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Title: Price Setting in Online and Offline Markets: Evidence from Korea

Authors: Kozo Ueda (Waseda University), Kota Watanabe (Canon Institute for Global Studies), and Tsutomu Watanabe (University of Tokyo)

Abstract (maximum length of 400 words)

Consumer purchasing has been shifting from the offline to online markets in many countries. In macroeconomic studies, it has been argued that the online markets are characterized by lower operating costs, menu costs, search costs, and costs of monitoring competitors' prices than the offline markets, which may lead to lower and more flexible prices and a reduction in price differences among regions/retailers.

The purpose of this paper is to empirically examine the impact of the online market on price levels and price stickiness and analyze its implications on the macroeconomy. To do so, we employ unique scanner data for three retail chains in Korea: supermarkets, drugstores, and consumer electronic stores. The data have the following two important aspects for empirical analysis. First, all the retail chains sell their products through both offline and online channels, which enables us to compare the offline and online prices for the same product sold by the same retailer. Second, the data record both listed and transaction prices. Specifically, the data contain information on customer/transaction-specific price discounts. We find that customer/transaction-specific discounts are more common in the online market, while in the offline market temporary sales discounts are applied to all customers uniformly. While the previous studies on price stickiness in the online markets observe listed prices and ignore customer/transaction-specific discounts, we look at not only listed prices but also transaction prices, which enables us to analyze deeply whether prices are lower and less sticky in the online markets.

To address the question, we compare online and offline prices in the following respects: (1) the price level; (2) the frequency and size of price changes; (3) the frequency and size of temporary sales and customer/transaction-specific discounts; (4) price dispersions across regions and customers. Our tentative hypothesis is that there is not a large difference in price level and price stickiness between the online and offline markets as far as listed prices are concerned, but there is a non-trivial difference in transaction prices. The price dispersion across regions is smaller in the online market than in the offline market but the price dispersion across customers is somewhat larger in the online market owing to more frequent and diverse discounts. We will check whether this hypothesis is supported by the data.

REFERENCES

- Alberto F. Cavallo, "Are Online and Offline Prices Similar? Evidence from Large Multi-channel Retailers." *American Economic Review*, 107 (1): 283-303, 2017.
- Alberto F. Cavallo, "More Amazon effects: online competition and pricing behaviors." *National Bureau of Economic Research*, w25138, 2018.

• Yuriy Gorodnichenko, Viacheslav Sheremirov, Oleksandr Talavera, "Price Setting in Online Markets: Does IT Click?" *Journal of the European Economic Association*, Volume 16, Issue 6, December 2018, Pages 1764–1811.