

Revealing Private Information in a Patent Race*

Pavel Kocourek[†]

July, 2021

Abstract

In this paper I investigate the role of private information in a patent race. Since firms often do their research in secrecy, the common assumption in patent race literature that firms know each other's position in the race is questionable. I analyze how the dynamics of the game changes when a firm's progress is its private information, and I address the question whether revealing it might be to a firm's advantage. I find that a firm has an incentive to reveal its breakthrough only if its rival has not done so, and only if the research is costly.

Keywords: Patent Race, R&D Investment, Race, Optimal Effort, Revealing Private Information.

*I am indebted to Ennio Stacchetti for his invaluable guidance and support throughout this project. My most sincere gratitude to Dilip Abreu, Jaroslav Borovička, Sylvain Chassang, Boyan Jovanovic, Rumen Konstadinov, and Erik Madsen for continued discussions and suggestions that helped improve this paper greatly. I am also grateful to Corina Boar, Laurent Cavenaile, Francisco Espinosa, Shrijita Ghosh, Natalie Lee, Alessandro Lizzeri, Laurent Mathevet, David Pearce, Michael Richter, Francisco Roldán, Nikhil Vellodi, and to seminar participants at NYU for their comments and suggestions. All mistakes are my own. Recipient of ERC grant 770652 (Steiner).

[†]CERGE-EI, a joint workplace of Center for Economic Research and Graduate Education, Charles University and the Economics Institute of Czech Academy of Science, Politických veznu 7, P.O. Box 882, 111 21 Prague 1, Czech Republic. Email: pavel.kocourek@cerge-ei.cz