profile of review authors can be visible, showing statistics like number of reviews written or an average score given on reviews (Dellarocas, 2010).

2.2.2 Independent Consumer Review Platforms

Independent consumer review platforms display customer reviews without having a direct or indirect interest in businesses or products (Burtona and Khammash, 2010): the intention is often to facilitate product comparisons. Epinions.com, yelp.com, ciao.co.uk or tripadvisor.com are examples of independent review platforms. The reviews can take the form of aggregated, numerical star ratings and open-ended customer-authored comments about the product in the format of a written text (Chua and Banerjee, 2015). Some platforms offer consumers an additional function to upload photos for supporting the consumer’s review and sorting options are often offered. Profiles of review authors are often included and reviews in independent sites have often greater depth of writer information (Burtona and Khammash, 2010).

2.2.3 Personal Blogs

Reviews by bloggers are quite popular among online (and offline) shoppers. The intention of private blogs is therefore to share purchasing experiences about certain product categories and give recommendations to others. Often review blogs are specialized in a product or category. Since bloggers recommendation posts are seen as a useful marketing communication tool and a vital reference in consumer purchase decision making (Lu et al., 2014), many bloggers have become opinion leaders. The profile of the blogger is mostly very detailed and communication exchanges with the blogger are often possible.

2.2.4 Video-sharing Platforms

Video-sharing platforms like YouTube or Vimeo enable the posting of product reviews in videos uploaded by consumers (Fan and Gordon, 2014). Blythe and Cairns (2009) found that many potential buyers of iPhone search in YouTube specifically for reviews of this product. The advantage of YouTube is that users who find a product review on a video can see the popularity of the review in number of downloads, read comments of others about the review and of course actually see the product in use. Next to the chosen video, other videos with a similar content are displayed also (Blythe and Cairns, 2009; Chang and Lewis, 2013). Profile of the video review
authors are visible and show links to other videos posted by the user, statistical information like number of subscribers and sometimes a personal description (Chang and Lewis, 2013).

In general, literature about diverse online consumer platforms reveals that online reviews in general affect consumer product choice. However, online reviews influence consumer purchasing decisions only when consumers’ reliance on online reviews is sufficiently high when they make purchase decisions (Zhu and Zhang, 2010).

### 2.3 Company Analytics and Platform Attraction

Review analytics refer to collecting, monitoring, analyzing and summarizing information to extract intelligence. Monitoring reviews allows businesses to learn about customer opinions and satisfaction levels and identify problems or issues with their products on time i.e. before they become widely known. Data collected through monitoring of review platforms can be used for product-design-development, learning, tracking consumer concerns and the development of influencers themselves (Becker and Nobre, 2014; Fan and D.Gordon, 2014; Henning-Thurau and Walsh, 2003). For the application of analytics on online reviews, it is of importance to know what review format characteristics on review platforms have the most influence on consumer purchasing decisions (Henning-Thurau and Walsh, 2003).

### 3 OPERATIONALIZATION AND DATA ANALYSIS

The format characteristics of reviews and its presence on various platforms can be divided into two categories. The first category (Usability) demonstrates the simplicity of a system, its ease of use, navigation and clarity of overview, the second (Credibility) illustrates the social and reliability factors. The categorization is done on the basis of the different nature of the format characteristics of review platforms and its different influences. Table 1 displays the format characteristics of reviews, firstly categorized as usability characteristics, secondly those classified as credibility characteristics. Several format characteristics can be categorized in both categories since they affect the usability of the reviews on the platform as well as the credibility. Consequently, the two categories usability and credibility for format characteristics of reviews will be taken for measurement.

<table>
<thead>
<tr>
<th>Usability characteristics</th>
<th>Retail platforms</th>
<th>Independent platforms</th>
<th>Blogs</th>
<th>Video platforms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Display of review</strong></td>
<td>Qualitative</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td></td>
<td>Quantitative</td>
<td>X</td>
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<tr>
<td><strong>Summary statistics</strong></td>
<td>Total number of reviews</td>
<td>X</td>
<td>X</td>
<td></td>
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<td></td>
<td>Average rating</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td><strong>Sorting options</strong></td>
<td>By date</td>
<td>X</td>
<td></td>
<td>X</td>
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<tr>
<td></td>
<td>Review helpfulness</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Overall aggregated rating</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td><strong>Media support</strong></td>
<td>Picture</td>
<td>(X)</td>
<td></td>
<td>X</td>
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<tr>
<td></td>
<td>Video</td>
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<tr>
<td></td>
<td>Average rating</td>
<td>X</td>
<td></td>
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<tr>
<td><strong>Self-disclosure</strong></td>
<td>Picture</td>
<td>(X)</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Media support</td>
<td>Picture</td>
<td>(X)</td>
<td>X</td>
</tr>
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Table 1: Usability and credibility characteristics of review sites.
Consumer reliance on reviews and platforms is increased by a user friendly design and trust building measures (Dellarocas, 2010; Huang and Benyoucef, 2012).

The survey researches the impact of the format characteristics and measures the influence of credibility and usability factors on a consumer purchasing decisions.

4 DATA ANALYSIS

4.1 Data Collection

An online survey (convenience sampling) in the format of a questionnaire was conducted in order to survey consumer purchasing behavior in relation to reviews. The questionnaire was divided in three parts; the first part of the survey covers demographics, the second part asks about general social media and review behavior while the third part surveys consumers about their perceptions of reviews and review format characteristics. The survey was filled in by 422 responders (211 fully completed).

4.1.1 Population Statistics

The average age of respondents was 24.3 years. The range lies in between 16 and 63. In category, the age group of students from 18 to 25 years amount to 82% (N=175). 56.4% of the sample size is female and 43.6% male which gives a variance of 0.25. The main nationality of the sample was German with 62% (N=131) with Dutch respondents (14%) the second largest group (N=30). Students make up the biggest occupation group of the respondents with 77% (N=163) and employees the second biggest with a percentage of 17% (N=35).

4.2 Survey Results

4.2.1 Social Media Behavior and Use of Reviews

For obtaining an overall overview of social media use, the questionnaire asked what Social media platforms the participant uses. 98 % of all respondents use Facebook, followed by YouTube (70 %) and Instagram (46 %). The next question was whether participants ever checked online reviews prior a product purchase; 98 % (N=206) were positive in this indicating the popularity of product reviews among this age category. Most participants check reviews quite often (38 %, N=80), sometimes (29 %, N=62) or very often (22 %, N=47). The final question of this part concerns the various online review platforms. It was found that retail platforms are the most used, as 82 % of the sample population make use of those. Independent platforms are the second most indicated review platforms since 55 % make use of those, followed by video platforms (37 %) and blogs (31 %).

4.2.2 Review Function Characteristics

The second part of the questionnaire presents three pictures of reviews for the iPhone. The participant was not supposed to pay attention to the content of the review but to the overall impression of the review. The first picture shows a text review and an aggregated rating on a retail or independent platform, the second a screenshot of a video rating and the third a blog review composed of a text, photo and profile of the author. This question explores what review format is more attractive for the users. The blog review was chosen by 55% of the respondents. The text reviews on a retail and independent platform and the video review were chosen by 23% and 25 % respectively. The following questions asks about the review the participant sees as most credible and about the most user-friendly review platform type. 46 % see the blog as most credible, followed by the retail or independent website with 31 % and the video by 22 %.

As to user-friendliness the video reviews are seen as most user friendly (54 %) and the blog the least user friendly (21 %); also 86 % of all respondents prefer qualitative and 45 % quantitative reviews.

Qualitative reviews are perceived as more credible (78 %) and user friendly (55 %).

Further findings: 46 % of the sample population makes use of sorting options and 54 % not. With regard to qualitative reviews 39 % of the participants considers them as credible, 74 % as user-friendly. The last two questions concerns self-disclosure of the review author: 73 % of the sample population, rate a visible and detailed profile of the author as credible. Member activity statistics like the number of reviews created by the author or the duration of membership are preferred by 71 %. 50 % (also) consider personal characteristics like the author’s interests as important.

4.3 Survey Analysis

Summary of findings per question asked
4.3.1 Choice of Platform (Q1.7 and Q1.8)
The review platform choice does not depend on the frequency of checking reviews prior a purchase.

4.3.2 Display of Reviews (Q1.8 and Q2.1)
Blogs have just recently grown in popularity as a reviewing platform and hence are rather new for consumers in that respect. Not all survey participants might have been aware when answering the first question that a personal blog can be used as a review platform. The display characteristics of the review blog convince consumers over the credibility of this channel.

4.3.3 Display of Reviews (Q2.4 and Q1.8)
To further examine the displaying of reviews, Q2.4 will be analyzed. The results have shown that more respondents use qualitative reviews as a basis for their purchasing decision. Though, multiple answers were possible. 71 out of 211 respondents chose both answers which makes 34 % of the respondents. Consequently, around every third person prefers a review platform where both kinds of reviews are displayed. This confirms with the multiple choices of platforms in Q1.8.

4.3.4 Credibility Characteristics Vs Usability Characteristics (Q2.1, Q2.2, Q2.3 and Q2.4)
Both characteristics play an influence when deciding for reviews on a review platform; credibility seems to be more important when a consumer comes to choose a review as a basis for a purchasing decision. The analysis shows that people who base their purchasing decision on qualitative reviews more likely do so due to credibility. Consumers who base their purchase on quantitative reviews, distinguish usability as the most important characteristic.

4.3.5 Review Volume Statistics (Q2.11)
Statistics about the review volume influence a consumer’s reliance on reviews since the visibility of the total number of reviews is valued as more credible. Further, due to the consumer’s high interest in the statistics and its high influence, user-friendliness for statistics is important.

4.3.6 Media Impact on Review Platform Choice (Q2.1 and Q2.7)
Media support can be categorized as credible and user-friendly and seems to have an impact on review choice and hence the consumer’s purchasing decision.

4.3.7 Self-disclosure (Q1.8, Q2.1 and Q2.12)
It can be concluded that those participants who were more attracted by the reviews showing a profile, confirmed their choice by classifying self-disclosure in a review as credible. The matching of results gave further insights in review function characteristics on platforms and their impact on consumer decisions. Hereafter the results will be discussed.

5 CONCLUSIONS AND RECOMMENDATIONS
The study confirms that reviews are highly popular among consumers considering a purchase. Online reviews influence consumer purchasing decisions only when consumers’ reliance on online reviews is sufficiently high when they make purchase decisions. Consumers’ reliance on reviews is dependent on and influenced by the format characteristics of the review and the online review system design. To increase consumers’ reliance on reviews, the objectives of the different platforms should be to build trust for the consumer, promote website and service quality, facilitate member matching and offer consumers sufficient information as well as a user friendly design. Hence, online review platform design moderates reviews and the consumer’s reliance and purchasing decisions. Two categories of review format characteristics could be established: usability and credibility characteristics.

Consumer’s motives to search for reviews were identified in the literature as personal and social motives, more precisely as Informational behavior, Risk reduction, Quality seeking and Social belonging. The platform choices thereby differ, as well as the platform’s review function characteristics. The survey results confirm the presence of various review function characteristics and their influence on consumers. The platform categories found in the literature could be confirmed through the respondents in the survey as the online consumer review platforms that consumers use in practice; retail websites are the most used review platforms for checking online reviews. The combination of shopping and checking reviews for the product, seems to be appealing due to its convenience.
From a company’s perspective, the growing popularity of online reviews affects a wide range of management activities and takes information control from companies and gives it away to the consumer. Though, the Web 2.0 makes it possible to follow and protocol CGC and herewith identifies points for improvement as in improving the quality of goods or services. Monitoring and analytics nonetheless have to be planned and focused systematically and precisely. To do so effectively, companies need to understand the phenomenon of online consumer reviews and online consumer review platforms. Knowing the online review platforms of importance and the review function characteristics influencing consumers can be hereby regarded as of upmost priority. Negative information about a company’s service or product can be spread rapidly and to an unlimited number of people on several platforms. Investing in customer satisfaction is hence the one side of preventing the company from risks (Dellarocas, 2003). On the other side, learning about review function characteristics and their influence can lead companies to invest in new marketing concepts. Cooperation with online review platforms can be made, since platforms can, for example, influence the readability of reviews through their design of the review function as in sorting options automatically applied. This is for example the case with the ‘most helpful’ reviews appearing first on certain platforms leading the reader to specific reviews. Further consumer promotions animating to review the product in certain ways can influence the presence on review platforms of companies and with the review function characteristics applied correctly influence other consumers.

Model 1: impact of review characteristics on decisions.

From a platform’s perspective, knowing the preferred review function characteristics of consumers, can lead to increased platform use when applied. Further, as it became clear throughout this research, none of the online review platforms has all the review function characteristics that influence consumers or are desired by those. Accordingly, it is advisable to create a new online consumer review platform combining the different characteristics as shown in Model 1. Additionally, constant monitoring of new market trends by companies as well as platforms is advisable, as the web is constantly developing further and new platforms are rapidly emerging. From a consumer’s perspective, review platforms increase market transparency and make purchasing less risky. Firstly, understanding the consumer’s wants and impacts of reviews, makes platforms adapt to them and offer an even better use of reviews. Secondly however, as companies understand consumers better, they gain more power to manipulate.

REFERENCES


