

DO BRAND RESPONSES INCREASE CUSTOMER REVIEWS? AN ANALYSIS OF ONLINE COSMETIC REVIEWS IN A RUSSIAN RETAIL GIANT

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Abstract

Brand responses to customer reviews is an accelerating area of e-commerce, and more and more businesses are taking advantage of this tool to show appreciation to existing customers, boost the possibility of repeat sales, frame negative reviews and market products to new customers.

As evidence shows an increasing number of Russians primarily get their product information from online reviews, increasing a brand's review could directly increase company revenue. It can also help to boost a product's ranking on search engines and e-commerce stores, leading to more brand exposure and additional sales. However, businesses continue to face a very big challenge with online reviews: most customers buy products without leaving reviews. This happens regardless of product quality or experience. Therefore, how can businesses motivate more customers to leave reviews?

This paper examines the number of customer reviews on hundreds of cosmetic products, on the website of Russia's leading e-commerce giant: Ozon.ru (Nasdaq: OZON). The paper finds a positive relationship between brands that leave responses to each customer review, and the number of reviews each product receives. The paper argues that the possibility of receiving an appreciatory response could motivate customers to leave reviews.

Key words: E-commerce, product reviews, cosmetics, Russian retail, consumer behaviour.

JEL Code: M29, M31.

Introduction

Online customer reviews – also commonly referred to as electronic word of mouth – has become the second leading driver of purchase after the price of the product. Studies from Anderson and Margruder (2012) show that 86% of people under 45 believe online reviews are helpful to them, and data from Deloitte (2019) showed that Russians are increasingly getting their product recommendations from online reviews.

Over the last two decades, there has been an increasing body of research on the impact online reviews can have on the bottom line of companies. For example, Maslowska et al. (2016) presented data proving online reviews can directly increase the probability of a consumer buying a product, thereby increasing company revenue. Further research from Chevalier and Mayzlin (2006), Luca (2011), Anderson and Margruder (2012), and Dellarocas et al. (2004) buttress the position that online reviews can materially influence a company's turnover. However, as e-commerce competition intensifies, and as large electronic marketplaces – like Amazon, eBay and Alibaba – become more dominant, a different part of online review has been garnering more attention. This is the act of companies or brands responding to the reviews of their customers. Brand responses are normally displayed directly beneath each customer review.

There are many arguments supporting the need for firms to publicly respond to online reviews, regardless of whether the reviews are positive, neutral or negative. A recent survey from Uberall (2020) showed that one third of customers do not return to a brand if they do not respond to their online reviews, and 65% of consumers “think brands should respond to every online review every time”. Furthermore, one of the most profound studies on the impact of review responses was carried out by Proserpio and Zervas (2017), albeit on the hotel industry. They found that hotels who responded to reviews increased their ratings by 0.12-star. “After hotels start responding, they attract more reviewers who are more positive in their evaluations even when they review non-responding businesses, suggesting that these positive reviewers see management responses as an incentive to leave a review” (Proserpio and Zervas, 2017). Crucially for this paper, they also found a 12% increase in the overall volume of reviews for hotels who responded to reviews. Therefore, responding to reviews can be an excellent way for firms to reward positive reviewers, challenge or put a spin on negative reviews, and increase the number of product reviews. This paper investigates the relationship between a brand's review response and the total number of reviews a cosmetic product receives on Ozon. The paper establishes a theoretical foundation with the expectancy theory, and uses a number of statistical instruments to analyse results.

1 Ozon, cosmetic sales, and the value of increasing the review numbers

Ozon – also ozon.ru – is one of Russia's largest online retailers with over 40 million monthly active users. Cosmetic sales have experienced astronomical growths on Ozon in recent years, for example in 2019 sales of products in the beauty and health category grew by 265% from the

previous year, and in 2020, sales of lipgloss increased by 185% (Russian Search Marketing, 2020). Similar to Amazon, Ozon operates as an e-commerce marketplace with over 18000 brands/sellers.

In an attempt to justify the existence of this research, we examined studies looking into the value of increasing the number of online reviews. These studies have produced mixed results at best. While some authors like found no relationship between the number of reviews and sales of a product, other scholars like Liu (2006) have found positive relationships between the number of reviews on different products, and the sales of those products. The position of this paper mirrors those of Zhang et al. (2010), and Proserpio and Zervas (2017) who all argued that at the very least, the number of reviews on a product can increase the product's popularity, capture the attention of more customers, and increase the likelihood that a customer would buy the product. On e-commerce platforms like Ozon, there is an additional benefit to having more reviews. It can make a product rank higher on its search engine, and increase the probability of the product appearing on its crucial first or second page. Furthermore, when consumers filter for things like ratings or popularity, the number of reviews on a product can significantly make a difference.

1.1 Theoretical foundation: Expectancy Theory

The expectancy theory is a leading theory in psychology, proposed by Vroom (1964) to explain human behaviour. It argues that people behave in a specific way because they are motivated by an anticipated result. The expectancy model is based on three vital concepts; the concepts of expectancy, instrumentality and valence. Expectancy is the amount of effort leading to performance, instrumentality is the desired outcome of performing a task, and valence is the value associated with the desired outcome. These three concepts work together to create what Vroom (1964) described as a motivational Force. The formula for the theory can be expressed below:

$$MF = \sum V \times I \times E \quad (1)$$

Where MF stands for motivational force, V stands for valence, I stands for instrumentality, and E stands for expectancy. Expectancy theory has been studied extensively and adapted for many types of research including for work motivation by Ashford et al. (1998) and for decision making by Chen and Miller (1994). For the purpose of this research, one of the closest studies using the expectancy theory was a research by Caulfield (2007) on the motivation driving students to leave anonymous feedback on their teachers. Caulfield (2007) claimed "Expectancy theory has been more effective in predicting motivation when the subject being studied had

more discretion in performing a task”. Therefore, this article argues that responding to online reviews can be a motivating factor for consumers, encouraging them to take out the additional time required to write a product review.

2 Methodology and Findings

This paper examined 204 cosmetic products in the sub-category – simply referred to as ‘category’ in this paper – of *Makeup, Body Care, Hair Care and Oral Hygiene*. The data was gotten from the review section of each product on Ozon.ru. For every product, the Ozon website publicly displays the number of reviews, the actual review, and brand responses to the reviews. The review data was obtained between April 20 and April 25, 2021, and official responses from Ozon were not considered as ‘brand responses’ because they were often in response to packaging and delivery issues. A ‘brand response’ was taken as the official response from a company to a customer’s review. Our analysis was solely focussed on the following research question: Is there a relationship between brand/company response and the total number of reviews on a product?

2.1 Relationship between Number of Reviews and Brand Response

The table below shows the summary statistics for the number of reviews by brand response.

Tab. 1: Summary statistics for number of reviews and brand response

Brand Response	N	min	max	mean	sd	sum
No	47	27	4006	636.979	757.793	29938
Yes	156	34	11583	1265.763	1694.241	197459

Source: Ozon.ru

Yes are the cosmetic products with brand responses, while *No* are those without. Cosmetic products with brand response (*Yes*) had higher values than those without (*No*). The total number for *Yes* was 156, while *No* had 47. *Yes* had a minimum of 34 reviews and a maximum of 11,583, while *No* had a minimum of 27 and a maximum of 4,006. The difference between the means of the two was almost double with *Yes*, with 1257, while *No* had 637.

When we examined the average reviews per category, *Makeup* had the highest mean with 1637, followed by *Oral Hygiene* with 906. *Body Care* and *Hair Care* had a mean of 873 and 723 respectively.

Fig. 2: Testing for significance the number of reviews and product category

Source	Analysis of Variance			F	Prob > F
	SS	df	MS		
Between groups	32583410.3	3	10861136.8	4.77	0.0031
Within groups	453032152	199	2276543.48		
Total	485615562	202	2404037.44		

Bartlett's test for equal variances: $\chi^2(3) = 90.8118$ Prob> $\chi^2 = 0.000$

Source: Ozon.ru

Using the one way ANOVA test with the number of reviews as our independent variable and product category as the dependent variable, the results are as follows:

We found a level of significance of (Prob> χ^2) 0.000 which is less than the p-value of 0.05. This shows that there is a statistically significant difference between the number of reviews and the product category. This means that among other factors, the number of reviews are also influenced by the product category. For example, people who buy makeup products are more likely to leave reviews on Ozon than people who buy Hair care products. This is likely because brands who sell makeup products are more proactive in responding to customer reviews.

2.3 Relationship between brand responses, number of reviews and display page

The table below shows the summary statistics for the number of reviews and the display page.

Tab. 3: Summary statistics for number of reviews and display page

Display Page	N	min	max	mean	sd	sum
Page 1	98	40	11583	1279.378	1828.539	125379
Page 2	65	41	5226	1132.723	1320.115	73627
Page 3	29	27	5046	727.103	1116.569	21086
Page 4	10	34	1990	550.2	679.844	5502
Page 5	1	1803	1803	1803	.	1803

Source: Ozon.ru

We found a trend in which the products displayed on the first pages of Ozon’s cosmetic section had higher total reviews and averages than subsequent pages. This shows that products in the first pages receive more reviews and are far more likely to feature brand responses.

Fig. 3: Testing for significance between the number of reviews and display page

Source	Analysis of Variance			F	Prob > F
	SS	df	MS		
Between groups	10689705.9	4	2672426.48	1.11	0.3510
Within groups	474925856	198	2398615.44		
Total	485615562	202	2404037.44		

Bartlett's test for equal variances: $\chi^2(3) = 20.9787$ Prob> $\chi^2 = 0.000$

Source: Ozon.ru

From the Anova table above, we got a Prob> χ^2 value of 0.000 which is less than the p-value of 0.05. This means that there is a statistically significant difference between the number of reviews and display page. Since the overwhelming majority of products on the first and second pages feature brand responses, it further bolsters the argument that responding to reviews can increase the likelihood of a product appearing on the first two pages of its product category on Ozon. This is proven further in the analysis below.

Fig. 4: Relationship between Brand Response and Display Page

Brand response	Display page					Total
	Page 1	Page 2	Page 3	Page 4	Page 5	
No	21	10	8	7	1	47
Yes	77	55	21	3	0	156
Total	98	65	29	10	1	203

Pearson $\chi^2(4) = 18.3428$ Pr = 0.001

Source: Ozon.ru

We ran a Chi-square to test if brand responses can influence the display page of a product on Ozon’s website, and we found the results in Fig 4 (above). We got a Pr value of 0.001 which is less than the p-value of 0.05. This showed that brand responses can also influence the display page of cosmetic products.

Conclusion

This paper shows that responding to reviews can be a brilliant way to increase the total number of reviews on cosmetic products, especially makeup products. We analysed 204 cosmetic products on the website of ozon.ru, and found a relationship between brand responses to customer reviews and the number of reviews for each product. We also found that products with review responses are also likely to rank higher on the product category page of the e-commerce store. However, this study is limited to cosmetic products in a single e-retail company. The results present significant opportunities for further study.

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