Online Review Characteristics and Information Asymmetry

Is it easy to switch between Online Shopping sites?
A Case Study of Reviews from Amazon and Flipkart

Sudhakar Vijayakumar¹, G. Vidyashankar², R. Venkatesakumar³∗, S. Madhavan⁴ and S. Riasudeen⁵

¹Research Scholar, Department of Management Studies, Pondicherry University, Pondicherry – 605 014, India
²Chief Executive Officer, Only Success Leadership Academy Private Limited, Chennai – 600 024, Tamil Nadu, India
³Professor, Department of Management Studies, Pondicherry University, Pondicherry – 605 014, India
⁴Professor, Department of Management Studies, Manonmaniam Sundaranar University, Tirunelveli – 627 012, Tamil Nadu, India
⁵Associate Professor, Department of Management Studies, Pondicherry University, Pondicherry – 605 014, India

Abstract

Consumer characteristics and store attributes decide the store choice decision of consumers. To facilitate the switching process, physical formats create identical layout structures, shelf designs, staffing and billing desk. In similar lines, online stores also create features like similar website characteristics like the menu, creating shopping basket options, comparing product and billing process. Similar to Word-of-Mouth (WOM), online stores encourage and facilitate electronic Word-of-Mouth (eWOM) communications through Online Consumer Reviews (OCR) in their websites. Many online buyers use the reviews of others, social media content and blogs in their decision process. To understand the distribution characteristics of the online reviews, in this research work, we analyze the online review from Amazon and Flipkart for the masks and sanitizers. In a review, star rating, review length and helpfulness of a review are visual characteristics that communicate the content faster than words and no research works compare their variation between two online sellers. We prove that there are significant differences exist in the distribution of review characteristics between the online retailers’ reviews. Two websites reviews vary in terms of star rating, review length and helpfulness votes. There are variations between Amazon and Flipkart reviews in general, and differences are observed in their brands sold also. Since the review characteristics and their distributions are unknown, this information asymmetry creates constraints for store switching behavior of online consumers.

Keywords: COVID19, eWOM, Information Asymmetry, Online Consumer Reviews, Online Store Choice

*Email: venkatesh1316@gmail.com
1. Introduction

The pandemic virus spread COVID19 has created disasters around the globe. To protect the virus spread, many nations and governments insist their people use the mask and sanitizers. These products until March 2020, used by specialized user segments, suddenly have become mass-market consumption category. In India, there are legal amendments, like a penalty for non-compliance of usage of the products in common places. These developments have triggered a new set of manufacturers for the masks and sanitizers, retailers, online retailers and created new demand cycles for the products. In particular, measures like complete lockdown, ban on public transport and restriction of people movements create a dependency to source the products from online retail firms. In turn, Amazon and Flipkart, the major players of online retail business, have to depend upon a few reliable suppliers and manufacturers to get the products in stock. These developments lead to a research context, where the product category, brands and retailers are relatively new and a very little information is available about consumers’ awareness level, product knowledge and, attributes consider for purchase.

A literary work on classification by (Andersen & Philipsen, 1998) outline and redefine the characteristics of products as the Search-Experience-Credence goods (Gottschalk, 2018). The researchers argue that relevant attribute information for experience and credence goods are not available to the customers before the purchase (Girard and Dion, 2010). Masks and sanitizers fit into the definition of experience goods, where the product quality is possible to assess by the customers in their post-purchase stage (Swaminathan, J. Fox, and K. Reddy, 2001). The products are relatively new to the shopping basket of many consumers and consumers’ identification and evaluation of product-related attributes is highly formative nature.

Various researchers address factors influencing the store choice of consumers. Predominantly the studies consider the brick-and-mortar formats and rarely the studies compare online formats or retailers. Store choice is influenced by shopping trip timing (Leszczyc, Sinha and Timmermans, 2000), brand loyalty (Dawes and Magda Nenycz-Thiel, 2014), lifestyle factors and shopping motives (Jayasankara Prasad and Ramachandra Aryasri, 2010), in-store layouts and shelf designs (Elbers, 2016). In the technology era of business, retailers or manufacturers’ websites, comparison websites, social media and blogs are modern sources of information and the online stores have become choice of not only information search but also, a source to buy.

In the monopolistic competitive structure of the online retail business in India, a few retailers dominate the competition. The online retailers present almost very similar product categories, brands, visuals, product specification and follow the same pricing policies of their competitors. Research work on signaling theory and cue theory suggests that producer or marketer’s credibility or the reputation are capable of reducing the perceived risk, uncertainty and improve the validity of information signals (Helm and Mark, 2007). Researchers prove that due to risk, experience and credence goods have direct influence from eWOM (Chiu, Chen, Wang and Hsu, 2019). If the purchase situation is a ‘straight re-buy’, there is a lesser need for additional information by the consumers. Nevertheless, in situations like modified re-buy or new purchases, consumers seek an opinion from other buyers, online sources and retailer’s website. Thus, while buying products like masks and sanitizers, which experience in nature, consumers’ dependencies are higher on retailer’s websites and reviews from other consumers.

The Theory of Planned Behavior proposed by (Ajzen, 1991) pointed out that behavioral intention and behavioral control are predictors of behavioral achievement. Theory of Planned Behavior interpreted that attitude and subjective norms of engaging in an action influence intention of people (George, 2004). Moreover, Theory of Planned Behavior finds it relevance in Internet Purchase Behavior and online purchases. In purchase decision process, a buyer searches information (intention) and aware of sources, product attributes, retailers attributes (control) to arrive decision (achievement). However, reviewers can effectively use the information from alternate sources,
only if the information available is similar, identical, superior or complementary.

Unless the distribution of various review characteristics is well known, reviewers cannot use an alternate source of information in the decision process. To address this research gap, we compare the online reviews of Amazon and Flipkart and establish the distribution characteristics of online reviews. We analyze review characteristics like star rating, review length and helpful votes that are ‘visual’ in nature. Finally, we show how the information asymmetry present in the search attributes, affect E-retail store choice decisions.

2. Review of Earlier Studies

Word-of-Mouth communication (WOM) and electronic-WOM (eWOM) play a significant role in recommendation-based heuristics and hybrid decision processes (Chatterjee, 2001). In general, information search theories suggest a common process, which includes stages like need identification, decision to use, source selection, collection, interpretation and use of the information (Kundu, 2017). Research work on channel choice behavior proves the influence of offline channel’s service quality and performance levels on choosing the online channels (Yang, Lu and Chau, 2013). However, the determinants of an online retailer as a shopping destination or the role of online reviews on store choices are found a place in the retail researches.

Design of the webpage and navigation are the key drivers of success for the online retail stores (Wu and Tsai, 2017). Moreover, online retailers need specialized skills to acquire and maintain customers’ preferences and handle privacy, security risks related to the reviews they post online (Ayanso, Lertwachara and Thongpapanl, 2010) in addition to ensure availability of required information to reviewers.

To facilitate any new buyers, purchase process, many offline stores create similar layout structures and identical shelf locations for various products. In parallel, online firms create identical menu structure, product grouping and online customer review templates. If we consider online review characteristics of Amazon and Flipkart, both the firms provide almost similar features in the consumer’s review template except few fields, which are unique in the review forms (See Appendix-1). Fields like profile image, user profile and comment for review are unique in Amazon, whereas, fields like review location and not helpful reviews are unique in Flipkart reviews.

Among many review characteristics, star rating (a visual with star symbol), review length (long reviews or short) and helpfulness of the review (number of votes, represented by thumbs-up symbol) strike any reviewers attention and we operationalize them as ‘visual’ review characteristics for our study purpose. This study specifically tests the following hypotheses on e-retailer brands and their relationships with various review characteristics that are ‘visual’ in a review.

3. Hypotheses for the Study

3.1 Star Rating

Almost all the product or service websites provide a provision of registering a consumer opinion in a numeric rating scale, ranging from one to five. Known as star rating, it conveys a glimpse of the review content in one go to the reviewer. Various studies have addressed the significance of star rating; its influences on consumer purchase process (Wang, Cunningham and Eastin, 2015), association with product liking (Moe and Trusov, 2011), sales volume (Chiu et al., 2019); (Arbelles, Berry and Theyyil, 2020) and post-purchase satisfaction level (Chua and Banerjee, 2016). Even though this numeric summary provides signals faster than the content itself, extreme review ratings are considered as less helpful in the consumer’s decision process (Mudambi and Schuff, 2010b).

Review length is another visual message characteristic that influences a reviewer’s decision process. A study on review length proves that 3 to 5 lines as, ideal review length (Hernandez-Ortega, 2020). Another study finding shows that longer reviews are associated with high-ranked reviewers (Baek, Ahn and Choi, 2012). Researchers prove that review length affects perceived
helpfulness (Ryan and Alexander, 2010) and the utility of the review (Heng, Gao, Jiang and Chen, 2018).

Helpfulness votes of a review are another parameter that improves the credibility of an online review. Online retailers make efforts to bring down the expectation-performance gap of online sources in the purchase decision process by adding the source credibility and trustworthiness of a reviewer in the online review templates (Mumuni, Lancendorfer, O’Reilly and MacMillan, 2019). Firms are also encouraging a customer to provide testimonial and referrals in the online review system (Anastasiei and Dospinescu, 2019) thereby involving him in the information search process. To identify and use helpfulness review in the search process, firms hire people to create interactive online product review systems (Lin, Bruning and Swarna, 2018).

Thus, earlier studies have brought out the significance of various visual review characteristics. However, all the researches consider the context of a regular buying decision process. Unless the distribution of star rating, review length and helpfulness votes are ‘similar’, ‘identical’ between two retailers, a reviewer cannot use the information in his decision process. However, no research works in the past address variation in the star rating, review length and helpfulness votes between two online retailers. Thus, to understand the distribution of select ‘visual’ review characteristics and the variation across e-retailers and brands sold by them, we propose the following hypotheses.

\( H_1: \) Online retailer brands and online review characteristics (‘visual’) are independent of each other.

The hypothesis \( H_1 \) is tested for a set of ‘visual’ review characteristics like ‘star rating (\( H_{11} \))’, ‘review length (\( H_{12} \))’ and ‘helpfulness of a review (\( H_{13} \))’.

Further, to understand the association between e-retailer brands and their review characteristics, we compare the review characteristics across the e-retailer brands and brands sold by them [exclusive brand and common brand]. The following hypothesis \( H_2 \) is tested again for the set of review characteristics that are ‘visual’ in a review.

\( H_2: \) Online review characteristics (‘visual’) are varying significantly across the online retail brands and brand sold by them.

The hypothesis \( H_1 \) is tested for a set of ‘visual’ review characteristics like ‘star rating (\( H_{21} \))’, ‘review length (\( H_{22} \))’ and ‘helpfulness of a review (\( H_{23} \))’.

4. Methodology

To compare online review characteristics of the products, we use sample reviews from Amazon and Flipkart websites. For the analysis purpose, we consider the reviews of experience category products masks and sanitizers from March 2020 to June 2020, posted from India. Out of the 34263 sample reviews taken for the study, 67% of the reviews (23092 reviews) are from Flipkart and the remaining 33% of reviews are (11171 reviews) from Amazon. Various brands related information is summarized in Table 1.

To understand how online consumers, review characteristics vary between Amazon and Flipkart, we collect online reviews of various brands of Mask and Sanitizers. The brands sold are further classified as exclusive and common; for example, in Table 1, ‘Dettol’ is sold only in Flipkart whereas ‘boroplus’ only in Amazon and few brands like ‘Dabur’ by both the players. In particular, we analyze variations in the star rating, review length and helpfulness votes for the reviews between online retailers (Amazon and Flipkart) and brands sold by them (common brands and exclusive brands). Hence, this study can be considered as a descriptive research work (Cooper and Schindler, 2002).

4.1 Pre-processing the Data

Preprocessing of the text data is the starting point of any text analysis procedure. Through the R-Programming and the R-studio, we use plugins like ‘wordcloud’, ‘wordcloud2’ and ‘tm’ and ‘gsub’ command to preprocess the data. As per the earlier literature guidelines, the preprocessing is done (Al-Otaibi et al., 2018; Gaikar and Marakarkandy, 2015). In this stage, various tasks like the removal of punctuations, special characters in a review, numbers and symbols, lowercasing
the words, removal of stem words and blank spaces are carried out. Then for each review, we counted the number of words in the review and added them back to the dataset for further analyses.

It is well-known fact that www.amazon.in and Flipkart gives the flexibility in filling the feedbacks, where, all the fields are not mandatorily to be filled by the reviewers, except star rating. Hence, in some places, the sample sizes would be varying from the total reviews collected. For example, the helpful field not filled by all the reviewers and, only 10% of the reviews received at least one vote for helpfulness component in a review.

5. Results

To test the hypothesis-1 (H₁) on the association between review characteristics and online retail brands, we use Chi-square test of independence and the results summarized in Table 2 conclude that Star rating and E-retailer brands are dependent upon each other \(\chi^2 = 1535.051, \text{Sig.} = 0.000\) and there is support for the hypothesis H₁₁.

In addition, to test the hypothesis-1 (H₁) on review characteristics and online retail brands, we use Chi-square test of independence and the results provided in Table 4, conclude that Helpfulness of reviews and E-retailer brands are dependent upon each other \(\chi^2 = 1637.602, \text{Sig.} = 0.000\) and there is support for the hypothesis H₁₃.

From the specific hypotheses results of H₁₁, H₁₂ and H₁₃, it is clear that online review characteristics and e-retailer brands are dependent upon each other and there is a support for the hypothesis H₁.

To test the hypothesis H₂ on the review characteristics across the e-retailer brands and brands sold by them, we use a 2 X 2 Univariate Factorial ANOVA. We consider star ratings of the reviews as a dependent variable, E-retailers (Amazon vs. Flipkart), Brands sold (Exclusive brands vs. Common brands) as the factor variables.

The result of Univariate Factorial ANOVA given in Table 5 & Table 6 shows that the main effects (E-retailer and Brands) are significant and their interaction effect (E-retailer X Brands) is significant. Thus, there is a support for the hypothesis (H₂₁) that the star ratings of

| Table 1. Reviews of exclusive and common brands used in the study |
|---------------------------------------------------------------|
| **Brands sold exclusively by the E-retailers** | **Brands commonly sold by the E-retailers** |
| Flipkart | Amazon |
| Asian, Dettol, Flipkart, Godrej, Jokot, Peter_England, Phouri, Venus, Wildcraft | Armv, big_tree, bodyguard, boroplius, mediweave, mirah, onroad, oriley, oromask, scott, solimo, urbangabru, xstore |
| **Table 2. Test of independence for star rating and E-retail brands** |
| 1 | 2 | Star Rating of the review | Total |
| | | 3 | 4 | 5 |  |
| E-retailer | Flipkart | Count | 2554 | 899 | 2097 | 4778 | 12764 | 23092 |
| | % within E-retailer | 11.1% | 3.9% | 9.1% | 20.7% | 55.3% | 100.0% |
| Amazon | Count | 2928 | 745 | 979 | 1738 | 4781 | 11171 |
| % within E-retailer | 26.2% | 6.7% | 8.8% | 15.6% | 42.8% | 100.0% |
| Total | Count | 5482 | 1644 | 3076 | 6516 | 17545 | 34263 |
| % within E-retailer | 16.0% | 4.8% | 9.0% | 19.0% | 51.2% | 100.0% |

Pearson Chi-Square = 1535.051 [DF=4, Sig. = 0.000]
the reviews vary across E-retailers and Brand Sold by the retailers.

Again, to test the hypothesis $H_2$ on the review characteristics across the e-retailer brands and brands sold by them, we use a 2 X 2 Univariate Factorial ANOVA. We consider Length of the reviews as a dependent variable, E-retailers (Amazon vs. Flipkart), Brands sold (Exclusive brands vs. Common brands) as the factor variables.

The summary result of Univariate Factorial ANOVA given in Table 7 & Table 8 shows that the main effects (E-retailer and Brands) are significant and their interaction effect (E-retailer X Brands) is significant. Thus, there is a support for the hypothesis ($H_{21}$) that the review length varies across E-retailers and Brand Sold by them.

To test the hypothesis $H_3$ on the review characteristics across the e-retailer brands and brands sold by them, we use a 2 X 2 Univariate Factorial ANOVA. We

---

### Table 3. Test of independence for review length rating and E-retailer brands

| E-retailer | Brand Type | Less than 5 Words | 5-10 Words | More than 10 Words | Total |
|------------|------------|-------------------|------------|-------------------|-------|
|            |            | Count             | % within E-retailer | Count             | % within E-retailer | Count             | % within E-retailer | Count             | % within E-retailer | Count             | % within E-retailer |
| Flipkart   | Common     | 17455             | 75.6%       | 3319              | 14.4%             | 2318              | 10.0%             | 23092             |                    |                   |
| Amazon     | Exclusive  | 5860              | 52.5%       | 2246              | 20.1%             | 3065              | 27.4%             | 11171             |                    |                   |
| Total      |            | 23315             | 68.0%       | 5565              | 15.7%             | 5383              | 100.0%            | 34263             |                    |                   |

Pearson Chi-Square = 2195.054 [DF = 2, Sig. = 0.000]

### Table 4. Test of independence for helpfulness of reviews and E-retailer brands

| E-retailer | Brand Type | No Votes | Up to 10 Votes | Count | % within E-retailer | More than 10 Votes | Count | % within E-retailer | Total | Count | % within E-retailer |
|------------|------------|----------|----------------|-------|---------------------|--------------------|-------|---------------------|-------|-------|---------------------|
|            |            |          |                |       |                     |                     |       |                     |       |       |                     |
| Flipkart   | Common     |          |                | 22139 | 95.9%               | 821                | 132   | 0.6%                | 23092 |                    |
| Amazon     | Exclusive  |          |                | 9280  | 83.1%               | 1723               | 168   | 1.5%                | 11171 |                    |
| Total      |            |          |                | 31419 | 91.7%               | 2544               | 300   | 0.9%                | 34263 |                    |

Pearson Chi-Square = 1637.602 [DF = 2, Sig. = 0.000]
consider helpful votes in a review as a dependent variable, E-retailers (Amazon vs. Flipkart), Brands sold (Exclusive brands vs. Common brands) as the factor variables. We consider only the reviews, which received at least one helpful vote for this analysis.

The result of Univariate Factorial ANOVA given in Table 9 & Table 10 shows that the main effect
‘E-retailer’ is a significant one and the main effect of Brands and their interaction effect (E-retailer X Brands) are not significant. Thus, there is partial support for the hypothesis (H$_{23}$) that the mean helpful votes per review vary across E-retailers and brand sold by them.

From the specific hypotheses results of H$_{21}$, H$_{22}$ and H$_{23}$, it is clear that online review characteristics are varying across e-retailer brands and brands sold by them. Thus, there is partial support for the hypothesis H$_2$.

6. Discussion

WOM communications predominantly consider personal sources only. Based on the closeness with a personal source, the information is classified as weak or strong. However, this feature is not directly available to the internet forums (Chatterjee, 2001). To overcome this issue, the consumer often gives higher importance to product websites and E-retailer’s sources. Researchers prove that firms can be benefited by effectively managing buyer-created information in their product websites (Chen and Xie, 2008). In line with the views, Amazon and Flipkart allow users to generate reviews and feedbacks from their post-purchase consumption. In this research work, we compare and show variation in online consumer review characteristics of two product websites.

From the comparisons of Amazon and Flipkart reviews, it is evident that star rating, review length and helpful votes of the reviews vary between the e-retailers. The cross-tabulation on these results further support that if a consumer switches from Flipkart to Amazon website, 1. The likelihood of seeing lower star-rated reviews are higher than Flipkart; 2. The likelihood of seeing longer reviews are higher than Flipkart and 3. The likelihood of seeing reviews with helpful votes are more in number for Amazon reviews. The results clearly have brought out the systematic variation on the reviews posted between Amazon and Flipkart. Thus, unless the consumers have distribution characteristics of reviews, it is not easy to compare the product or brand reviews from two different sellers or switching from one seller to another.

Another significant dimension, we consider in our research, is the role of brands sold by them. Few brands are available in the shelves of both the retailers (common brands) whereas, another set of brands are unique to a specific retailer (exclusive brands). Further analyses on review characteristics across the e-retailer brands and brands sold by them provide evidence that the means of star rating, review length and helpful votes of the reviews are varying significantly across e-retailers and brands sold by them.

If a consumer switches from Flipkart to Amazon website, the likelihood is more to see 1. Comments with lower star ratings, 2. Comments of common brands sold getting lower star ratings and 3. Comments of its exclusive brands also get lower star ratings. Thus, Flipkart reviews receive a higher star rating than Amazon reviews. We have observed this systematic variation between Amazon and Flipkart reviews.

As far as review length is concerned, if a consumer switches from Flipkart to Amazon website, the likelihood is more to see 1. Longer comments, 2. Longer comments for common brands sold and 3. Longer comments for its exclusive brands. Thus, Flipkart reviews will be shorter than Amazon reviews.
Again, this is another systematic variation between Amazon and Flipkart reviews.

By combining the results on review length and star rating, we have noticed that our results are different from an earlier work, where the researchers claim that longer reviews are positive and higher star rated (Korfiatis, García-Bariocanal and Sánchez-Alonso, 2012). 5% of Flipkart reviews and 17% of Amazon reviews have received helpfulness votes. Among the helpful reviews, however, the mean number of votes per review is higher for Flipkart than Amazon.

By combing the review length and helpfulness results, we have noticed that our study findings are in line with an earlier study, where the researchers concluded that lengthier reviews are more helpful than shorter reviews, which is true in the case of Amazon reviews (Mudambi and Schuff, 2010a).

Thus, the marketers have to address a key concern on the review characteristic. Researchers show that voluminous data available from online sources has a dysfunctional effect of creating confusion rather than providing clarity to the customers (Sturiale and Scuderi, 2013); (Baek et al., 2012). It is an important task for the firms to eliminate this confusion. Moreover, the consumers need credible and valuable online reviews, that create a positive attitude, which in turn, influence the purchase decision process (Mumuni et al., 2019).

7. Managerial Implications

The e-retailers should come up with strategies to reduce such asymmetry in such a way to make it useful for the new buyers or buyers who plan to switch. Firms are already providing information characteristics like more helpful review and ranking of the reviewers, in addition to sorting facilities of reviews based on star rating, most recent and helpfulness. If needed, more information metrics for review characteristics can be added to the website dashboards. Due to COVID19 impact, more number of new customers is visiting the sites for the first time and, they rely on reviews and try to make their purchase decisions based on reviews shared by the customers as directional views for their purchase decisions.

Researchers prove that if reviews contain information related to product quality, the likelihoods are higher for the review to receive helpfulness votes (Singh et al., 2016). However, a significant review characteristic, the helpfulness of a review, reflected by the number of votes, are very less in number for Flipkart. Research results show product quality and price influence the buyers to post online reviews of the products (Duan, Gu and Whinston, 2008). Hence, Flipkart may encourage consumers to provide reviews based on product attributes.

In the eWOM context, the consumers express their service quality satisfaction through star ratings (Park and Nicolau, 2015). More number of lower started reviews in Amazon may create a negative impression for the first time user, even though information theory on rational consumers suggests that they will give more weightage to negative information than positive to reduce risk of losses (Hong, Xu, Wang and Fan, 2017). To overcome this issue, Amazon may think of classifying the reviews as ‘service performance’ and ‘product-related’ so that its brand equity is not hit by the poor performance of a product or brand. Since Amazon receives more number of helpful votes for its reviews, they should add further details like the product category, reviewer’s expertise and review sidedness for its reviews to enhance their helpfulness review mechanism (Ming-Yi Chen, 2016).

8. Conclusion

Comparison of e-retailers’ online reviews and its research, managerial implications are less researched in the past. A research finding on review characteristics suggests that about-to-buy shoppers look for positive reviews as an affirmation to their decisions and the retailers should ensure access of such positive reviews (Ong, 2011). In general, the consumers would like to create channel synergies between the retailers rather than dissynergies, so that they can use them as complementary (Yang et al., 2013). Particularly, this strategy would provide better outcomes, when a
preferred product or brand is not available with one retailer. Periods of lockdown, restriction of shopping timings, the consumers prefer to choose alternate channels. However, to rely on his decision to use a retailer, he needs overall review characteristics of online retailers to evaluate them. Unfortunately, product websites, review blogs or social media platforms do not provide insights on the distribution of review characteristics.

In this study, we have brought out the distribution characteristics of Amazon and Flipkart reviews. In particular, we showed how the distribution of star rating varies from one retail to another. For example, due to non-availability of mask or sanitizer, if the buyer moves from Flipkart to Amazon, he would likely to see more number of negative reviews for the product. We further proved that both the retailers sell the brand, still, the buyer is likely to see a number of negative ratings for the products in Amazon.

Readability of a review and review length affect the helpfulness of a review (Singh et al., 2016). In our research, we have proved that shorter reviews are often found in Flipkart than Amazon and in turn, Amazon has more helpful votes than Flipkart. This is true for even the brands common to both the retailers. If it is a new buy or modified re-buy, the reviews Amazon will provide more insights than shorter reviews of Flipkart.

Researchers on helpfulness of online review established that a retail site with more helpful reviews give better value to the consumers (Mudambi and Schuff, 2010c). A research work on predicting helpfulness of the review shows that star rating is significant determiner for certain product categories (Singh et al., 2016). One-star and two-star rated reviews contain more of negative words and sentiments and considered as helpful reviews than a 4-star or 5-star rated reviews (Reddy, Kumar, Keshav, Prasad and Agarwal, 2017). This research work findings complement the findings of earlier studies; even though Amazon reviews’ mean star rating is lower than Flipkart, relatively a large proportion of customers have registered Amazon reviews are helpful. This is again, a complex information presentation by the online reviewers. Unless the consumers fully aware of the distribution characteristics of helpful votes and star rating, it will create constraints to use information from an alternate channel.

We have also proved that the review characteristics are varying for the brands commonly sold by both the retailers. If it is an exclusive brand, it has lower mean star rating than brands commonly sold. Hence, it is clearly established that the consumers shift from one e-retailer to another involve voluminous information processing.

9. Limitations and Future Research Directions

The products like masks and sanitizers are recent entry to mass-market consumption. Until March 2020, specialized user segments post most of the reviews and suddenly from March 2020, common people purchase the products and posting reviews online. Experience goods attributes are difficult to evaluate even in the post-consumption stage and for many consumers, even attribute related information might not be available for comparisons. Thus, consumers might have posted reviews based on their preliminary evaluations. The firms generally restrict demographic details and, hence we did not analyze the role of demographic details and their influence on the visual characteristics of online reviews.

In the current research, we consider the products from credence category alone; a betweenness comparison of online retailers across the category of goods (search or experience or credence) will bring further insights on review characteristics. By including the mood of the consumers, future researches can bring temporal variables influence in the reviews. From the profile of the users, it is possible to identify consumer-buying segments and review characteristics may be analyzed across the buyer segments.

10. References

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes. 50(2):179–211. https://doi.org/10.1016/0749-5978(91)90020-T.
Al-Otaibi, S., Alnassar, A., Alshahrani, A., Al-mubarak, A., Albugami, S., Almutiri, N. and Albugami, A. (2018). Customer satisfaction measurement using sentiment analysis. International Journal of Advanced Computer Science and Applications. 9(2):106–17. https://doi.org/10.14569/IJACSA.2018.090216.

Anastasiei, B., and Dospinescu, N. (2019). Electronic Word-of-Mouth for online retailers : Predictors of Volume and Valence. Sustainability. 11(814):1–18. https://doi.org/10.3390/su11030814.

Andersen, E. S., & Philipsen, K. (1998). The evolution of credence goods in customer markets : exchanging ‘pigs in pokes’. In DRUID Winter Seminar, Middelfart. pp. 1–19.

Arbelles, K. D’, Berry, P. and Theyyyil, A. (2020). Electronic Word-of-Mouth marketing on Amazon: Exploring how and to what extent Amazon reviews affect sales. The McMaster Journal of Communication. 12:50–79.

Ayanso, A., Lertwachara, K. and Thongpapanl, N. (2010). Technology-enabled retail services and online sales performance. Journal of Computer Information Systems. (Spring). 102–11. https://doi.org/10.1080/08874417.20 10.11645412.

Baek, H., Ahn, J. and Choi, Y. (2012). Helpfulness of online consumer reviews: Readers’ Objectives and Review Cues. International Journal of Electronic Commerce. 17(2): 99–126. https://doi.org/10.2753/JEC1086-4415170204.

Chatterjee, P. (2001). Online reviews : Do consumers use them? ACR 2001 Proceedings. M. C. Gilly and J. Myers-Levy, eds. Provo, UT: Association for Consumer Research. p. 129–34.

Chen, Y. and Xie, J. (2008). Online consumer review: Word-of-Mouth as a new element of marketing communication mix. Management Science. 54(3): 477–91. https://doi.org/10.1287/mnsc.1070.0810.

Chiu, Y. L., Chen, K. H., Wang, J. N, and Hsu, Y. T. (2019). The impact of online movie Word-of-Mouth on consumer choice: A comparison of American and Chinese consumers. International Marketing Review. 36(6): 996–1025. https://doi.org/10.1108/IMR-06-2018-0190.

Chua, A. Y. K. and Banerjee, S. (2016). Helpfulness of user-generated reviews as a function of review sentiment, product type and information quality. Computers in Human Behavior. 54:547–54. https://doi.org/10.1016/j.chb.2015.08.057.

Cooper, D. R. and Schindler, P. S. (2002). Business Research Methods. New Delhi: Tata McGraw-Hill;

Dawes, J. and Magda Nencycz-Thiel. (2014). Comparing retailer purchase patterns and brand metrics for in-store and online grocery purchasing purchasing. Journal of Marketing Management. 30(3/4):1–36. https://doi.org/10.1080/0267257X.2013.813576.

Duan, W., Gu, B. and Whinston, A. B. (2008). Do online reviews matter? - An empirical investigation of panel data. Decision Support Systems. 45:1007–16. https://doi.org/10.1016/j.dss.2008.04.001.

Elbers, T. (2016). The effects of in-store layout- and shelf designs on consumer behaviour.

Gaikar, D. and Marakarkandy, B. (2015). Product sales prediction based on sentiment analysis using Twitter data. International Journal of Computer Science and Information Technologies. 6(3):2303–13.

George, J. F. (2004). The theory of planned behavior and Internet purchasing. Internet Research. 14(3):198–212. https://doi.org/10.1108/106622404104542634.

Girard, T. and Dion, P. (2010). Validating the search, experience and credence product classification framework. Journal of Business Research. 63(Sep):1079–87. https://doi.org/10.1016/j.jbusres.2008.12.011.

Gottschalk, F. (2018). What characterizes Credence Goods? A critical look at the literature. SSRN Electronic Journal. Jan:1–23. https://doi.org/10.2139/ssrn.3114257.

Helm, R. and Mark, A. (2007). Implications from cue utilisation theory and signalling theory for firm reputation and the marketing of new products. International Journal of Product Development. 4(3-4):396–411. https://doi.org/10.1504/IJPD.2007.012504.

Heng, Y., Gao, Z., Jiang, Y. and Chen, X. (2018). Exploring hidden factors behind online food shopping from Amazon reviews: A topic mining approach. Journal of Retailing and Consumer Services. 42:161–8. https://doi.org/10.1016/j.jretconser.2018.02.006.

Hernandez-Ortega, B. (2020). When the performance comes into play: The influence of positive online consumer reviews on individuals’ post-consumption responses. Journal of Business Research. 113(Aug):422–35. https://doi.org/10.1016/j.jbusres.2019.08.026.

Hong, H., Xu, D., Wang, G. A. and Fan, W. (2017). Understanding the determinants of online review helpfulness: A meta-analytic investigation. Decision Support Systems. 102:1–11. https://doi.org/10.1016/j.dss.2017.06.007.

Jayasankara Prasad, C. and Ramachandra Arazy, A. (2010). Shoppers’ attributes on supermarket store choice behavior in food and grocery retailing in India - an empirical analysis. Journal of Business and Retail Management Research (JBRMR). 4(2):77–92. http://www.jbrmr.com/cdn/article_file/i-5_c-35.pdf.
Korfiatis, N., Garcia-Bariocanal, E. and Sanchez-Alonso, S. (2012). Evaluating content quality and helpfulness of online product reviews: The interplay of review helpfulness vs. review content. Electronic Commerce Research and Applications. 11(3):205–17. https://doi.org/10.1016/j.elerap.2011.10.003.

Kundu, D. K. (2017). Models of information seeking behaviour: A comparative study. International Journal of Library and Information Studies. 7(4):393–405. http://www.ijlis.org.

Leszczyc, P. T. L. P., Sinha, A. and Timmermans, H. J. P. (2000). Consumer store choice dynamics: An analysis of the competitive market structure for grocery stores. Journal of Retailing. 76(3):323–45. https://doi.org/10.1016/S0022-4359(00)00033-6.

Lin, H.-C., Bruning, P. F. and Swarna, H. (2018). Using online opinion leaders to promote the hedonic and utilitarian value of products and services. Business Horizons. 1–12. https://doi.org/10.1016/j.bushor.2018.01.010.

Ming-Yi Chen. (2016). Can two-sided messages increase the helpfulness of online reviews? Online Information Review. 40(3):316–32. https://doi.org/10.1108/OIR-07-2015-0225.

Moe, W. W. and Trusov, M. (2011). The value of social dynamics in online product ratings forums. XLVIII(Jun): 444–56. https://doi.org/10.1509/jmkr.48.3.444.

Mudambi, S. M. and Schuff, D. (2010a). What makes a helpful online review? A study of customer reviews on amazon.com. MIS Quarterly. 34(1):185–200. https://doi.org/10.2307/20721420.

Mudambi, S. M. and Schuff, D. (2010b). What makes a helpful online review? A study of customer reviews on amazon.com. MIS Quarterly. 34(1):185–200. https://doi.org/10.2307/20721420.

Mudambi, S. M. and Schuff, D. (2010c). What makes a helpful online review? A study of customer reviews on amazon.com. MIS Quarterly: Management Information Systems. 34(1):185–200. https://doi.org/10.2307/20721420.

Mumuni, A. G., Lancendorfer, K. M., O’Reilly, K. A. and MacMillan, A. (2019). Antecedents of consumers’ reliance on online product reviews. Journal of Research in Interactive Marketing. 1–22. https://doi.org/10.1108/JRIM-11-2017-0096.

Ong, B. S. (2011). Online shopper reviews: Ramifications for promotion and website utility. Journal of Promotion Management. 17(3):327–44. https://doi.org/10.1080/10496491.2011.597304.

Park, S. and Nicolau, J. L. (2015). Asymmetric effects of online consumer reviews. Annals of Tourism Research. 50:67–83. https://doi.org/10.1016/j.annals.2014.10.007.

Reddy, C. S. C., Kumar, K. U., Keshav, J. D., Prasad, B. R. and Agarwal, S. (2017). Prediction of star ratings from online reviews. Malaysia: IEEE Region 10 Conference (TENCON); p. 1857–61. https://doi.org/10.1109/TENCON.2017.8228161.

Ryan, H. and Alexander, C. (2010). The impact of product line extensions and consumer goals on the formation of price image. Journal of Marketing Research. 47(1):51–62. https://doi.org/10.1080/10496491.47.1.51.

Singh, J. P., Irani, S., Rana, N. P., Dwivedi, Y. K., Saumya, S. and Kumar Roy, P. (2016). Predicting the “helpfulness” of online consumer reviews. Journal of Business Research. 70:1–10. https://doi.org/10.1016/j.jbusres.2016.08.008.

Sturiale, L. and Scuderi, A. (2013). Evaluation of social media actions for the agrifood system. 6th International Conference on Information and Communication Technologies in Agriculture, Food and Environment (HAICTA 2013). Elsevier B.V. 8:200–8. https://doi.org/10.1016/j.procy.2013.11.028.

Swaminathan, V., J.Fox, R. and K.Reddy, S. (2001). The impact of brand extension Introduction on choice. Journal of Marketing. 65(1):1–15. https://doi.org/10.7232/iems.2017.16.4.437.

Wang, S., Cunningham, N. R. and Eastin, M. S. (2015). The impact of eWOM message characteristics on the perceived effectiveness of online consumer reviews. Journal of Interactive Advertising. 15(2):151–9. https://doi.org/10.1080/15252019.2015.1091755.

Wu, S.-I. and Tsai, H.-T. (2017). A comparison of the online shopping behavior patterns of consumer groups with different online shopping experiences. International Journal of Marketing Studies. 9(3):24–38. https://doi.org/10.5539/ijms.v9n3p24.

Yang, S., Lu, Y. and Chau, P. Y. K. (2013). Why do consumers adopt online channel? An empirical investigation of two channel extension mechanisms. Decision Support Systems. 54(2):858–69. https://doi.org/10.1016/j.dss.2012.09.011.
Appendix -1

Online Reviews of Amazon & Flipkart

- Reviewer: Sudhakar Vijayakumar, G. Vidyashankar, R. Venkatesakumar, S. Madhavan and S. Riasudeen

---

**Amazon Review**

*Must buy!*

I really love the camera, though I would have loved a telephoto lens. The super steady OIS works like a charm.

I have been using M1 A1 with Android One platform before. I find it a bit hard to find the settings options in S10 lite and mostly resort to Google search figure out the settings.

The phone is fast. Great display.

The included case won't keep the dust out and will require regular cleaning or will damage the phone's outer layer.

The fingerprint scanner is small and not so accurate.

---

**Flipkart Review**

*Terrific purchase*

**Best Camera**

**Best Performance**

**Best Battery Backup**

**Video Quality Awesome**

---

**Amazon Review**

*Zargham Haider*

*5* stars

That display!!!

Verified Purchase

So happy to get my pm ordered S10. So far I'm impressed with most part. The display is unimaginably awesome, and pics don't do justice.

---

**Amazon Review**

*Ashish Goyal*

*5* stars

The NoNonsense Device.

Verified in India on 18 March 2019

Hello, this is going to be a long-detailed review... So make yourself comfortable, relax and let's begin.

I got this device on 6th March from flipkart, pre booked on 2nd Feb itself. Probably one of the early recipients of this device. Then why did take such long to post this review?

Because I didn't want to post an incomplete review for the sake of likes and views. I want my review to help average consumer to make his decision as this is an expensive device.

I'll start with Pros of device, because why not? Everyone likes to hear good thing first, right? I'll spare your time with specs as you have already seen the specs sheet anyways. This is going to be real life review.

1. Dynamic AMOLED Screen: Sure, the dynamic term is marketing, but you know that Samsung is the best display manufacturer and this device is no exception.

2. Camera Performance: This device has a fantastic camera.

3. Performance: I'm sure all of you are aware of Snapdragon 855.

4. Battery Life: The battery is expected to last for 1 day with normal usage.

5. Design: The device has a sleek and stylish look.

---

**Flipkart Review**

*Type here to search*

---

**Amazon Review**

*Type here to search*