

**Patents Renewals as Options :
Some Implications for Intellectual Property Right Policy**

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Adjusting duration and thus patent monopoly through patent renewal mechanisms is today at a centre of an important debate. The aim of this paper is therefore to examine the influence of a reduction of patent length and/or a change in renewal fees on patents value and implicitly on the number of patent applications. More specifically, we try to modify the parameters of patent protection by affecting as little as possible patents that are renewed till the legal statutory term. Conversely, we try to discourage low-value patents in order to improve the quality of patents. To do so, we model the value of a patent as a succession of as many European options as dates for which renewal fees have to be paid. The main interest of using a real option approach is that a variation of the maximum patent length and/or renewal fees may affect the decision not to renew a patent and thus the value of a given patent, whatever the patent taken into consideration. A database on French patents renewals is used to estimate the option model presented in this paper. The estimation is based on a maximum simulated likelihood method applied to a grid of values for the parameters of the model. In the light of the estimation results, different scenarii are proposed and examined in order to improve the current patent system.

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