Caught in a Portfolio Trap:
A Behavioral Theory of the Pursuit of Radical Invention in Multi-technology Firms

J. P. Eggers
New York University, Stern School of Business
40 W 4th Street, Tisch 715, New York, NY 10012
Tel: +1 212 998 0874
Email: jeggers@stern.nyu.edu

Aseem Kaul
Carlson School of Management, University of Minnesota
321 19th Avenue South, RM 3-412, Minneapolis, MN 55455
Tel: +1 612 625 8458
Email: akaul@umn.edu

WORKING DRAFT: October 2015

The authors wish to thank Rajshree Agarwal, Deepak Hegde, P.K. Toh, conference participants at the Wharton Technology Conference, Atlanta Competitive Advantage Conference and Mid-West Strategy Meeting, as well as seminar participants at Bocconi University, Ohio State University, University of Minnesota, and Ludwig Maximilians Universitet for helpful comments on prior versions of this paper.
Caught in a Portfolio Trap: A Behavioral Theory of the Pursuit of Radical Invention in Multi-technology Firms

We examine the development of radical technologies, distinguishing between a firm’s choice to pursue radical invention and its success in doing so. We argue that the pursuit of radical invention will be problem-driven, with firms being more likely to pursue such inventions in technological areas where their existing performance is weak. However, since poor performance is associated with weak capabilities, attempts at radical invention in areas of weakness are less likely to succeed than those in areas of strength. Multi-technology firms are thus susceptible to a portfolio trap—being more likely to pursue radical invention where they are less likely to succeed—with this effect being stronger, the greater the firm’s technological diversification, and the weaker its financial performance. We show empirical support for our arguments using patent data, adopting a novel empirical approach that distinguishes the potential radicalness of an invention from its eventual success. Our study sheds new light on the decision to pursue radical invention by examining the antecedents of this key strategic choice and highlighting its behavioral basis.