Title
Censorship and Experience Goods. Evidence from Online Wine Retail

I want to submit an abstract for:
Conference Presentation

Corresponding Author
Igor Cerasa

E-Mail Corresponding Author
igor.cerasa@gmail.com

Affiliation
Brown University

Co-Author/s

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Keywords
Experiment Ratings Wine Retail Online Welfare Censorship Crowd Scores Scraping Seller Demand Stated Choice Model

Research Question
Do sellers censor quality information on wines? Do consumers anticipate this behavior? What are the welfare consequences of what we observe in the online wine retail market?

Methods
We collected data from two online sources: a major wine retailer and an independent database of wine reviews. We also designed an online experiment using stated choices methods.

Results
We documented that sellers censor low expert scores, selected the maximum score when more than one is available, and that consumers do not anticipate this behavior. We discuss welfare consequences.

Abstract
Wines are a classic example of experience goods, a category of products whose quality is unknown before consumption. When making a decision, consumers can greatly benefit from the guidance of pre-purchase information to signal about quality. Over the past decades, digitization has made it easier to disseminate independent evaluations from different sources, divided into two broad categories: professional critics, who can be influential as individuals, and crowd-based ratings, generated by individuals who have tried the product and decide to share their opinion. Unlike expert reviews, limited by the supply of professionals, crowd scores are available for almost every consumer product.

Given the importance that quality information has in this context, it is crucial to understand how this information is delivered to consumers, and whether the medium can have a differential impact on their welfare. In particular, we are interested in the role played by sellers, who have better knowledge than consumers, in facilitating or
undermining the learning process. Sellers can manipulate information if it is profitable or, in different situations, find it optimal to disclose everything they know. A connected question is whether consumers are aware of the strategic incentives faced by sellers, whether they take them into consideration when making a purchase decision, and how this affects their welfare. We therefore want to ask the following questions. First, do sellers decide whether to censor or disclose quality information to consumers; if they engage in censorship, how do they determine its pattern? Second, what is consumers attitude towards pre-purchase information, when it is provided by sellers as opposed as independent sources? Are they aware of sellers strategic incentive or are they acting naively? Finally, what are the welfare implications of what we observe in the data?

In theory, we should expect different results based on the specific characteristics of the market. Under ideal conditions, market can reach the so-called unraveling equilibrium, where every available information is reported, except that pertaining to the lowest type. For this to happen, stringent assumptions need to be met: namely that consumers are aware that the information exists, are able to understand it, and can think strategically about consequences. If this is not the case, we are likely to observe partial censorship, a reduction in welfare, and the potential for policy interventions, such as mandatory or third party disclosure.

This paper attempts to address these fundamental questions by studying the wine market. Online wine retail has several interesting features that make it particularly suitable for investigating the issue. First, wine is a clear example of an experience good, where quality information can be especially desirable. Second, the wine sector has a well established system of independent and reliable expert opinions in place, that dates back to the pre-internet era, through specialized magazines, journals and more recently websites. Third, crowd based reviews have emerged as a popular and powerful complement to traditional ratings, and are easily available on mobile apps. Most importantly, we were able to collect data from both a seller and an independent aggregator of expert ratings, and will thus be able to exploit the different incentives they face. We are therefore in the position to precisely describe the seller's behavior, and document whether it engages in information manipulation.

We construct a novel dataset that includes expert wine reviews as displayed by two different sources, for more than 100,000 different wines. One is a leading wine retailer's store, while the other is the comprehensive database of a leading wine search engine. We compare the distributions of reviews across websites, testing whether the retailer is less likely to report reviews that assign lower scores to a wine.

We consider whether censorship by the retailer can impact consumer choices by designing and implementing an online random choice experiment to collect data on consumers behavior. In the experiment, we ask consumers to choose wines from a virtual shelf, showing them information about wine attributes, expert and crowd based reviews. To evaluate how censorship impacts consumer choices, we randomly assign consumers to a control, and two different treatment groups. Individuals receive an information treatment that varies based on their group assignment. In one case we inform respondents that expert ratings come from an impartial and comprehensive source, while in the other we warn them that the scores displayed may be manipulated by the seller. Control group members receive no additional information, in an attempt to mimic as close as possible a real world environment. Comparing the behavior of different groups allow us to investigate whether they are aware of the seller's strategic incentives, if they react to them, and what are the possible welfare consequences.

We obtain three broad findings. First, we document that the seller engages in extensive censorship of lower scores, completely omitting values of 85 points or less, and engaging in the so-called score shopping, i.e. releasing only the highest score available for a given wine. Comparing crowd based scores from different sources, we present descriptive evidence compatible with the seller manipulating those as well, although we cannot exclude that other factors may play a role. Interestingly, we find that censorship affects wines considered good or very good by the reviewers, and scores that make a wine more likely to be chosen, both in our data and studies that use real transactions. Second, from our experiment we show that for any realistic score value, consumers are much more likely to purchase a wine if that score is displayed, and that they focus on the maximum score whenever more than one is available. Our estimates show that wines with scores below 89 points are 84 percent more likely to be chosen than wines with no ratings. Comparing only wines with at least one score, we estimate that a value of 90 points or more increases the likelihood of that wine being chosen by 25 percent. We are also able to evaluate the complementary of crowd based ratings, and show that a negative crowd score can erode up to three quarters of the effect of a positive expert rating. Third, we establish that consumers are extremely naive in addressing
strategic interactions with the seller, ignoring them even when they are explicitly warned about it. Specifically, we document that their behavior with respect to expert ratings is not different among treatment groups.

We discuss possible implications and welfare consequences. First, based on our estimation of consumers demand, any censorship of expert ratings reduces welfare, leading to the conclusion that, for the seller, the optimal censoring strategy is no censorship at all. Second, consumers appear to value more scores better than less scores, and do not take into account the seller's incentive. These two facts together have important welfare consequences for consumers as the number of available ratings increases over time. Sellers could mechanically increase the willingness to pay of consumers just by adding reviews, independently of the underlying quality of the wines. In this context, the complementary role of crowd based reviews becomes crucial as a counterbalancing factor, provided that they are not manipulated. This suggests that the market may benefit from policy interventions, aimed at regulating how consumers ratings should be handled from retail websites, namely the impossibility to censor or manipulate them.

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