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THE INFLUENCE OF MARKET CONCENTRATION ON THE DEVELOPMENT OF NEWLY BORN BUSINESSES IN THE CZECH REPUBLIC

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Abstract

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The paper deals with the market concentration as a detractor of life expectancy of new-born economic entities in the Czech economy. Although the start-up firms are small companies, their role in the economy exceeds their size, they are seen as providing the energy for economic growth. The aim of the paper is to evaluate the influence of different levels of market concentration on the business lifespan and consequently the job destruction in the economy. The analysis has shown that the greatest decline of start-up firms comes during the first and second year and that only around 30% of them get to their sixth year. From the viewpoint of the job creation it was found out that almost 30% of all new positions in the Czech economy are established in wholesale and retail trade sector, followed by manufacturing and professional, scientific and technical activities, both with 14% of new jobs. Using the regression analyses and statistical hypotheses testing the relationship between market concentration and firms' lifespan was investigated with result of semi-strong dependency of the business success on the market structure. The positive correlation between the probability of decline across individual economic sectors and the market concentration in these sectors was confirmed on the level of statistical significance $\alpha = 0.01$.

Keywords: start-up firms, market concentration, regional development

INTRODUCTION

To set up a firm, enter a market and compete successfully is subject to serious uncertainty, which results to the fact that a considerable proportion of new firms have to leave the market relatively soon and only a minority of the start-ups survive for a longer period of time. Understanding this process may contribute to our knowledge about the development of firm population.

While concentration measures are a good indicator of market structure, the link with the competitiveness and lifespan of companies is more complex than often assumed. According to Shughart (in Henderson, 2007), industrial concentration refers to a structural characteristic of the business sector, that is the degree to which production in an industry (or in the economy as a whole) is dominated by a few large firms. Once assumed to be a symptom of "market failure", concentration is, for the most part, seen nowadays as an indicator of superior economic performance.

Economists have been wary about the proposition that concentration is beneficial for the competitiveness of the industries. Whereas Casu and Girardone (2006) claim that the degree of concentration is not necessarily related to the degree of competition, or even Blažková and Chmelíková (2014) state that the low concentration of the food producers makes the food industry to be less competitive, the majority of studies support for the conventional view that concentration impairs competitiveness. Bikker and Haaf (2002) show how concentration harm the competition, so does Nathan and Neave (1989), or Pasadilla and Milo (2005). Besides the impact of concentration on the general quality of market competition the association with lifespan of businesses is of a great

interest as well. This is especially due to enormous importance of newly established businesses for the economic development.

The role of the start-up companies in the economy exceeds their size, despite they are small companies. They are seen as providing the energy for economic growth, which is also shown in the statistical figures of national economies (Horell and Litan, 2010). Fast growing economies usually have a larger number of start-up companies than in a stagnating economy.

The importance of start-up companies in an economy has several dimensions. One of the most important attributes of their relationship to the socio-economic system is the creation of new jobs. Kane (2010) showed as part of documenting job creation in the USA that start-up firms are the one stage in the life cycle of a company which provides a growth in jobs. In the other stages of the life cycle of a company, the net job creation figures are on average negative. This is also in harmony with findings of Chmelíková and Somerlíková (2014), who observed this pattern in the conditions of the Czech economy.

Ilmakunnas and Topi (1999) emphasizes the importance of the entry of new firms due to their help to maintain competition and hence efficiency. They state that new firms typically represent newer technologies and their role is important in innovation, which can promote industrial competitiveness and a structural change from traditional industries to high-tech fields.

Microeconomic explanations of changes in the firm population are typically derived from the theory of industrial organisation – the works analysed determinants of entry of new firms and the emphasis was put on the description and explanation of birth, growth and survival of firms (Dunne *et al*., 1988). The entry and exit of new firm have been studied also within labour economics and regional economics, since it has consequences on employment and there may be regional differences in the changes. Start-up firms and their survival have been in the interest of the subfield of organizational sociology called organizational ecology (Hannan and Freeman, 1989). From the macroeconomic perspective the unemployment as an explanatory variable has been usually included as an influence or the monetary policy transmission effects on the entry-exit process have been studied (e.g. Kashyap and Stein, 1993).

Lopez-Garcia and Puente (2006) found that larger start-ups survive longer and that the probability of exit is larger in sectors with high entry rates and low concentration, which is also supported by findings of Fauchart and Keilbach (2002). As stated by Fritsch *et al*. (2004), the critical reasons for the failure during the first years of existence are the problems of setting up on organizational structure and getting the new unit work efficiently enough to keep pace with competitors, which includes establishing business relations with suppliers, acquiring suitable personnel as well as gaining customers.

Another reason for the relatively high vulnerability of new firms to closure is that new firms tend to start relatively small, therefore "the liability of newness may also be a liability of smallness", as reported by Aldrich and Auster (1986). The liability of smallness is understood as one of the central explanations of the high failure rates of the new start-ups also in contemporary research, e.g. Pe'er *et al*. (2016) used firm-level longitudinal data of all new start-ups in the Canadian manufacturing sector between 1984 and 1998 and argue that survival is contingent upon the structure of the environment. Therefore the environment for the new start-ups seems to be less favourable on highly concentrated markets, where there is a dominance of large firms with market power. This assumption is confirmed by the empirical research conducted by Mata and Portugal (1994) or Ranger-Moore (1997), who concluded that the risk of failure decreases with the larger the initial size of a new business is. The empirical evidence that significant market power of the existing firms on the market may imply low prospects for successful entry may be found in many studies (e.g. Ilmakunnas and Topi, 1999; Rosenbaum, 1993).

Competitive structure can be seen as a factor that is to influence business survival. The likelihood of a firm surviving in a market is in part determined dependent upon the strength and intensity of competition – e.g. Romanelli (1989) found in her study of minicomputer producers in the United States that the likelihood of new firm survival increased when competitive concentration was declining.

However, the relationship between the new-firm survival and the level of market concentration may not be a priori clear, e.g. Fritsch *et al*. (2004) analysed new business survival in 52 German industries over a 15-year period with the use of multivariate analysis and pointed out that relatively distinct barriers to entry due to the high market concentration could induce a self-selection process that results in relatively few but high-quality start-ups with high chance of surviving.

The purpose of this paper is to show the influence of market concentration on the business lifespan and consequently the job destruction in the economy. The paper contributes to a better understanding of the high market concentration consequences on the business environment and the lifespan of firms, which can be used especially by policymakers. The structure of the paper is as follows. First, the data and methodology are described (the data in this study cover the years 2001–2013). Second, the net job change in the Czech Republic during the observed period is analysed with respect to the differences across particular sectors. Third, development of market concentration on particular sectors is evaluated and with the use of the regression analyses and statistical hypotheses testing the relationship between market concentration and firms' lifespan is investigated and subsequently discussed. Fourth, based on the findings the conclusions are made.

METHODOLOGY, DATA AND HYPOTHESIS

The development of newly born businesses is of a great importance for the socio-economic system in the Czech Republic. It can be assumed that different sectors' structures lead to specific life environment for businesses. The research question is to what degree the market concentration influences the lifespan of firms in different sectors. One may assume that the higher the market concentration in the particular sector, the lower the percentage of surviving companies from the number of newly-established firms after a specific amount of time has elapsed since their establishment. Therefore, it is a suitable scare for checking that the lifespan of companies is influenced by the market concentration.

To verify this conjecture, the following hypothesis may be formulated:

The alternative hypothesis H_1: The probability of decline across individual economic sectors is positively correlated with the market concentration in these sectors (H_1: $\rho_{yx} > 0$).

For the purposes of testing and eventually supporting the stated hypothesis, its zero hypothesis is formulated thus:

The null hypothesis H_0: The probability of decline across individual economic sectors is not positively correlated with the market concentration in these sectors (H_0: $\rho_{yx} = 0$).

The analysis is based on the data published by the Eurostat (European Commission, 2014) and by Bisnode in the corporate database Albertina – Gold Edition (Bisnode Česká republika, 2015). The analysed period is from 2001 to 2013. Common statistical methods (synthesis, comparison, regression analysis and statistical testing of hypotheses) were employed in the data processing. The data range of the Eurostat – Business Demography Project (BDP) database enables a detailed assessment of the survival rate for companies established and operating in the Czech Republic. As far as covering the national economy is concerned, the industries that were not included in the population of economically-active companies according to the collective BDP methodology were as follows: agriculture, forestry and fishing, holding activities, the government sector, non-profit institutions and foreign countries and housing co-operatives. The BDP international project proceeded according to a collective methodology, according to which an economically-active subject is one that, during an observed period, was an employer or showed a turnover. Markets are defined based on the 1-digit level of the Classification of Economic Activities (CZ-NACE), which are referred to as Sections.

Market concentration is expressed by the most common measure of concentration – the concentration ratio (the share of one largest firm and the four largest firms on the total sector production). The concentration ratio (CR_m) is calculated as the percentage of market share held by the m largest firms in an industry (Viscusi *et al.*, 2005):

$$CR_m = \sum_{i=1}^{m} S_i ,$$

where S_i denotes the percentage of the i-th firm calculated as the production of the company divided by the sum of production of all firms in the market, and m denotes the number of the largest firms for which the concentration ratio is calculated. Market share is the percentage of a market accounted for by a specific entity (in this case it is calculated in terms of revenue, i.e. sales of own products and services).

The method of regression analysis and statistical hypotheses testing was used to analyse the relationship between market concentration and the probability of decline. Individual sets of data were first subjected to normality verification by the Kolmogorov-Smirnov test as well as on the basis of a normal probability plot. Then comes a regression analysis of the following two variables:

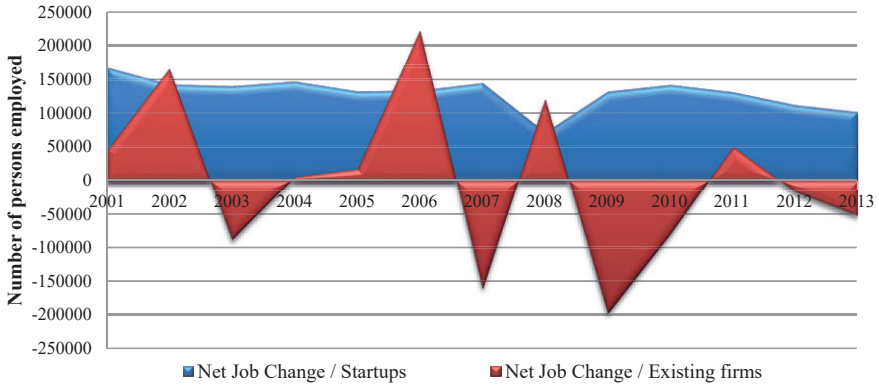
- Concentration ratio *CR4* in the observed time span from 2001 to 2007 for particular NACE 1-digit sections (*CR4*) as independent variable (which enables to monitor the impact of market concentration on the probability of decline until 2013).
- Probabilities of decline within 1 to 6 years (*birth* + *j*, where *j* = 1, 2, …, 6) as dependent variable.

On the basis of data from 11 sections of the Czech economy, the assumption about positive relationship between the market concentration in individual economic sectors (x = *CR4*) and the probability of decline across these sectors (y = *birth* + *j*) was verified with the use of statistical hypothesis testing. The software Gretl was used for calculations. The null hypothesis was rejected or not rejected on the basis of statistical significance (the significance level $\alpha = 0.01$).

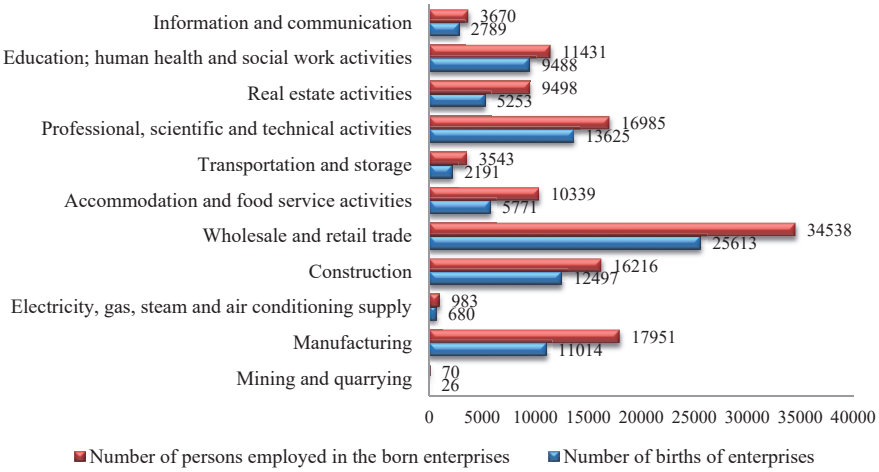
RESULTS

The graph in Fig. 1 shows that during the past decade the start-up firms have been the dominant creators of new jobs in the Czech Republic, while existing companies contributed with a lower intensity. During the observed period the start-up firms contributed to the economic development in the Czech Republic with 59 times higher intensity than the existing firms. In the years 2003, 2007, 2009, 2010, 2012 and 2013 were even more jobs lost than created by the existing firms. It can be concluded that inception of new firms is crucial from the view of generating new jobs in the Czech economy.

The intensity of job creation differs across the particular sectors of the economy. There are differences in the number of new-born economic subjects as well as in the number of jobs created by these firms across the sectors. Fig. 2 shows the average structure of the start-ups and by them



1: *Net job change in the Czech Republic in 2001–2013*
Source: Eurostat – Business Demography Project (BDP), author's calculations



2: *The average number of births of enterprises and persons employed in them in the Czech Republic in 2001–2013*
Source: Eurostat – Business Demography Project (BDP), author's calculations

imposed jobs in the Czech Republic in the observing period 2001–2013.

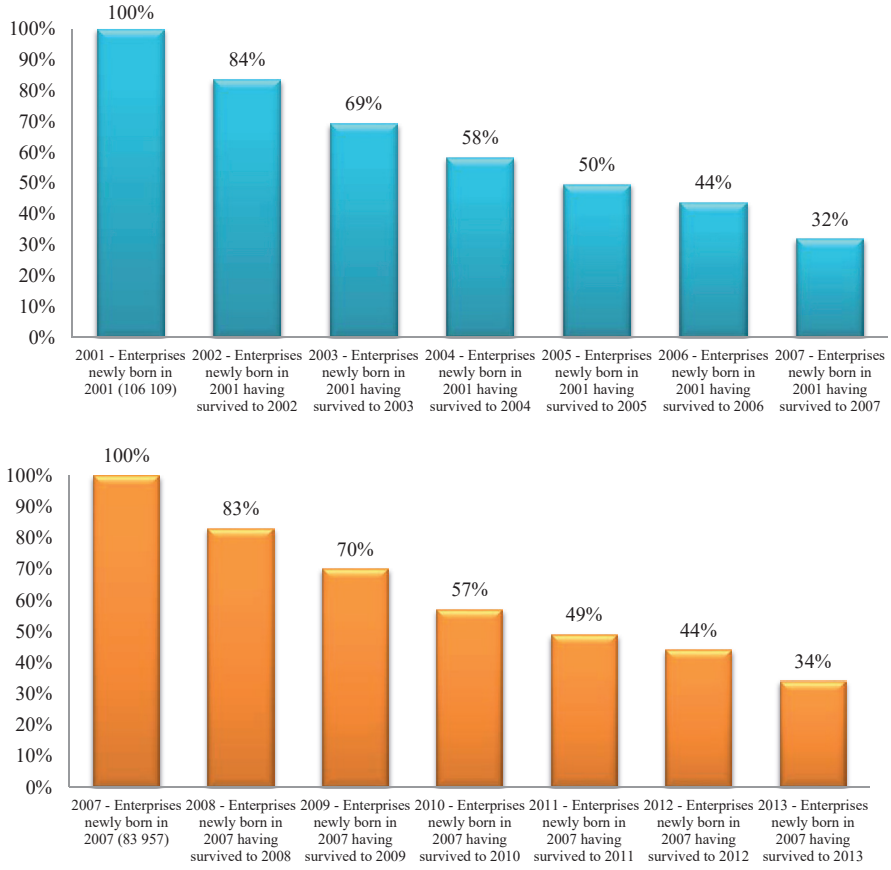
Regarding the job creation and birth of enterprises the most productive sector is wholesale and retail trade in which almost 30% of all new positions in the economy are established. This sector is followed by manufacturing and professional, scientific and technical activities, both with 14% of new jobs. Important job producer is also a sector of construction.

Examining the longevity of businesses in the Czech Republic in the period 2001–2013 reveals that the survival shows different patterns than observed in other economies. Fig. 3 illustrates that only 32% of economic subjects born in 2001 and 34% of economic subjects born in 2007 get to their sixth year.

Fig. 4 shows that Czech high-risk industries include mining, where newly-established companies displayed a first year survival rate of merely 70%, which is 14 percentage points less than the overall average. This industry's high mortality rate continued during the entire observed period, only 7% of companies established in 2001 saw their sixth year. The second riskiest industry is that of banking and insurance, whose first year survival rate was just 72% (12 percentage points less than the overall population). Only 22% of banking and insurance companies established in 2001 were economically active in year six. On the other hand, industries that were successful above average include production and distribution of electricity, gas, heat and air-conditioning, as well as companies operating in the field of education, health and social care. Both of these industries maintained a higher than average survival rate during the observed period. The industry of education, health and social care had the highest sixth year survival rate of all the observed industries, namely 44%.

As Knaup and Piazza (2007) point out, not only the company age, but also the sector influences the mortality of the businesses. It raises the question of whether the different levels of market concentration influence the business lifespan and consequently the job destruction in the economy.

The research on the longevity of businesses shows that survival changes with the changing sector and time span that elapses after the firm inception. The



3: *Survival percentage of economic subjects established in the Czech Republic in 2001 and 2007*
Source: Eurostat – Business Demography Project (BDP), author's calculations

relationship between market concentration and the longevity of businesses is therefore controlled for particular sections as well as particular age of the companies.

The market concentration in particular sections of the Czech economy differs significantly from each other. The average concentration ratio over the entire observing time span from 2001 to 2013 amounts from 17.39% (Information and Communication section) to 80.96% (Mining and Quarrying section) – see Fig. 5.

The significant differences among particular sections highlight that market structures of 1-digit CZ-NACE sections differ significantly. It can be assumed that different sectors' structures lead to specific life environment for businesses. The question is to what degree the market concentration influences the lifespan of firms in different sectors. One may assume that higher market concentration in the particular sector means lower percentage of surviving companies from the number of newly-established firms after a specific amount of time has elapsed since their establishment. The survival percentage from the number of newly-established firms determines the probability of decline for companies in individual industries.

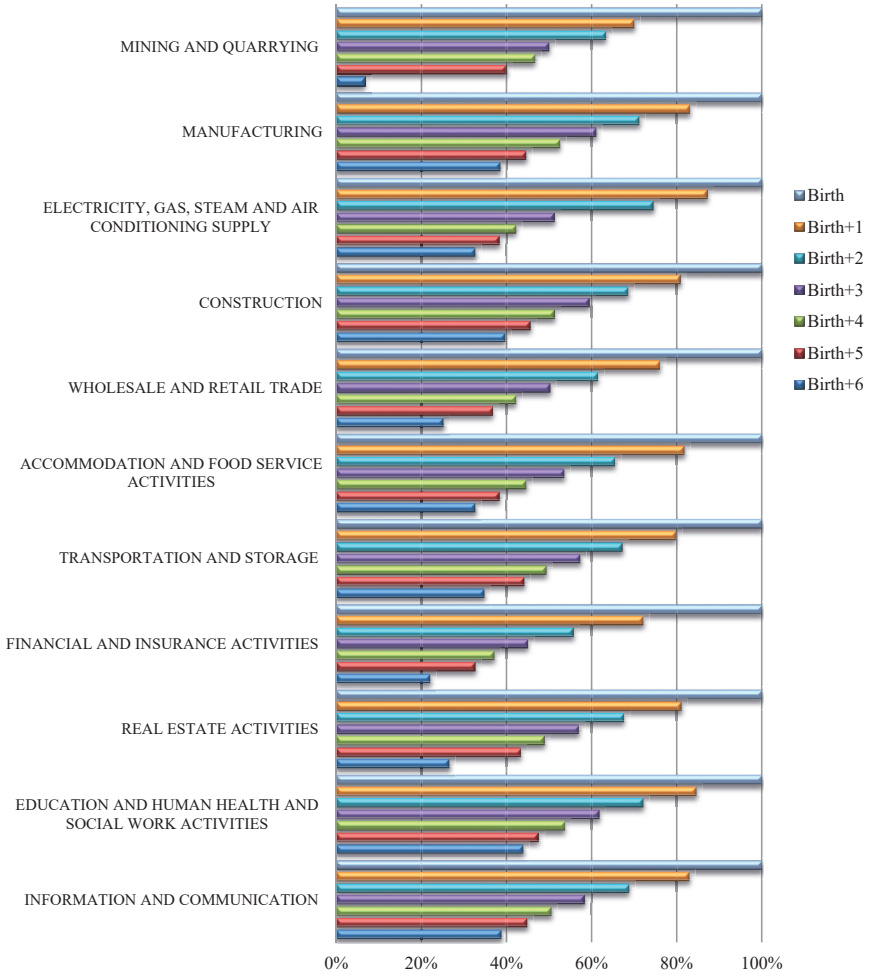
The resultant regression lines as well as the coefficients of correlation differ in different years after inception of the businesses. Fig. 6 shows the dependency of decline on the sector's concentration in 1 to 6 year after inception including the information on the coefficient of determination and slope of the dependency.

The coefficients of correlation reach the values $r_{birth+1} = 0.60$, $r_{birth+2} = 0.41$, $r_{birth+3} = 0.67$, $r_{birth+4} = 0.48$, $r_{birth+5} = 0.50$, $r_{birth+6} = 0.79$ and point to a dependence of decline on market concentration. This hypothesis about the relationship between the observed variables was statistically tested on the significance level $\alpha = 0.05$ for six particular years of decline (see Tab. I).

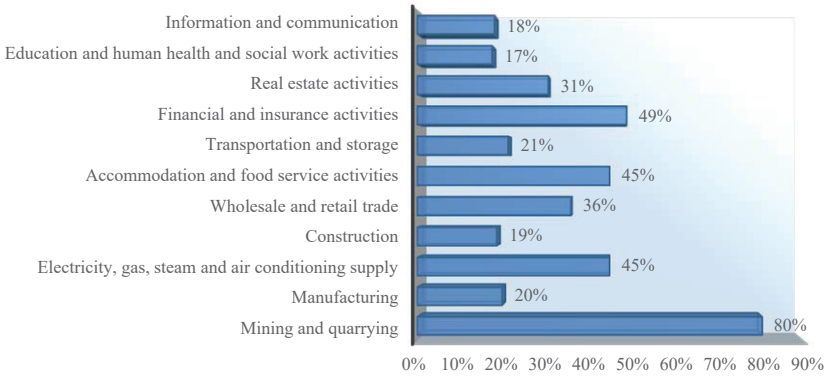
The null hypothesis of the independence assumption is rejected on the basis of statistical significance (*p*-value is less than the given significance level $\alpha = 0.01$). Hence, it can be stated that the probability of decline across individual economic sectors is positively correlated with the market concentration in these sectors.

DISCUSSION

According to the results of the research it is obvious that the decline of newly born business in the first years of existence is significant in the Czech economy, especially during the first and second year, while only about 30% of new-born economic



4: *Survival percentage of economic subjects established in 2001 in the Czech Republic according to individual industries*
Source: Eurostat – Business Demography Project (BDP), author's calculations



5: *The average concentration ratio CR4 over the observing time span from 2001 to 2013*
Source: Albertina – Gold Edition (Bisnode Česká Republika, 2015), author's calculations)

subjects get to their sixth year. In contrast to the conclusions of Knaup and Piazza (2007), Czech economic subjects have a greater chance of surviving their first year than their American counterparts. While for economic subjects operating in U.S. economic conditions the chances of survival increase with each passing year, this is not true for Czech subjects. The number of companies that close down during their sixth year is close to the mortality rate of years two and three.

6: *Dependency of decline on the sector's concentration in 1 to 6 year after inception*
Source: Albertina – Gold Edition (Bisnode Česká Republika, 2015), author's calculations

I: *Statistical hypothesis test on the significance level* $\alpha = 0.01$ *for six particular years of decline*

Independent Variable	Dependent Variable Coefficients					
	birth + 1	**birth + 2**	**birth + 3**	**birth + 4**	**birth + 5**	**birth + 6**
Intercept	0.15598***	0.30513***	0.40662***	0.50430***	0.56673***	0.57932***
	(0.00905)	(0.01046)	(0.00827)	(0.00950)	(0.00833)	(0.01379)
CR4	0.00145***	0.00102***	0.00162***	0.00113***	0.00103***	0.00376***
	(0.00022)	(0.00026)	(0.00021)	(0.00024)	(0.00021)	(0.00034)
R^2	0.3564	0.1714	0.4540	0.2339	0.2469	0.6169
F-test	41.5270	15.5117	62.3614	22.8944	24.5871	120.7892
p-value	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Source: author's calculations (processed in software Gretl)

Empirical studies that concentrated on the survival probability of newly-established companies (e.g. Knaup and Piazza, 2007) show that in the economic conditions of the U.S. only 44% of companies survive long enough to enter their fourth year of existence, and only 31% survive to enter their seventh. The studies of Knaup and Piazza (2007) reveal that during company life cycles the mortality rate gradually decreases with company age.

On the contrary, in the European countries the results of numerous studies show similar percentage of decline of new businesses – e.g. Mata and Portugal (1994) followed firms created in Portuguese manufacturing in 1983 and studied the

determinants of their lifetime. They found out that one fifth of them died during the first year of their lives and only 50% survived for four years, which correspondents with the result of this study (see Fig. 3).

During the observed period, individual industries saw a similar development in the survival rate as the overall population of all newly-established companies (see Fig. 4). Comparing the development of the overall company population and individual industries reveals the typical behaviour within individual sectors. Those sectors whose survival rate was lower than average during their first year continued to show a lower mortality rate in subsequent years as well. Reversely, sectors that displayed a higher average survival rate in their companies' first years of existence also maintained it in later years. This connection leads to the conclusion of systematically a greater risk due to worsened conditions in selected industries.

Due to the fact that the longevity of business is changing across different sector, the question about the impact of sector characteristics on the business lifespan and the job destruction in the economy arises. The importance of the sector specifics and characteristics on the mortality of businesses is highlighted also by other authors, e.g. Knaup and Piazza (2007). As important characteristic of a sector the market structure can be considered, which is described by the level of market concentration.

The assumption that was statistically tested and proved, is that high market concentration in a sector leads to the lower percentage of surviving companies from the number of newly-established firms – the probability of decline across particular economic sectors in the Czech Republic was positively correlated with the market concentration in these sectors. The results of the analysis of the relationship between market concentration and the longevity of businesses correspond with few studies that have looked at spatial concentration and firm failure rates – e.g. Shaver and Flyer (2000) analysed the sample of 95 firms entering in the U.S. manufacturing sector and Staber (2001) used the data on the population of knitwear firms in Baden-Württemberg in Germany and they have concluded that higher concentration is associated with higher mortality. They suggest that the higher mortality rates for firms in denser concentrations may be due to higher performance expectations and lower exit costs.

Romanelli (1989) used the Herfindahl–Hirschman Index as a predictor of survival likelihoods and in his model the regression coefficient for the market concentration was negative, which is in harmony with this study (he estimated the relationship between market concentration and the survival likelihood and in our study the relationship between market concentration and the probability of decline was observed). He used the ordinary least square (OLS) regression to gain estimates as well.

There is no doubt that, besides the market structure, a wide variety of factors are likely to influence business survival. They may include: personal background and work experience of key founder (see e.g. Cooper, 1993; Bates, 1990), characteristics of the business (e.g. Romanelli, 1989), customer base (e.g. Romanelli, 1989; Cooper, 1993), networking (e.g. Low and MacMillan, 1988), financial base (e.g. Reid, 1991; Bates, 1990), technology – i.e. sophistication and inputs (e.g. Audretsch, 1991), technology diffusion – i.e. R&D outputs (e.g. Reid, 1991), management functions (e.g. Cooper, 1993) and start-up problems – i.e. product timing difficulties, inappropriate distribution channels or initial undercapitalization (e.g. Bruno *et al.*, 1992; Reid, 1991).

CONCLUSION

The aim of this paper was to show the influence of market concentration on the business lifespan and consequently the job destruction in the economy. To investigate the relationship between market concentration and business mortality, we present a comprehensive empirical regression analysis.

We reported about analysis of newly born business survival in context of the market structure on the basis of the 13-year period. We examined the dataset from the Eurostat on business demography to find out what is the importance of newly established firms in the job creation for the Czech economy. The analyses showed that during the past decade the start-up firms have been the dominant creators of new jobs in the Czech Republic, while existing companies contributed with a lower intensity. However, the situation is different across the sectors both in the number of new-born economic subjects and in the number of jobs created by these firms. Almost 30% of all new positions in the economy are established in wholesale and retail trade sector, followed by manufacturing and professional, scientific and technical activities, both with 14% of new jobs. The analysis of the survival of start-ups shows that only around 30% of new-born economic subjects get to their sixth year. The high-risk industry is the sector of mining and quarrying and the sector of financial and insurance activities sector, where newly-established companies displayed a first year survival rate of about 70%.

Using the dataset from the database Albertina the relationship between life expectancy and market concentration in particular sectors of the Czech economy was investigated. The method of regression analysis and statistical hypotheses testing were used to analyse the relationship between market concentration and the probability of decline. The empirical results point to semi-strong dependency of life expectancy on the market concentration and this conclusion was confirmed also by statistical

testing. In general it can be stated, that the older the firm is, the more sensitive is it to the market structure. The findings presented in this paper, as well as the previous literature and studies, suggests that market concentration is important factor in the economy development and that it harms the healthy development of business' environment, since it should increase the risk of failure for young firms.

On the whole, our results suggest that market concentration matters importantly in job destruction across the particular sectors of the Czech economy. The results of the present research lead to the suggestion that increased concentration in the economy leads to higher mortality of start-up firms and suppresses the job creation. The results raise the question as what are the main factors of high market concentration in particular sectors of the Czech economy. Additional research on the market concentration might analyse the explanatory factors of the market power across the sectors.

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REFERENCES

ALDRICH, H. E., AUSTER, E. 1986. Even Dwarfs Started Small: Liabilities of Size and Age and their Strategic Implications. *Research in Organizational Behavior*, 8: 1655–198.

AUDRETSCH, D. B. 1991. New-Firm Survival and the Technological Regime. *Review of Economics and Statistics,* 60: 441–450.

BATES, T. 1990. Entrepreneur Human Capital Inputs and Small Business Longevity. *Review of Economics and Statistics*, 72: 551–559.

BIKKER, J. A., HAAF, K. 2002. Competition, concentration and their relationship: An empirical analysis of the banking industry. *Journal of Banking & Finance*, 26(11): 2191–2214.

BISNODE ČESKÁ REPUBLIKA, a. s. 2015. *Albertina – Gold Edition*. Praha: Bisnode Praha.

BLAŽKOVÁ, I., CHMELÍKOVÁ, G. 2014. Market Concentration as a Precondition for Higher Competitiveness of the Czech Food Industry. In: *Proceedings of the 8th International Scientific Conference INPROFORUM: Investment Decision-Making in the Period of Economic Recovery*. 1. vyd. České Budějovice: Jihočeská univerzita v Českých Budějovicích, 121–126.

BRUNO, A. V., MCQUARRIE, E. F., TORGRIMSON, C. G. 1992. The Evolution of New Technology Ventures Over 20 Years: Patterns of Failure, Merger, and Survival. *Journal of Business Venturing*, 7: 291–302.

CASU, B., GIRARDONE, C. 2006. Bank Competition, Concentration and Efficiency in the Single European Market. *Manchester School*, 74(4): 441–468.

COOPER, A. C. 1993. Challenges in Predicting New Firm Performance. *Journal of Business Venturing,* 8: 241–253.

DUNNE, T., ROBERTS, M. J., SAMUELSON, L. 1988. Patterns of firm entry and exit in U.S. manufacturing industries. *Rand Journal of Economics* 19: 495–515.

CHMELÍKOVÁ, G., SOMERLÍKOVÁ, K. 2014. Capital structure in start-up firms in the conditions of the Czech economy. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 62(2): 363–372.

EUROPEAN COMISSION. 2014. *Eurostat: Structural Business Statistics.* [Online]. Brusel: European Commission. Available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/european_business/special_sbs_topics/business_demography. [Accessed: 2014, March 28].

FAUCHART, E., KEILBACH, M. 2002. What Drives Market Structure? On the Relation Between Firm Demographic Processes, Firms' Innovative Behaviour and Market Structure. *The Open Access Publication Server of the ZBW – Leibniz Information Centre for Economics*. Discussion Papers, No. 02-77.

FRITSCH, M., BRIXY, U., FALCK, O. 2004. *The effect of industry, region and time on new business survival: A multi-dimensional analysis*. Freiberg working papers, No. 2004, 04.

HANNAN, M. T., FREEMAN, J. 1989. *Organisational Ecology*. Harvard: Harvard University Press.

HORELL, M., LITAN, R. 2010. *After Inception: How Enduring is Job Creation by Startups?* Kauffman Foundation Research Series: Firm Formation and Economic Growth.

ILMAKUNNAS, P., TOPI, J. 1999. Microeconomic and Macroeconomic Influences on Entry and Exit of Firms. *Review of Industrial Organization*, 15: 283–301.

KANE, T. 2010. *The Importance of Startups in Job Creation and Job Destruction*. Kauffman Foundation Research Series: Firm Formation and Economic Growth.

KASHYAP, A. K., STEIN, J. C. 1993. *Monetary policy and bank lending*. NBER Working Paper No. 4317, National Bureau of Economic Research.

KNAUP, A. E., PIAZZA, M. C. 2007. Business Employment Dynamics Data: Survival and Longevity. *Monthly Labor Review,* 3–10.

LOPEZ-GARCIA, P., PUENTE, S. 2006. *Business demography in Spain: determinants of firm survival*. Banco de Espana Research Paper No. WP-0608.

LOW, M. B., MACMILLAN, I. C. 1988. Entrepreneurship: Past Research and Future Challenges. *Journal of Management,* 14: 139–161.

MATA, J., PORTUGAL, P. 1994. Life Duration of New Firms. *Journal of Industrial Economics*, 42: 227–245.

NATHAN, A., NEAVE, E. H. 1989. Competition and contestability in Canada's financial system: empirical results. *Canadian Journal of Economics*, 576–594.

PASADILLA, G., MILO, M. 2005. *Effect of liberalization on banking competition.* Discussion paper series No. DP 2005-03. Philippine Institute for Development Studies.

PE'ER, A., VERTINSKY, I., KEIL, T. 2016. Growth and survival: The moderating effects of local agglomeration and local market structure. *Strategic Management Journal*, 37: 541–564.

RANGER-MOORE, J. 1997. Bigger May be Better, But is Older Wiser? *American Sociological Review*, 62: 903–920.

REID, G. C. 1991. Staying in Business. *International Journal of Industrial Organization,* 9: 545–556.

ROMANELLI, E. 1989. Environments and strategies of organization start-up: Effects on early survival. *Administrative Science Quarterly*, 369–387.

ROSENBAUM, D. I. 1993. Profit, entry and changes in concentration. *International Journal of Industrial Organization*, 11: 185–203.

SHAVER, M. J., FLYER, F. 2000. Agglomeration economies, firm heterogeneity, and foreign direct investment in the United States'. *Strategic Management Journal,* 21: 1175–1193.

SHUGHART, W. F. II. 2007. Industrial Concentration. In: HENDERSON, D. (ed.), *The Concise Encyclopedia of Economics, Liberty Fund, Inc.*

STABER, U. 2001. Spatial proximity and firm survival in a declining industrial district: the case of knitwear firms in Baden-Wurttemberg. *Regional Studies 35*, 329–341.

VISCUSI, W. K., HARRINGTON, J. E., VERNON, J. M. 2005. *Economics of Regulation and Antitrust*. MIT press.

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