

Learning when to Quit

Abstract:

We study a dynamic model of the decision to continue or abandon a research project. Researchers improve their ideas over time, and also learn whether those ideas will be adopted. Projects are abandoned as researchers grow more pessimistic about their chance of success. We estimate the structural parameters of this dynamic decision problem using a novel data set that contains information on both successful and abandoned projects submitted to the Internet Engineering Task Force (IETF), an organization that creates and maintains internet standards. Using the model and parameter estimates, we simulate counterfactual policies, a cost-subsidy and a prize-based incentive scheme. For a fixed budget, subsidies have a larger impact on research output, but prizes perform better when accounting for researchers' opportunity costs.