

Optimal variety and pricing of a trade platform

Simon Anderson* Özlem Bedre-Defolie †

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Abstract

We model one platform facilitating trade between buyers and differentiated sellers by charging fixed and transaction fees to sellers. Buyers incur intrinsic fixed costs to discover their tastes for products. We illustrate conditions under which the platform's fee setting problem is equivalent to a multiproduct firm's problem of choosing a number of variants and their prices. We analyze the firm's optimal variety under different situations regarding its ability to commit to prices and variety before consumers visit the shop. Using the equivalence result we derive conclusions for the platform's variety choice in each case and compare it to the socially optimal variety at the prices set by the platform. We also provide illustrations of how the trade platform's seller fees could distort selection of products.

*University of Virginia, Sa9w@virginia.edu

†European School of Management and Technology (ESMT), Berlin, & CEPR ozlem.bedre@esmt.org.

¹In 2017, B2C e-commerce accounts for 9 percent of total retail trade in the US and 23.8 percent of total retail trade in China, see Global E-commerce Report (2017).