

Reference Pricing in Europe and Beyond

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June 27th, 2022

Overview

- ▶ Recent empirical evidence on negative effects of reference pricing
- ▶ Policy proposal to alleviate these effects
- ▶ Joint work with several coauthors (Josh Feng, Thomas Hwang, Fabio Pammolli)

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United States: gov't-sponsored welfare programs reference private payers

- ▶ Medicaid (low-income Americans) uses function of **minimum** US commercial price
- ▶ Medicare (Americans aged 65 and over) uses function of **average** US commercial price

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2. Reference pricing leads to **launch delays** in referenced markets

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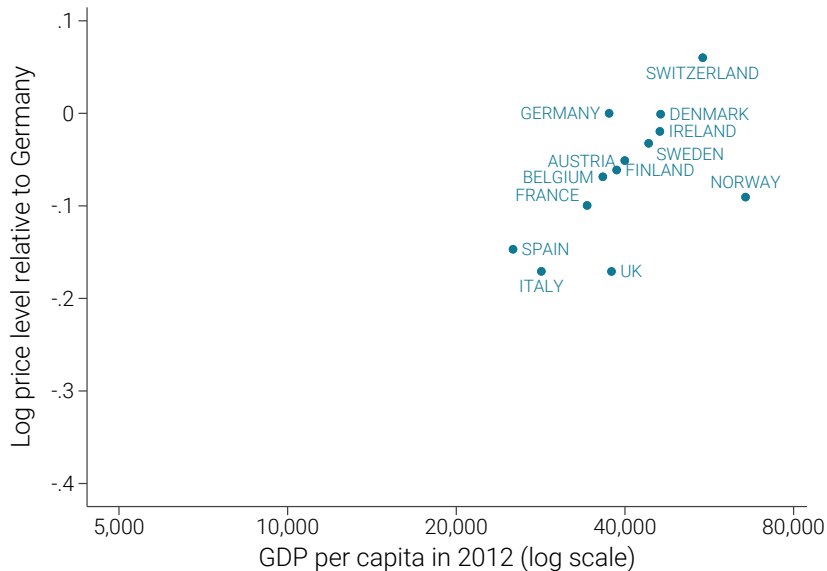
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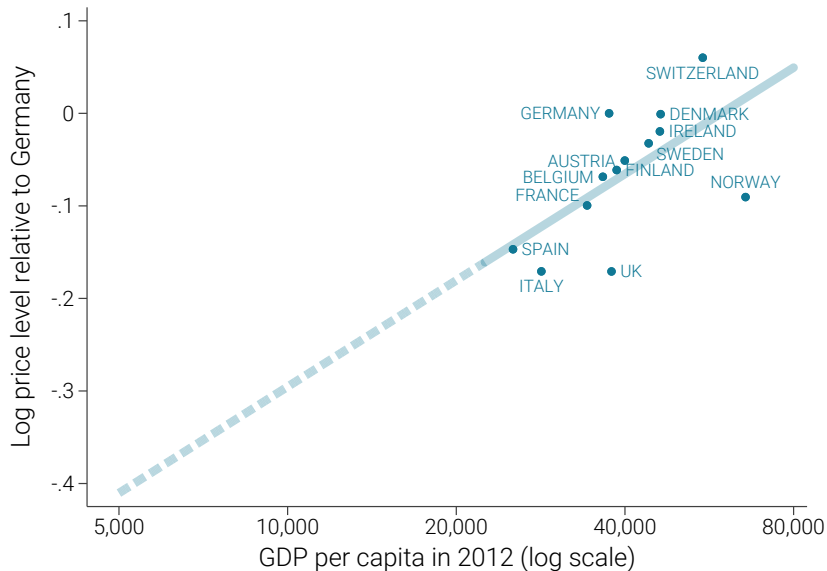
→ Adoption of reference pricing has a **small effect on spending**

1. Reference pricing leads to higher prices in referenced markets

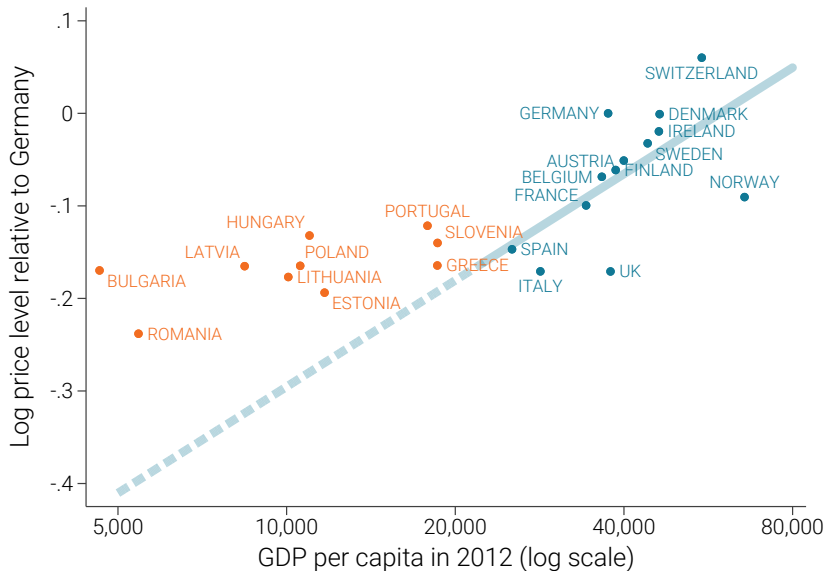
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Recent empirical evidence demonstrates the effect of reference pricing using US data

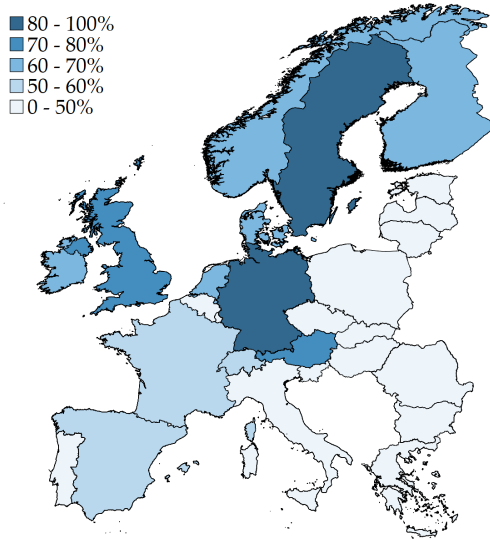
Hwang, Feng and Maini (2022): Exploit natural experiment around US payment reform

- ▶ Price paid by Medicaid is a function of prices in the commercial US market
- ▶ Formula was “relaxed” in 2010, making it less reliant on commercial prices
- ▶ After the rule change, commercial US prices of popular Medicaid drugs fell significantly

2. Reference pricing leads to launch delays in referenced markets

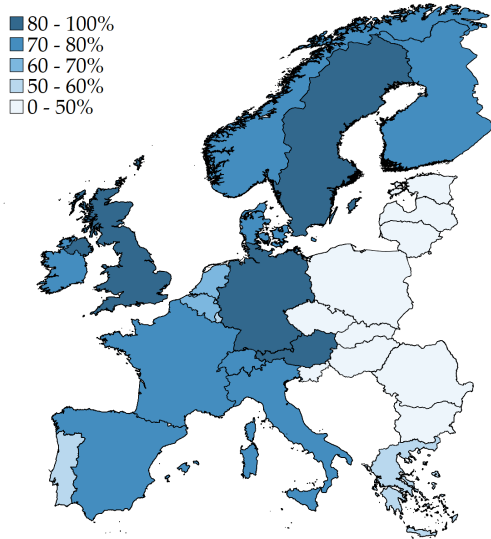
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Diffusion of novel drugs across Europe, 1995–2012: 1 year after EMA approval



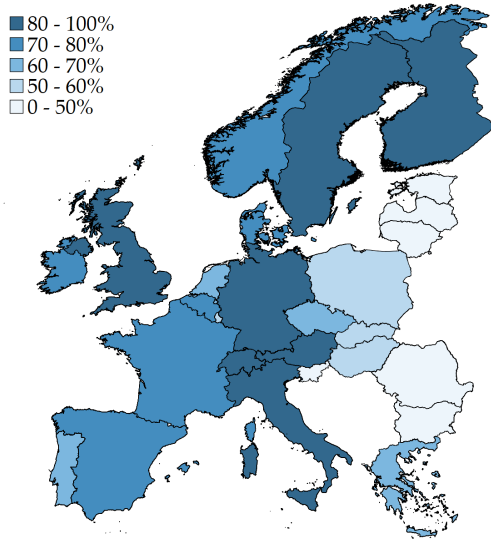
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Diffusion of novel drugs across Europe, 1995–2012: 2 years after EMA approval



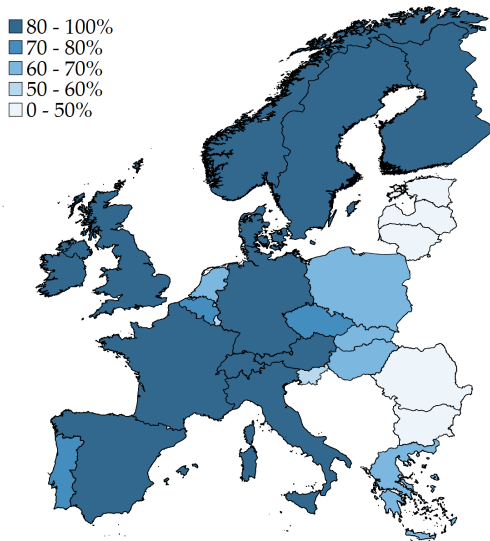
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Diffusion of novel drugs across Europe, 1995–2012: 3 years after EMA approval



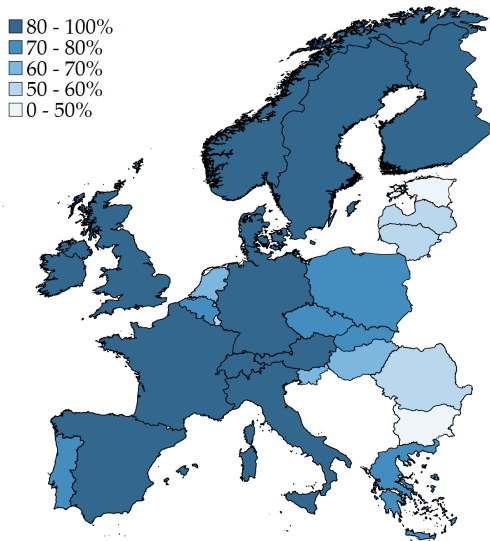
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Diffusion of novel drugs across Europe, 1995–2012: 4 years after EMA approval



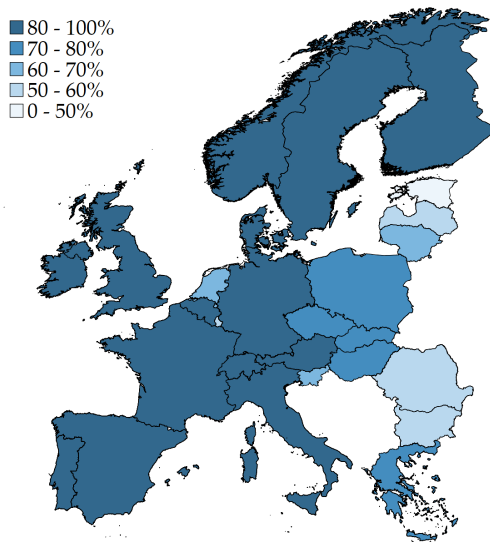
2. Reference pricing leads to launch delays in referenced markets

Diffusion of novel drugs across Europe, 1995–2012: 5 years after EMA approval

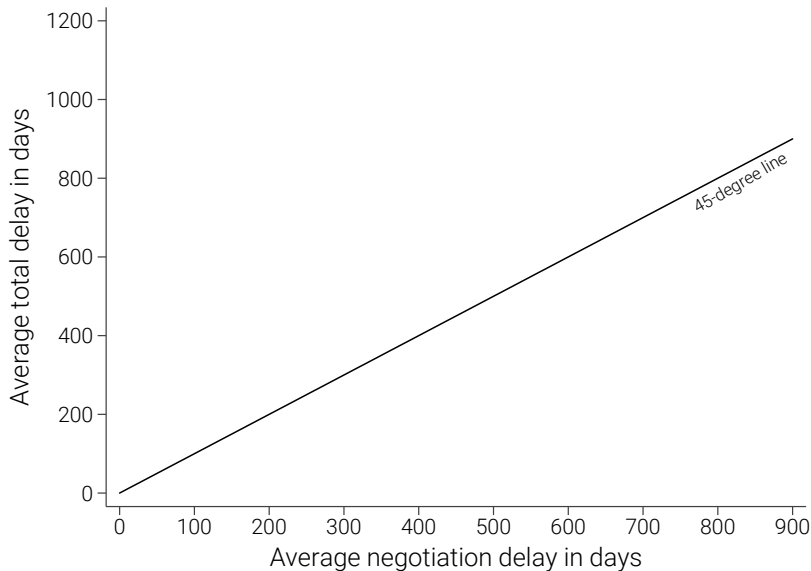


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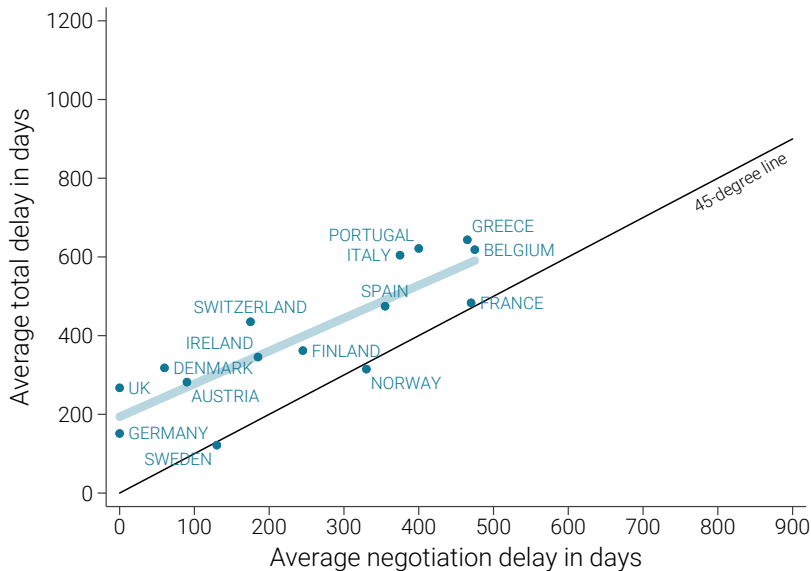
Diffusion of novel drugs across Europe, 1995–2012: 6 years after EMA approval



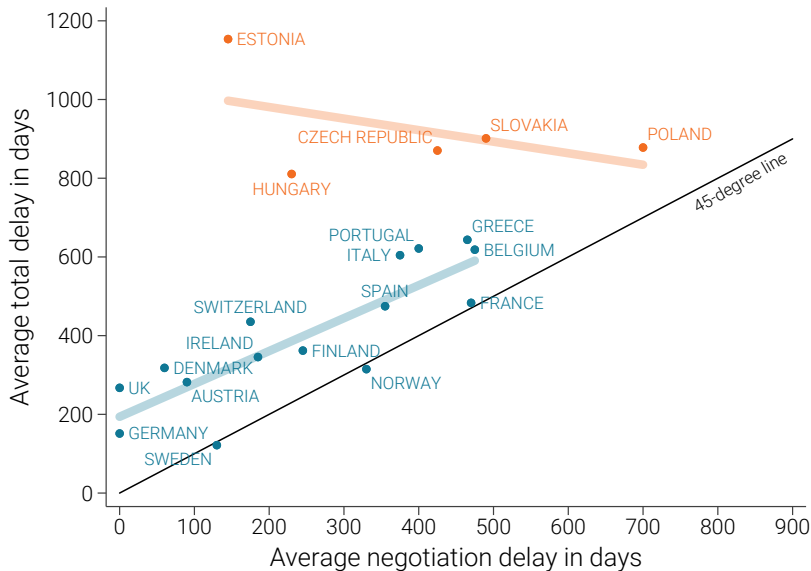
Some delays come from price negotiations but others are strategic



Negotiation delays dominate in high-income countries



Strategic delays dominate in lower-income countries



Both strategic delays and negotiation delays matter, but how much?

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Maini and Pammolli (2022): analyze external reference pricing in Europe

- ▶ Uses a structural model to separate negotiation delays from strategic delays
- ▶ Virtually all delays in higher-income countries come from negotiations
 - ▶ Average negotiation delay is approximately **8 months per drug** in each country
 - ▶ Reference pricing adds strategic delays of **1 year per drug** in lower-income countries

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Hwang, Maini and Pammolli (in progress): calculate savings from reference pricing in EU

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Dubois, Gandhi and Vasserman (2022): simulate US adoption of external reference pricing

- ▶ External reference pricing in the US would lead to
 - ▶ higher prices abroad, and
 - ▶ negligible impact on US prices and spending

Beyond reference pricing

Reference pricing does not work very well. Can we replace it with something else?

Beyond reference pricing: **centralized negotiations**

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Basic setup

- ▶ European Union would negotiate a single price
- ▶ Price would be scaled down automatically by country (e.g., based on income per capita)
- ▶ Individual countries could retain right to negotiate additional discounts

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Benefits:

- ▶ Removes strategic reference pricing delays
- ▶ Manufacturer only needs to negotiate once → also removes most negotiations delays

Thank you