Do Followers Matter?
Quantitative Success Factors of Sale Enhancing Product Review Blogs

Robert Zimmermann
Sascha Thieme


When analysing the impact of blogs on sales, previous research focused solely on qualitative factors (e.g. trust and credibility). This article, however, answers the question if one can also identify quantitative factors such as the number of followers on social media and similar. For this reason, a multiple regression analysis was conducted analysing eight quantitative factors of 56 product review blogs. This analysis shows that only two of eight quantitative factors have a statistically significant impact on the number of sales of an article reviewed by a blog. Therefore, the authors conclude that the intuitive reflex to always prefer influencers with a high number of followers is misleading and the established practice of using followers as a kind of currency becomes highly questionable.

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1. Introduction

In the past 15 years, online purchasing amongst Germans older than 14 years grew steadily to 67.6 percent of the population (IfD Allensbach 2015). Studies show (Heckathorne 2010; Nielsen/MTV/VW 2010) that the buying decision of these people is strongly influenced by the so-called Electronic Word of Mouth (EWoM) which according to Hennig-Thurau and Hansen (2001, p. 562) describes every positive or negative comment of a potential, current or former customer which is made public to a considerable number of people using the internet. This article focuses on a special kind of EWoM as a form of consumer-generated content, namely: Blogs who focus on reviewing products or in short “Product Review Blogs” (PRBs). Blogs are used by companies as well as individuals to share their influential opinions and views with the rest of the world and therefore, they are one of the most important sources for information on the internet (Kreutzer 2014, pp. 357-358; Halvorsen et al. 2013, p. 213). According to Alexa.com (2016a; 2016b), the blog publishing service blogspot.de ranks among the 25 most visited websites in Germany and among the 50 most visited websites worldwide. This clearly demonstrates the huge popularity of blogs and how blogs have become part of everyday life on the internet.

Additionally, blogs have a high impact on the purchase decision of their readers. This is mainly because of two reasons. Firstly, they are perceived as user generated and therefore considered to be an informal source of information (Hsu et al. 2013, p. 71; Rogers 2003, p. 18). Secondly, communication on blogs is very personal and bloggers and readers share a strong bond between each other (Halvorsen et al. 2013, p. 213; Allen 2009, p. 5). This personal and interactive style of communication makes the dialog on blogs flexible and thus explains its intensity when influencing purchase decisions (Kroeber-Riel/Weinberg/Groepel-Klein 2009, pp. 535). This is especially true for product reviews posted on blogs as they allow the users to interact with the review by posting questions or feedback. This personal style of communication by posting questions or feedback is very lively, which makes product reviews on blogs more authentic and more interesting than classical advertisements and therefore explains their strong influential power (Garnefeld 2008, p. 2). Putting this into the context of a study by Nielsen (2015, p. 13) which showed that in Europe consumer opinions posted online (60 percent) are trusted much more than traditional advertising channels, such as ads on TV (45 percent), newspapers (44 percent), and billboards (40 percent) it becomes clear that PRBs do not only belong to the most trusted, but also to the most influential sources of information.

As a result, it is not surprising that a lot of research has already been published concerning the topic if blogs influence the purchase decision in general and this question can be answered with a clear yes. Nevertheless, previous research focused mainly on qualitative factors (e.g. Hsu and Tsou 2011, focus: Credibility; Hsu et al. 2013, focus: Trust; Huang 2014, focus: Trust) when analysing the impact of blogs on sales. However, no previously published study has, to the best knowledge of the authors, shed light on the topic which quantitative factors of blogs (e.g. number of followers on social media) have an influence on the number of sales of articles featured on blogs. Additionally, it has become an axiom that a high number of followers is always better than a low number of followers. Thus, the number of followers has become a currency to determine the value of an influencer.
1.1 Problem Statement and Objectives

This leads us to the problem statement of this article. Imagine the following situation: A marketer must choose three out of ten different PRBs to promote a new product. They all fit his target group, but have a differing number of followers on their social media channels. All handle the topic of SEO with varying degrees of success and they all have a different number of regular readers. Which ones should he choose? The one with the most followers on social media? Or the SEO specialist who has a well-established regular readership but regards Facebook as an invasion into his personal life and therefore does not use it at all? Would it not be a relief if one knew which easily accessible metric is the deal maker and helps to decide which blog to choose?

To solve this problem this article will answer the following questions:

1. Which quantitative factors of product review blogs actually drive sales?
2. Which recommendations can be given to companies to optimize their blogger relations to generate more sales?

1.2 Quantitative Blog Factors

The most important quantitative blog factors are the number of readers of a PRB as well as the number of followers connected to the social media channels of such a blog. This is because social media channels are used to share information, experiences, and opinions on community web pages. On these community web pages, users recommend content which they like to other users who again share the content with users, thus starting a potentially viral spread of information (Weinberg 2014, pp. 1, 10). This is especially important as a study of Court et al. (2009) showed that consumers who are evaluating which product to buy include additional brands to their initial set of consideration if they encounter touchpoints such as EWoM of these brands during their active evaluation phase. Therefore it can be assumed that a larger base of followers on a social media platform is more likely to spread the word of a review on a PRB than a smaller base of followers. Subsequently, a larger base of followers would indicate a greater influence on the purchase decision and therefore leads to the generation of more sales. Based on this assumption the following hypotheses can be created.
H1: The number of readers of a PRB has a significant and positive effect on sales.
H2: The number of Facebook followers has a significant and positive effect on sales.
H3: The number of Twitter followers has a significant and positive effect on sales.
H4: The number of Instagram followers has a significant and positive effect on sales.
H5: The number of Pinterest followers has a significant and positive effect on sales.
H6: The number of Google+ followers has a significant and positive effect on sales.

However, not only social media channels influence the spread of information. Today’s consumers pull helpful information from the internet to inform themselves about their purchases and do not only rely on information pushed onto them by companies (Court et al. 2009). Nevertheless, this pulled information first needs to be found to influence a consumer’s decision process. Therefore, SEO factors also play an important role, as SEO helps to make information discoverable through search engines. For this reason, the factors “Number of Keywords” and “Height of Visibility Index” are examined in this article. The “Number of Keywords” describes how many keywords could be identified in an organic ranking on Google. The “Height of Visibility Index” is an artificial metric created by the company SISTRIX, which describes the visibility of a website on a search engine and indicates how likely it is for this website to obtain users through organic search results.

H7: The number of keywords on a PRB which trigger a Google organic search has a significant and positive effect on sales.
H8: The visibility index of a PRB has a significant and positive effect on sales.

2. Methodology

To examine the proposed hypothesis a multivariate method of the descriptive statistics called multiple regression analysis is used to determine the influence of the 8 hypotheses (independent variables) on the number of sales of a product featured on a PRB (dependent variable) (Figure 1). The analysis was conducted with the “SPSS Statistics 24” program by IBM. All independent variables were entered simultaneously into the regression equation which is called the enter method.

As data foundation the sales data of 2016 from a German medium sized company with 300 employees are used. This company is heavily relying on reviews on PRBs to generate awareness for their products. The provided data contained 56 product reviews on PRBs. The tested products belonged to the product categories of home appliances (38 reviews), music devices and speakers (18 reviews) and were analysed separately. For every article reviewed the number of sales (measured in Euro turnover to make differently priced articles more comparable) two weeks before and after the review were measured and compared with one another. Beforehand, the PRBs were checked if the published review was negative (if yes, exclusion as negative reviews do not work sale enhancing), if a SISTRIX Visibility Index could be calculated (if not, exclusion as the blog is too small), if a blog reviewed more than one product (if yes, exclusion as qualitative blog factors could distort the result). Additionally, it was assured that the prices of the examined products stayed the same during the observation period. Lastly, the data were tested for outliers using the Mahalanobis-distance measure. These steps reduced the number of observable PRBs to 37
(home appliances: 27, music devices and speakers: 10). The historic data of the PRBs were acquired using the following tools: Fanpagekarma, archive.org (number of followers on Facebook, Twitter, Pinterest, Instagram, Google+), SimilarWeb (number of blog readers), SISTRIX (number of keywords, height of the Visibility Index). In the course of conducting a multiple regression analysis the data were checked for linearity (present), homoscedasticity (present), normality (present), misspecification of the model (not present), autocorrelation (not present) and multicollinearity (present in category of music devices and speakers). As multicollinearity can distort a regression analysis, the independent variables followers on Twitter, Instagram and Pinterest of the category music devices and speakers were combined into an index variable freeing the data from multicollinearity.

Figure 1 Conceptual Model
3. Results

3.1 PRBs – Home Appliances

From the 27 PRBs reviewing articles from the category of home appliances 26 had a Facebook page (Min. follower: 1,330/ Max. follower: 13,186/ Ø follower: 4,060), 24 had a Twitter page (Min. follower: 5/ Max. follower: 1,273/ Ø follower: 384), 23 had an Instagram page (Min. follower: 0/ Max. follower: 22,927/ Ø follower: 1,946), 13 had a Pinterest page (Min. follower: 0/ Max. follower: 580/ Ø follower: 167) and 18 had a Google+ page (Min. follower: 5/ Max. follower: 2,663/ Ø follower: 524). The smallest number of average blog readers was 581 and the highest number was 51,022 with an average of 7,853 blog readers. The lowest number of keywords which triggered a Google search result used on a PRB was 9, the maximum was 460 and on average 111 could be found. The lowest Visibility Index was 0.0001, the highest 0.15985, on average the Visibility Index was 0.01529. All PRBs which reviewed home appliances combined lead to a difference in sales of 39 additional articles sold, creating an extra 3.57 sales per day and thus generating an extra turnover of 473.17€ per day during the observation period.

Taken as a whole, the multiple regression model of the home appliances data set displays a significance level of 12.2 percent (p = 0.122) (Figure 2). As a significance level of 5 percent or lower (p < 0.05) is required for a model to be accounted as significant, it must be concluded that the multiple regression model as a whole is not significant (Urban and Mayerl 2011, p. 135).

<table>
<thead>
<tr>
<th>Model Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

<sup>a</sup> Independent Variables: (Constant), Visibility Index, Instagram, Facebook, GooglePlus, Keywords, Pinterest, Twitter, Blog Readers  
<sup>b</sup> Dependent Variable: Turnover per Day

**Figure 2** Model Summary home appliances
### Model Summary

<table>
<thead>
<tr>
<th>Modell</th>
<th>Multiple R</th>
<th>R-Square</th>
<th>Std. Error of the Estimate</th>
<th>F</th>
<th>Sig.</th>
<th>B</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.579&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.336</td>
<td>51.65737</td>
<td>12.625</td>
<td>.002</td>
<td>956.268</td>
<td>.579</td>
</tr>
</tbody>
</table>

<p align="center"><sup>a</sup>. Independent Variables: (Constant), Visibility Index</p>
<p align="center"><sup>b</sup>. Dependent Variable: Turnover per Day</p>

### 3.2 PRBs – Music Devices and Speakers

From the 10 PRBs which reviewed articles from the category of music devices and speakers all had a Facebook page (Min. follower: 2,312/ Max. follower: 28,413/ Ø follower: 10,340), 9 had a Twitter page (Min. follower: 167/ Max. follower: 9,813/ Ø follower: 1,930), 4 had an Instagram page (Min. follower: 526/ Max. follower: 2,872/ Ø follower: 1,153), 4 had a Pinterest page (Min. follower: 16/ Max. follower: 446/ Ø follower: 198) and 5 had a Google+ page (Min. follower: 330/ Max. follower: 1,174/ Ø follower: 503). The smallest number of average blog readers was 1,265, the highest 1,033,381 and on average the number of blog readers was 173,215. The minimum
number of keywords observed was 50, the maximum 2,350 and on average 560 keywords could be observed. The lowest Visibility Index spotted was 0.00125, the highest 0.49855 and on average the data set had a Visibility Index of 0.13372. All PRBs reviewing products from the category of music devices and speakers combined lead to 1 extra sale, creating an extra of 0.22 sales per day and thus generating an extra turnover of 24€ per day during the observation period.

The multiple regression analysis for products from the category of music devices and speakers displays a significance value of 40.06 percent (p=0.406) (Figure 5). Thus, making the model as a whole highly insignificant.

### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>Multiple R</th>
<th>R-Square</th>
<th>Std. Error of the Estimate</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.789&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.623</td>
<td>26.20481</td>
<td>1.320</td>
<td>.406</td>
</tr>
</tbody>
</table>

<sup>a</sup> Independent Variables: (Constant), Visibility Index, Tw_Inst_Pin, GooglePlus, Facebook, Page Users  
<sup>b</sup> Dependent Variable: Turnover per Day

**Figure 5** Model Summary Music Devices and Speakers

Looking at the impact of the independent variables, no independent variable seems to have a significant impact on the dependent variable. Though, it must be noted that the independent variable “Twitter_Instagram_Pinterest” is very close to being significant. Therefore, to be sure about the influence of these independent variables, a linear regression is performed for all three variables individually (Figure 7). Looking at the variables individually shows that the independent variable “Twitter” indeed has a significant influence (p=0.027) on the dependent variable “Turnover per Day”.

### Unstandardized Coefficients

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Std. Error</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-28.703</td>
<td>19.715</td>
<td>-1.456</td>
<td>.219</td>
</tr>
<tr>
<td>Facebook</td>
<td>.002</td>
<td>.001</td>
<td>1.054</td>
<td>.351</td>
</tr>
<tr>
<td>Tw_Inst_Pin</td>
<td>.006</td>
<td>.002</td>
<td>2.423</td>
<td>.073</td>
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<tr>
<td>GooglePlus</td>
<td>.000</td>
<td>.025</td>
<td>.019</td>
<td>.986</td>
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<td>Blog Readers</td>
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<td>.000</td>
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<td>.702</td>
</tr>
<tr>
<td>Visibility Index</td>
<td>34.535</td>
<td>62.292</td>
<td>.239</td>
<td>.554</td>
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</tbody>
</table>

**Figure 6** Multiple Regression Music Devices and Speakers
### Model Summary

<table>
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<tr>
<th>Model</th>
<th>Multiple R</th>
<th>R-Square</th>
<th>Std. Error of the Estimate</th>
<th>F</th>
<th>Sig.</th>
<th>B</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twitter</td>
<td>.690</td>
<td>.476</td>
<td>21.83793</td>
<td>7.262</td>
<td>.027</td>
<td>.007</td>
<td>.690</td>
</tr>
<tr>
<td>Pinterest</td>
<td>.598</td>
<td>.357</td>
<td>24.17125</td>
<td>4.457</td>
<td>.068</td>
<td>.110</td>
<td>.598</td>
</tr>
<tr>
<td>Instagram</td>
<td>.572</td>
<td>.328</td>
<td>24.73368</td>
<td>3.897</td>
<td>.083</td>
<td>.018</td>
<td>.572</td>
</tr>
</tbody>
</table>

a. Independent Variables: (Constant), Twitter  
b. Independent Variables: (Constant), Pinterest  
c. Independent Variables: (Constant), Instagram  
d. Dependent Variable: Turnover per Day

**Figure 7** Linear Regressions – Twitter, Pinterest, Instagram

### 3.3 Summary of the Results

Summing up the results, it can be noted that with the exception of hypothesis 3 and 8 no hypothesis could be supported (Figure 8).

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: The number of readers of a PRB has a significant and positive effect on sales.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H2: The number of Facebook followers has a significant and positive effect on sales.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3: The number of Twitter followers has a significant and positive effect on sales.</td>
<td>Partially Supported*</td>
</tr>
<tr>
<td>H4: The number of Instagram followers has a significant and positive effect on sales.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H5: The number of Pinterest followers has a significant and positive effect on sales.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H6: The number of Google+ followers has a significant and positive effect on sales.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H7: The number of keywords on a PRB which trigger a Google organic search has a significant and positive effect on sales.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H8: The Visibility Index of a PRB has a significant and positive effect on sales.</td>
<td>Partially Supported**</td>
</tr>
</tbody>
</table>

*True for music devices and speakers  
**True for home appliances

**Figure 8** Hypothesis Status Summary
4. Discussion

Looking at the descriptive statistics, it can be observed that product reviews on blogs lead to additional turnover (+473.17€/day home appliances, +24€ music devices and speakers/day). Therefore, this article found more evidence for the statement that blogs influence the purchase decision, which has already been discovered by many researchers (e.g. Heckathorne 2010; Nielsen et al. 2010; Google 2015; Reichelt 2013, pp. 2-3; TechnoratiMedia 2013, p. 13). However, proving the quantitative influence from PRBs on sales still remains a challenging topic as only 2 of 8 hypotheses and their underlying quantitative variables could be identified as partially sale-enhancing.

The first hypothesis could not be supported. Blogs are effective in influencing the purchase decision because of their personal and interactive style of communication (Halvorsen et al. 2013, p. 213; Allen 2009, p. 5; Garnefeld 2008, p. 2). It can be argued that on PRBs with many readers this personal and flexible style of communication is less present than on smaller PRBs as a blogger will not be able to communicate to all of his or her readers in the same flexible and interactive way. Therefore, the number of readers might not influence the number of sales at all.

The second hypothesis could not be supported. Having a lot of fans might not convert into a high interaction with the fans. This is due to the fact that at a certain size of a Facebook page, not all fans of this page will get every post of this page displayed in their newsfeed. This only happens if a blogger pays for promoting each post on his/her Facebook page (Boland 2014). Therefore, small Facebook pages might have the same impact as huge Facebook pages if the huge pages do not pay for their post or if the small pages do pay a lot.

The third hypothesis could be supported for the category of music devices and speakers. Twitter does not have a limitation like Facebook that ensures that not all followers see a Facebook posts. On Twitter, every tweet will at least be shown once on the newsfeed of the followers of a Twitter page (Stewart 2016). Hence, this allows for a wider spread of information and therefore positively influences the number of sales if a Twitter page has more followers. A reason why the number of Twitter follower did not influence the purchase decision for the category of home appliances might be the small number of Twitter followers in the data set (Ø 384 followers home appliance/ Ø 1,930 followers music devices and speakers) which might not have been enough to significantly influence sales.

Hypothesis 4 could not be supported. Only 3.2 percent of all Germans who use social media channels use Instagram (BLM 2016). Further, one should note that Instagram is a platform where only pictures get posted (Weinberg 2014, p.336). The power of blogs results in their potential to share influential opinions and views with the rest of the world (Kreutzer 2014, pp. 357-358; Halvorsen et al. 2013, p. 213). Posting only pictures without an explanatory text might not be enough to make Instagram an important source of information for people.

The fifth hypothesis could not be supported. Only 4.4 percent of all Germans using social media, use Pinterest (TechnoratiMedia 2013, pp. 22-23; BLM 2016). Pinterest also is a platform where only pictures get posted (Weinberg 2014, pp. 339-340). As mentioned before, the posting of a picture without context might not be enough to
make Pinterest an important source of information therefore lowering its potential influence on sales.

Hypothesis 6 could not be supported. Only 3.7 percent of all Germans, who use social media, use Google+, thus lowering the potential influence of this social network (BLM 2016). This coincides with a study by ARD and ZDF (2015) which showed that only 2 percent of all German Google+ users use this network on a daily base and only 4 percent of its users use Google+ once a week. Consequently, the social network Google+ as a whole currently has no impact on sales.

The seventh hypothesis could not be supported. It could be argued that not the sheer number of keywords but having the right keywords for the targeted audience is influencing the purchase decision (Kreutzer 2014, p. 201-202). A PRB might have a lot of keywords which trigger a Google search on his or her page and will eventually get a lot of clicks due to these keywords. However, if these keywords trigger Google searches which are not related to a product reviewed on a PRB, a possible reader will not be interested in reading this product review. This is because he came to the PRB because of a completely different keyword and respectively a completely different reason.

Hypothesis 8 could be supported for the category of home appliances. The SISTRIX Visibility Index rates the overall visibility of a web page by counting and simultaneously weighing the keywords used on the web page (Seo-analyse.com 2016). As seen in hypothesis 7, the pure number of keywords does not influence the number of sales generated. Nevertheless, the extra keyword weighting factor present in the Visibility Index seems to cover up this issue. However, for the category of music devices and speakers the hypothesis was found not to be true. One should keep in mind that the home appliances data contained 27 PRBs and the music devices and speakers data only 10 PRBs, which could be a reason for the insignificance of this hypothesis regarding music devices and speakers.

5. Limitations

The analysis only focused on PRBs and the product categories of home appliances, music devices, and speakers. As this is only a small part of all available blog types and product categories, one must be careful when translating these results to other blog or product categories. Also, it should be noted that this study did not take gender effects into account wherefore a difference between male or female bloggers cannot be ruled out. Another important aspect is the sample size used in this study. The final sample size contains 27 PRBs for articles from the category of home appliances and 10 PRBs for the category of music devices and speakers. A larger sample size could have led to more significant results. Lastly it is possible that not all or even the wrong independent variables might have been chosen to predict an influence on sales.
6. Recommendations for companies

Despite the aforementioned limitations, the following recommendations can be given to companies. Companies selling music devices and speakers should focus on using influencers with a higher number of Twitter followers and companies selling home appliances should take a close look at the SISTIRX Visibility Index of their influencers.

However, it is of special importance to note that a high number of followers does not automatically lead to a higher number of sales. According to the carried-out analyses, the established practice of using followers as a kind of currency and preferring influencers with a high number of followers over influencers with a low number of followers can be seen as highly questionable or even totally wrong. Instead, qualitative factors seem to have a much greater influence on the buying decision wherefore they need to be considered when selecting influencers to promote a product (e.g. Hsu and Tsou 2011; Hsu et al. 2013; Huang 2014). In closing, the following advice can be given: Should an influencer try to convince you or your company to promote your products because of the huge number of followers he or she has, it should first be tested if this influencer can indeed lead to additional sales before investing into this influencer.

Sources


**Keywords**

Blogs, Blogging, Consumer Behaviour, E-Commerce, Followers, Influencer Marketing, Social Media