

## **Prolific Inventors and the Value of Inventions: An Empirical on U.S. Patenting (1975-1998)**

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The aim of this paper is to test two related propositions : (1) that there is a direct, positive relationship between the involvement of a prolific inventor in the production of knowledge and the magnitudes in the collective dimension of this knowledge production, as measured by the presence of foreign inventors and the size of the inventive team ; and (2) that there is a direct, positive relationship between the involvement of a prolific (or foreign) inventor and the value of the new knowledge produced. We use detailed information from nearly 300,000 patents granted by the US Patent Office to French, German and British inventors over the period from 1975 to 1999. From data available from each patent regarding citations of prior patents and the numbers and identities of the inventors listed in the patent application, we are able to construct measures of collective knowledge, the presence of prolific inventors, and the imputed value of patents. In a novel approach in this literature, we estimate negative binomial multiple regression models for determining measures of both collective knowledge and the value of the patents. We find strong support, after controlling for technological field effects, for hypotheses that both prolific and foreign inventors tend to be parts of larger teams of inventors and that both prolific and foreign inventors tend to produce inventions having more value. In the conclusion, we draw some implications of these results for knowledge governance.