It’s my great pleasure to provide comments on this paper.

In a nutshell, the paper documents that there is a likely causal effect of a hotel’s online reputation on its advertising activity. The effect of a better reputation is negative on average, but positive for some hotels.

I would like to applaud the authors for having embarked on a massive data merging exercise. They combine data from Tripadvisor and Kantar Media and are therefore able to study the effect of online reputation on different measures of advertising activity, including advertising in magazines and newspapers, on TV and radio, and on the internet.

The empirical approach is borrowed from Anderson and Magruder (2012): The actual online reputation is continuous, as it is given by the average review received in a given time window. But on websites, the review score is rounded to multiples of 0.5, for instance, as it is displayed in terms of symbols such as stars. This gives rise to a regression discontinuity design: we can compare the advertising activity of firms for whom the reputation score is just rounded off to the one of firms for which it is just rounded up. Those firms are comparable, because they have almost the same underlying online reputation. This breaks the endogeneity problem that is otherwise present: firms that are higher rated are generally different from firms that are rated lower, which is why the cross-sectional correlation between advertising
activity and online review score does generally not have a causal interpretation. Here, this correlation is local—around the threshold—and therefore it does have such a causal interpretation.

We know since the late 1990’s that online reviews have an effect on sales. This was established in the context of eBay, an online trading platform, but has been shown recently to be the case much more broadly. Finding this is not surprising. When consumers search for products or the provider of a service, such as hotel accommodation or a taxi ride, then reviews provide valuable information about the quality of the product that cannot be credibly communicated online, for instance by means of a description of the product.

Because they are so powerful, review systems in which customers who bought the product or service share their experiences contributed to the success of trading platforms such as eBay for goods, Airbnb for accommodation, and Uber for taxi rides. It has been argued that these help to “build trust” (Resnick and Zeckhauser, 2002). One can also think of them as providing a form of certification.

From the perspective of the seller or the provider of a service, this means that a good online reputation record is valuable. Therefore, firms have an incentive to invest into such a record and exit the market if their record is not good enough (Cabral and Hortacsu, 2010). But instead of investing, they may also simply manipulate reviews. Mayzlin, Dover and Chevalier (2013) have investigated this for online reviews of hotels and find that especially independent hotels actually do so.
A review system can also be thought of as furthering market transparency. An increase in market transparency can be achieved by improving the feedback mechanism. It has been shown that sellers react to an increase in market transparency by providing better services to their customers and not by exiting the market (Klein, Lambertz and Stahl, 2016). This ultimately benefits consumers.

Against this backdrop, the paper by Hollenbeck, Moorthy and Proserpio asks the question how advertising spending depends on the online reputation, as summarized by a better star classification on Tripadvisor, a rating platform for hotels, restaurants and sights. First results presented at the QME conference in Frankfurt suggest that better displayed reviews lead to less advertising. Sample splits suggest that the effect is driven by independent hotels. There are additional results that suggest that advertising could also increase. This begs the question what the underlying mechanism is. I would like to encourage the authors to explore this further, by providing additional discussion and conducting additional analysis.

In general, I believe it would be helpful to look at online markets with reviews through the lens of a model in which firms have several instruments at hand. They can set prices, invest into quality, advertise, and manipulate ratings. To the best of my knowledge, there is no such model yet. Klein, Lambertz and Stahl (2016) provide a first sketch, but much more work is needed in the future. This is clearly beyond the scope of the paper by Hollenbeck, Moorthy and Proserpio, but nevertheless I believe it would add value to interpret the results that are presented with a sketch of such a framework in the back of one’s mind. I can also imagine that adding a section describing such a framework could add value to the paper.
Moreover, given that the paper is very close to Mayzlin, Dover and Chevalier (2014), who show that independent hotels are also more likely to manipulate ratings, I would be interested in knowing whether independent hotels either manipulate ratings or advertise more, if their rating score is low. Answering this question would involve using additional data, but this may be feasible, because Mayzlin, Dover and Chevalier also use Tripadvisor data for their paper.

In passing, the fact that ratings are manipulated by some hotels makes me wonder to what extent one would want to take this into account when interpreting the results presented in the paper. But I have no doubt that the authors will find a clever way to address this potential concern.

To summarize, the paper is a valuable addition to the literature because the authors combine a novel data set with a credible identification strategy to provide evidence on the causal effect of online reviews on advertising spending. I look forward to reading the next version of the paper and would particularly welcome additional work shedding light on the underlying mechanism and more discussion related to the question why some hotels react to a better online record with decreased advertising spending, while others such as budget hotels react with an increase in advertising spending.

References


