

MACS 30200

Literature Review

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Customer review has played a critical role in the operation of businesses, and it has long been a topic behavior economics, business and marketing researches. In the old days, customers' perceptions are spread from person to person through daily conversations, and previous literatures have provided evidence that traditional viva voce customer ratings affect business revenue. For example, Mahajan et al. (1984) discussed the behaviors of word-of-mouth spread based on a new "diffusion model" in movie markets, and provided evidence that better customer perceptions lead to high movie revenue, while negative customer reviews can result in low revenue. Not only in commercial areas, similar patterns also exhibit in public sectors. Mackay and Crompton (2006) analyzed customer reviews in recreation service, and also provided evidence that better guest reviews increase revenue. However, with the development social media and technology, the online business rating platforms have become more and more important in business operation and management, and online review systems have substituted the role of traditional word-of-mouth to some extent. Furthermore, online ratings have the same type of boosting effect on restaurant revenue as viva voce guest reviews. There are more abundant literatures on how online reviews affect sales and revenue of products, partly due to the fact that online review data are more easily collected and analyzed, and some authors even employed more recent computational methods as innovative tools to do analysis to a deeper level. Moreover, such effect exists in various industries. For instance, Liu (2006) discussed the patterns and effect of movie reviews on Yahoo movies, claiming that the forum is most active just before the release of the movies, while the reviews has the strongest effect on box office revenue when movies are on. As for books market, Chevalier and Mayzlin (2006) analyzed customer reviews and sales of books on Amazon.com and Barnesandnoble.com, and found out that better reviews on one site lead to better sales in that sight, and 1-star reviews have larger effect on sales than 5-star reviews. More closely related to my research topic, Zhang et al. (2010) investigated reviews by consumers and editors, and

found out that consumer reviews have positive effect on people's intention to visit a restaurant, while editor reviews exhibit negative effect. Park and Nicolau used dataset of around 5000 reviews of 45 restaurants in London and New York, and claimed the asymmetric effect of customer reviews – customers tend to react more to extremely good or bad reviews, while do not react much to others. Specific to Yelp.com, Luca (2016) discussed the positive effect of higher ratings to restaurant revenue. Furthermore, the author also described the behaviors of customers and restaurant ratings – a review of one restaurant does not affect chained restaurants, and customers are affected by a review that conveys more information, while exhibiting an asymmetric and less attention to other reviews. Anderson and Magruder (2012) did a similar analysis and yield similar result that positive reviews lead to higher restaurant revenue, while claiming different behaviors that such effect tend to be larger when other information of this restaurant is not available. Due to such influence of rating on restaurants, some restaurants even generates fake reviews to attract more customers and therefore increase their revenue (Luca, 2016).

Literatures in the previous paragraph have provided strong evidence that guest reviews play a significant role in determining a restaurant's revenue, and the boosting effect of customer reviews on business revenue provides my research with the ultimate legitimacy and underlying theoretical basis. Such information is valuable for both restaurant owners and customers. For restaurant operators, they need information about what underlying factors lead to higher ratings so that they can improve their ratings and revenue accordingly. For customers, they can adjust their own expectation for a restaurant accordingly. For instance, suppose quietness of a restaurant is positively correlated with the rating of a restaurant. If, however, a customer does not mind loud environment or even prefer loudness, he or she may expect that the restaurant is better than the rating suggests.

There are some literatures that investigate what factors lead to higher customer rating and satisfaction in different areas. The influencing factors on guest satisfaction vary according to industries. In business area, and specifically, hospitality industry, Ramanathan (2011) did research on hotels in United Kingdom, and found out that for

“value for money” is critical for returned stay of customers – it is crucial for increasing customers’ satisfaction, while inadequacy in “value for money” may lead to negative effect that cannot be improved by other factors. “Customer service”, “Room quality” and “Quality of good” are dissatisfier factors, which means that lower performance in these areas can lead to negative result in the number of returned customers. In finance sector, Yang and Fang (2004) used content analysis methods to investigate 52 items in 16 major service quality dimensions from a dataset of 740 reviews in online securities brokerage services. They found out that the most significant factor contributing to higher customer service is the primary service quality, and lower customer satisfaction is primarily resulted is information systems quality. Tripp et al. (2010) analyzed travelers at an information center, and investigated their behaviors – the most significant factors affecting their choices are sanitation, food quality, and service quality. McAuley and Leskovec (2013) used innovative computational methods in analyzing review texts, found out the factors influencing customer ratings, and even performed predictions of user ratings. Hu et al. (2014) even extend their studies to geological effect – higher rating of a restaurant tends to mildly increase the ratings of other surrounding restaurants. As for Yelp.com specifically, there is a paper that is very similar to what I intend to do. Huang et al. (2014) used computational methods - Latent Dirichlet Allocation (LDA) algorithms, predicted hidden topics in customer reviews, and claimed that service, values, taking out and decorations are the four most crucial factors that influence Yelp rating of a restaurant, followed by healthiness of food, waiting time, background music, breakfast availability, dinner availability, and lunch availability.

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