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The Supply and Demand Effects of Review Platforms

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Review platforms such as Yelp and TripAdvisor aggregate crowd-sourced information about users' experiences with products and services. We analyze their impact on the hotel industry using a panel of hotel prices, sales and reviews from five US states over a 10-year period from 2005–2014. Both hotel demand and prices are positively correlated with their average ratings on TripAdvisor, Expedia and Hotels.com, and such correlations have grown over our sample period from a statistical zero in the base year to a substantial level today: a hotel rated one star higher on all the platforms on average has 25% higher demand, and charges 9% more. We argue that the price increases are due to a combination of revenue management and re-pricing: increased demand from higher ratings shifts hotels along an upward sloping supply curve, and also causes small but significant changes in the supply curve itself. A natural experiment in our data that caused abrupt changes in the ratings of some hotels but not others, suggests that these associations are causal. Building on this causal interpretation, we estimate heterogeneous treatment effects, showing that the impact of review platforms on hotels varies by organization form and hotel class. Specifically, we show that independent hotels that had little outside reputation prior to the entry of review platforms stand to gain more than chains.

Full paper available at: <http://people.bu.edu/zg/publications/reviews-supply-demand.pdf>

CCS Concepts: • **Information systems** → **Reputation systems**; **Electronic commerce**.

Additional Key Words and Phrases: online reviews; supply; demand; hotels

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