

## **The ownership and financing of innovation in R&D races**

**Paolo Fulghieri, Merih Sevilir**

**University of North Carolina Kenan-Flagler Business School**

**merih\_sevilir@unc.edu**

Our paper offers a new rationale for the use of mergers, research alliances and corporate venture capital as competitive tools in R&D races. We model the relationship between a firm and its research unit in the context of a R&D race. We show that a firm can choose the organization and financing of its R&D activity strategically to accelerate its R&D efforts and gain competitive advantage. In our model, integration, venture capital financing, and strategic alliances emerge as optimal responses to competitive pressures of the R&D race, research intensity and the stage of the R&D project. For low levels of competition and research intensity, firms merge with research units and undertake their R&D investments in an integrated organization structure. For high levels of competition and research intensity, firms form strategic alliances with independent research units, and finance R&D expenditures with corporate venture capital rather than independent venture capital.

Furthermore, the amount of corporate venture capital invested in the research unit increases in the level of product market competition. Finally, our paper offers several novel testable predictions regarding the observed cross-sectional variation of organization and financial structures as a function of variables such as the extent of product market competition, research intensity, and stage of product development.