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Do Balanced Skills Help Nascent Entrepreneurs to Make Progress in the Venture Creation Process?

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Abstract

We apply Lazear's jack-of-all-trades theory to investigate the effect of nascent entrepreneurs´ balanced skill set across various functional areas on the performance of nascent projects. Analyzing longitudinal data on innovative nascent projects, we find that nascent entrepreneurs with a more balanced skill set are more successful in that they progress faster in the venture creation process.

Introduction

Entrepreneurship is of central importance for economic development (Audretsch et al., 2006). New ventures – often used as an indicator for entrepreneurship – facilitate the exploitation of new knowledge and contribute to job creation. In order to have an impact on the economy, new ventures must be created in the first place. Contrary to popular opinion, however, this is not an easy task but a demanding and complex challenge. According to the Panel Study of Entrepreneurial Dynamics (Reynolds, 2007), a representative large-scale survey of business founders and their emerging new firms in the US, only one out of three nascent ventures eventually get up and running.

Given this demanding nature of starting a new business, it is important to better understand what makes a successful nascent entrepreneur. Entrepreneurship research has often applied human capital theory as a lens to explain entrepreneurial outcomes. Grounded in economics (Becker, 1964), human capital theory indicates that investments in knowledge and skills pay off in terms of getting a nascent venture up and running (Davidsson and Honig, 2003). Nevertheless, recent studies report low correlations between traditional human capital indicators and nascent entrepreneurship success (see Davidsson and Gordon, in press). One reason for these disappointing results might be traced to the logic that knowledge and skills acquired through education and on-the-job training may also relate to superior performance in paid employment. In search of a distinctive set of skills and abilities as the "essence" of entrepreneurial human capital, Lazear (2005) proposed a theoretical model highlighting the importance of *a balanced skill set* for entrepreneurs. The basic assumption is that entrepreneurs must be competent in many skills because they have to combine different resources such as physical and financial capital, people and ideas in order to successfully run a business. So far, studies emphasizing this "jack-of-all-trades" view have primarily focused on the entry decision

(Lazear, 2005; Silva, 2007; Wagner, 2006), indicating that individuals with a balanced skill set are more likely to engage in entrepreneurship.

We complement this literature by applying Lazear's theory to the thorny task of *successfully creating a new venture*. Generally, the process of new venture creation is conceptualized as a sequence of gestation activities (e.g., development of a marketable product or service, financing, acquisition of materials and inventories) which need to be undertaken in order to transform a nascent project into a fledgling new firm (Samuelsson and Davidsson, 2009). We expect that nascent entrepreneurs with a more balanced skill set are more successful in that they progress faster in the venture creation process. This paper further extends prior work from the lead author on balanced skills (Stuetzer et al., 2011) by acknowledging that most nascent projects are started in teams. Thus, considering the skill set of all team members (instead of the single respondent entrepreneur) allows a more accurate and convincing test for the effects of balanced skills on successful nascent entrepreneurship.

Dataset and Measures

The data for our analysis stems from the Thuringian Founder Study (TFS), a research project on determinants of successful entrepreneurship in Germany. One part of the TFS is the examination of innovative (technology-oriented or knowledge-based) nascent projects via a longitudinal survey (see Stuetzer et al., 2011, for a detailed description). Following established definitions (see Davidsson and Gordon, in press), in this study, a nascent venture refers to an active start-up attempt which neither has achieved positive cash flows nor is officially registered yet.

Across two measurement occasions, nascent projects were followed along the founding process. At the first measurement occasion (T1; July 2008 to May 2009), the research team conducted face-to-face interviews with the solo entrepreneur or lead entrepreneur of 98 genuinely new nascent projects. A self-developed structured questionnaire was used to collect data on skills and prior experiences of each nascent entrepreneur as well as characteristics of the nascent projects. Twelve months after the T1 interview (T2), the research team conducted a follow-up survey by phone to collect information on the progress made in the venture creation process since T1. Of the 98 respondents at T1, 90 could be re-interviewed at T2. In five other cases a different member of the founder team provided information. Our final sample for all analysis, thus, contains 95 cases.

Using an established list of 32 gestation activities (Stuetzer et al., 2011), our first dependent variable *progress since the start of the venture creation process* is measured as the number of these activities which nascent entrepreneurs had initiated or completed until T1 (M=15.01, SD=5.56).

We use the number of gestation activities undertaken between T1 and T2 (M=14.17, SD=6.39) as our second dependent variable *progress between T1 and T2*. Note that this requires taking into account the achievements prior to T1. We thus consider the number of gestation activities undertaken until T1 adjusted for the duration (in months) of the venture creation process until T1 as additional control variable *prior progress* in the regression analysis (Stuetzer et al., 2011).

As an indicator for *balanced skills*, our main variable of interest, we used the number of functional areas (*M* = 3.41, *SD* = 1.43) in which the solo entrepreneur or the members of an entrepreneurial team had work experience prior to the first gestation activities. The five possible categories underlying this count variable include 1) marketing, sales and promotion; 2) accounting, controlling and financing; 3) engineering and R&D; 4) production; and 5) personnel. Similar measures have been successfully used in previous research studying the jack-of-all-trades approach (Lazear, 2005; Wagner, 2006).

The set of controls used in the regression analysis includes indicators of human capital (*working experience*, *tertiary education*, *start-up experience*, *same industry experience*, *work experience in small and young firms, PhD degree*) accumulated prior to the start of the venture creation process. Also, we control for social capital (*knowing entrepreneurs*), the *time since initiation* of the nascent project, *working time invested* and *financial capital invested* by the nascent entrepreneurs. Finally, industry peculiarities are accounted for with six industry dummies.

Results

In order to test our hypothesis of a positive effect of balanced skills on the progress of nascent projects in the founding process, we employ the following empirical strategy. The first dependent variable, progress since the start of the venture creation process (i.e., the number of gestation activities undertaken prior to T1), involves count data that is characterized by the absence of zeros. We, thus, use a zero-truncated Poisson model for the empirical analysis. The count data involved in the second dependent variable, progress between T1 and T2 (i.e., the number of gestation activities undertaken between T1 and T2), exhibit overdispersion, with the variance of this variable being larger than its mean (Likelihood ratio test: χ^2 = 13.05, *p* < 0.01). Accordingly, we employ a negative binomial regression model (Hausman et al., 1984).

Descriptive statistics and regression results are provided in Table 1. Model 1 shows the results for the prediction of progress prior to T1. Regarding the control variables, nascent ventures progress faster if the founders hold a PhD degree and invest more working time. As expected, our main variable of interest, balanced skills, positively predicts progress prior to T1.

In Model 2, the analysis is devoted to nascent venture progress between T1 and T2, adjusted for achievements prior to T1. The control variables PhD degree, working time invested, and progress prior to T1 show a positive effect while work experience negatively relates to nascent progress. More importantly, our measure of balanced skills shows a positive effect on the number of gestation activities undertaken between T1 and T2.

In sum, our results reveal that nascent entrepreneurs with a more balanced skill set are more successful in that they progress faster in the venture creation process.

Discussion and Conclusion

This paper contributes to entrepreneurship research in four ways. First, we show that nascent entrepreneurs with experience in many functional fields enjoy a head start in the

venture creation process and also progress faster later in the process. Adding to previous research (e.g., Lazear, 2005; Silva, 2007), our results suggest that balanced skills are an important success factor throughout the entrepreneurial process.

Second, the limited explanatory power of the "traditional" human capital indicators calls for the development of alternative measures of entrepreneurial skills and competence.

Third, this study offers practical implications. As a more balanced skill set pays off, prospective entrepreneurs may decide to either invest in own skills or choose team members with a complementary skill set.

Fourth, the questions whether entrepreneurship can be taught and what should be included are of central importance for entrepreneurship education – a field which is rapidly expanding. Our results offer guidelines for suppliers of entrepreneurship education to broaden their curricula with interdisciplinary elements.

References

Audretsch, D.B., Keilbach, M., Lehmann, E., 2006. Entrepreneurship and economic growth. Oxford University Press, New York.

Becker, G.S., 1964. Human capital. University of Chicago Press, Chicago.

Davidsson, P., Honig, B., 2003. The role of social and human capital among nascent entrepreneurs. J. of Bus. Ventur. 18, 301-331.

Davidsson, P., Gordon, S.R., in press. Panel studies of new venture creation: a methods-focused review and suggestions for future research. Small Bus. Econ. doi: 10.1007/s11187-011-9325-8.

Hausman, J.A., Hall, B.H., Griliches, Z., 1984. Econometric models for count data with an application to the patents–R&D relationship. Econometrica, 42, 909-938.

Lazear, E.P., 2005. Entrepreneurship. J. of Labor Econ. 23, 649-680.

Reynolds, P.D., 2007. New firm creation in the United States: a PSED I overview. Found. and Trends in Entrep. 3, 1-150.

Samuelsson, M., Davidsson, P., 2009. Does venture opportunity variation matter? Investigating systematic differences between innovative and imitative new ventures. Small Bus. Econ. 33(2), 229-255.

Silva, O., 2007, The jack-of-all-trades entrepreneur: innate talent or acquired skill. Econ. Lett., 97, 18-123.

Stuetzer, M., Obschonka, M., Schmitt-Rodermund, E., 2011. Balanced skills among nascent entrepreneurs. Unpublished working paper.

Wagner, J., 2006. Are nascent entrepreneurs jack-of-all-trades? A test of Lazear's theory of entrepreneurship using German data. Appl. Econ. 38, 2415-2419.

Table 1: Regression Results

	Descriptive statistics		Model 1	Model 2
	Mean	SD	β	β
Main variable				
Balanced skills (number of functional areas with prior work experience)	3.41	1.43	0.088*** (0.023)	0.067** (0.034)
Human capital				
Work experience (number of years)	13.70	13.72	-0.005 (0.003)	-0.007* (0.004)
Tertiary education (number of founders)	2.24	1.32	-0.016 (0.029)	-0.040 (0.061)
Start-up experience (number of founded companies)	0.59	1.02	-0.026 (0.037)	-0.087 (0.056)
Same industry experience (number of founders)	1.42	1.14	0.031 (0.031)	0.066 (0.045)
Work experience in young and small companies (number of founders)	0.93	1.07	0.041 (0.037)	0.010 (0.050)
PhD (number of founders)	0.55	0.87	0.079* (0.045)	0.129** (0.061)
Other controls				
Knowing entrepreneurs (1 = yes; 0 = no)	0.94	0.24	-0.160 (0.120)	-0.056 (0.167)
Financial capital invested until T1 (7 categories)	3.38	2.00	----	0.026 (0.029)
Working time invested in the project (number of months from start until T1 /	12.63/14.40	16.59/4.94	0.009*** (0.002)	0.005*** (0.010)
Time since project initiation (number of months)	37.20	28.13	0.002 (0.001)	----
Prior progress	0.00	1.00	----	0.171*** (0.049)
Industry dummies			Yes	Yes
Intercept			2.397*** (0.144)	1.714*** (0.236)
LR χ^2			91.94***	68.06***
Pseudo R^2			0.44	0.48
N			95	95

Notes: β=regression coefficients, standard errors in parentheses; *** (**,*) denote a significance level of 1% (5%, 10%).