

DEVELOPMENT OF NUMBER OF EMPLOYEES IN THE CZECH COMPANIES WITH VENTURE CAPITAL INVESTMENT

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Abstract

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According to Schefzyk (2006), creating of new job opportunities in companies financed by venture capital ranks among the most considerable economic impacts of venture capital on companies and national economy. Such obvious conclusions can not be identified in other foreign studies; therefore, a piece of research was undertaken with the aim to prove whether venture capital – in the conditions of the Czech Republic – contributed to any growth of number of employees in the companies with its participation.

Partial objectives in two levels were formulated to accomplish primary objective: the first partial objective was the identification and evaluation of development of number of employees in the individual companies funded by venture capital, namely in the period of one year prior to its entry, in the period of co-existence and in the period of maximally three years following the venture capital investment exit out of such companies. The second partial objective was represented by the comparison of development of number of employees in the companies with venture capital with development of employment rate in the Czech Republic. Collected research material comes out from the data of all business subjects financed by venture capital in the Czech Republic in the period from 1998 until 2011. Quantitative research method and subsequent logical inductions were employed to reach established research primary objective. On the basis of collected data on annual average converted number of employees in the companies per individual years their chain indices, subsequently assessed, were calculated.

In the research conclusions the authors observe that the statement on positive influence of venture capital on the employment growth in the companies with its participation can not be confirmed in the conditions of the Czech Republic.

company financing, venture capital, annual average converted number of employees, chain indices, corroboration of statement on venture capital influence

Business subjects use venture capital for their financing, too. Czech terminology related to this term is not completely united. In our research we apply the definition of Rajchlová (2012), defining venture capital as the form of own external resource, posing the risk. In contrast to common forms of foreign resources its investment is burdened neither with cost interests nor with investment amortization. The risk, which investors face, is perceived especially as the loss on investment. The investment is usually made for the period solely

contractually negotiated, mostly in the period from 4 to 6 years. Venture capital investors concentrate on companies, which can quickly and strongly increase their value. Nevertheless, company financing, exploiting venture capital, does not necessary result in the increase of company value, or possibly in company's growth and development. Venture capital investors provide companies with their managerial support, which can be identified as a non-financial value-added offered by investors.

Such an attribute is an important and unique characteristic of venture capital financing.

Economic impacts of venture capital investment are the subject of interest of many studies. They are delimited in the stimulation of business environment such as e.g. according to Režňáková/Nývtová (2007), in the support for economic growth, establishment of new companies, higher competitiveness of companies, e.g. according to Roling (2001), Haessler *et al.* (2009), Tykova (2000) and creation of new job opportunities, as presents e.g. Engel (2001). According to Schefzyk (2006), creation of new jobs in the companies funded with venture capital ranks among the most important economic impacts of venture capital on companies and national economy. Numerous studies aiming at the topic of employment rate growth have been carried out, out of which can be quoted e.g.: Engel (2001), who – on the basis of empirical analysis – proved a larger increase of the employment rate in those companies funded with venture capital in Germany in the years 1991–1998 compared with those companies funded with any other method of financing.

In the year 2002 the US National Venture Capital Association (in co-operation with a consulting company DRI) conducted a study, examining the fields of average turnovers, employment rate, efficiency, research and development costs and exports. Totally 3.500 companies were tested. On the basis of analysed data the authors came to the conclusion that in the year 2000 so-called *venture capital industry* participated in the employment rate and gross domestic product with 11%. As more deeply methodologically elaborated study can be mentioned the study of Belke, Fehn and Foster (2003), who in their work described the influence of venture capital investments on the total employment rate growth in 20 OECD countries in the period from 1986 until 1999. By means of a dynamic model they clarified the employment growth depending on GDP change, labour market and capital market as well as the share of venture capital investment of a country's GDP. Long-term results are surprisingly high. The increase of venture capital investments of GDP for one defined unit increases the employment rate for 1.0 to 1.8 percentage points in a long-time horizon. The influence of venture capital investment is even greater as regards early stages of company development. To increase the employment rate for one percentage point the participation of venture capital investments of GDP is to be increased for 0.25 units.

In the year 2002 the British Venture Capital Association (BVCA) conducted a survey among 176 companies, managers of which confirmed in the questionnaires more rapid development of their companies owing to venture capital investments, as regards turnovers and employment rate, compared with e.g. average of stock market index companies. The Austrian Venture Capital Organisation in co-operation with Penedel and Jud (2004) published

a study, the results of which should have answered, among others, following question: What is a development of turnover and employment rate in companies financed by venture capital, and what is a development in a control group? In spite of the fact that both groups were selected from industries with higher development rate, development of companies with venture capital investment was significantly better compared with used control group. The research was carried-out by means of questionnaire research. The employment rate growth of those companies, included in the control group, was for 46% lower compared with companies funded with venture capital.

On the basis of comparison of 136 companies, development of which was financed by venture capital, Jain, Kini (1995) stated that support provided by venture capital investors had a positive impact on higher employment rate and turnover increase compared with those companies not financed by venture capital. By the term “support” (also in the text below) is understood the personal initiative of the investor in the management of company.

To maintain the objectivity it is also necessary to mention studies, the results of which (on the contrary) did not prove any impact of funding on employment rate growth in companies funded with venture capital. The results of the study submitted by Manigart and Hyfte (1999) indicated that venture capital funded companies, enjoying the support of their investors, did not show demonstrably higher employment rate growth. The research was carried-out by means of the analysis of so-called control group of companies. Totally 187 Belgian companies with venture capital participation were compared.

Frederiksen *et al.* (1991), in contrast to the conclusions of his own research published in 1990, added that the results of research, undertaken by the investigation of development of indicators, did not prove any positive impact of capital venture on the company development. Monitored indicators were represented by: liquidity, turn-over, number of employees, equity ratio.

On the basis of results of selected foreign studies it is possible to state that the fact that financing of companies by venture capital would result in the increase in number of their employees has not been clearly recognized. Therefore, a piece of research was conducted, the main aim of which was to delimitate whether venture capital (in the conditions of the Czech Republic) positively influenced the increase in number of employees in the companies with its participation.

Partial objectives were set in two levels to accomplish the primary objective:

- the first partial objective was the identification and evaluation of development of number of employees in the individual companies funded by venture capital, namely in the period of one year prior to its entry, in the period of co-existence and in the period of maximally three years following

the venture capital investment exit out of such companies,

- the second partial objective was the comparison of development of number of employees in the companies with venture capital participation with development of employment rate in the Czech Republic. The total employment rate in the Czech Republic was selected based on the fact that the industry representation of the subjects of business in the companies with the venture capital influence was rather various with problematically identified outputs and to them assignable numbers of employees.

The research focusing on the identification of venture capital impact on the growth of number of employees is the very first research with such topic conducted in the Czech Republic.

MATERIALS AND METHODS

The research material comes out from the data of all business subjects, funded with venture capital in the Czech Republic in the period from 1998 until 2011. The basic file contains totally 93 companies with their registered seats in the Czech Republic. The source to obtain the file of companies, funded with venture capital, was the Czech Private Equity & Venture Capital Association. Publicly available financial statements provided data about the number of employees employed in the individual companies. Despite the fact that in the years 1998–2011 venture capital participated in the funding of 93 Czech companies, data of 63 companies were acquired, i.e. 68% of the total basic file. 30 companies either did not file their financial statements into the Collection of Instruments ("Sbírka listin"), or they were not digitalized by the Trade Register, and the data could not be found in any other way. Thus, the selection file was represented by 63 companies.

The method of quantitative research, followed by logical inductions, was applied to accomplish specified objective of the research plan. Statement on the employment rate growth owing to venture capital we consider as a type of statement which can be tested by factual data, fulfilling the conditions for empirical methods of research, specified e.g. by Popper (1997). At the same time, from Popper's methodology approach results that mentioned statement can not be verified even on the basis of factual data. Thus, we operated with a falsification technique only, i.e. proving whether the statement on the employment rate growth owing to venture capital investment is erroneous and incorrect. Furthermore, we searched for a complementary characteristics for the falsification being the finding of the fact how mentioned statement would stand in the empirical data, how was "proved", in other words, how was corroborated. Carnap, according to Popper (1997), aptly names this characteristic as the "degree of confirmation".

While investigating venture capital influence to growth of number of employees the information, which all the companies were supposed to identify compulsory and publish in the attachment to the financial statements, i.e. information on annual average converted number of staff, was analysed. Primarily its specification is needed to evaluate the fulfilment of the obligation of a company to employ persons with disabilities pursuant to § 81 Act No. 435/2004 Coll., on the employment. Therefore, the calculation of annual average converted number of employment is uniformly regulated by the order No. 518/2004 Coll. and comes out from the total number of factually worked-out hours of those employees working in the employment relationship, increased with hours not worked-out by such employees based on following reasons:

temporary incapacity for work, for which the sickness payment is made, holidays, obstacles at work from the side of employer, obstacles at work from the side of employee for which such employee is entitled to a compensation, care for child or any other family member, for which a nursing allowance is paid. Subsequently, the sum of all hours is divided by total annual fund of working period of one employee.

The authors are aware of the fact that the calculation of annual average converted number of employees is conditioned by the reason of its existence and includes certain facts not falling into economically reasoned number of employees, e.g. incapacity for work or family member care. Its application is supported by the fact that it represents a figure reached with a uniform calculation methodology applied in all companies and in all monitored years and is publicly available. On the grounds of gathered data on annual average converted number of employees in the companies in the individual years their chain indices, necessary for the fulfilment of the first partial objective, were computed. These indices were evaluated in the individual companies according to the time frame of venture capital involvement, i.e. prior to entry, in the period of co-existence and in the period of maximally three years after venture capital investor exit out of such companies. From 63 companies were collected data on converted number of employees for the period of one year prior to the entry of investor, for totally 60 companies for venture capital involvement and for 3 companies were found data only for the period after the exit of their investors. Totally 23 companies with venture capital exit were identified (from total 63 companies) and for 19 of them data were collected. Detailed data reflecting the whole monitored period were identified for 39 companies, in case of 11 companies were missed data for the year prior to venture capital investor entry, in case of 13 companies were missed certain data from the period of investment funding.

Quantitative data were processed by means of the methods of descriptive statistics. A tabular evaluation of results with their subsequent

description was used to strengthen the explanatory power of achieved results. Data published by the Czech Statistical Office (2012) were used to compare the employment rate development within the framework of the second partial objective. Number of the employed people in the whole national economy in the individual years (1998–2011) was exploited. The Czech Statistical Office includes within the category of the employed people all persons undertaking any rewarded activity: paid employees, members of production associations and those employed in their own businesses.

Interannual chain indices for the mentioned period were calculated from absolute data, then compared with the indices of development of number of employees in the companies with venture capital involvement. Initial files of data on annual average converted number of employees working in the individual companies in the years 1998–2011 are mentioned in Tab. I. and Tab. II. First column of the tables indicates the year of venture capital investor entry, second line indicates the year of the exit of such investor out of the company, third line specifies the identification of every company through its identification number. Below specified lines delimitate the individual years.

RESULTS

Tab. III and Tab. IV show chain indices coming out from annual average converted numbers of company employees. The logic of the structure of compiled Tab. III and IV is identical with previous tables, except their structuring into the columns.

The first piece of knowledge can be formulated on the grounds of collected data and out of them calculated indices, shown in Tab. I to IV: i.e. the fact that in the file of Czech companies with venture capital financing there are subjects with zero growth of number of employees (even their decrease was registered) means that the statement on positive influence of venture capital on the increase of number of employees must be falsified for the conditions existing in the Czech Republic in the years 1998–2011. More detail characteristics of development of number of employees with venture capital financed companies see Tab. V. Second column specifies absolute values of number of companies reporting any growth of number of employees in the period of involvement of the investor (complex file of monitored companies). These values are re-calculated to the percentage expression in third column. Analogical values reported in the period after the exit of investors from their companies are specified in fourth and fifth columns. First column represents in percentage expressed period with indicated growth of annual average converted number of employees. E.g., percentage expression in the amount of 100 means the fact that for the whole period of the activity of particular investor (100% years) the annual average converted number of employees grew up.

Such a result was yielded in case of 19 companies, representing 31.7% of monitored companies from the selection file. In the period after the exit of investor 6 companies (out of the file containing 19 companies) reported growth of number of employees for the whole monitored period.

On the grounds of results, shown in the Tab. V., following can be stated:

various degrees of growth of number of employees in the period of participation of investors in companies was reported in 80% of companies forming the selection file. The span of such growth of number of employees oscillated between 14.29% and 100% of monitored period.

Totally 20% of companies funded with venture capital did not report any growth of number of employees.

Tab. III. and Tab. IV. express a determination in how many companies growth of number of employees occurred compared to the period of investment existence. A growth of converted number of employees was reported by totally 9 companies, equalling to 47% from monitored 19 companies. In 7 cases this number decreased compared to the period of investment existence, in 3 cases the identical status in the duration of period of growth of number of employees was registered.

As regards the period following the exit of investors it was found that certain growth of number of employees occurred in the companies, representing less than 70% of selection file. Degree of growth of number of employees oscillated between 33.33% and 100% of monitored period.

Totally 31.6% of companies did not show any growth of number of employees even after the exit of the investor from the company.

The knowledge on falsification of statement on growth of number of employees in consequence of the entry of venture capital into the company we must then complete with the statement on existence of a positive level of corroboration of such statement, i.e. to confirm positive relation among mentioned quantities. Should we derive the level of positive corroboration from the number of incidence of positive relation, occurring in 80% of cases, then we could state that from the point of monitoring of development of number of employees in the individual companies the level of confirmation of venture capital influence on growth of number of employees would be high.

Data about development of number of employees following the exit of investor from the company also confirm the high level of confirmation of positive influence of venture capital on growth of number of employees.

Data related to the second partial objective – comparison of development of number of employees in companies with venture capital involvement and development of employment rate in the whole Czech Republic are shown in the Tables VI. and VII.

I: Annual Average Converted Numbers of Employees in Companies with Venture Capital Investment (1998–2007)

year of entry	1999	2004	2006	2000	2006	2009	2006	2009	2001	2005	2003	2003	2007	2003	2004	2003	2004	2006	2003	2004	2003	2004	2009	2004	2004	2009	2004	2007	2005	2005	2006	2006	2008	2008/2011	2011	2009
year of exit	2005	2004	2006	2000	2006	2009	2006	2009	2006	2005	2003	2003	2007	2003	2004	2003	2004	2006	2003	2004	2003	2004	2009	2004	2004	2009	2004	2007	2005	2005	2006	2006	2008	2008/2011	2011	2009
company identification number	257 88 001	45148295	25346687	28214722	61065056	00081299	25334727	26700239	26052555	562262	26193426	25418921	27085015	60792710	60700238	279 16 693	254 78 478	44017774	26033097	27394743	27426068	27701395	16355407	63497956	64949681	28207505	28175247	277 03 185	45193444	27600041						
1998			9																																	
1999			13																																	
2000			36		26																															
2001		449	50		27																															
2002		395	58	59	32	277	0	18																												
2003	1,347	328	64	59	32	250	111	345	9	127	0																									
2004	1,513	303	80	40	250	215	111	336	4	106	29	10	124	213	65																					
2005	1,829	291	81	20	240	198	118	346	4	91	29	8	128	209	128	11	14	0	343	1,688	17	2,449														
2006	1,925	320	80	19	238	194	123	360	3	3	67	130	205	189	188	11	495	11	309	1,662	24	2,532	1,473	0												
2007	1,974	316	76	371	19	253	194	130	418	3	1	135	191	191	265	14	501	17	309	1,398	26	2,503	1,815	0												
2008	2,055	322	76	373	21	247	195		517	3	0	75	137	184	381	344	16	482	17	110	1,355	2,559	104	138	2069	11										
2009	2,110	247	59	300	12	235	160		551	3	0	73	131	184		434	16	423	14	77	1,216	2,866	90	110	1457	11										
2010	2,425			276	12	232	118			3	0	76	126	141		447	16	419	14	7	1,183	2,900	91	114												
2011					12		130				0	73	115					429	14			2,944	92													

Source: authors' processing pursuant to the Ministry of Justice (2012), data valid as of 10. 08. 2012

[illegible]

The comparison of chain indices of employment rate development in the Czech Republic in the years 1999–2011 with development of annual average converted number of employees in companies, funded with venture capital, was made with the intention to at least partially excerpt the venture capital influence on development of number of employees in the companies.

The authors come out from the fact that development of number of employees in the companies is not influenced only by the existence of venture capital, but also a whole series of other influences which can not be quantified. All influences also affect the total employment rate in the national economy. Development of one quantity – number of the employed people – in the macroeconomic and company level was compared by a confrontation of development of number of employees in the companies, funded with venture capital, with development of employment rate in the whole national economy.

The result of such comparison is obvious: in the individual years of monitored period those companies with venture capital funding reached (in 56% of cases) lower index of development of number of employees compared to the employment rate development index in the Czech Republic. Any positive corroboration of growth of number of employees owing to venture capital does not result from this point of view.

Generally it is possible to state that in the Czech Republic (1998–2011) the positive influence of venture capital upon growth of number of employees was not manifested – number of employees grew in significant group of companies with venture capital involvement, but growth of number of employees in prevailing part of the companies financed with venture capital was lower compared to growth of the employment rate in the whole national economy.

CONCLUSIONS

The objective of the research task was to determine whether venture capital (in the conditions of the Czech Republic) influenced any growth of number of employees in the companies with its participation. The studies, aiming at the survey of development of this quantity in companies funded by venture capital, emphasize the importance of growth of number of employees and consider it as a manifestation of positive influence on the development of companies. On the basis of results of presented research the authors observe that in the conditions of the Czech Republic in the years 1998–2011 the positive influence of venture capital to growth of number of employees in these companies can not be confirmed. Formulated conclusion comes out from the analysis of results of two partial objectives supporting the main objective of the research task.

III: Chain Indices of Annual Average Converted Numbers of Employees in Companies with Venture Capital Investment (1999–2007)

year of entry	year of exit	company identification number	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1999	2005	257 88 001						1.12	1.21	1.05	1.03	1.04	1.03	1.15	
1999	2004	45148295				0.88	0.83	0.92	0.96	1.10	0.99	1.02	0.77		
2000	2006	25346687	1.44	2.77	1.39	1.16	1.10	1.25	1.01	0.99	0.95	1.00	0.78		
2000	2006	28214722										1.01	0.80	0.92	
2000	2009	61065056					1.00	0.68	0.50	0.95	1.00	1.11	0.57	1.00	
2001	2006	00081299			1.04	1.19	1.00								
2003	2011	25334727					0.90	1.00	0.96	0.99	1.06	0.98	0.95	0.99	
2003	2007	26700239							0.92	0.98	1.00	1.01	0.82	0.74	1.10
2003	2004	26052555						1.00	1.06	1.04	1.06				
2003	2006	562262						0.97	1.03	1.04	1.16	1.24	1.07	0.00	
2004		26193426					0.50	0.44	1.00	0.75	1.00	1.00	1.00	1.00	
2004	2009	25418921						0.83	0.86	0.03	0.33				
2004	2004	27085015							1.00			1.12	0.97	1.04	0.96
2005	2007	60792710							0.80						
2005		60700238							1.03	1.02	1.04	1.01	0.96	0.96	
2005	2006	279 16 693									0.93	0.96	1.00	0.77	
2005	2006	254 78 478							0.98	0.90	1.01	1.99			
2005		44017774							1.97	1.47	1.41	1.30	1.26	1.03	1.10
2006	2010	26033097								1.00	1.27	1.14	1.00	1.00	
2006		27394743								35.36	100.2	0.96	0.88	0.99	1.02
2006		27426068									1.55	1.00	0.82	1.00	1.00
2006	2011	27701395								0.90	1.00	0.36	0.70	0.09	
2006	2011	16355407								0.98	0.84	0.97	0.90	0.97	
2006		63497956								1.45	1.08				
2006	2011	64949681								1.03	0.99	1.02	1.12	1.01	1.02
2007		28207505								1.00			0.87	1.01	1.01
2007		28175247										1.60	1.00	0.94	1.03
2007		only 2011											0.70		
2007		45193444									1.23				
2007	2009	27600041											1.00	0.82	
2007	2008	27636224										0.93	1.02	1.02	
2007	2009	25302400										1.02	0.90	0.69	0.83

Source: authors' processing

The first partial objective focused on the identification and evaluation of development of number of employees in the individual companies funded by venture capital, namely in the period of one year prior to its entry, in the period of co-existence and in the period of maximally three years following the venture capital investment exit out of such companies. On the basis of analysis of results, emerging from solution of the first partial objective, we can state that totally 80% of companies reported a demonstrable rate of growth of number of employees in the period of the investment existence. A steady fall of number of employees was reported for totally 12 companies, i.e. 20% from the total number of monitored companies. In the period following the exit of investors a certain rate

of growth of number of employees was reported in the companies, representing less than 70% of selection file.

Totally 31.6% of companies did not show any growth of number of employees even after the exit of the investor from the company.

The conclusion to the first partial objective can be formulated as the identification of a positive relation between growth of number of employees and venture capital not only in the period of the involvement of the investors in their companies, but also after their exit from such companies.

The second partial objective was the comparison of development of number of employees in the companies, funded with venture capital, with development of employment rate in the Czech

IV: Chain Indices of Annual Average Converted Numbers of Employees in Companies with Venture Capital (2007–2011)

year of entry	year of exit	company identification number	2007	2008	2009	2010	2011
2007	2011	27565301		1.00			
2007	2009	27913805		1.09	0.36	0.65	
2007	2011	27544001			0.90	1.00	0.88
2007		46708707	0.92	0.63			
2007	2011	27625761		2.70	1.78	0.83	
2007		10545	0.80	0.98	0.92	0.95	1.09
2008 /2007				1.60	1.00	0.94	1.03
2008		25617036		1.60	1.00	0.94	
2008		26702924		1.96	0.42	0.82	1.02
2008		27767680		1.15	0.91	1.02	0.84
2008		25350471		0.94	0.88	0.83	
2008		26204967		6.55	1.01	1.30	1.00
2008		27208052		1.00	1.16	0.88	
2008		28492170				0.92	
2008/ 2007	2009	26772884	1.00	1.25	1.05		
2008		60108649		0.95	1.07	0.75	0.71
2008		28216733			15.44	0.88	0.80
2009/2008		28223209			1.00	1.11	0.59
2009		28398238				1.10	
2009		27865789			1.00	1.00	0.54
2009		44017774			1.26	1.03	1.10
2009		28968506				0.76	0.90
2009		28356250				1.00	2.00
2009						1.11	0.59
2010		28818741				1.00	0.86
2010		27654087			0.93	1.05	1.01
2010		48173029			0.96	1.00	
2011		61672157				0.94	0.92
2011		27537749				1.03	
2011		24772631					1.03
2011		25112775				0.58	1.00

Source: authors' processing

Republic as such. The companies funded with venture capital reached lower index of development of employees in the individual years of monitored period in 56% cases in comparison to the index of employment rate development in the Czech Republic. The conclusion of second partial objective can be formulated as follows: in the monitored period companies with venture capital participation indicated lower growth of number of employees compared to the results shown for the national economy.

Final conclusion: in the Czech Republic in the years 1998–2011 grew up number of employees employed in the companies with venture capital; however, the total employment rate in the national economy grew even faster. In the years 1998–2011 any positive influence of venture capital to growth

of number of employees was not reported in the Czech Republic.

Development of number of employees in the companies with venture capital involvement is an important characteristic of venture capital influence; however, in view of the authors, focus on monitoring and evaluation of efficiency of the companies funded with venture capital is advisable. This research shall continue in the existing knowledge.

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V: *State of Development of Number of Employees in Companies with Venture Capital Financing*

Development of number of employees- relative expression (column 1)	Investor participation period- absolute expression of number of companies (column 2)	Investor participation period- relative expression of number of companies (column 3)	Period following exit of investor-absolute expression of number of companies (column 4)	Period following exit of investor –relative expression of number of companies (column 5)
100%	19	31.7%	6	31.6%
83.33%	1	1.7%		
80%	1	1.7%		
75%	3	5.0%		
62.5%	1	1.7%		
66.67%	7	11.7%	1	5.3%
60%	1	1.7%		
50%	6	10.0%		
42.86%	1	1.7%		
33.33%	3	5.0%	6	31.6%
25%	2	3.3%		
20%	2	3.3%		
14.29%	1	1.7%		
0%	12	20%	6	31.6%
Total	60	100%	19	100%
without result	3			

Source: authors' processing

VI: *Values of Chain Indices of Number of Employees in the Czech Republic (1999–2011)*

year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
chain index	0.979	0.993	0.999	1.008	0.993	0.994	1.012	1.013	1.019	1.016	0.989	0.990	1.006

Source: authors' processing on the basis of the Czech Statistical Office

VII: *Results of Comparison of Development of Number of Employees in the Czech Republic and in Companies with Venture Capital*

year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	totally absolutely	totally relatively
companies totally	1	1	2	3	6	9	15	19	30	38	48	51	23	246	100%
higher index	1	1	2	2	3	4	6	9	11	16	20	25	8	108	44%
lower index	0	0	0	1	3	5	9	10	19	22	28	26	15	138	56%
identical index	0	0	0	0	0	0	0	0	0	0	0	0	0		

Source: authors' processing

SUMMARY

According to Schefzyk (2006), creating of new job opportunities in companies financed by venture capital ranks among the most considerable economic impacts of venture capital on companies and national economy. On grounds of ambiguous results provided by foreign studies a piece of research was undertaken with the aim to prove whether venture capital – in the conditions of the Czech Republic – contributed to any growth of number of employees in the companies with its participation. Partial objectives in two levels were formulated to accomplish primary objective: the first partial objective was the identification and evaluation of development of number of employees in the individual companies funded by venture capital, namely in the period of one year prior to its entry, in the period of co-existence and in the period of maximally three years following the venture capital investment exit out of such companies. The second partial objective was represented by the comparison of development of number of employees in the companies with venture capital with

development of employment rate in the Czech Republic. Collected research material comes out from the data of all business subjects financed by venture capital in the Czech Republic in the period from 1998 until 2011. Data on selection file of 63 companies were acquired, i.e. 68% of the total basic file. The method of quantitative research, followed by logical inductions, was applied to accomplish specified objective of the research plan. On the basis of collected data on annual average converted number of employees in the companies per individual years their chain indices were calculated. They were further evaluated especially from the point of time involvement of venture capital.

From the outcomes of first and second partial objectives result that positive influence of venture capital on growth of number of employees in the companies with its involvement was not confirmed. In the research conclusions the authors observe that the statement on positive influence of venture capital on the employment growth in the companies with its participation can not be confirmed in the conditions of the Czech Republic.

REFERENCES

- BELKE, A., FEHN, R., FOSTER, N., 2003: Does Venture Capital Investment Spur Employment Growth? Working paper No. 0303. CESIFO. Vol. DII. ISBN 978-0-7334-2911-8.
- BVCA, 2002: *The Economic Impact of Private Equity in the UK*. [online]. [cit.2011-01-15]. <<http://www.bvca.co.uk/assets/features/show/TheEconomicImpactofPrivateEquityintheUK2002.pdf>>.
- ČSÚ, 2012: *Zaměstnanost a nezaměstnanost od roku 1993*. [online]. Praha: ČSÚ. [cit.2012-06-30]. <http://vdb.czso.cz/vdbvo/tabparam.jsp?voa=tabulka&ci slotab=PRA1010CU&&kapitola_id=3>.
- ENGEL, D., 2001: Höheres Beschäftigungswachstum durch Venture Capital. *Discussion Paper No. 01-34*. Mannheim: ZEW.
- FREDRIKSEN, O., KLOFSTEN M., LANDSTRÖM H., OLOFSSON C., WAHLBIN C., 1990: Entrepreneur-Venture Capitalist relations: The entrepreneurs' views, in: Churchill, N. C., Bygrave, W. D., Hornaday, J. A., Muzyka, D. F., Vesper, K. H. & Wetzel, W. E. Jr. (Eds.) *Frontiers of Entrepreneurship Research Proceedings of the Tenth Annual Babson College Entrepreneurship Research Conference, Babson: Babson Park, MA*, pp. 251–265.
- HAESSLER, C., HARHOFF, D., MUELLER, E., 2009: To Be Financed or Not – The Role of Patents for Venture Capital Financing. *Discussion Paper 7115*. CEPR.
- JAIN, B. A., KINI, O., 1995: Venture Capitalist Participation and the Post-issue Operating Performance of IPO firms, *Managerial and Decision Economics*, 16: 593–606. ISSN 1099-1468.
- MANIGART, S., VAN HYFTE, W., 1999: Post Investment Evolution of Venture Backed Companies. *Frontiers of Entrepreneurship Research*. Wellesley, MA: Babson College.
- Ministerstvo spravedlnosti, 2012: Účetní závěrky podniků.: <http://obchodnirejstrik.cz/>.
- NVCA, 2002: Measuring the Importance of Venture Capital and Its Benefits to the United States Economy. New York: NVCA, Vol. Research paper IV.
- PENEDER, M., JUD, T., 2004: Empirische Untersuchungen und Ergebnisse zur Wirkung von Private Equity und Venture Capital auf die Unternehmensentwicklung. [online]. [cit.2010-04-01] <<http://www.avco.at/AVCO.aspx?target=21865>>.
- POPPER, K., 1997: Logika vědeckého bádání. 1. vyd. Praha: Oikoymenth. 182 s. ISBN 80-86005-45-3.
- RAJCHLOVÁ, J., 2012: *Vybrané aspekty financování podniků rizikovým kapitálem v podmínkách České republiky*. Disertační práce. Brno: Vysoké učení technické v Brně, Fakulta podnikatelská, 2012. 158 s.
- REŽŇÁKOVÁ, M., NÝVLTOVÁ, R., 2007: *Mezinárodní kapitálové trhy – zdroj financování*. Praha: Grada, 222 s. ISBN 978-80-247-1922-1.
- ROLING, J., 2001: Venture Capital and Innovation. Bonn: J. Eul Verlag. 248 s. ISBN 3-89012-902-1.
- SCHEFCYK, M., 2006: *Finanzieren mit venture capital und private equity*. Berlin: Schaffer, Poeschel. 287 s. ISBN 978-3-7910-2507-0.
- Vyhláška č. 518/2004 Sb., kterou se provádí zákon č. 435/2004 Sb., o zaměstnanosti
- Zákon č. 435/2004 Sb., o zaměstnanosti

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