



---

**WIPO SEMINAR SERIES ON  
“THE ECONOMICS OF INTELLECTUAL PROPERTY”**

---

WIPO/IP/ECON/GE/2/11/INF.1  
ORIGINAL: ENGLISH  
DATE: FEBRUARY 4, 2011

**The Determinants of the Private Value of Patents  
(Professor Alfonso Gambardella)**

*Organized by*  
the World Intellectual Property Organization (WIPO)

**Geneva, February 10, 2011**

13.30 – 13.40 Introduction

Moderator: Mr. Carsten Fink, Chief Economist, World Intellectual Property Organization (WIPO), Geneva

13.40 – 15.00 The Determinants of the Private Value of Patents (co-authors Professors Dietmar Harhoff and Bart Verspagen)

Speaker: Mr. Alfonso Gambardella, Professor, Department of Management & Technology, *Università Commerciale "Luigi Bocconi"*, Milan, Italy, and Founding Member of the European Policy for Intellectual Property (EPIP)

Abstract: Despite a plethora of research in this field, the process by which investments in innovation translate into economic values is not fully understood. Since firms rationally invest in R&D, investments in these resources clearly matter. However, we do not know how much they matter, or whether the value of innovations is largely unpredictable. At the same time, we do not know how much it depends on the talent of the individual inventors vs. the organization in which they are employed.

In this paper, we address these issues by estimating the determinants of the monetary value of a large sample of patents held by firms. The most important finding of our study is that resources are much more effective at increasing the number of patents in a portfolio of technical related inventions than the average value of the patents in the portfolio. In other words, firms create value by raising the number of patents or inventions that they produce, but which particular patent or invention is most valuable is harder to predict.

This is not surprising because the economic value of technologies depend on many factors that the inventor or the firm cannot fully control – e.g., demand, the presence of complementary assets or products, network externalities. By contrast, inventors or firms can control better the number of inventions that they produce, which is largely a measure of technical rather than economic success. We also find that inventor education matters more than age related experience. On average, a fresh PhD produces patent values as large as an inventor with a college education and several years of experience. Finally, we find that, other things being equal, inventors with greater past successes (as measured by the past citations of their patents) linger on incremental innovations (of lower value) rather than trying to produce new valuable inventions. The ultimate managerial implication of our study is that the most valuable patent portfolios come from inventors with PhDs who have not yet produced major inventions.

Time will be reserved for an open discussion.

*The session will start at 13.30 p.m., on Thursday, February 10, 2011, at the headquarters of WIPO, 34, chemin des Colombettes, Geneva (Conference Room B).*

[End of document]