

Vertical Integration and Regulated Profits in Pharmacy Benefits Markets*

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Abstract

This paper studies the effects of vertical integration between insurers, pharmacy benefit managers (PBMs), and pharmacies on drug prices and insurance premiums. I construct an empirical model of pharmacy pricing, insurer premium setting, and consumer demand for insurance plans and pharmacies in Medicare Part D. I estimate the model using prescription drug claims data, which I combine with novel information on insurer-PBM relationships and pharmacy ownership. In equilibrium, vertically integrated insurers reduce premiums and increase internal prices for prescription fills, shifting profits to their pharmacies. Two institutional features motivate this profit-shifting strategy: consumer cost-sharing (which allows firms to retain profits on integrated prescription fills) and regulatory caps on insurer profits (which incentivize firms to “tunnel” excess profits to pharmacies through higher drug prices). My estimated model predicts that the divestiture of vertically integrated pharmacies would reduce drug prices by 7.3% and increase annual consumer surplus for Medicare enrollees by 8.1%.

JEL Codes: I11, I13, I18, L14.

Keywords: prescription drugs; vertical integration; pharmacy benefit managers; bargaining; health insurance.

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