



## Stanford eCorner

### Stanford Innovation Study Findings

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Video URL: <http://ecorner.stanford.edu/videos/3018/Stanford-Innovation-Study-Findings>

Stanford Management Science & Engineering Assistant Professor Chuck Eesley shares impressive economic results and quantitative data collected from the Stanford Innovation Survey, which measured the economic impact of Stanford alumni engaged in entrepreneurial activity.



#### Transcript

So, this all started for me a few years ago when I first arrived at Stanford back in the summer of 2009, and like all of you, you start seeing the examples and hearing these stories about successful entrepreneurs and alumni and faculty going on to start companies out of their research and their technology. And so I began to wonder what's the overall impact of all of this? If we were to sum together, the aggregate of all of this entrepreneurial activity that Stanford is producing through students, through alumni who have passed through Stanford and been exposed to the entrepreneurial environment or have been exposed to some new technology, through faculty, what would the aggregate results of that be? And so, I set out to do a survey of all Stanford alumni, faculty and staff. And so this was a large undertaking, obviously; we sent the survey out to 143,000 Stanford alumni. So this covers across the schools, across graduation years. So we got responses from alumni going back from the 1930s up through graduates from 2010. And so we got back - out of these 143,000 we got back 27,000 responses. So this is both from entrepreneurs and from non-entrepreneurs. And so, if you use that data, which took a lot of time to crunch the numbers and add all of this up, you wind up with 39,900 still surviving companies have been created over the decades by Stanford alumni and faculty, which have created 5.4 million new jobs and annual worldwide revenues of \$2.7 trillion. So, Stanford on the whole is having a large impact on the economy, both locally and globally. And Stanford is on the whole importing founders into the State of California.

So, just under 35% of the newly admitted students at Stanford are from California. About 45% of the alumni founders wind up founding their companies in California. So, I just want to highlight two other quick results and then there is a lot more in the report, which you can download from the website. But two other interesting results just to kind of peak your interest. One is, as students, you may be looking out at the various programs and business plan competitions and courses and wondering should I get involved in these? Should I work on my start up on the side? What should I do? And so, we asked people who responded to the survey, these are graduates going back in time, which aspects of Stanford did you interact with and more important in founding your venture? And so, we gave them various options for taking an entrepreneurship course, participating in business planning competition and so on. And so, as you might expect, those who were innovators, who produce some sort of patent, new business process, new product and those who are entrepreneurs were slightly more likely to take these entrepreneurship courses. But the surprising result came when we looked at those who founded a company within three years of graduating and who had managed to raise venture capital in their firms. So, 25% of the innovators and entrepreneurs in the aggregate had participated in entrepreneurship course of some type. But 60% of those quick founders, who had been able to raise venture capital within three years, had taken an entrepreneurship course. And similar results for the programs and Business Plan Competitions, STVPs, Center for Entrepreneurial Studies and the d.school.

The other interesting result comes around, we asked the founders if they had changed their business model? So, we asked them is the business that you're running now very similar to the business model, the vision that you had in the beginning? And

we gave them several categories, did the target customers change, did the revenue model change, did the sales channels change. And so, we found that 60% of the founders indicated that they had changed the business model from the beginning. And in particular, only 13% said they had the same target customers as they thought they would in the beginning. So, the classic thing, look to your left, look to your right, if we look at - if you look to your left, then probably if you're all founders the person to your left is going to wind up changing their target customer from what they think it would be. And if there are 200 people in the room, then perhaps only 26 of you are going to wind up choosing the right initial target customer in the beginning. So, we also looked at the performance implications of this. And I'll tell you just briefly a couple of interesting results. So, when you look on the whole, those who had changed their business model have slightly lower performance than those who stayed with their initial vision. The differences aren't large, but median revenues of \$150,000 compared to \$200,000. So - but when you look in particular at the software and Internet firms, those who had changed their business model in some way wind up having higher revenues than those who did not.

So, about \$500,000 median revenues compared to \$200,000. So, I think that this shows, that one, it's perhaps more about the insights into their correct business model that you get than about a particular number of times or whether you've changed the business model or not. And the second thing is that there maybe some industry differences where particularly for software and Internet firms, where uncertainty is higher than there maybe more benefit from these changes.