

BIRTH AND SURVIVAL OF NEW VENTURES IN THE CZECH REPUBLIC

Martin Lukes – Jan Zouhar

Abstract

Despite recent emergence of studies inspired by Panel Study on Entrepreneurial Dynamics, the theory of new business foundation is far from developed. The aim of the paper is to analyze factors influencing birth and survival of early-stage entrepreneurial activity in the Czech Republic. Compared to previous Czech studies, this paper stands out in two directions. Firstly, it is based on a more robust and representative sample than previous studies. We use data on 371 early-stage entrepreneurs that come from two longitudinal studies conducted between 2011 and 2014 in the frame of the Global Entrepreneurship Monitor project. Secondly, it puts a special focus on entrepreneurs who are already running their start-ups. We employ logistic regression to analyze differences in the effects of factors influencing these entrepreneurs and the ones who have only reached the nascent phase. The paper provides added value for our understanding of early-stage entrepreneurial dynamics.

Key words: nascent entrepreneurs, early-stage entrepreneurship, firm survival, start-ups, Czech Republic

JEL Code: L26, O31

Introduction

This paper seeks to better understand why are some start-up entrepreneurs successful in getting their new business running while others discontinue from their effort. A significant share of nascent entrepreneurs discontinue their entrepreneurial activities and the same is true for new ventures – many of them survive just several months or few years (Parker, Belghitar, 2006; Reynolds, Curtin, 2008; Gelderen van, Thurik and Bosma, 2006). In its efforts to analyse factors influencing birth and survival of early-stage entrepreneurial activity in the Czech Republic, the paper builds on previous studies (Lukeš, Zouhar, 2013; Lukeš, Zouhar, in press) but incorporates larger sample size and extends its scope also to the development of new and already operational businesses. Such studies are needed because the existing theory of early-stage entrepreneurship is underdeveloped and research findings so far are not

fullyconvincing (Davidsson, Gordon, 2012). Thus, it is important to accumulate original evidence based studies.

Previous studies identified several factors that influence the outcomes of early-stage entrepreneurial activities. In the state of the art review of nascent entrepreneurship research, previous start-up experience has been acknowledged as one of the main factors (Davidsson, Gordon, 2012). Further, there is a scarcity of research that has investigated how ex ante expectations of nascent entrepreneurs influence ex post occurrences such as business launch or entrepreneurial exit (Cassar, 2010). Therefore, in line with (Lukeš, Zouhar, 2013 and Lukeš, Zouhar, in press) we includeemployee expectations in the analysis. Another important factors include business planning, identified as important in the study by (Delmar, Shane, 2003), andsolo vs. team entrepreneurship and fear of failure (Lukeš, Zouhar, 2013, Lukeš, Zouhar, in press). In line with previous studies (Parker, Belghitar, 2006; Lukeš, Zouhar, 2013) we incorporate also duration from the conception of start-up activities. Finally, the trend covering the year in which respective data gathering took place is incorporated in order to account for systematic changes in entrepreneurial environment over time. Gender, education and city size are used in line with (Zouhar, Lukeš, 2013) as control variables. For more detailed theoretical background and review of existing studies see (Lukeš, Zouhar, 2013 and Lukeš, Zouhar, in press).

2 Material and methods

2.1 Data

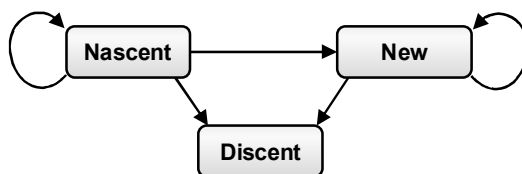
The data set used in our analysis is a longitudinal survey that combines two samples of 159 and 212 early-stage entrepreneurs identified in the GEM surveys carried out in the Czech Republic in 2011 and 2013;the sampling procedure was based on randomized phone calls,see (Lukeš, Jaklová, &Zouhar, 2014) for more details.These entrepreneurs were subsequently questioned in yearly follow-up interviews up until 2014.

2.2 Variables

Our dependent variable was the **entrepreneurial state**, coded into the *nascent*, *new*, and *discent* state. The distinction between the nascent and new entrepreneurs in the first interview followed standard GEM methodology. The transitions between the states in thefollow-up

years are given in Fig. 1. The *nascent* → *new* transition was established based on the reported revenues and number of employees; see (Lukeš&Zouhar, in press) for more details.

Fig. 1: Possible year-to-year transitions between entrepreneurial states.



Independent variables can be classified into (i) basic start-up characteristics, (ii) respondents' personal entrepreneurial attitudes, and (iii) demographic control variables. Start-up characteristics include **start-up duration**, i.e. years elapsed from the conception of start-up activities, and indicators of **solo entrepreneurship** (i.e. single-person start-up teams) and of the presence of a formal **business plan** (1 = yes, 0 = no). The variables capturing a respondent's attitudes are indicators of his/her **fear of failure** and **previous start-up experience** (1 = yes, 0 = no), and **employee expectations**, the number of employees expected 12 months after the survey; this variable entered regressions in a logged form. Demographic controls include indicators of a **female gender**, **post-secondary education**, and place of residence in one of Czech Republic's two largest cities, **Prague or Brno**; the latter has been shown to be a concise, but efficient control for regional entrepreneurial differences in the Czech Republic (Zouhar, Lukeš, 2013). Finally, we included the **year(trend)** variable.

2.3 Model specification

We used standard discrete-time event history models to study the probabilities of entrepreneurial state transitions. As Fig. 1 reveals, different sets of transitions are available for nascent and new entrepreneurs; a nascent entrepreneur can change into a new or a discent one, while a new entrepreneur can only change his/her state by winding up the venture, thus switching to the discent phase. Therefore, we divided the person-year observations into those in the nascent and the new phase. For the nascent, we applied the multinomial logit model of competing risks popularized by Allison (1982); for the new, we used an analogous model based on binary logit.

In order to avoid the so-called *reversed causality trap*, we applied the principle of time separation of the dependent and independent variables (Davidson & Gordon, 2012), i.e. the independent variables were all lagged by one period.

Also in line with the recommendations in (Davidson & Gordon, 2012), we used imputation techniques to curb the loss of efficiency in our regressions due to missing values. An analysis of the pattern of missing values revealed that a substantial portion of observations is incomplete owing to missing values in three particular independent variables: start-up duration, employee expectations and business plan. Through the use of multiple imputation techniques, we managed to increase the total number of observations in both regressions by more than 20 per cent.

Specifically, we used the multiple imputation suite in Stata 13 to implement the method of *chained equations*, described e.g. in (White, Royston, & Wood, 2011). The conditional distributions for imputed continuous variables, start-up duration and employee expectations, were specified as classical linear models, while the business plan indicator was modelled through a logistic probability model. The predictors in imputation models included both the remaining independent variables from our regressions and the dependent variables.

3 Results and discussion

Our results further developed findings related to nascent entrepreneurship discontinuance presented in (Lukeš, Zouhar, 2013; Lukeš, Zouhar, in press). As can be seen in the second column of Table 1, there are multiple factors causing the exit from nascent entrepreneurship. Firstly, this study confirms previous results (Lukeš, Zouhar, in press) showing that the number of months of involvement plays the role – more activity is discontinued either shortly after conception of nascent entrepreneurship or on the other hand after a longer duration of “just trying”. I.e. for a subgroup of nascent entrepreneurs, the decision to discontinue comes fast. On the other hand, there is other subgroup that gets stuck in the phase of “pseudoefforts” to launch and discontinue after relatively longer period of time.

Secondly, and again in line with previous findings (Lukeš, Zouhar, 2013; Lukeš, Zouhar, in press), we confirmed that fear of failure increases the odds of discontinuance from nascent entrepreneurship. This can be expected as people who fear of failure more likely stop entrepreneurial activity when facing unexpected problems and arising risks naturally connected to early phases of entrepreneurship.

Thirdly, a new result not found in previous Czech studies (Lukeš, Zouhar, in press) relates to previous start-up experience. People with such experience more likely discontinued from nascent entrepreneurship. This is surprising finding. It may indicate that more experienced individuals sooner evaluate whether to discontinue from early entrepreneurial

activity or not. It corresponds to recent approaches to start ups, such as Lean startup (Ries, 2011). In this approach, start-up entrepreneurs get quick and effective feedback from customers, iterate their business models and based on these iterations and feedbacks decide cheaply and quickly whether it makes sense to develop business idea in question. The informed decision to discontinue may represent more positive outcome than to remain with start-up with low chances of success. Disengagement from no longer appropriate goal frees up resources that can be invested in goals with higher chances of success (Latham, Locke, 2007), more specifically in a new business idea.

Finally, the study captured a change in between years – more nascent entrepreneurs exited from nascent activities in the last year when compared with previous years. It may again illustrate the spread of concepts such as lean start-up in the recent years. Other factors did not have a significant influence on nascent entrepreneurship discontinuance.

Tab. 1: Logistic regression results.

	(1) Multinomial logit		(2) Binary logit
	Nascent →Discent	Nascent → New	New →Discent
Start-up duration	-2.243*** (0.747)	-0.776 (0.740)	0.690 (0.921)
Start-up duration squared / 100	34.12** (14.05)	4.880 (15.55)	-17.70 (16.90)
Previous start-up experience	1.230*** (0.404)	0.654* (0.341)	0.512 (0.454)
Employee expectations	0.212 (0.196)	0.242 (0.176)	-0.728** (0.327)
Fear of failure	0.849** (0.399)	-0.335 (0.387)	0.0449 (0.627)
Solo entrepreneur	-0.237 (0.392)	0.0592 (0.346)	-1.048** (0.532)
Business plan	-0.394 (0.379)	-0.0843 (0.333)	0.166 (0.457)
Female	-0.0821 (0.389)	0.0148 (0.337)	-0.223 (0.482)
Post-secondary education	0.145 (0.433)	0.309 (0.362)	1.196** (0.562)
Prague or Brno	-0.813 (0.506)	0.123 (0.375)	-1.197* (0.697)
Year (trend)	0.457** (0.200)	0.260 (0.175)	-0.311 (0.300)
<i>N</i>	250	250	241

Notes: (i) Results based on 20 chained-equations imputations of start-up duration, employee expectations and business plan. (ii) Standard errors in parentheses. (iii) * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Source: own calculation.

When columns 2 and 3 of Table 1 are compared, it is obvious that whereas entrepreneurial discontinuance can be predicted quite well, the transition from nascent entrepreneurship to operational business is not so well captured by factors used in the analysis. The firm was launched rather by those individuals who had some previous start-up experience. It should be noted that start-up experience is significant both for entrepreneurial discontinuance and launch. This finding confirms that more experienced entrepreneurs are able to decide sooner whether new entrepreneurial activity makes sense or not and act accordingly.

The last column of Table 1 deals with entrepreneurs who already owned and managed a new business. It presents results related to factors which influence entrepreneurial exit from this early stage and already operational activity. Those entrepreneurs who planned to have more employees in the future more likely did not exit when compared with those who planned to have less employees. This finding suggests that if business is attractive enough for the individual, such a person is more likely willing to continue. Second, people with postsecondary education more probably abandoned entrepreneurial activity – a finding that may be related to performance thresholds (Gimeno, Folta, Cooper, Woo, 1997). Better educated people have better options on Czech labour market, thus they are more likely to discontinue if the net advantages stemming from their business are not comparatively higher than advantages coming from other labour market options. Further, less exits experienced entrepreneurs in Prague and Brno, probably due to higher purchase power in these bigger cities. Finally, results show that solo entrepreneurs more likely stayed in entrepreneurship than those who had a business with co-owners. This may suggest potential issues in entrepreneurial team and underestimated process of selecting co-owners in the pre-launch phase. Other factors did not play a significant role in explaining exits from operational start-ups.

Conclusion

This study provided added value for our understanding of early-stage entrepreneurial dynamics in the Czech Republic. It built on previous studies but was based on a more robust and representative sample and also incorporated entrepreneurs who were already running their start-ups. Study findings confirmed the role of fear of failure and duration dependence in influencing outcomes of nascent entrepreneurship. New interesting finding is related to previous start-up experience that had significant influence both on discontinuance and

actually launch. It may suggest the growth of lean startup approach in between Czech starters. Other findings are related to the phase of young operational startups where higher employee expectations, solo entrepreneurship and running a business in large city had negative whereas postsecondary education positive influence on new venture discontinuance.

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Contact

Martin Lukeš

Department of Entrepreneurship, University of Economics, Prague

nám. W. Churchilla 4, Prague 3, 130 67

lukesm@vse.cz

Jan Zouhar

Department of Econometrics, University of Economics, Prague

nám. W. Churchilla 4, Prague 3, 130 67

zouharj@vse.cz