

Germany's Innovation Gap: R&D-Heavy, Startup-Shy

Bits & Pretzels and Speedinvest report explores how Germany's largest companies rely on internal research and development while lagging in AI adoption and startup collaboration

July 28, 2025 – German corporations continue to invest heavily in internal research and development (R&D), spending €90.4 billion in 2023 alone. However, more than 85% of their innovation budgets remain tied to internal structures, with little flowing into startup collaboration, corporate venturing, or other external innovation initiatives¹. This internal-first approach is evident among Germany's top R&D investors: Volkswagen, Mercedes-Benz, and Bosch – Germany's top R&D spenders – devote nearly 90% of their innovation budgets to internal projects. In contrast, the largest R&D spenders in the U.S. – Alphabet, Amazon, and Meta – allocate roughly 30% of their innovation spend to external bets, including corporate venturing and tech acquisitions.

This strategic divergence is reinforced by a much more active M&A culture in the U.S.: Between 2018 and 2023, the average annual M&A activity in the United States reached 5.3% of GDP, amounting to €1.15 trillion per year². In Germany, the corresponding figure was just 2.9% of GDP, or €110 billion annually. The difference in innovation strategy is also reflected in R&D intensity: While U.S. firms spend an average of 7.7% of their revenue on R&D, German companies invest only 5.5%, focusing on internal development instead of accessing external capabilities. Combined, these factors contribute to measurably stronger growth among firms that embrace startups and emerging technologies.

This is one of the key findings of a new report by Bits & Pretzels, an annual festival for European founders, investors and decision-makers – and Speedinvest, a pan-European early-stage venture capital firm. The report, based on numerous conversations with leading European corporations, external studies, and expert insights from voices like Thomas Jarzombek and Verena Pausder, examines how Germany's largest companies – including all DAX40 firms – engage with external innovation models.

High R&D intensity correlates positively with market performance

The report reveals a clear link between R&D intensity and corporate valuation. The top 5 DAX40 by R&D-to-sales ratios trade at a P/S multiple of 4.05 and a P/E of 25.7, significantly above the DAX40 average (1.89 P/S, 21.47 P/E)³. In contrast, the bottom 5 R&D spenders show much lower market confidence, with an average P/S of 1.44 and P/E of 14.9. Moreover, external research suggests that companies with above-average R&D intensity tend to outperform on profitability, posting 15.4% EBIT margins compared to 10.0% for those investing below average⁴.

¹ Data is derived from publicly available sources. Figures should be interpreted as indicative, not exact.

² Calculations are based on data from BCG, Bloomberg, Pitchbook

³ Figures are based on an analysis of trailing average P/E and P/S ratios of DAX40 companies between May 2024 and May 2025, conducted by the authors using publicly available data.

⁴ Findings from a 2025 study by EY, which analyzed the 500 publicly listed companies worldwide with the highest R&D budgets.

AI is everywhere – except at scale

Artificial intelligence has become a top-line theme across corporate Germany. Between 2023 and 2024, references to AI in DAX40 annual reports increased sevenfold, from 205 to 1,440. Today, 58% of firms explicitly mention Generative AI. However, only 4% are actually deploying AI technologies at enterprise scale⁵. This gap between AI narrative and execution correlates with performance. The top 5 DAX40 firms by AI reporting intensity trade at an average P/E of 26.7 and P/S of 3.77, compared to 15.2 P/E and 1.01 P/S among the bottom 5 firms⁶. However, the report reinforces that it's not AI visibility alone, but demonstrated capability that translates into valuation upside.

External innovation drives valuation

While most corporate innovation remains in-house, external models such as corporate venture capital (CVC) and venture clienting are gaining traction. The number of active corporate investors worldwide rose to 2,344 in 2024, up from ~500 in 2013⁷. CVC engagement is not only widespread but also measurable in its impact: each year of CVC activity is associated with a +0.16 uplift in price-to-sales multiple among DAX40 firms (Baseline: 1.89) – roughly an 8.5% valuation premium⁸. In 2024, 29% of CVC-backed deals involved AI startups, underlining the growing strategic role of venturing in tech adoption⁹.

In parallel, venture clienting is emerging as the preferred low-risk model for startup collaboration. It allows corporations to pilot and scale startup technologies without taking equity. According to the report, 92% of surveyed European corporations rate it as one of the most effective external innovation models, especially in AI and industrial tech contexts¹⁰. CVC investments were also rated positively by over 80% of respondents. By contrast, venture building and accelerator programs were viewed as less effective with many corporations reporting they had shut such initiatives down due to limited business outcomes. When it comes to sourcing external innovation, VC & partner networks were seen as the most effective channel (88% satisfaction), followed by internal scouting efforts (78%). Inbound outreach from startups received the lowest score at just 28%.

Structural change needed to unlock Europe's innovation potential

The report concludes that German corporations are strategically aware, but still do not take full advantage of the startup ecosystem. In a global market increasingly shaped by AI scale-ups and open innovation, internal R&D alone is no longer sufficient. To remain competitive, companies

⁵ The figure is taken from BCG's 2024 report "Where's the Value in AI?"

⁶ Figures are based on an analysis of trailing average P/E and P/S ratios of DAX40 companies between May 2024 and May 2025, conducted by the authors using publicly available data.

⁷ The data is based on research published by Global Corporate Venturing in February 2025.

⁸ Figures are based on an analysis of trailing average P/E and P/S ratios of DAX40 companies between May 2024 and May 2025, conducted by the authors using publicly available data.

⁹ The data is drawn from Silicon Valley Bank's "State of CVC 2024" report, published in September 2024.

¹⁰ All figures mentioned in this paragraph are based on qualitative interviews conducted by Speedinvest in Q2 2025 with senior leaders from European corporations.

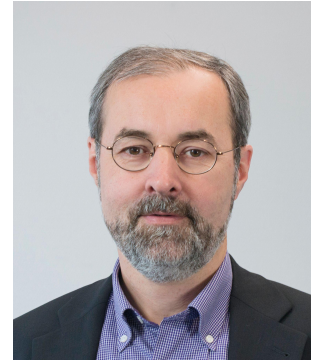
must complement internal capabilities with structured access to external innovation, doubling down on corporate venturing. The data shows that those who do are already outperforming their peers.

The full report, jointly developed by Bits & Pretzels and Speedinvest, is available on the Bits & Pretzels website [\[hyperlink incoming\]](#) and will be presented at the upcoming Bits & Pretzels CIO Summit happening during Bits & Pretzels Founders Festival in Munich from September 29th until October 1st.

Expert voices

Dr. Christian Rammer, Head of the Research Group "Economics of Innovation and Business Dynamics" at ZEW – Leibniz Centre for European Economic Research in Mannheim, says:

"Companies with above-average R&D investment signal a clear focus on developing and commercializing new solutions. If these prove successful in the market, they offer strong growth potential and high profitability – two factors that play a crucial role in capital market valuations."



Verena Pausder, Chair of the German Startups Association

"Startups aren't just a side note in the AI transformation, they're the driving force. Not just as tech providers, but as pace-setters. The most relevant AI applications in industry, healthcare, or software aren't coming from large corporations, they're coming from small, radically focused teams."

Thomas Jarzombek, Parliamentary State Secretary to the German Federal Minister for Digital Affairs and State Modernization, and formerly the Federal Government Commissioner for the Digital Economy and Start-ups:

"So far, we've put too much energy into AI regulation and too little into development. Of course, regulation matters, but we're world champions at creating rules, not at turning ideas into innovation. AI is developing globally. Other countries aren't waiting for our regulatory framework to be finished."



At the same time, we need to improve our talent pipeline, for example, through the ‘1000 Talents Program’, and make better use of data, especially mobility, research, and healthcare data. We also need better computing infrastructure, such as high-performance data centres or even an ‘AI gigafactory’.

The AI Act must now be implemented quickly and pragmatically. But regulation alone won’t make us a global leader. What we need are investments in talent, data, and infrastructure.”

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About Bits & Pretzels

Bits & Pretzels is an annual festival with 7,500 participants, aimed at startup founders, investors, and decision-makers. Founded by Andy Bruckschlägl, Felix Haas, and Bernd Storm van’s Gravesande, it takes place during the Oktoberfest from September 29 to October 1 in Munich. The event’s goal is to bring European tech startups into the spotlight and provide founders with the knowledge and network they need. Since 2014, the festival has gained international attention and welcomed high-profile speakers such as Sir Richard Branson, Tarana Burke, Jessica Alba, Nico Rosberg, Barack Obama, and Arnold Schwarzenegger. For more information, visit the official website at www.bitsandpretzels.com.

About Speedinvest

Speedinvest is a leading early-stage venture capital firm with more than €1 billion AuM and investors based in Berlin, London, Munich, Paris, and Vienna. Our dedicated sector-focused teams are the first to fund Europe’s most innovative technology startups and our in-house operational experts are on hand to offer founders ongoing support with growth, HR, market expansion, and more. Bitpanda, GoStudent, Wayflyer, Open, CoachHub, Schüttflif, TourRadar, Adverity, and TWAICE are among our portfolio of 300+ companies.

Learn more at www.speedinvest.com.