The Added Value of Data Analytics: Evidence from Online Retailers

Abstract:

Does the adoption of data analytics impact retailers' performance, and if so, how? Exploiting the staggered adoption of a retail analytics service by more than 1,000 e-commerce websites, we find an average increase of 8-29% in monthly revenues post adoption. Further analysis shows an increase in the number of transactions, the number of unique customers, and revenue from repeated customers. In contrast, we do not find a change in basket size. These results are robust to different identification strategies and specifications. Importantly, we demonstrate that only retailers that adopt and use the service reap these benefits.

We explore subsequent marketing decisions to uncover the mechanism underlying retailers' improved performance. While retailers do not seem to change their advertising spending or pricing strategies after adoption, they install more prospecting technologies that allow websites to better attract and serve new customers. Further, retailers' exhibit an increase in the number of paid visitors to their sites, an increase in the diversity of products sold. Put together, these findings suggest that the adoption of the data-analytics service added value to retailers, primarily through improved prospecting activities that drive new customers to the retailer's website with more heterogeneous preferences.