

Title: Modeling the Duration of Patent Examination at the European Patent Office

Dietmar Harhoff and Stefan Wagner
Munich School of Management, LMU München

We analyze the duration of patent examination at the European Patent Office (EPO). Our data contain variables that are correlates of the applicants' and examiners' assessments of a patent's economic and technical relevance as well as ex post-application citation measures which indicate the impact of the patent application on the state of the art. We present descriptive statistics for 30 major technology fields and focus in our multivariate analysis on a number of particularly relevant subfields such as semiconductors, biotechnology, pharmaceuticals and chemicals. The use of semiparametric Bayesian MCMC estimators allows us to detect nonlinearities in the impact of some of these variables on decision-making lags. We also employ competing risk specifications in order to characterize differences in the processes leading to either a withdrawal of the application by the applicant, a refusal of the patent grant or an actual patent grant by the European Patent Office.