

The content evolution of basic, mission-oriented, and applied research in European universities. A patent-based analysis

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The dynamics of basic and applied research have steadily changed since the eighties, with the private sector reducing its investments in science and universities experiencing significant remodelling in the governance of their funding. Studies looking at this have mostly focussed on industry, and less attention has been paid to understanding the evolution of the contents of university research. We adopt a critical perspective of the basic versus applied research dichotomy, and using a patent-based analysis we first identify a variety of indicators to determine the pure basic, mission-oriented, and pure applied research content. Following this, we observe how university research content has evolved with respect to industrial research content from 1978 to 2015. Our results suggest that relevant shifts occurred in academic research. In particular, while pure basic and mission-oriented research contents remain mostly a matter of university knowledge production, their intensity progressively declined after the early 2000s. Conversely, the pure applied content of university research has been steadily declining since 1978. These results complement recent literature focussing on basic and applied research dynamics in the private sector, while opening up considerations on the role of university research and its value for society.