

Pricing Without Borders: Spillovers of External Reference Pricing in Pharmaceutical Regulation

Simona Gamba¹, Paolo Pertile², and Giovanni Righetti²

¹*Department of Economics, Management and Quantitative Methods, University of Milan*

²*Department of Economics, University of Verona*

Abstract

In years of growing pharmaceutical spending, regulators have exerted effort to reduce the impact of this tendency. As part of their strategy, several countries have introduced External Reference Pricing (ERP), a mechanism through which the domestic price is benchmarked to publicly available pricing data from a number of foreign countries where a price has already been set. While ERP is designed to contain domestic prices, it creates potentially complex mechanisms of strategic interaction at the international level.

This paper documents the consequences of one country being included in the ERP reference set of another country. We develop a simple theoretical model to show that there exists a spillover effect of the introduction of ERP in one country due to the increased marginal impact on global profit of prices set in countries used as reference. As a result, we expect higher prices to be negotiated in foreign countries. Our empirical analysis uses a dataset of 65 anticancer drugs in 16 countries and exploits the introduction of ERP in Germany in 2011 as part of the AMNOG bill. The results confirm our theoretical predictions: the introduction of ERP in Germany led to a 6.6% price increase in reference countries.

Our findings have implications for international pricing coordination. The existence of spillover effects raises questions about the overall efficiency of a system in which each country defines its ERP policy and provides a rationale for considering cooperative initiatives, allowing for the internalization of such spillovers.