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THE ECONOMIC IMPACT OF SCIENCE-BASED FIRMS – FINDINGS FROM CODING NEWS ARTICLES (INTERACTIVE PAPER)

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Principal Topic

Theorizing postulates that knowledge spillovers from universities, carried forth by academic spin-offs, is a key input to economic growth. Empirical verification of such theorizing has however proven to be difficult. While some studies have pointed to the existence of high growth spin-offs, other studies have shown that most spin-offs remains small, questioning the idea that commercialization of university research through spin-offs is important to economic growth. The purpose of this paper is to explore this important issue from a new angle. We look at the economic impact of spin-offs from the point of view of society, and not from the perspective of the focal spin-off firm. This change in focus is warranted because spin-offs may have high economic impact even though the firm itself does not grow or become very profitable. Therefore, our research aims to identify to what extent university spin-offs generate economic impacts for other actors beyond themselves, for instance in other firms, that may be large and economically important firms. These types of economic impacts are central in knowledge spillover theories of economic growth, and our paper aims to identify their prevalence and importance in the case of university spin-offs. Moreover, se seek to explain why some university spin-offs generate such economic impacts and the role of university, firm and technology characteristics.

Method

We use a hand-collected database covering the population of academic spin-offs from Norwegian universities from 1999-2012, in total 371 firms. The economic impact of the research commercialized by the spin-offs was identified and measured from news articles. News articles were collected from the major national and regional newspapers in Norway and trade magazines. Trained research assistants coded whether and to what extent each spin-off have had an economic impact as identified in the new articles. About 1400 new articles have been coded. Robustness checks were made to ensure data quality.

Results and Implications

Our study contribute by shifting the focus from the spin-off firm itself and examine to what extent spin-off generate economic impact that can be identified among other actors. We find that the economic impacts are important, that it takes considerable time to generate them, and that they are heterogeneously distributed among spin-offs. Factors at the university, firm and technology levels can all explain why some spin-off generate economic impacts.

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