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THE REGIONAL IMPACT OF ENTREPRENEURIAL COMPARED TO NON-ENTREPRENEURIAL UNIVERSITIES: AN ANALYSIS FOR GERMANY

Academic paper

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Abstract text:

Globalization and internationalization have influenced the regional actors who are agents economic and societal change in a world which is characterized by complexity and uncertainty. Especially the higher education institutions, had to broaden their fields of activity from their traditional tasks of teaching and conducting research to fostering social and regional economic development and at the same time being more self-sufficient concerning their financial funding etc. (Guerrero-Cano et al. 2006, p. 1; Gibb/Hannon 2020, Jameson/O'Donnell 2015, p. 73). This shift of focus, called the second revolution in academia (Guerrero-Cano et al. 2006, p. 2), forced universities to become more entrepreneurial (Guerrero-Cano et al. 2006, p. 1). On that background, our paper examines differences in the impact of entrepreneurial universities and non-entrepreneurial universities on their regional environment in Germany. We address the following questions:

- Are entrepreneurial universities stronger focused on future-oriented technologies?
- Do entrepreneurial universities have more university chairs with spin-off activities or do the average number of spin-offs from chairs with spin-off activities differ?
- Do we find another structure of Spin-offs in entrepreneurial universities? Is there a higher share of research and innovation-oriented spin-offs?
- How do entrepreneurial universities and non-entrepreneurial universities differ in respect to the patterns of regional cooperations?
- In how-far barriers for spin-offs and applied research cooperations differ between entrepreneurial and non-entrepreneurial universities.
- How does the self-assessment of entrepreneurial university professors differ from other universities concerning the role of their university for the regional environment?

The originality and value of our contribution lies in the comparative perspective. Many papers look at entrepreneurial universities or the process of becoming entrepreneurial and the related value creation for society (Etzkowitz 1983, 2008, Jameson/O'Donnell, 2015 p. 72, for the processual aspect EC/OECD 2012, p. 2; Bercovitz/Feldmann 2006, S. 175, Alfalih/Ragmoun 2020, p. 1858). However, quite few papers chose a comparative view which allows us to learn more about the regional impact of entrepreneurial universities. Our research design combines qualitative and quantitative elements. The empirical basis is a standardized survey of German universities on their focus on new technologies, knowledge transfer and university spin-Offs. The survey was conducted in 2019 as part of a research project for the Ministry of Economic Affairs of North Rhine-Westphalia. The survey aimed at 54,861 academic teachers at higher education institutions and had a return of 7,653 participants (response rate: 13.9%). In addition, we make use of ten semi-structured expert interviews conducted in 2019.

We distinguish entrepreneurial and non-entrepreneurial universities by looking at core characteristics of entrepreneurial universities that are mentioned in the literature (Guerrero-Cano et al. 2006, p. 4; Gibb/Hannon; EC/OECD 2012, p. 2, Bikse et al. 2016, p. 78, Sánchez-Barrioluengo

et al. 2019, S. 486) . These are especially the degree of university spin-off activities and of cooperations with the university environment. In addition to our survey, we use the Gründungsradar (spin-off radar), a separate survey from the SV Wissenschaftsstatistik that does not address individual professors but universities. On that basis, we analyse the survey data both qualitatively and with econometric methods. While it is clear from the beginning that entrepreneurial universities are characterized more spin-off activities, our paper looks deeper into structural issues that lead to different regional impulses from entrepreneurial universities. Thereby, we concentrate on spin-off activities, regional innovation cooperations and the impulses that result from these kinds of activities.

While the data analysis in respect to the differences between entrepreneurial and non-entrepreneurial universities is still going on, first results have been obtained. The first results show, not surprisingly, that the proportion of professors at entrepreneurial university is higher who report newly established firms out of university within the five years prior to our survey. Furthermore, entrepreneurial and non-entrepreneurial universities don't differ very much concerning the intensity of cooperation with small and medium-sized as well as large enterprises. Interestingly entrepreneurial universities exacerbate a slightly lower share of cooperation activities with spin-offs. A more supportive entrepreneurial ecosystem in the sphere of an entrepreneurial university might be a reason for that observation. The self-assessment of the regional impact (e.g. contribution of the university to the regional location, culture/leisure, innovation, and economic stability) is in every case higher for entrepreneurial universities.

There are some limitations to our analysis. Our analysis only looks at the economic aspects and leaves aside societal effects. In addition, also dynamic and processual aspects of entrepreneurial universities compared to non-entrepreneurial universities can only be accounted for to a rather limited extent.

Our analysis primarily leads to additional knowledge about the effects that can be expected from fostering entrepreneurial universities. In addition, we get a glimpse about how the main barriers to innovation and entrepreneurship differ between entrepreneurial and non-entrepreneurial universities.

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