

Essays in Pharmaceutical Economics

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Thesis Abstract:

This doctoral dissertation incorporates formal industrial organization and mechanism design analysis in the pharmaceutical industry in order to expand our understanding of modern pharmaceutical markets and provide new insights to key policy questions. The focus is primarily on the supply side of the pharmaceutical sector and in particular on questions involving the pricing strategies of profit maximizing brand-name drug producers and the provision of incentives for innovation in the industry. In the first chapter I examine the optimal pricing behavior of a producer that operates under patent protection for a given period of time and afterwards faces competition from generic drug producers, under the assumptions that advertisement results in dynamic transformations of demand and that the rate of entry of rival manufacturers is a function of brand-name price. The second chapter formalizes a problem of public pharmaceutical pricing, and consequently the payment structure that the producer faces, that provides incentives for innovators to develop drugs that, in expectation, can cure more patients that suffer from a particular condition as well as encourage novelty in innovation by developing drugs that cure more difficult cases in the patient spectrum. The third and final chapter uses publicly available aggregate data to explore the responsiveness of the demand that producers face, for prescription and over-the-counter pharmaceuticals separately, with respect to various socioeconomic aggregate variables, including own-price, in Canadian markets.

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