

What Makes Academic Startups Succeed: Brains or Breakthroughs?

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Not every academic startup comes out of a lab, and not all innovation starts with a scientific breakthrough.

Picture this: A robotics professor files a patent and launches a cutting-edge AI venture. Meanwhile, a business school lecturer starts a tech-enabled consulting firm after years of industry collaboration. Both are academic entrepreneurs, but their paths couldn't look more different.

We often picture academic startups as research spin-offs built around patents and inventions. But that's just one piece of a much bigger picture. Many academics build successful businesses that aren't based on their research at all, yet they still gain huge advantages from their time in academia. Despite this, these types of founders are often overlooked in policy discussions, support programs, and academic studies.

This raises an important question: Is the real strength of academic startups found in their research, or in the way academics think? We may be putting too much focus on research results and not enough on soft skills like problem-solving and analytical thinking.

In our study of 871 academic and 5,002 non-academic startups in Germany, we show why it's time to move beyond the simple categories of "research-based" or "general" startups. Instead, we look at a spectrum of academic research-basedness, showing the many different ways that university experience can fuel innovation and business success.

Different Types of Academic Founders, Different Innovation Paths

So what happens when academics start companies, but not to bring their research to market?

Our findings show a wide range of outcomes, depending not just on what academics know from their research, but how they use that experience in a startup. On one end of the spectrum are researchheavy academic startups that directly commercialize research. These ventures are at the forefront of innovation, often creating breakthrough technologies. But that comes at a cost, their road to market is usually long, and early sales often lag behind other startups. Their cutting-edge ideas need time to find the right fit.

On the other end are startups led by academics whose ventures aren't based on specific research, but who still bring an academic mindset. These founders may not launch headline-grabbing innovations, but they're often skilled at spotting business opportunities and creating new offerings for the market. Their edge may come more from how they think, solving problems, recognizing

patterns, and working through complexity, than from research results.

In between is a group with mixed results: startups that invest heavily in R&D but don't achieve the innovation they're aiming for. These ventures often lack a clear focus, whether to double down on research or pivot toward a more agile application. That lack of direction can lead to wasted resources and stalled performance.

The key takeaway? There's no one-size-fits-all model. Different academic startups bring different strengths. And if we treat them all the same, we risk missing their unique value, or worse, offering the wrong kind of support.

Why It Matters: for Policy, Practice, and Performance

This more detailed understanding of academic startups has real implications for how we support them. It shows why universities and policymakers need to move beyond a one-size-fits-all approach.

Traditionally, support systems have focused on research spin-offs, startups built around patents, or formal tech transfer. However, that leaves out many academic entrepreneurs who bring different strengths from their academic background, like problem-solving, analytical thinking, and cross-disciplinary experience. To better serve all types of academic startups, support should be tailored to how closely their venture is tied to research.

For highly research-based startups, the challenge is often moving from lab to market. These ventures benefit from targeted help with commercialization, management skills, and specialized incubator programs. Universities, tech transfer offices, and policy programs can play a big role in bridging that gap.

Startups with less research intensity, on the other hand, may thrive with support that builds entrepreneurial thinking, sharpens their ability to recognize new business opportunities, and encourages interdisciplinary collaboration. This underscores the opportunity for universities and policymakers to design programs and events specifically tailored to these needs. For those in the middle, neither fully research-based nor fully independent, custom support can help them clarify their direction, either by deepening their research link or shifting toward more applied innovation strategies.

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