The Patent Explosion: Quantifying Changes in the Propensity to Patent*

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The tremendous increase in U.S. patent applications and grants over the past one and a half decades has been attributed to institutional change, better management of research, increased invention potential and a variation of the 'regulatory capture' hypothesis. In this paper I focus on the institutional changes that occurred in the U.S. during the early 1980s and 1990 as explanations for the mid-eighties and early nineties patent surge. I develop a simple sequential application-grant framework to analyze patent grant probabilities for domestic and foreign patents, factoring in the various information asymmetries. The 'friendly court' hypothesis argues that legislative changes in the 1980s lowered the cost of patenting in the US, and that affected the foreign and domestic applications differently. Foreign patent applications to the U.S. are on average, of a higher quality than domestic patent applications, due to higher hurdles faced by foreign inventors. Thus the change in the cost threshold should affect foreign patents less as they already face a higher internal threshold. In addition, small inventors should increase as an applicant and grant cohort if the above hypothesis is true. The regime laxity hypothesis argues that the 1990s intellectual property regime change lowered examination standards. If this caused the 1990s patent surge we would expect a further increase in grants rates and a greater variance of patent quality for foreign inventors when compared to the pre-1990 period. Using the US, OECD and EPO patent data, I test the validity of the theoretical predictions. Although the evidence is somewhat mixed, I can reject the 'friendly court' hypothesis as the primary source of the eighties patent surge. The nineties surge can be attributed partly to the regime laxity hypothesis.