

Sellers 3.5 times more influential than buyers in driving e-commerce platform growth

November 30 2016

E-commerce platforms, such as Uber and eBay, which link sellers and buyers, face the perennial dilemma of what is more lucrative, supporting the needs of the buyers or the sellers. The traditional belief has been that it is more important to focus on buyers, who create demand, than on sellers. A forthcoming study in the INFORMS journal *Marketing Science*, sheds new light on this dilemma with the discovery that sellers are in fact 3.5 times more impactful than buyers in driving growth of e-commerce platforms. The study's findings provide valuable insight that will enable the managers of these platforms to make policy adjustments that will further incentivize sellers.

The article, "Quantifying Cross and Direct Network Effects in Online Consumer-to-Consumer Platforms," is authored by Junhong Chu of the National University of Singapore and Puneet Manchanda of the University of Michigan. It examines the growth of Taobao.com, the world's largest consumer-to-consumer platform. Both buyers and sellers on this platform are individuals or families, rather than businesses. With more than 500 million users, Taobao.com is larger and has more transaction value than Amazon and eBay combined.

"There's very little information on e-commerce platforms and it's not clear that these companies know which side is more important when they're doing the matchmaking," said Manchanda. The authors use data on the number of buyers and sellers from Taobao.com's inception in 2003 to the end of 2012. "It's usually difficult to get information dating back to a site's beginning to fully study the question of who has a bigger

impact on growing the network. We were fortunate that Taobao.com was willing to share the data with us for academic research," noted Chu.

The authors looked at the impact of one seller joining the network in terms of how many buyers were induced to join the network as a result. At the same time, they also quantify the impact of one buyer joining the network on how many sellers were induced to join. By looking at nearly 10 years of data, they found that the impact of a single seller that joined was 3.5 times (on buyers) that of a single buyer (on sellers) that joined. In other words, the presence of sellers is more crucial to grow the site's customer base. Interestingly, this finding is contrary to the belief of many e-commerce site managers that buyers were more important for driving growth. This belief was rooted in the fact that it's buyers who bring revenue to the business (via their expenditure on the platform). But this study's results suggest that unless there is a lot of merchandise for sale, buyers are not motivated to join.

Besides just the presence of many sellers, the analysis also found that what sellers sold was critically important for buyers. Specifically, the more diverse the product offerings on the platform, the more buyers they attracted. In other words, buyers value both choice and variety. Sellers, on the other hand, were motivated to join if the registered buyers showed frequent buying activity. Inactivity on the buyer side in terms of purchases acted as a disincentive for sellers to join and participate on the platform.

These results have clear implications for e-commerce platform site managers. Generally speaking, each site needs to identify its more important side and design policy to incentivize participants on that side. For example, Taobao.com has recently tweaked some policies to become more "seller-friendly." In a similar vein, platforms can focus on encouraging [sellers](#) who bring more product variety, as well as incentivize dormant [buyers](#) to "wake up" and start buying again.

More information: Junhong Chu et al. Quantifying Cross and Direct Network Effects in Online Consumer-to-Consumer Platforms, *Marketing Science* (2016). [DOI: 10.1287/mksc.2016.0976](https://doi.org/10.1287/mksc.2016.0976)

Provided by Institute for Operations Research and the Management Sciences

Citation: Sellers 3.5 times more influential than buyers in driving e-commerce platform growth (2016, November 30) retrieved 3 May 2024 from <https://phys.org/news/2016-11-sellers-influential-buyers-e-commerce-platform.html>

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