

University-Industry Collaboration and Patent Quality in Biopharmaceutical Industry

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Abstract ID: 106

Inviato: 15/04/2022

Evento: XX Workshop Annuale SIEPI

Argomento: 14. Relazioni università-impresa

Parole chiave: U-I collaboration, biopharma industry, patent quality

We investigate whether University-Industry (U-I) interaction is beneficial to industry in terms of quality of innovation. Empirical evidence suggests the existence of a positive effect of U-I collaborations on firms' innovation activity. We aim to understand if knowledge spillovers stemming from academia are absorbed by firms and reverberated through patents quality. We use a sample of Italian biopharmaceutical firms observed over the time span 2000-2010 to study if U-I joint research (co-authored articles) relates positively to the average quality of firm's patent portfolio. Our results show the effective presence of knowledge transfer from academia to industry. On average, firms' patents embed more complex and fundamental knowledge and show wider technological breadth. Nevertheless, innovation becomes more incremental, although non-linear and more recombinant.