

Innovator's Dilemma: To be the First or to be the Best

Shirish D. Chikte and Sudhakar D. Deshmukh

MEDS and Operations Department, Kellogg School of Management
Northwestern University, Evanston, Illinois 60201, U. S. A.

Abstract

New and better products attract more consumers and yield higher profits. However, developing better products usually takes longer, allowing other products to appear and take away a market share. Moreover, the product development process involves uncertainty about the time, cost and quality of the end product. Innovators must take this uncertainty and tradeoff into account in determining their product development strategies. We model innovation competition as a stochastic game, study its equilibrium, and characterize socially optimal innovation.