

Economics Seminar, Indian Statistical Institute, New Delhi.

SPEAKER: Chirantan Chatterjee, IIM Bangalore

TITLE: Killing the Golden Goose or Just Chasing it Around the Farmyard? : Rising Generic Entry and the Incentives for Early-Stage Pharmaceutical Innovation

TIME: 11:30 AM - 1:00 PM.

DAY & DATE: Friday, 31st August, 2012

PLACE: Seminar Room 2

Abstract:

Over the last decade, generic penetration in the US pharmaceutical market has increased substantially, providing significant consumer surplus gains. But is generic entry reducing the flow of early stage pharmaceutical innovation and therefore future availability of new medicines? We explore this question using novel data sources and an empirical framework that models the flow of early-stage pharmaceutical innovations as a function of generic penetration, scientific opportunity and challenges, firm innovative capability, and additional controls. Our estimates suggest a sizable, robust, negative relationship between generic entry and early-stage pharmaceutical research activity. A 10% increase in generic penetration decreases early-stage innovations in the same market by 7.3%. This effect is weaker in top therapeutic markets where an increase in generic penetration by 10% decreases the flow of early-stage innovations by 2.2%. However, in those top markets, a 10% increase in the stock of Paragraph IV challenges decreases the flow of early-stage innovation by 3.9%. Our estimated effects appear to vary across therapeutic classes in sensible ways, reflecting the differing degrees of substitution between generics and branded drugs in treating different diseases. Finally, we are able to document that with increasing generic penetration, firms in our sample are shifting their R&D activity to more biologic-based (large-molecule) products rather than chemicals-based (small-molecule) products as evidenced in their early-stage pipelines. We conclude by discussing the potential implications of our results for long-run consumer welfare, policy, and innovation.

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