

FOUNDERS

The Startups Most Likely to Succeed Have Technical Founders Who Quickly Hire Businesspeople

by Martin Murmann

NOVEMBER 06, 2017



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When you're in a startup, the first ten people will determine whether the company succeeds or not. Each is ten percent of the company. So why wouldn't you take as much time as necessary to find all the A-players?... A small company depends on great people much more than a big company does. – Steve Jobs

Identifying, recruiting, and retaining the right employees are among the most important tasks in the formative stages of a new business – and among the most challenging. To paraphrase Jobs, the first employees are almost as important for the future success of a new venture as the founder or founding team members. But what kind of hires help ensure a startup's success?

Despite research arguing that innovative new firms are drivers of economic growth, we do not know much about their employees. The importance of talented employees for a young firm's success is undisputed, yet we know relatively little about how exactly employees contribute to a startup's success.

In a joint paper with Bettina Müller, we aim to better understand the relationship between new ventures' innovation success and the human capital of their employees. We analyze how the skills of employees relate to young firms' likelihood of introducing new-to-the-market products or services and how that relationship varies depending on the skills of the founders.

We concentrate on two types of skills that are frequently referred to as the most important ones for the innovation success of a young firm: business skills and technical skills. Technical skills are typically required to implement a new business idea, while business skills are required for conducting market research and finding a promising niche or for securing financing during research and development stages. Our main focus is to assess

under which conditions these two types of skills are complementary, meaning the return on one skill type is higher if the other skill type is used as well. In other words, if technical and business skills are complementary, firms may be able to profit disproportionately if they are equipped with both.

Our empirical analyses are based on a comprehensive data set on German startups. This data matches information on startups from the KfW/ZEW Start-Up Panel with official register information on all of their employees. Established in 2008, the KfW/ZEW Start-Up Panel is a representative survey of German startups. The linked register information is provided by the German Federal Employment Agency and stems from mandatory notifications of the employing firms to the German social insurance authorities. We derive our measures for technical and business skills by coding information on educational fields and prior occupations of founders and employees according to listings provided by the German Federal Employment Agency.

We use methods designed to test for complementary relationships in order to find out whether startups' innovation outcomes differ for different configurations of business and technical skills of founders and employees. Since entrepreneurs' choices of partners and employees are very likely to depend on whether the entrepreneur intends to bring innovations to the market, we control for measures for firm quality and firms' innovation strategies in multivariate models.

Our empirical analyses show that companies that are equipped with both business and technical skills are disproportionately more likely to introduce new-to-the market innovations than firms that have only one of these skills. **However, not all firms that are equipped with both types of skills are able to profit from them.** Firms profit disproportionately from a mix of business and technical skills **when the founder has technical knowledge and employs additional business experts.** **By contrast, we find no**

evidence of complementarity either when business and technical skills are balanced within a founding team, or when a founder with business skills hires employees with technical skills.

Why doesn't mixing technical and business skills seem to work among the founding team? Diversity of perspectives within a team has been shown to bring both benefits and costs. We suspect the costs of skill diversity are higher within the founding team, which has to agree on a joint strategy, than between founders and employees.

One theory for why technical skills seem to matter more for a founder is simply that the average technical founder has better business skills than the average business-trained founder has technical skills. The theory of the entrepreneur as a jack-of-all-trades suggests that the success of a new venture is constrained by the weakest skill of the entrepreneur, which implies that entrepreneurs can only successfully employ personnel for tasks they are able to understand sufficiently well. While it is reasonable to assume that a founder with technical skills has a basic understanding of business processes, it may be less likely for a founder with business skills to have basic technical knowledge.

Returning to Steve Jobs: Our study confirms the view that the founder's choice of employees is crucial for the success of a new venture. We hope our research helps entrepreneurs to identify the A-players their firms need in order to innovate successfully. With respect to innovation, it seems desirable for technically-trained founders to augment their firms' knowledge bases by hiring employees who are trained in business. This advice is particularly important since our data shows that a large share of founders with technical skills does not hire business experts, which comes along with less innovation success.

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SUPRIYO CHATTERJEE 3 days ago

Thank you for sharing your research in the above HBR article. A few years ago, within our group of ~2400 technical software developers, we created a subgroup to address the need of those who wished to evolve into software entrepreneurs. We ran the subgroup for about a year but had to cease operations for a lack of funding. Wish we had your research to back up our efforts.

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