

A Study of Online Reviewers' Behavior in China on Tmall and JD Platform¹

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Abstract

The purpose of this paper is to study how online reputation and attention from other consumers affect reviewers' contributions to online review systems in China. A quantitative empirical study was used to examine book reviews on Tmall and JD, the two large online retailers in China to study reviews' behaviors of local online users basically Chinese people. The study accomplished 36 books for a month from two sites which were Tmall and JD using ranking system and also performed the multiple regression model to validate the analysis. This study found that the crowdedness of reviews, the newness of the books, the potential reviewers, and the retailing platforms are the main concern to attract potential reviewers' attention. The reviewers normally follow the crowd and usually more concentrated on new products than the old one to be able to compete for attention. Reviewers' attentiveness to review is not associated with sales performance if there is

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no rating system on online retailing. The higher the rating of reviewer is, the more likely for them to achieve compensation. This is the incentive for reviewers to engage more. Surprisingly, the popularity of the books was not found affecting the reviewers' attention in this study. The paper offers potential guidance and assistance for online retailers and online reviewers to be able to attract reviewer's attention and communicate with them more effectively. This study yields important managerial implications for organizations to improve their scheme of online review systems and improve their understanding of reviewers' strategic behaviors. Findings of the study validate strategic thinking for online retailers and reviewers in China.

Keywords: Reviewer Attention, Reviewer Intention, Incentive for Reviewers, Online Reviewing, Online Retailing, Online Reviewers

1. Introduction

China is the leading social media market in the world which close to 350 million active social media users in the present day (Clement, 2020). According to the current projections, number of social network users in China will continue to increase from 926.8 million social network users in 2020 to over 1.1 billion in 2025. Although there is government's internet censorship, there are many famous local social media and online marketing platforms across the country. Online shopping opportunities in China enormously grow in recent years. It has been the world second-largest market after the U.S. in terms of e-tailing in recent years but China's e-commerce sector is now more than three times bigger the size of the U.S. (China Ecommerce, 2020) and e-commerce revenue is projected to reach nearly 1,468.5 billion USD by 2024 (Statista Research Department, 2020).

Current information highlights the understanding about China's e-commerce market and online landscape to know key players in the sector. Tmall China by Alibaba Group is the top Chinese e-commerce market and world's third most visited B2C marketplace with a market share of 50%-60% (Curran, 2018). Jingdong (JD) is the second largest B2C marketplace with in-house delivery and logistics with 15%-20% market share (eMarketer Editors, 2019). Kaola and RED and others like WeChat (with their own WeChat store) divide the rest between them (China Ecommerce, 2020).

Social media has been contained in many extensive research which mainly focused on electronic word of mouth (eWOM) and social media marketing (Appel, Grewal, Hadi, & Stephen, 2020). Notwithstanding what academics and practitioners have deliberated and studied over the past decades on that topic, how consumers use it and evaluate it in e-commerce platform needs more updates especially for fast growing Chinese e-commerce's consumer behavior due to the fast-paced and ever-changing nature of digital platforms.

Tsao and Hsieh (2015) also confirmed that electronic word-of-mouth (eWOM) has an influential effect on consumers' buying decisions although it might vary with the source of eWOM and product type. Their findings also proved that the type of eWOM platform management mechanism encouraging more on the organization's eWOM management. Consumers normally find quality information when purchasing new products and online consumers reviews have become fundamental source for almost every customer since e-commerce is growing.

According to Bright Local Research, 82% of consumers read online reviews and 52% of readers (between the age of 18-54) answered that they 'always' read reviews before making the decisions (Murphy, 2019). The research also stated that the typical consumer reads ten reviews to

understand the business climate and 97% of them read businesses' replies to those criticisms. For that particular reason, 67% of consumers have now been asked to leave a review for a local business with 24% of these being offered a discount, gift or cash in return. Hence, consumers are expected to find more relevant and accurate online reviews on the internet or digital e-commerce platforms when they are looking for particular products or services (Deloitte, 2007; Murphy, 2019).

There are many literatures on online reviews, but most of them paid less attention on how online reviewers got incentives to write online reviews. For instance, the present literatures were focused more on the impact of reviews on consumers' purchases, the evolution of review ratings, and behaviors of online reviewers. The literature appears to think that online reviewers may have self-motivation to contribute their own opinions and fewer notice has been made to the fact that reviewers can receive benefits such as online reputation and attention from other consumers. This study aims to have better understanding on how online reputation and attention from other consumers affect reviewers' contributions to online review systems in China.

2. Literature Review

Researchers confirmed that online users contributed their feedbacks voluntarily because they have three motivating mechanisms: reciprocity, peer recognition, and self-image (Chen, Wei, & Zhu, 2019). Previous research of Lerner and Tirole (2002) also found that when direct financial incentives are not available, enticements such as peer recognition and online reputation are important drivers for online users to contribute freely. Online opinion expression by analyzing the time-based progression of user views from online

reviews, the observations revealed that people tend to follow a different pattern from others when opinion expression is costly or disagreeing with previous ones which has practical values to the online reviewers and therefore it could be concluded as online reviews need attention and recognition by others (Wu & Huberman, 2008).

Positive reputation and online viewers peer-to-peer recognition can be encouraged online contributors to remain sharing their views and experiences willingly (Pavlou & Gefen, 2004). Peer-to-peer sharing online networks have seen massive growth mostly voluntary despite the massive free-riding by others; their study found that the more benefit users “get from” the network, in the form of downloads, browses, and searches, the more likely they are to continue sharing. Moreover, the more value users “give to” the network, in the form of downloads by other users and recognition by the network, the more likely they are to continue sharing. In this way, different research findings suggested that, overall, “getting from” is a stronger force for the continued-sharing decision than “giving to” (Xia, Huang, Duan, & Whinston, 2012).

Bilal et al. (2020) suggested that the online review behaviors can be based on two main concepts, which are social conformity and attention grabbing. The social conformity suggests that the previous review can influence the reviewers’ behaviors. New reviewers observe the current review result as the social norm and will do the new review to confirm with such norm (Sridhar & Srinivasan, 2012). The attention grabbing suggests that the reviewers may intentionally review differently from the current review to grab attention of other users. There was evidence showing that reviewers with low ranking were more likely to do reviews deviating from the current in terms of using more negative words (Shen, Hu, & Ulmer, 2015).

Dixit, Badgaiyan, and Khare (2019) proposed the integrated model to predict the intention to write online review. In their model, those factors include attitude, subjective norms, perceived behavioral control, ego involvement, taking vengeance, and helping the business. As there is no tangible benefit from providing online reviews, people may have intrinsic motivation to review and this can be considered as ego involvement (Park, Jung, & Lee, 2011; Park, Oh, & Kung, 2015). However, Shen, Hu, and Ulmer (2015) proposed that online reviewers could try to gain attention and reputation from their reviews, which can be their benefits in providing reviews. Therefore, the factors that influence reviewers' behaviors can be related to gaining reputation and attention.

Goldhaber (1997) proposed the attention economy theory, expressing that getting attention is not temporary; receiving attention is acquiring as a form of wealth that puts in a desired position to get the economy benefits. The theory also stated that attention itself is property in the new economy; it is situated in the minds of those who paid attention in the past whether years ago or seconds ago and money flows along with attention. The theory explained that how good the advertising geniuses they hire, the advertisers have to be good at attracting attention on their own. Bill Gates is one of the good examples of how financial affluences of his extent is getting larger because of his fame. If Gates were to decide to buy control of Corp A instead of staying at the Microsoft, his Microsoft stock would fall abruptly and Corp A's stock would rise. His own net worth would fall, at least momentarily, but Gates' former monetary wealth might excitingly reappear. Despite the fact that the arena in which he made his mark happens to be business, it is already true that Gates' actual wealth, and that of many like him, is less in money or shares of stock than in attention.

Therefore, acquiring online reputation and attention from other consumers are important motivation for online contributors to the review systems. For instance, Xia et al. (2012) studied using a large-scale data set activity in a peer-to-peer music sharing network, they seek to understand that the users continued-sharing behavior as a private contribution to a public goods when other users used it and recognized by the network. Leading online reviewers who are dependable gain consumers' attention to make extensive monetary gains from reputation they have earned. Coster (2006) also contributed that a top Amazon reviewer have become not only minor celebrities among book buyers and writers; but also getting financial gains around thousands of dollars, frequently receiving free dinner offers, free travel offers, free books, and communicating regularly with authors and fans.

3. Methodology

3.1 Sample and Data Collection

We collect book reviews on JD and Tmall, two largest online retailers in China to study reviews' behaviors of local online users, basically Chinese people. They have two different review environments. JD offers a reviewer ranking system that reviewers can get the title of top reviewer based on their review amount and quality. The reviewer ranking system allow reviewers to build up online reputation. However, Tmall does not offer such a reviewer ranking system.

The data set of online reviews of books are electronically collected on a daily basis from 17th August to 18th September 2020, which lets this study to replicate the environment of reviews and how online reviewers made the review decision. The study accomplished 36 books

released in July and August for a month from two sites, 15 books on JD and 21 books on Tmall. At the end of the data collection period, there are 15 books on JD and 9 books on Tmall having more than 2 reviews, resulting in a total of 619 reviews in the data set.

The data in our sample includes daily information on books, reviews, and reviewers. For books, we collect the book's release date and its daily sales rank. For reviews, we collect the date when the review was posted and the reviewer's username. Moreover, all the review information started from the release date of each book.

3.2 Model

Concluding the above-mentioned theories on online reputation and consumer attention, this research extends the literature on online product reviews by empirically replicating Shen, Hu, and Ulmer (2015) to research how incentives affect online reviewers' behaviors in terms of finding reputation and attention. The popularity and crowdedness affected reviewers' decisions on choosing a product to review in two different review systems, which could be measured by $SalesRank_{it-1}$ and $ReviewNumber_{it-1}$.

In addition, the number of potential reviewers was positively related with consumers who had already purchased the product that could lead to additional future daily reviews. In that case, potential reviewers could also affect reviewers' product choice and we constructed $PotentialReviewers_{it-1}$ to measure it. Moreover, reviewers' enthusiasm for writing reviews might decay over time, which could affect the number of daily reviews at different time periods, and we constructed $DaysElapsed_{it}$ to measure this effect. Lastly, at the reviews level, we also included the platform as dummy variable to measure the effect of review behaviors, which equals to 1 for JD and zero otherwise.

Therefore, we construct $SalesRank_{it-1}$, $ReviewNumber_{it-1}$, $PotentialReviewers_{it-1}$, $DaysElapsed_{it}$ and marketplace platform ($JD/Tmall$) as independent variables, and $DailyReviewNumber_{it}$ as Dependent variable in this research. Figure 1 summarizes the key variables in our model.

Addition to this, different online reviewing and ranking systems allow us to compare reviewers' intentions more in details. As mentioned above, Tmall does not offer review rating system or ranking system which ranks reviewers' popularity based on their performance. On the other hand, JD has ranking system which could be quantifiable attention for reviewers. The ranking system allows top reviewers to create their online review reputation and gain future attention from potential customers as well as product or service providers. For that reason, JD seems to have more crowdedness of reviews.

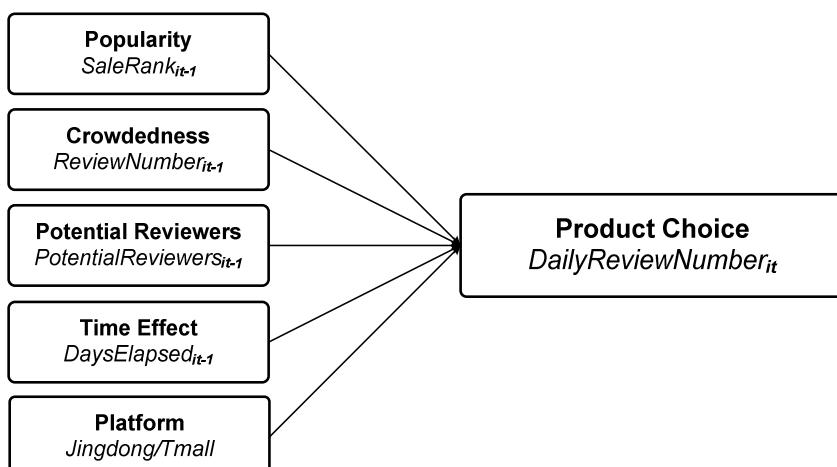


Figure 1. Conceptual Framework

3.3 Statistical Analysis

In this research we use multiple regression model to analyze the data (Cohen, Cohen, West, & Aiken, 2003). The regression model can be illustrated as follows.

$$\begin{aligned} DailyReviewNumber_{it} = & \beta_0 + \beta_1 SalesRank_{it-1} + \beta_2 ReviewNumber_{it-1} + \\ & \beta_3 PotentialReviewers_{it-1} + \beta_4 DaysElapsed_{it} + \beta_5 JD_i + \varepsilon_{it} \end{aligned} \quad (1)$$

From the above equation, $DailyReviewNumber_{it}$ is the number of reviews for book i at day t ; $SalesRank_{it-1}$ is the natural logarithm of the sales rank of book i at day $t-1$; $ReviewNumber_{it-1}$ is the natural logarithm of the cumulative number of reviews of book i from its release date to day $t-1$; $PotentialReviewers_{it-1}$ is the sum of the inverse of $SalesRank$ from book i 's release date to day $t-1$; $DaysElapsed_{it}$ is the number of days from book i 's release date to day t ; JD_i is the dummy variable equals to one if the book i is from JD and zero if the book i is from Tmall.

4. Data Analysis and Results

Table 1 shows the data estimation results using multiple regression model. The first column is the multiple regression result for the whole sample as specified in the equation 1. The second column represents the multiple regression result for JD sub-sample whereas the third column is the multiple regression result for Tmall sub-sample.

Table 1 Estimation Results Using Multiple Regression Model

Variables	JD & Tmall	JD	Tmall
$SalesRank_{i(t-1)}$.037 (.109)	.073 (.115)	.438 (.857)
$ReviewNumber_{i(t-1)}$	1.001** (.127)	1.043** (.135)	.945* (.360)
$PotentialReviewers_{i(t-1)}$.168* (.075)	.170* (.077)	14.117 (14.393)
$DaysElapsed_{it}$	-.075** (.007)	-.080** (.007)	-.084* (.030)
JD_i	1.283** (.247)		
N	497	461	36

Note: The number in parenthesis is the standard error; * $p < 0.05$; ** $p < 0.01$

For the whole sample in the first column, the coefficient of sales ranks is not statistically significant, indicating that the popularity is not the case that effect potential customer's awareness. As discussed before, review number reflects the crowdedness of reviews. The coefficient of review number is positive and significant. This means that the crowdedness of reviews can affect the daily review number of each book. It also indicates that reviewers just follow others to write reviews and they are more likely to compete for attention by providing reviews to the book with higher number of reviews.

The coefficient of potential reviewers is positive and significant. That is, under the ranking system, the accumulated sales volume affects the daily review number. High cumulative sales volume indicates more potential reviewers and lead to additional future daily reviews. Days elapsed is to see whether the days passed will influence on people's behavior on writing reviews. The results show the coefficient of days elapsed is negative and significant. This means that the newness of the books can affect their daily review number. Reviewers lose interest in writing reviews for products that have been released for some time regardless of the retailing platform. Their enthusiasm for writing reviews decay over time.

The coefficient of dummy variable is positive and significant, which indicates that reviewers are likely to write reviews on JD (dummy=1) rather than Tmall (dummy=0). This means that the platform can affect the daily review number. This is because JD offer review ranking for reviewers. The higher the ranking of the reviewer is, the more likely for them to achieve reputation. This is the incentive for reviewers to write more and more.

For the sub-sample in the second column and the third column of Table 1, the result for JD sub-sample shows the significance of all coefficients similar to the whole sample. The result of Tmall sub-sample is also similar to the whole sample, except the coefficient of potential reviewers is not significant. This indicates reviews are not related with previous sales performance because there is no ranking system for Tmall.

These results can show how the online reputation and attention affect reviewers' contributions to online review systems. The products with higher number of reviewer and newly issued can bring more attention of users and this help motivate the reviewers to contribute more. The number of potential reviewers could also lead to more reviews because it can bring the reputation to the reviewers for the platform with the review ranking feature.

5. Conclusion and Discussion

Our research analyses on how online reviewers in China purposely select the right product and the right rating to post so that they can gain attention and improve reputation. The finding of this study focused on product level and review level. At the product level, the research investigates how popularity and newness of the products affect the final decision of reviewers to write a review. At the review level, the research examines how potential reviewer, crowdedness of the reviews, and retailing platforms affect the final decision of reviewers to write a review.

Our finding shows popularity of the book is not fully influenced on potential customer's attention. However, the crowdedness of reviews in all platforms mainly influenced the reviewer's attention because reviewers are not willing to avoid competing for attention with other reviewers. This finding supports Chen et al. (2019)'s reviewers motivating mechanisms to review which are reciprocity, peer recognition and self-image. Reviewers intentionally posted more on new books, and they managed to select strategically if there is ranking system or rating system available for online reviews to gain attention. It seems that reviewers would like to differentiate with others and wanted to become first movers to receive attention and reputation. This online reviewers' characteristics also support the important aspect of online reviewers' psychology proposed by Zhang, Zheng, and Wang (2020). Only when online marketers fully observe the features of online consumers and reviewers' psychology, online firms can determine their business direction and business objectives for future growth (Zhang, Zheng, & Wang, 2020).

Our study confirms that ranking system is important factor for potential reviewers because it is incentive for them to contribute their opinions. The study supports Chen and Huang (2013)'s investigation on how the

characteristics of reviews and the reviewers shape consumer review incidence and continuity. Our research completes Chen and Huang (2013)'s study by showing that review ratings, comments on a review, and helpful votes have a positive relationship with review frequency and continuousness because the reputation normally getting higher under the systematic review ranking system. Agreeing to Shen, Hu, and Ulmer (2015), our research also suggests that the number of potential reviewers is positively related with consumers who had already purchased. Under the ranking system, there are potential reviewers who could contribute additional future daily reviews. Our results signify that reviewers' review decisions are motivated by the presence of a reputation system which could be enlarged the effect of their personal reputation and reviewer attention. When the day passed, reviewers lose interest to write reviews in both platforms.

Our findings also make theoretical contribution to the attention economy theory (Goldhaber, 1997), which mentioned that the global economy is changing from a material-based economy to an attention-based economy by highlighting to online reviews offered by reviewers. Since people are involved more in service-economy with a lot of information, we could say that information is not scarce, but the attention is.

One of the interesting managerial implications would be building online review systems in their online market because reviewers are more attractive and motivate to write a review in such system. If the companies can collaborate with incentives mechanism in their design will create win-win situation for both companies and online reviewers. Another benefit to feature their websites could be online reviewers' product selection to review which is newest books to distance from the crowd and wanted to become the first mover. This finding will technically benefit for the companies. Companies may send e-mails or contact the reviewers before launching product or

services with some small incentives. All in all, companies may develop interesting marketing tools and tactics depending on their specific goals. Since online reviews are considerably helpful for potential customers, studying online reviewers' behaviors will be beneficial for their decision making.

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