Strategic Concealment in Innovation Races*

Yonggyun Kim†  Francisco Poggi‡

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Abstract

We investigate a firm’s incentives to conceal an intermediate research discovery in order to influence its rival’s choice of strategy in an innovation race. To study this, we introduce an innovation game where two firms dynamically allocate their resources between two distinct research and development (R&D) paths towards a final innovation: (i) developing it with the currently available but slower technology; (ii) conducting research to discover a faster new technology for developing it. We fully characterize the equilibrium behavior of the firms in the cases where their research progress is public and private information. Then, we extend the private information setting by allowing firms to conceal or license their intermediate discoveries. We show that when the prize from winning the race is high, firms sometimes conceal their interim discoveries, which inefficiently retards the pace of innovation.

JEL Classification: C73, D21, O32

Keywords: Research and Development, Patent, License, Secrecy

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†Department of Economics, Duke University. Email: yonggyun.kim@duke.edu
‡Department of Economics, University of Mannheim. Email: poggi@uni-mannheim.de