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# The Influence of Prior Experience on Innovativeness of Startup Business Ideas

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## ABSTRACT:

Following the disruptive innovations theory, entrepreneurs are encouraged to focus on game-changing innovations – e.g. by policy makers – in order to become a more successful economy. Typically, these founders are backed by investors (e.g. Venture Capital), which tend to finance startups with a proven team that combines outstanding prior experience regarding the industry and the founding process itself, as these startups show higher performance. The call for disruptive innovations on the one hand, and this investment behavior on the other hand might lead to contradicting situation of producing less innovative startups and teams. We therefore question, whether a higher level of prior experience and interdisciplinary within the founding team leads to more disruptive innovations or not.

KEYWORDS: Prior experience, opportunity recognition, innovativeness, novelty, disruptive innovation

## 1 INTRODUCTION

Entrepreneurial activity is a key driver to the growth of an economy (e.g. Schumpeter, 1942; Drucker, 1986; Audretsch and Fritsch, 2002). It unfolds whenever an entrepreneur recognizes and exploits a business opportunity. Based on human capital theory, the entrepreneur has a special set and combination of prior knowledge, experience and capabilities (e.g. Becker, 1964; Morris et al., 2011) that enables her to identify a certain opportunity not everybody is able to recognize (Venkataraman, 1997) or evaluate totally differently than other people (Shane, 2000). Following the disruptive innovations theory, which advises to focus on game-changing businesses, as these ideas have a higher potential to success, founders are encouraged to focus on disruptive innovations (Christensen 2006).

Typically, these founders are backed by investors, which specialize in evaluating and funding these “hopefully disruptive” business opportunities (Timmons and Bygrave, 1986; Amit, Brander and Zott, 1998). The decision to invest in a particular startup is a serious one. Once the investment is made, it is characterized by high illiquidity, and success is highly dependent on a small group of managers. Therefore, the evaluation process and the resulting selection decisions are crucial to the success of a VC (Zacharakis and Meyer, 1998). In General, investors tend to finance startups with a proven team that combines outstanding prior experience regarding the industry and the founding process itself, as these startups show higher performance (Westhead, Ucbasaran & Wright 2005, 2009; Hsu, 2007; Mitchell et al., 2007).

Although it is quite clear today, that more experienced startup teams perform better, in today’s literature it is quite unclear whether a higher prior experience and knowledge leads to newer or more innovative business ideas or not (e.g. Brockman und Morgan 2003). Therefore, we want to shed light on whether the demand for producing disruptive and highly innovative businesses ideas and the supply of experienced founders by venture capital firms fits into one another or not. The addressed research question of this study is:

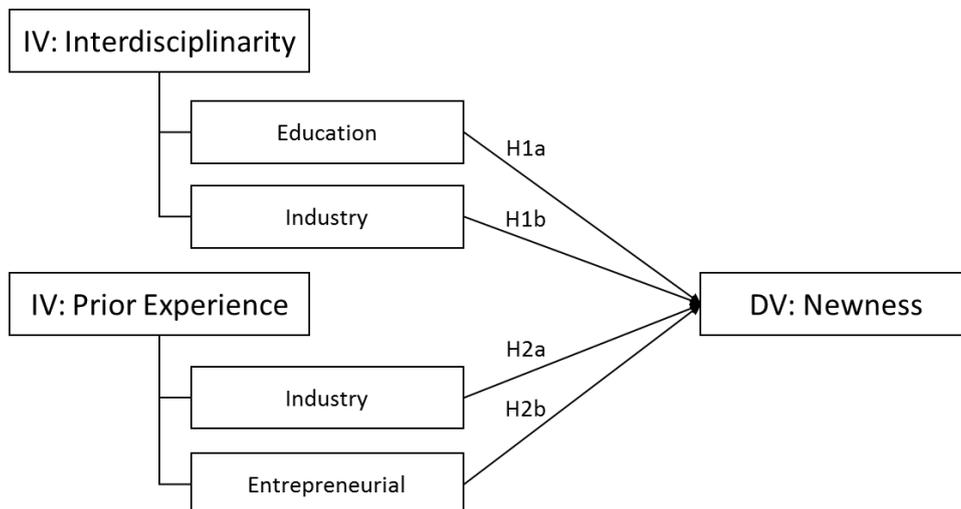
*Is there a positive or negative relationship between prior experience of founders and the innovativeness of a startup business idea?*

Furthermore, the academic discussion on newness or degree of innovation so far mainly focuses around technology or production innovation (Witt, 2009). This leads to a shortage of methods that help to evaluate the newness of business ideas (Dahlqvist and Wiklund, 2012). In this study, we therefore present an adapted model of Schlaak and Hausschild (2001) that measures newness of products to evaluate business ideas.

## 2 RESEARCH QUESTION AND FRAMEWORK

For early start-up companies mainly the founders' experiences and capabilities constitute human capital. Those experiences influence (1) which events are observed and (2) what consequential actions the founder takes in reaction to these events (Morris et al., 2012). A higher experience therefore leads to a superior ability of those individuals to interpret and classify these events more correctly, which leads to a higher probability of taking the right decisions and actions (Mitchell et al., 2007; Hsu, 2007).

In entrepreneurship literature human capital is most frequently associated with prior entrepreneurial experience, because this type of experience serves as a proxy for capabilities like opportunity identification and evaluation, resource acquisition (investors and employees) and implementation of organizational structure (e.g. Carter, Williams and Reynolds, 1996; Stuart and Abetti, 1990; Florin et al., 2003; Delmar and Shane, 2006). In addition to entrepreneurial experience, industry experience provides information about rules and norms as well as customer and supplier networks, which help start-ups to achieve a better performance regarding growth (Bates, 1990; Gimeno et al., 1997; Delmar and Shane, 2006). Based on this prior research the variable prior experience is split up into two dimensions of prior experience and two dimensions of interdisciplinary, which leads to the following research framework (see Figure 1) and the development of hypotheses.



**Figure 1:** Research Framework

### 2.1 Interdisciplinary educational & industry experience

Cohen and Levinthal (1990) argue that the deeper the knowledge base is within a certain domain, the easier it is to adapt knowledge outside that domain. Subsequently, this knowledge can also be applied more easily to new problems, which is a significant advantage when

searching and evaluating new opportunities within this domain (Zollo and Winter, 2002). Moorman and Miner (1997) proof, that interdisciplinary knowledge of a team has a positive impact on creativity and the capacity for innovation. In other words, according to their work, interdisciplinary teams support the implementation of radical changes or innovations. In line with them hypotheses 1a and 1b are formulated as follows:

*H1a: There is a positive relationship between interdisciplinary educational experiences within the founding team and the newness of startup ideas.*

*H1b: There is a positive relationship between interdisciplinary industry experiences with-in the founding team and the newness of startup ideas.*

## **2.2 Prior industry & entrepreneurial experience**

Argyris and Schön (1978) indicate that prior knowledge and experience leads to a certain blindness regarding new business opportunities. Qualitative research indicate, that knowledge inhibit true innovation (Brockman and Morgan, 2003). Innovative change is becoming more difficult the more information and data exist (Moorman and Miner, 1997). They observe a negative relationship between a company's memory and creativity regarding new product development. Transferred into the startup setting, this would mean that less prior experience and knowledge lead to higher innovative or more disruptive business ideas. Fiet and Patel (2008), reported that the more experience an entrepreneur has, the more specific information channels does he use, which is more likely to lead to incremental innovations, rather than to disruptive business ideas. In line with Westhead et al. (2005) who showed that serial entrepreneurs often tie in with prior successes and experiences and therefore produce less and less innovative ideas as their second or third startup we formulate Hypotheses 2a and 2b:

*H2a: There is a negative relationship between prior industry experience of founders and the newness of startup ideas.*

*H2b: There is a negative relationship between prior founding experience of founders and the newness of startup ideas.*

## **3 RESEARCH METHOD**

We use standard regression models for the analysis (McCullagh & Nelder, 1989). In order to investigate the hypotheses, we run different regression analyses in a hierarchical form (Aiken and West, 1991; Janssen, 2001).

The sample consists of Internet start-ups founded between 2008 and 2010 in Germany. We used data from the *Handelsregister* to filter information about the founding team, founding date of the startup and industry. In order to secure comparability, we focus on the four generic business models 1) e-commerce, 2) social media/community, 3) multisided platforms and 4) software-as-a-service that are most common for online startups. Based on these filters we collected data of 121 companies.

We generate data regarding entrepreneurial, work and industry experience based on the curricula vitae of the founders through analyzing Xing or LinkedIn profiles, company websites and articles from various blogs like *gruenderszene.de*, *deutsche-startups.de* and *techcrunch.com* and newspapers like *Zeit*, *financial times* or *FAZ*. We eliminated 32 companies from the initial sample, as we could not generate a complete profile of the founding teams from those companies, which leads to a final sample of 89 start-up companies

In order to operationalize the constructs introduced, we slightly adapted established scales and familiar measures to reflect the focus of this study.

*Dependent Variable Newness:* In order to evaluate the newness of startup business ideas, two independent experts were asked to categorize each business idea (James, Demaree and Wolf, 1984). Based on an adapted version of the widely used model of Schlaak and Hauschild (2001) regarding the newness of products, these experts were asked to evaluate the newness of the business ideas based on seven separate propositions that stand for four different dimensions 1) Business Model, 2) Market, 3) Technology and 4) Organization. The experts had to rate each proposition based on a seven-level Likert scale (1 = strongly disagree; 7 = strongly agree). Cohen's Kappa, a widely accepted measure for inter-rater reliability (Cohen, 1968), shows a high consensus of the two raters. Based on these evaluations we calculated a z-transformed variable representing the newness of each business idea, which serves as the dependent variable of our regression analysis.

*Independent Variable Interdisciplinary Education:* Here we count the number of different educational backgrounds of the founding team. For example, a team of three co-founders where all three studied business administration counts for one. The same number of co-founders, where one person studied engineering, the second business administration and the third design counts for three. Therefore, the higher the number the more interdisciplinary is the founding team regarding education.

*Independent Variable Interdisciplinary Industry Experience:* Similar to the variable interdisciplinary education we count the number of industries the founding teams worked in prior to the current start-up of the sample. Therefore, the higher the number the more interdisciplinary is the founding team regarding industry backgrounds.

*Independent Variable Prior Industry Experience:* Here we accumulated all months of work experience the founding team has. We only count months where the founding team worked within the same industry as the current start-up of this sample.

*Independent Variable Prior Entrepreneurial Experience:* Here we accumulated all months of founding experience the founding team has prior to the current start-up of this sample.

#### **4 RESULTS AND CONCLUSION**

Results of the regression analysis (see also Table 1) allows the following interpretations regarding our hypotheses:

Despite Model 2, no significant relationship between the educational interdisciplinary and the newness of a business idea exist. This leads us to reject Hypothesis H1a, which is in line, with Stieglitz (1985) and Fiet (2008) who state educational information existing in textbooks and online sources as easy to replicate information and therefore useless information regarding opportunity recognition processes.

Surprisingly, interdisciplinary industry experiences has a significant negative influence on the newness of business ideas. We therefore reject Hypothesis H1b. As interdisciplinary teams evaluate a business idea from several different angles, they avoid overoptimistic new business concepts, because of a more complete picture of markets, needs and technologically feasible ideas. Additionally, they might have problems to agree on a certain radical new business idea, as their fields of experiences are too diverse to complement (Moorman and Miner, 1997).

Regarding H2a and H2b our data supports a significant positive relationship between newness of business ideas and general industry experience as well as a negative but not significant relationship of entrepreneurial experience. We therefore have to reject our Hypotheses.

Regarding hypothesis 2a, we argue, that only real industry experts, who know their fields by heart and have built trustful networks are able to create radical innovations for their target groups and industries, if they manage to stay open and creative enough to see new opportunities. This is in line with Zollo and Winter (2002) who state that you have to be an expert within a certain domain of knowledge in order to integrate also new opportunities into this particular domain. Although not significant, prior entrepreneurial experience clearly has a negative impact on newness of business ideas, which is in line to our hypothesis (see also Westhead et al. 2005).

	1	2	3	4	5
<b>Independent Variables</b>					
Interdisciplinary Education		-.159 (.054)*	-.005 (.071)	-.004 (.071)	.019 (.071)
Interdisciplinary Industry Experience			-.234 (.027)*	-.347 (.031)**	-.380 (.032)**
Prior Industry Experience				.170 (.023)*	.205 (.032)*
Prior Entrepreneurial Experience					-.121 (.012)
<b>Control Variables</b>					
No of Founders	-.112 (.038)	-.130 (.037)	-.089 (.038)	-.110 (.038)	-.109 (.038)
E-Commerce (Industry)	-.175 (.293)	-.155 (.292)	-.177 (.291)	-.168 (.290)	-.166 (.290)
Social Media (Industry)	-.053 (.343)	-.038 (.342)	-.073 (.343)	-.072 (.341)	-.050 (.345)
Platforms (Industry)	-.054 (.282)	-.061 (.280)	-.097 (.281)	-.079 (.282)	-.068 (.282)
Software (Industry)	.049 (.282)	.056 (.280)	.088 (.281)	.072 (.282)	.062 (.282)
R <sup>2</sup>	.034	.059	.089	.106	.120
Adjusted R <sup>2</sup>	-.012	.002	.022	.029	.032

\* p < .10, \*\*p > .05, \*\*\*p > .001; n = 89

**Table 1:** Regression Analysis

With this work we conducted a more detailed analysis of different types of experiences and their influence on the newness of ideas than prior works in this area (Brockman and Morgan, 2003; Witt, 2009). Furthermore, we give evidence to the contradicting situation regarding the call (e.g. of policy makers) for disruptive innovations in order become an economy that is more successful on the one hand. On the other hand investors (e.g. Venture Capital), tend to invest in more experienced and interdisciplinary founding teams, which leads to less innovativeness, but more success.

Here, future research could help to understand this conflict better. Especially the negative relationship between interdisciplinary industry experience and newness is rather contra intuitive and would need further in-depth research, e.g. an inverted u-shaped relationship might be an appropriate explanation, which we cannot analyze due to restrictions based on sample size.

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