

## Divergence or convergence in research performance between public and private universities: The case of the German higher education system

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### Research Domains

Higher Education policy (HEP)

### Abstract

The global rise of private universities has surpassed public universities, particularly in the U.S., where they now represent 64% of higher education institutions but enroll only 26% of students. Contrarily, in Germany, private universities are newer and have grown significantly in the past 25 years, despite traditionally state-funded higher education. This study examines research performance in economics and business studies between private and state universities in Germany, utilizing data from Scopus (N=3,006). Results show private universities have slightly more average publications per author per year and higher three-year citation averages than state universities, alongside increased international collaboration. Trends over five-year clusters reveal private universities are catching up or surpassing state universities in research impact, challenging the traditional dominance of state-funded institutions. Future research will delve into thematic analyses and keyword-based comparisons to further understand these trends.

### Full paper

The number of private universities has increased globally and has now surpassed public universities worldwide (Buckner, 2017). In the United States, this type of higher education institution (HEI) plays an important role (Maldonado, 2004). The proportion of private universities in the US increased from 54% in 1980 to 64% in 2011, while only 26% of students attend private HEIs, indicating their smaller size (Hüther & Krücken, 2018). In Europe, particularly Germany, the situation differs. German universities are traditionally state-funded (Rüegg, 2010). Private universities are relatively new but have grown significantly in number and enrollment over the past 25 years. Despite frequent discussions (Brockhoff, 2003; Frank et al., 2020; Grüner, 2018; Herrmann, 2019; Herz, 1999; Konegen-Grenier, 2018), they have been largely neglected in research (Sperlich, 2008). As niche providers, private universities in Germany are known for their flexibility and practical orientation (Frank et al., 2020), becoming integral to the national higher education and science system (Wissenschaftsrat [WR], 2012). Economics and business studies are strong fields at private universities in Germany in terms of student education (Frank et al., 2020; Federal Statistical Office [Destatis], 2022) and research and doctorates.

However, private universities in Germany have limited legitimacy due to shaky financial resources (Ashour & Kleimann, 2024) and low status. No private university is among Germany's top 40 research

universities (Hüther & Krücken, 2018). However, these rankings are misleading as they do not account for size differences between private and state universities. Thus, the knowledge contribution from private university researchers is largely unknown and underestimated. Our presentation will address this research gap by linking information from research-active scholars in economics and business studies at all private universities, state universities, and universities of applied sciences (UAS) with their journal publications in “Scopus” (N=3,006). Our analysis focuses on the research performance of academics at private universities published between 2001 and 2020. It addresses two questions:

- What differences can be identified in the research activities of researchers from private and state universities?
- What trends in the research performance of private universities can be identified since the 2000s?

Results indicate, that between 2001 and 2020, private universities have slightly, but non-significant more average publications per publishing author per year, while UAS have significantly fewer publications per publishing author per year. In this aspect, private universities are on par with state universities. There are significant differences in the average three-year citations. Papers by authors at private universities have, on average, about one more citation three years after publishing than those by authors at state universities, whereas authors at UAS have one citation less. Compared to state universities, authors at private universities have, on average, 0.4 fewer co-authors, and authors at UAS have 0.2 fewer co-authors. This might be because of their smaller department sizes. However, the share of papers with an internationally affiliated co-author is, on average, 13 percentage points higher at private universities than state owned universities, whereas UAS have no significant difference to state-owned universities in that share. This indicates a higher level of internationalization in private universities’ research.

The pooled data, however, do not reveal trends, so the data were also evaluated in five-year clusters (2001-2005, 2006-2010, 2011-2015, 2016-2020). A slight divergence between private and state universities can be observed in the average number of publications per author. Starting at the same level in 2001-2005, private universities get ahead of state-owned universities. There is a noticeable increase in three-year citations at private universities, especially in the last five years. Additionally, there is a significant divergence in international publications over time, with a not proportional increase of the share of international co-authored publication at private universities. The number of average co-authors per publication rises parallel with private universities having the lowest and state-owned universities the highest number of average co-authors per paper.

In conclusion, private universities in Germany have shown notable research performance, with slightly more average publications per author and higher three-year citation averages compared to state universities. They also exhibit greater international collaboration, indicating strong global integration. These trends suggest that private universities are not only catching up but, in some cases, surpassing state universities in research impact. The findings challenge the traditional dominance of state-funded universities in academic research in Germany, highlighting the flexibility and practical orientation of private institutions as key factors in their success. Looking ahead, thematic analyses and comparisons based on keywords will be conducted to further explore these trends.

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