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SCIENTIFIC REVIEW

What Drives Private Equity and Venture Capital in Central and Eastern Europe Countries: Focus on Serbia

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ABSTRACT

The paper examines the main drivers of Private Equity (PE) and Venture Capital (VC) capital into the Central and Eastern European (CEE) market with focus on Serbia. Also, this article analyses the current trends in the industry. Although most of CEE economies remain far behind EU-15 countries in the amounts invested trough PE and VC industry, the region is becoming increasingly attractive. Poland, Hungary, Slovakia, Romania, and the Czech Republic currently attract the majority of PE/VC investors. Investment activities in CEE observed by sector, show that the largest total investments are made in the sector of consumer goods and services, in the sector of Information and communication technology and in life sciences. CEE private equity market remained dominant in buyouts, where VC as a proportion of total investment activity remained relatively low. Main drivers of the region are increased economic activity, favorable tax rates, tax incentives for investors and high quality of labour with low costs. According to SWOT analysis, Serbia has many advantages in terms of attracting PE/VC investments, with the most important factors such as geographical position, well educated and qualified labor with relatively low cost of labour and advantages related to the tax treatment, free trade agreements, but also the efforts made in recent years such as reforms, improvement of fiscal discipline, and introduction of numerous incentives in order to attract investments.

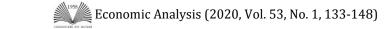
Key words: private equity, venture capital, investments, Central and Eastern Europe, Serbia, country attractiveness

JEL Classification: E50, G00

INTRODUCTION

The phenomenon of private equity, i.e., investing in order to buy a stake in a potentially successful business venture or company, is a concept as old as business itself. Examples of entrepreneurs who are receiving money from private investors for their business ventures and in return giving a share of their business are part of everyday life, but also, they are a historical constant. Private equity (PE), as defined by EVCA (European Association of Venture Capital Funds) is a form of equity investment into private companies not listed on the stock exchange; medium to long-term investment, characterised by active ownership which builds better business by strengthening management expertise, delivering operational improvements and helping companies to access new markets and outsize their returns. PE investors are not interested in regular dividends, but rather in an exit strategy from the investment in a period of

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usually 3-6 years (Ptacek, Kaderabkova, 2014). On the other hand, venture capital (VC) is a subtype of private equity focused on start-up companies with innovative ideas for a product or service who need investment and expert help in achieving growth. Rao&Jain (2002) highlight that VC funds invest in start-ups and early-stage businesses, as well as businesses in 'turn around' situations. VC funds invest mainly in small and medium-sized enterprises, which are not listed on the stock exchange and have high growth potential (Ramadani, 2014). Thus, they are an important catalyst for nurturing start-up firms with high-growth potential to undertake innovative endeavours that contribute to national wealth (Pradhan et al., 2017). It is considered that firms backed up by VC are more innovative (Cao et al. 2015) so the industry has given rise to many successful enterprises, some of which have produced major innovations (Tykvova, 2017).

This paper aims to explore factors that determine PE/VC investments in CEE, with the focus on the Serbian market. Sistematization of the countries included in CEE region is taken from Invest Europe, since they have the most comprehensive data bases on PE and VC. For this purpose, we analysed available data on PE/VC investments in period 2007-2016. According to the analysis, the most attractive countries for PE and VC were Poland, the Czech Republic, Hungary and Slovakia, and that countries received the largest amounts of investments. Some of the factors that drove PE/VC in these countries are accelerated economic activity, favourable tax regime, and qualified working force. The most unattractive countries in the analysis include Bosnia & Herzegovina, North Macedonia, Moldova and Montenegro who received sporadic investemnts of low amounts. These markets are still perceived as small and too risky.

THEORETICAL BACKGROUND LITERATURE REVIEW

Investment of PE or VC funds provides capital to a private company, getting a stake in the company in return, to sell the company when its value increases and therefore generate significant capital gains. The choice of investment is preceded by a detailed analysis of socio-economic factors that have an impact on the performance of the investment itself. Therefore, it is important to take into account a large number of socio-economic factors that will influence the outcome of a potential investment. According to Global PE Watch Worldwide, total PE investments amounted US\$391b in 2016, down 4% from 2015 or 50% from 2007, when PE investments reached US\$740b. In CEE, fundraising peaked in 2008, but under the delayed influence of financial crises, PE investments decreased by about 50% by 2010.

The strong private equity market is a cornerstone for commercialization and innovation in a globalized world (Groh, 2009). Private equity industry has a significant role in the modern economy since it can contribute to the growth by nurturing new enterprises and reenergizing existing ones (European Commission, 2011). VC helps the development of innovations, economic growth, and job creation and has a lasting positive effect on the economy because it mobilizes long-term investments (Ljumovic et al. 2015). Empirical studies confirm that private equitybacked firms are less likely to fail (Goncalves-Raposo&Lehmann, 2019). PE investors allocate their funds to companies with high growth potential, from innovative start-ups needing capital to grow or mid-cap companies with the ambition to take the next level in their development, but also to large business, with the capacity to become the leader on the market. Related to that, Moritz et al. (2016) found that younger, more innovative and with higher growth expectations are more likely to access equity from VC or PE investors. Suppliers of capital estimate the demand for PE and VC with one to two year horizon, make their allocations accordingly and judge the individual countries' attractiveness, which is determined primarily by expectations about the ability of local PE and VC funds to perform a sufficient number of transactions with satisfactory risk and return ratios (Groh, Liechtenstein&Lieser, 2008). PE and VC industry contributes to the value-creating process, meaning that they add value to companies to make them worth more. However, in evaluating the potential market, they take into account numerous factors. According to Oberli (2014, p.47), these factors are: capital markets, macroeconomic, fiscal/legal environment, government intervention, culture-related issues; while variables include past returns to investors (in countries with enough information on track records), initial

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public offerings (IPOs), recent investment activity, growth of gross domestic product, (short term) interest rates, gross domestic savings volume, capital gains taxation, the legal system, fairness, protection of property rights, liberal bankruptcy laws, investment regulations, labour market policies, the maturity of the private equity market and its size, technological opportunities, risk capital culture, and managerial talent. Some of these factor will be analysed in this paper. Costs of equity finance are depending on macroeconomic conditions and credit supply in the country. According to the Masiak et al. (2017) most important macroeconomic determinants are the inflation rate, inflation volatility, unemployment rate, tax rates, GDP per capita and GDP growth rates.

PE and VC investments in emerging economies are riskier than that of developed countries because of firm characteristics that are combined with high risk and volatile political environments (Johan and Zhang, 2016). However, high economic growth and lowering of state intervention in those markets are making them interesting for PE and VC industry on one side (Leeds and Sunderland, 2003), but challenging on the other since they are still relatively immature, under-developed, with substantial regulatory restrictions and corporate governance weaknesses (Bruton and Ahlstrom, 2003) and usually high level of corruption that has negative effect on the cost of doing business (Fisman and Miguel, 2007). However, Hain et al. (2015) that market-driven corruption may actually have a positive impact on VC investments into a country, but generally corruption should have a negative impact. A research from Cherif and Gazdar (2011), shows that GDP growth is a significant indicator for venture capital investments, but also, research and development expenditures and lack of corruption have positive impact on VC investments. They have not found statistical significance for variables such as divestments by IPO, trade sale, or write-offs. institutional and cultural differences matter, Nahata et al. (2014) found a positive influence on venture capital investment success when there is cultural distance between the country of the venture capitalist and the portfolio company. They also discovered positive relation between developed stock market and VC performance.

In order to analyze the attractiveness of the national equity market, several methodologies and publications are used. However, they all use similar methodologies and input parameters to determine the attractiveness. Venture Capital and Private Equity Country Attractiveness Index, which was initiated by IESE Business School Barcelona is used most often by researchers and professionals. It measures the attractiveness of 125 countries for investors in the VC and PE asset classes, by monitoring national PE and VC markets, taking into account specific factors. They consider that "key drivers," which potential investors focus on when making investment decisions, are economic activity; depth of capital market; taxation; investor protection and corporate governance; human and social environment and entrepreneurial culture and deal opportunities.

OVERVIEW OF THE INDUSTRY

Since the whole investment process in the PE/VC industry is geographically biased, it is reasonable to expect that the largest, most prominent and most active institutional investors in the PE/VC asset class are located in the US, which contributes to the dominant role of the US VC and PE market (Groh et al., 2010). According to the Venture Capital and Private Equity Country Attractiveness Index, in 2018, top ten ranked countries are: the USA (score 100.00), the UK (94.40), Canada (92.60), Hong Kong (91.20), Japan (91.20), Singapore (90.70), Australia (90.20), Germany (87.70), New Zealand (87.20) and Denmark (84.30).

Total PE investments in CEE between 2007 and 2016 were around 16,7 billion EUR, and the largest total investments were made in 2007 (3,01 billion EUR), but they had a negative trend up to 2013. There has been a trend of growth until 2016, but the investments didn't reach the maximum level achieved in 2013 (Figure 1).

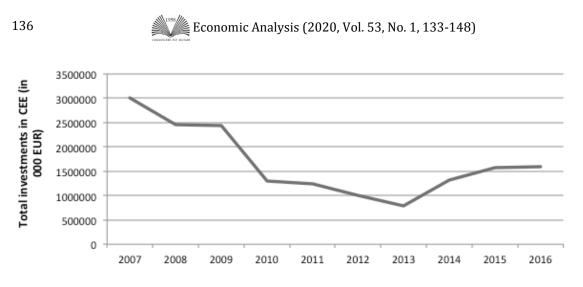


Figure 1. Total investments in CEE between 2007 and 2016 *Source: authors own calculation based on data from Invest Europe*

On the other hand, if we look only at the specific countries of the CEE region, this index shows that the most attractive country in 2018 for PE/VC investors is Poland, which took 26th place (globally), with 72.40 score. Serbia is ranked 88th out of 125 countries (Figure 2). Most of CEE countries remain far behind EU-15 in areas such as economic activity, entrepreneurial opportunities and depth of capital markets (Stefanova, 2015, pp. 51-52), as a result of significant changes that took place in the 1990s – the collapse of the communist centrally-planned system in the CEE countries or the self-management system in the former Yugoslav countries and transformation to a market based economies. Today, PE and VC are part of the common framework at EU level in the process of further integration of EU capital markets, but since its appearance, they have gone through several phases in the CEE. The first phase occurred during the early and mid-1990s, where PE/VC investments played a significant role in the process of transition. In this period investments came mainly from global funds and also from specific country-focused funds (relatively small investments, up to 50 million EUR). The second phase, which from the late 90s to the mid-2000s, was characterized by the emergence of regional funds with a portfolio of EUR 200-250 million and by the first gains on initial PE investments occurred in the first phase.

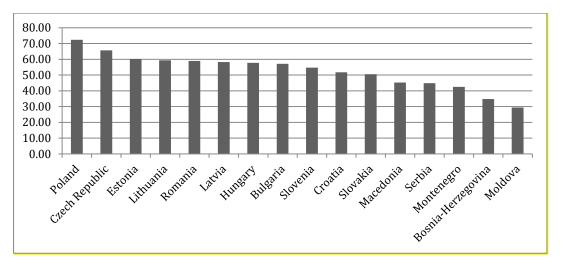


Figure 2. CEE countries scores for 2018 based on The VC and PE Country Attractiveness Ranking

Source: The Venture Capital and Private Equity Country Attractiveness Index

Most private equity investments, around 85%, are into small and medium enterprises (SMEs), that have high potential to grow and develop. (OECD, 2017). SMEs are the dominant form of business organization in both developed and developing economies (Harvie et al., 2013), but in EU SMEs are largely financed by bank loans (over 80% of attracted funds) and only 2% by venture funds, while in the US about 15% of investments in the SME sector are VC (OECD, 2017). According to Stefanova (2015) the lack of sufficient investments in start-up phase of SMEs in EU is due to the comparatively low returns of these investments (the rate of return on 10-year investments from all forms of venture capital in EU amounts to about 6.3% while in the US, it is 26%, respectively). Serbian economy is also dominated by SMEs (table 1), where almost 65% of the labour force is employed and SMEs are accounted for 56% of total gross value added and 44.8% of total exports in 2014 (OECD, 2017).

Table 1: Distribution of firms in Serbia, 2014, by firm size (enterpreneurs are included under micro enterprises)

Firm size (employees)	No. firms	Percent	No. employees	Percent
All enterprises	324 766	100.0	1 174 947	100.0
SMEs (0-249)	324 272	99.8	761 539	64.8
Micro (0-9)	312 943	96.4	355 389	30.2
Small (10-49)	9 198	2.8	185 206	15.8
Medium (50-249)	2 131	0.7	220944	18.8
Large (250+)	494	0.2	413 408	35.2

Source: OECD, 2017

INVESTMENTS BY SECTOR

Investment activities in CEE observed by sector between 2007 and 2016 (Table 1) shows that the largest total investments are made in the consumer goods and services, total EUR3,81 billion; in the sector of Information and communication technology EUR3,41 billion and in life sciences EUR2,04 billion.

AMOUNTS IN 000 €	2007		2008		2009		2010		203	11
Sector focus	amount	%								
Agriculture	11251	0.4	4300	0.2	82	0.0	43794	3.4	6721	0.5
Business products and services	356195	11.9	218963	9.0	67156	2.7	118778	9.2	149866	12.0
Chemicals and materials	227637	7.6	53041	2.2	6882	0.3	21822	1.7	10688	0.9
ICT (Information and communication technology)	719842	24.0	495803	20.1	535664	21.9	164387	12.7	272364	21.8
Computer and consumer electronics	163297	5.4	54218	2.2	173598	7.1	97448	7.5	61005	4.9
Construction	65871	2.2	43883	1.8	16849	0.7	15211	1.2	25301	2.0
Consumer goods and services	319871	10.6	362863	14.8	888890	36.3	418620	32.4	362054	29.1
Energy and environment	127495	4.2	91106	3.7	248377	10.2	93962	7.3	50842	4.1
Financial and insurance activities	318767	10.7	308356	12.5	249536	10.2	107487	8.3	97994	7.9
Life sciences	300770	10.0	616522	25.1	210591	8.6	158838	12.3	12	9.5
Real estate	91634	3.0	5068	0.2	45555	1.9	4258	0.3	-	0.0

Table 2. Investments by sector in CEE between 2007 and 2016

AMOUNTS IN 000 €	2007		2008		2009		2010		201	11
Transportation	301621	10.0	184476	7.5	-	0.0	47351	3.7	91436	7.3
Other	875	0.0	17011	0.7	3858	0.1	-	0.0	213	0.0
Total	3005126	100	2455610	100	2447036	100	1291685	100	1246901	100
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 Table 1 (continued). Investments by sector in CEE between 2007 and 2016

AMOUNTS IN 000 €	2012		2013		2014		2015		2016	•
Sector focus	amount	%	amount	%	amount	%	amount	%	amount	%
Agriculture	8638	0.9	20345	0.9	56269	4.3	37905	2.4	11548	0.7
Business products	90375	9.0	95848	12.1	81051	6.2	113609	7.2	100113	6.3
and services										
Chemicals and	8719	0.9	12564	1.6	973	0.1	1254	0.1	27486	1.7
materials										
ICT (Information and	109075	10.8	133487	16.9	492213	37.5	136999	8.7	344680	21.6
communication										
technology)										
Computer and	67885	6.7	26008	3.3	245957	18.8	0	0.0	0	0
consumer										
electronics										
Construction	11552	1.2	48299	6.1	687	0.1	688	0.0	46239	2.9
Consumer goods and	243311	24.2	141891	18.0	193620	14.7	511214	32.3	365674	22.9
services										
Energy and	86057	8.5	76627	9.7	119062	9.1	489414	30.9	192490	12.1
environment										
Financial and	115283	11.4	23657	3.0	16551	1.3	88538	5.6	149023	9.3
insurance activities										
Life sciences	259074	25.7	31999	4.1	85758	6.5	135399	8.6	240318	15.1
Real estate	-	0.0	99413	12.6	1158	0.1	7389	0.5	113	0.0
Transportation	7046	0.7	77333	9.8	17616	1.3	59257	3.7	101193	6.3
Other	-	0.0	1230	0.2	-	0.0	-	0.0	16863	1.1
Total	1007015	100	788702	100	1310914	100	1581664	100	1595740	100

Source: Authors own calculation based on data from Invest Europe

PE investments by stage focus.

In period 2007-2016, European private equity market remained dominant in buyouts, which accounted for 52.5-78.8% of total investments by value; CEE market followed Europe in terms of total investments by stage focus. However, in CEE total buyouts were relatively higher, up to 40% of total value invested, which is consistent with the growth orientation of the CEE economies. VC as a proportion of total investment activity in Europe remained relatively low, 9.3% on average, and in CEE it was even lower in this period (5.3% on average). Even though the regulatory framework for VC is still not in place in the Republic of Serbia, there are some sporadic investments of VC and equity funds established abroad (OECD, 2017). In Serbia, in 2007, only 0.6% of investments were VC, while buyouts dominated with almost 53%.

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Amounts in € thous ands	Bulgaria		Czech Republic	Estonia	Hungary	Latvia	Lithuania	Poland	Romania	Serbia	Slovakia	Slovenia	Ukraine	Other*	T otal CEE	% of total	T otal Europe	% of total
Stage focus	0	0		016	562		1591	1559				0		400	13175		440533	
Seed Start-up	4718	6220	516 1341	2954	562 8421	600	2103	4946	0	0	707	0	0	100	75004	0.8	20149138	0.8
Later-stage venture	390	300	924	3225	8290	500	623	9127	2984	0	3269	0	0		12110	0.8	1817577	
Total venture	5098	6520	2781	6179	17273	1100	4317	15632	2984	0	3976	0	0	100	100289	6.3	4307248	
Growth	6,000	5,972	4,440	20,875	36,194	2,200	7,157	150,412	9,828	2050	379	11,451	10,763	0	285333	17.9	9708891	
Rescue/Turnaround Replacement capital	0	6703	0 7000	0	0	0	0	0 8214	9455	0	0	0	0	0	20014	0.0	365021 1626238	
Buyout	0	0	120118	500	3360	12000	6076	205775	47835	0	0	7482	0		1190104	74.6	36460497	
Total	11,098	19,195	134,339	27,554	56,827	15,300	17,550	390,033	70,102	2050	4,355	18,933	10,763	100	1595740	100.0	52467895	100.0
									2015									
Seed Start-up	0 3050	0	300 1300	490 2937	3021 18729	251 6189	1377 7968	4691 17761	459	0 425	1740 4619	150 1400	0	0	10287 54655	0.6	117233 2009506	0.2
Later-stage venture	3000	1000	70	550	3068	1225	603	6421	1375	0	2750	1400	2976	0	19285	1.2	1678382	
Total venture	6050	1000	1670	3967	24818	7665	9949	28873	1834	425	9109	1700	2976	0	84227	5.2	3805121	8.0
Growth	5,250	11,547	8,750	9,859	38,482	33,169	35,608	79,385	4,505	0	7,000	0		. 0	229021	14.0	6475316	
Rescue/Turnaround	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	225071	0.5
Replacement capital Buyout	22239	0	0 3407	7269	95000	0	3499	22708	0	0 229657	0	10000	0	0	40225	2.5	586237 36317141	1.2
Total	33.539	12.547	13.827	21,095	158.300	40.834	49.056	817.750	147.069	229082	29,509	11.700	17.358	0	1631135	100.0	47439896	100.0
-Sinces						Colore in	and the second s		2014							500034		5
Seed	1178	0	0	400	1496	0	1570	1820	0	0	800	1050	0	0	8314	0.6	97995	
Start-up	758	0	2933	763	22174	1760	4952	9722	1825	0	900	1250	724	0	47762	3.6	1890926	
Later-stage venture	397 2333	300	6134	3239	8477 32146	1547	3224	10472	3478	0	3000	200	1396	0	41863	3.2	1624427 3613348	
Total venture Growth	2333	22,636	9067 29,386	4402 15,500	27,412	3307 25,700	9746 24,561	22014 65,410	5303 22,425	0	4700 900	2500	2121 2,190	0	97939 232385	7.5	3613348 5570378	8.7
Rescue/Turnaround	0	22,030	25,360	13,300	27,412	23,700	24,301	0	1060	0	0	0	2,190	0	23696	1.8	209265	
Replacement capital	0	0	0	20000	0	0	0	2107	0	0	0	0	0		22107	1.7	849606	
Buyout	0	0	261001	0	110375	4970	4537	161388	49182	326100	6000	11234	0		934787	71.3	31264722	
Total	2,333	41,636	299,454	39,902	169,933	33,977	38,844	250,919	77,970	326100	11,500	13,734	4,311	0	1310914	100.0	41507319	100.0
Seed	0	0	516	0	0	0	1329	1559	2013	0	0	0	750	0	4228	0.5	113963	0.3
Start-up	4718	6220	1441	2954	0 8421	600	2468	4946	0	0	0	707	750	0	4228	4.1	113963 1866201	0.3
Later-stage venture	390	300	924	3225	8290	500	5500	9127	2984	0	0	3268	0		29622	3.8	1402040	
Total venture	5098	6520	2981	6179	16710	1100	9297	15632	2984	0	0	3976	750	0	65860	8.4	3382204	9.5
Growth	6,000	5,972	4,440	20,875	36,194	2,200	7,157	150,412	9,828	0	2,050	379	11,451	2,099	259055	33.1	3580657	10.0
Rescue/Turnaround	0	6703	0 7000	0	0	0	0	0	0	0	0	0	0	0	6703 24669	0.9	343763	
Replacement capital Buyout	0	0	120118	500	3360	0	6076	8214	9455 47835	16076	0	0	7482	7675	24669 426897	3.1	27653873	2.1
Total	11,098	19,195	134,439	27,554	56,264	15,300	22,530	390,033	70,102	16076	2,050	4,355	19,684	9,774	426897	100.0	35726211	
	11,010		100,000	antipase [54,201	and and a			2012		2,000	-	11,001	4111				
Seed	0	0	0	327	0	0	200	2720	0	0	0	0	0	0	3247	0.3	130260	0.4
Start-up	88	0	127	4854	56675	400	3548	2904	0	0	0	1300	0	0	72773	7.2	1802639	4.9
Later-stage venture	0	3000	5101	800	8813	1642	0	3460	3055	0	0	0	1557	0	26502	2.6	1251615	1
Total venture Growth	88	12.102	5229 4.220	5961 11.650	2.926	1.360	3749 3.371	104.042	3055 7,850	0	0 5.348	1300	1557	0	204820	10.2 20.3	3184515 3807652	
Rescue/Turnaround	0	0	0	0	0	0	0	3,100	0	0	0	0	0	0	3100	0.3	372040	
Replacement capital	0	0	0	1000	0	400	0	25701	0	0	0	0	10198	0	41899	4.2	1104748	3.0
Buyout	84076	17198	96425	0	34539	0	0	331087	16700	4350	92500	2200	15600	0	654675	65.0	27990536	
Total	84,167	32,300	105,874	18,611	102,953	3,802	7,119	473,014	27,605	4350	97,848	3,508	43,314	0	1007015	100.0	36459491	100.0
Seed	0	0	0	137	3445	0	0	674	2011	0	0	0	0	0	4256	0.3	162155	0.4
Start-up	100	5625	2713	1192	27398	2450	546	10697	0	0	0	1802	0	0	52513	4.2	1795104	41
Later-stage venture	324	0	2783	0	9198	403	2185	15281	4000	0	0	0	3266	0	37439	3.0	1705149	
Total venture	424	\$625	5496	1329	40031	2853	2731	26652	4000	0	0	1902	3266	0	94209	7.6	3662408	8.3
Growth	6,801	0	7,733	4,200	494	1,500	10,294	162,856	31,763	0	9,149	4,920	26,600	975	267284	21.5	5096498	
Rescue/Turnaround Replacement capital	0	0	0	0	0	0 3270	0	1923	0 18500	0	0	0	0	0	1923 21770	0.2	392224 854749	
Buyout	0	10000	125678	979	154331	12600	13646	489196	11654	0	0	6967	33443	0	858394	69.0	34087325	2
Total	7,225	15,625	138,906	6,508	194,856	20,222	26,671	690,627	65,918	0	9,149	13,589	63,309	975	1243590	100.0	44093204	
									2010									
Seed	0	0	0	957	853	0	0	0	0	0	1742	0	0	0	3381	0.3	111308	
Start-up Later-stage venture	1,328	300	13,139 9910	4,125 732	5,761 11286	206	104	1,541 1272	1,904 3185	0	0 330	0 1129	0	0	27411 34709	21	1730420 1671937	
Total venture	1,328	300	23,049	5.814	17,900	206	104	2,813	5,089	0	2,072	1,129	0	0	65501	51	3513664	
Growth	80,910	0	84,779	11,931	6,897	5,074	0	114,454	52,049	13208	9,346	0	92,711	10,860	524730	40.6	6366528	
Rescue/Turnaround	0	0	0	0	0	0	1500	3073	0	0	0	0	0	0	4573	0.4	490711	1.2
Replacement capital	0	0	0	3200	0	0	0	16145	12000	0	0	5816	0	0	37161	2.9	1734743	4.2
Buyout Total	0 82,238	12200 12,500	85146 192,973	5438 26,382	40249 65,046	0 5,280	0	520517 657,002	50000 119,138	0 13208	3055 14,473	6,945	3116 95,827	0	659720 1291685	51.1	29126285 41231931	70.6
real	44,438	12,300	174,773	20,302	40,046	3,280	1,004		2009	13208	19,973	0,945	33,827	10,000	1291005	101.0	41231931	1000
Seed	0	0	0	451	0	0	0	1100	10	0	0	0	0	0	1561	0.1	144093	0.6
Start-up	1,600	0	0	2,292	1,255	0	145	0	4,170	0	0	900	175	0	10562	0.4	1848213	81
Later-stage venture	1,275	0	28,248	0	362	0	0	634	0	0	0	776	0	0	31295	13	1829421	81
Total venture	2,875	0	28,248	2,743	1,617	0	145	1,734	4,190	0	0	1,676	175	0	43418	18	3821727	16.8
Growth Rescue/turnaround	582	14417	205889	1764	956	197	1038	61559	89932	0	0	1000	7260	6267	390861 6800	15.9	4493697 683160	19.8
Replacement capital	0	0	139965	0	8640	0	0	99	22041	0	0	0	0	0	170745	7.0	1774590	7.8
Buyout	180,546	13,736	1,021,797	0	202,424	500	0	198,602	104,728	0	0	76,454	30,784	14,388	1843960	75.1	11917294	
Total	184,003	28,154	1,396,299	4,507	213,637	997	1,183	268,094	220,881	0	0	79,130	38,219	20,655	2455783	100.0	22690468	100.0
									2008								12121000	
Seed	3,771	0	0 281	1,100	2.017	2,993	0	4003	0	0	0	0	0	302	4027	0.2	293609 2409490	0.6
Start-up Later-stage venture	3,771 3,397	4,000	12,717	2,644	2,017	4,368	0	35,687	3,984	1300	0	2,353	1,187	658	123245	5.0	4126630	
Total venture	7,168	4,000	12,998	3,744	24,917	7,361	0	50,350	9,535	1300	0	2,853	1,187	1,212	186231	7.6	6829728	
Growth	81,969	0	250,660	3,000	49,387	19,723	0	73,515	90,157	7102	8,416	0		2,996	709783	28.9	7038643	
Rescue/turnaround	500	0	0	0	0	0	0	68	0	0	0	0	0	0	568	0.0	282696	
Replacement capital	0	0	0	0	0	0	0	0	5000	0	0	0	0	0	5000	0.2	1471731	2.8
Buyout Total	90.477	96875 100,875	170994 434,553	8228	401900	36000 63,084	0	509277 633,210	184679 289,371	0 9402	22729	2,853	96673 301,535	25000	1554028 2455610	63.3 100.0	36651817 52274615	
real	90,477	100,875	434,335	14,972	476,104	03,084	0		289,371	89402	31,145	4,853	301,535	29,208	2433010	100.0	342/9015	100.0
Seed	0	0	0	0	0	0	0	2483	0	60	0	377	0	377	3673	0.1	170670	0.2
Start-up	0	4800	500	322	2083	2683	3124	3321	0	0	1240	104	0		24198	0.8	2287142	
Later-stage venture	3,322	2,350	3,692	1,600	13,399	296	1,896	40,267	1,327	0	0	0	0			-		
Total venture	3,322	7,150	4,192	1,922	15,482	2,990	5,020	46,070	1,327	60	1,240	481	0	456	27871	0.9	2457812	
Growth	9,167	0	116,238	9,000	12,906	3,000	0	96,813	94,818	1092	0	1,073	0		388190	12.9	9665262	Automation and a second second
Rescue/turnaround Replacement capital	0	0	2250	0	0	0	0	1256	0	0	0	0	0	2750	6088	0.2	150049	0.2
	0	0	2250	0	0	0	0	8069	59477	56000	0	0	0	7750	263933	8.8	3048462	4.2
Buyout	550,885	0	59,613	25,395	186,295	17,674	146,640	288,507	162,466	48567	23,460	0	0	20,800	2319079	77.2	56843899	78.8

Table 3. Type of investment in CEE by stage focus 2007-2016

Source: Invest Europe Note: Other consists of Bosnia & Herzegovina, North Macedonia, Moldova and Montenegro.

DATA ANALYSIS AND RESULTS

So far, we examined PE/VC investments in CEE, in total amount, as well as a percentage of GDP. We compared the results with the European average in period 2007-2016 but also presented PE/VC investments in total value by stage focus. As investors in PE/VC funds have an objective to get access to activities with satisfying risk and return ratios, they are taking into account many factors to evaluate their investment opportunities.

As already mentioned, Venture Capital and Private Equity Country Attractiveness Index, which was initiated by IESE Business School Barcelona is used most often by researchers and professionals to analyze the attractiveness of the national equity market. The most important factors according to IESE are: economic activity (GDP, inflation, unemployment rate); size and liquidity of capital markets; taxation; investor protection and corporate governance; the human and social environment (human capital, labour market policies and crime); and entrepreneurial culture and opportunities (including innovation capacity, the ease of doing business and the development of high-tech industries)(Groh et al, 2008).

Macroeconomic indicators

Economic size and growth, employment level and entrepreneurial activity are important criteria for PE/VC country attractiveness and their stable and predictable trend is desirable. Investors follow indicators such as GDP, inflation and unemployment rate to evaluate their investment opportunities. Table 2 presents total PE investments as a percentage of GDP (as a determinant of a country's economic performance) in CEE countries in period 2007-2016. The results show that in Europe as in CEE, the highest level of investments as a percentage of GDP was in 2007, but the European market has experienced a sharp decline in 2008. This fall came as a consequence of the global economic crisis. After this period PE investments remained relatively stable until 2016. In CEE, there has been an increase in 2009, but the trend turned negative until 2014. Majority of CEE countries (except Estonia, Moldova, Serbia, and Slovakia) have reached their maximum of investments as a percentage of GDP between 2007 and 2009. Significant investments in relation to GDP in Serbia occurred in 2007 (0.548%) when it was above the CEE average. However, the level of investment reached a maximum level of 0.7% of GDP in 2014. Observed in relation to CEE average investments, Hungary was the most successful, by 6 out of 10 observed years with above-average investments. Table 2 shows that unfortunately, we cannot determine a a stable trend on PE investments in any of the observed countires. Rather, it seems that PE the investments in these markets happen ad hoc, as and individual initiatives when the investor sees a chance to buy a specific companies.

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bosnia-	0.007	0.034	0.052	0.000	0.000	0.000	0.000	0.000	n/a	n/a
Herzegovina										
Bulgaria	1.923	0.265	0.530	0.228	0.019	0.211	0.027	0.006	0.100	0.049
Croatia	0.046	0.213	0.061	0.027	0.035	0.073	0.044	0.097	0.010	0.090
Czech	0.133	0.297	1.010	0.133	0.092	0.069	0.085	0.193	0.020	0.096
Republic										
Estonia	0.332	0.088	0.033	0.176	0.041	0.109	0.147	0.204	0.090	0.361
Hungary	0.487	0.423	0.223	0.068	0.194	0.103	0.056	0.164	0.150	0.078
Latvia	0.793	0.274	0.005	0.029	0.100	0.017	0.066	0.141	0.150	0.103
Lithuania	0.567	n/a	0.004	0.006	0.086	0.023	0.064	0.107	n/a	n/a
Macedonia	0.177	n/a	0.217	0.000	0.000	0.000	0.094	0.000	n/a	n/a

Table 4. PE investment as a percentage of GDP

Country	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Moldova	n/a	n/a	0.000	0.000	0.019	0.000	0.035	0.000	n/a	n/a
Montenegro	n/a	0.582	0.000	0.000	0.000	0.000	0.000	0.000	n/a	n/a
Poland	0.222	0.165	0.089	0.192	0.183	0.125	0.096	0.061	0.210	0.172
Romania	0.392	0.198	0.187	0.101	0.049	0.020	0.049	0.052	0.090	0.087
Serbia	0.548	0.025	0.000	0.104	0.000	0.014	0.047	0.986	0.700	0.142
Slovakia	0.043	0.046	0.003	0.022	0.013	0.137	0.003	0.015	0.020	0.016
Slovenia	0.139	0.010	0.224	0.019	0.039	0.010	0.012	0.037	0.030	0.183
Ukraine	/	0.247	0.045	0.085	0.053	0.033	0.015	0.004	0.020	0.013
Total CEE	0.325	0.209	0.241	0.119	0.104	0.082	0.062	0.104	0.130	0.120
Total Europe	0.570	0.404	0.186	0.314	0.328	0.260	0.249	0.277	0.300	0.329

Source: authors own calculation based on data from the Invest Europe

Capital market

The depth of capital market, its development, liquidity, capitalisation, number of listed companies and IPO activity, M&A market, presence of financial institutions such as investment banks are crucial for PE/VC activity. Black&Gilson (1998) state that well-developed stock markets, which allows general partners to exit investments via IPOs, are crucial for the establishment of vibrant VC/PE markets. Bank-centered capital markets are less able to produce an efficient infrastructure of institutions that support VC/PE. According to Oberli (2014), exit opportunities and the amount of credit provided by the banking sector are strong determinants of new funds raised overall. Annual fundraising volume is dependent on the previous year's market liquidity (Balboa&Marti, 2003). CEE companies face small capitalisation of local markets, limited liquidity and poor effectiveness of legal systems, all of which can have detrimental effects on stock pricing (Korczak&Bohl, 2005).

Serbian capital market is categorized into a group of frontier markets (very small and illiquid emerging stock markets), where privatization significantly influenced on the features and volatility. Although the number of companies listed on the Belgrade Stock Exchange is extremely high, this does not reflect the developed capital market, since the level of market capitalization is extremely low. A large number of companies listed on the Belgrade Stock Exchange are a direct consequence of the selected model of privatization of the economy and forced involvement in the stock market (Ljumović et al. 2015). Secondary capital market is underdeveloped, and although formally there are conditions for initial and secondary public offer, in practice this is extremely rare. However, similar effects of privatization were noticed in other transition economies (Minović&Vuković, 2013). Stock markets in CEE countries significantly collapsed during the financial crisis of 2008 (Kizys&Pierdzioch, 2011).

Taxation

Tax system influences on the decision to invest, since the return from PE/VC investments is realised in the form of capital gain, dividends or interest income that are subjected to taxation. Corporate income tax is one of the key elements that investors are considering when making decisions about investing in a particular country. Other tax items also relevant for PE/VC, according to Invest Europe (2018) are VAT on management fees charged to the fund; withholding taxes on dividends; tax exemptions available for dividend income and capital gains; the availability of special fund regimes; stamp duties or financial transaction taxes. CEE countries have a lower corporate income tax rates compared to the developed countries, where the goal of maintaining such low tax rates is to create a favourable investment climate and thus economic growth in order to create new job opportunities. In the CEE region, the highest

corporate tax rate is in Slovakia (21%), while Montenegro and Hungary have the lowest corporate tax rate at the level of 9%. Bosnia-Herzegovina, Bulgaria, and Macedonia have a 10% rate, and together with Montenegro and Hungary, according to this criterion, they are the most attractive for investing.

Serbia's corporate tax rate of 15% is among the lowest in Europe, and a special rate of 10% is applied for sole traders. Non-residents are taxed only based on their income generated in Serbia. Serbian VAT rates are also among the most competitive in CEE – a standard rate of 20% for most taxable supplies and reduced rate of 10% for basic foodstuff, newspaper etc. (Table 3). Even though this looks good on the first glance, para-fiscal charges (such as social security contribution etc.) represent a heavy burden for the local economy in Serbia.

Country	Corporate tax rate	Withholding tax on	VAT	(%)		security ition (%)	Personal income
country	(%)	dividends (%)	standard	reduced	employer	employee	tax (%)
Bosnia- Herzegovina	10	5	17	-	10.50	31.00	10
Bulgaria	10	0/5	20	9	18.92- 19.62	13.78	10
Croatia	18	12	25	13	17.20	20.00	12-36
Czech Republic	19	15/35	21	15	34.00	11.00	15
Estonia	20	0	20	9	33.80	1.60-3.60	20
Hungary	9	0	27	5/18	19.50	18.50	15
Latvia	20	0/20	21	5/12	24.09	11.00	23-31.4
Lithuania	15	0/15	21	59	31.18	9.00	15
Macedonia	10	10	18	5	10.00	27.00	10
Moldova	12	6	20	8	27.50	10.50	7-18
Montenegro	9	9	21	7	10.70	24.00	9
Poland	15-19	19	23	5/8	21.00	22.71	18-32
Romania	16	5	19	5/9	2.75	35.00	10
Serbia	15	20/25	20	10	17.90	19.90	10
Slovakia	21	0/35	20	10	35.20	13.40	19 25
Slovenia	19	15	22	9.50	16.10	22.10	16-50
Ukraine	18	15	20	7	22.00	-	18

Table 5. Tax rates	in CEE relevant fo	r PE/VC investing
Table 5. Tak Tates		I L/VC mvcSung

Source: Deloitte (www2.deloitte.com)

Investor protection and corporate governance

Investor protection and corporate governance in terms of country's legal environment is an important factor that investors consider when making PE/VC investing decisions, and it is concerned with the agency problem, as a result of the weaker legal protection of shareholders. A country's institutional framework (both legal system and capital markets) is important for the success of privately held companies and, in turn, for promoting entrepreneurship and the VC industry (Rajarishi et. al, 2014). To measure a level of shareholder protection against expropriation by corporate insiders, Djankov et al. (2008) developed "Anti-self-dealing index", which is calculated for 72 countries based on legal rules in 2003. Their results show that high shareholder protection is positively related to measures of stock market development, such as market cap to GDP, number of listed companies per million inhabitants and IPOs. La Porta et al.

(2002) found that shareholder protection is empirically associated with the higher valuation of corporate assets.

Other important factors that determine the attractiveness of a particular market are accounting standards and property rights protection. PE financing improves corporate governance in companies by involvement of a PE fund manager in the early stages of company development or in existing companies, who sets a certain level of corporate discipline and improves shareholder protection because PE investors are actively involved in portfolio firms by monitoring and supporting managers with value-adding services (Croce&Marti, 2016).

Human and social environment

Human and social environment is very important for PE/VC activity because human capital is the key for company performance and success. VCs, expecting cultural differences, make a more careful job screening potential investments before investing in their portfolio companies (Rajarishi et. al, 2014). Family firms can suffer from nepotism, lack of professionalism, and rigidity in adapting to new challenges (Poutziouris, 2001; Croce&Marti, 2016). At the other side, Chakrabarti et al. (2009) and Rajarishi et al. (2014) state that greater cultural distance between lead VC investor and portfolio company increases the likelihood of VC success, instead of reducing it. One of the most important business performance drivers in CEE is high qualified labour force, which requires minimum training to adapt to the international business environment. This represents good value for money for investors because of relatively low labour costs and incentives for creating new job positions.

PE/VC MARKET IN SERBIA

During the process of transition, Serbia started the transformation process into an open market economy with a goal of creating a favourable climate for foreign investments leaving the domination of social property as a basic ownership form. In recent years, the Serbian government has made efforts to improve investment climate conducting macroeconomic reforms, greater political and financial stability and improved fiscal discipline. EU accession process that provides the impetus for legal changes that improve the abusiveness environment contributed to the process. One of priority of the Serbian government is promotion on the World Bank's Doing Business list. Currently, Serbia is ranked 48th globally in terms of ease of doing business (April 2019).

To analyze the factors that influenced and shaped the current PE/VC market in Serbia, we conducted a SWOT analysis. Taking into account all the factors that determine PE/VC investments, we summarize all strengths, weaknesses, opportunities, and threats of CEE economies with SWOT analysis in table 4. The main barriers for the development of PE and VC operations, either foreign investments or local initiatives, are market size, since the market is too small and immature, lack of entrepreneurial culture and venture friendly environment, political and economic factors (low market competitiveness, corruption, lack of strategies and legal framework, bureaucratic delays and administrative burdens, etc.), and lack of access to finance. However, Serbia's main advantages are favourable geographical position, cheap and well-educated workforce, low corporate tax rate, free trade agreements. SMEs engaging in professional, scientific, technical and innovative activities represent 11.69% of all businesses in the Serbian economy, and 11.71% of the entire SME sector (Đuričin&Beraha, 2016).

Table 6. SWOT	' analysis of Serbia in	terms of attracting PE	/VC investments
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Strengths	Weaknesses
 Well educated and highly qualified labour Relatively low labour costs (total costs about 50% of labour cost in EU countries from CEE) Competitive operating costs: corporate income tax rate (15%) VAT standard 20%, reduced 10% tax on dividends 20% personal income tax 10% Availability of tax incentives for foreign investments Customs-free imports of raw materials and semifinished goods, machinery and equipment for foreign investors Free zones (many municipalities offer the possibility to operate within industrial zones with favourable geographic location and infrastructure, and some of these zones are free from the VAT, customs and clearance) Consumer spending growth Fast registration of companies with founding capital 	 Small market Lack of entrepreneurial culture Corruption practices and insufficiently developed anti/corruption strategies and legal framework Bureaucratic delays, low efficiency of public administration SMEs reliance primarily on bank credits and loans from family and friends Unresolved problems with state-owned enterprises Serbian capital market is categorized into a group of frontier markets - very small and illiquid emerging stock markets
Opportunities	Threats
 The possibility of developing certain business activities thanks to a favourable climate and natural resources Strategic geographical position Macroeconomic reforms, greater political and financial stability improve the business environment The ambition to access to EU forces countries to maintain fiscal discipline Free trade arrangements with key markets (countries of South Eastern Europe and Russia) Mechansims for investor protection Developing infrastructure 	 Demographic crisis and aging of population New technologies Global economic crisis and slow down Global competition growth

Source: authors own research

Regional VC and PE Attractiveness landscape shows that Eastern Europe countries have taxation as the main drive to PE and VC investors and the weakness in the depth of capital market, and in investor protection and corporate governance; human and social environment and entrepreneurial culture and deal opportunities relative to other regions (Groh et al. 2018). Ten years ago, Serbian economy was characterized by the low level of capital, old technology, lack of know-how management, but on the other hand, a country with a great opportunity for investing, taking into account the natural resources, qualified and cheap workforce and its central position in the Balkan Peninsula (Makojević, 2009).

During the 2009-2011 period when the Serbian economy was hit severely by the world economic and financial crisis, private equity backed companies have increased their total assets from EUR 814 million in 2009 to EUR 882 million in 2011, which is an 8.25% increase (Trbovich, *et al.*, 2014).

Year	Seed	Startup	Growth	Later-stage Venture	Buyout	Total
2008			7102	1300		8402
2009						
2010			13208			
2011						
2012					4350	4350
2013					16076	16076
2014					326100	326100
2015		425			228657	229082
2016			2050			2050
2017	300	1200				1500
2018	400	3465				3765

Table 7. Type of investment in Serbia by stage focus 2008-2018 (amounts in 000 EUR)

Source: authors own research based on data from the Invest Europe

According to the results published by the Invest Europe, the dominant type of PE investment in Serbia between 2008 and 2010, was growth capital (which is usually a minority investment); between 2012 and 2015 the investment focus shifts to buyouts, although in 2015, for the first time startup investments are emerging, accounting for only 0.2% of total investments, while in 2017 startup investments dominated with 80%, as in 2018 with as much as 92%.

Serbia stands to benefit both from entrepreneurial private ventures, as well as important regional initiatives supported by European Union such as the Western Balkan Enterprise Development and Innovation facility (WB EDIF) and the new EU Programme for the Competitiveness of Enterprises and SMEs (COSME), which will also stimulate the supply of venture capital, with a particular focus on the expansion and growth phase of SMEs (Trbovich, *et al.*, 2014).

CONCLUSION

Private equity and venture capital industry is not a solution for macro-economic underperformance and poor competitiveness, but it can make an important contribution to the revitalization of the economy. Having in mind economic and historical heritage of the CEE counties, especially in the collapse of communist/socialist central-planning systems and transition into open market economy, PE and VC can play an important role in developing and promoting high-growth innovative companies that can contribute to fast economic growth and development.

Although most of CEE economies remain far behind EU-15, as a result of significant changes that took place in the 1990s, countries as Poland, Hungary, Slovakia, Romania, and the Czech Republic are growing fast now, and they are very attractive for investors in PE/VC funds. There are many factors that drive PE/VC in CEE, like economic activity, because in core CEE countries GDP is growing faster than GDP in developed countries; taxation and favorable tax rates which are relatively low, and what is more important – presence of numerous tax incentives for investors and high quality of labor with low costs. Total CEE investments were dominant in the form of buyouts in analyzed period, at their highest level in 2007, and after decline which lasts for six years, they started to recover from 2013. The private equity fund managers present in CEE mostly operate on a regional basis, and although being ready and resourced to complete transactions, they commit their exposure only when the deals have foreseeable exit horizons. Fund managers assess exit strategies rigorously before deciding on an investment. The goal is to ultimately exit investments before the PE partnership is terminated. Exits through IPOs may be

problematic, even for successful investments. Several reasons contribute to this outcome including small and illiquid local exchanges.

According to SWOT analysis, Serbia has many advantages in terms of attracting PE/VC investments, with the most important factors such as geographical position, well-educated and qualified labor with relatively low cost of labour and advantages related to the tax treatment, free trade agreements, but also the efforts made in recent years such as reforms, improvement of fiscal discipline, and introduction of numerous incentives in order to attract investments. However, financing through PE/VC is almost negligible. No equity or venture fund has been established in Serbia yet, but this is not an obstacle for investing. A fund can be geographically located anywhere in the world and invest in Serbia. The main reason for the low level of equity and venture capital investments is the poor socio-economic environment, immature and small market. Also, the unwillingness of companies for equity investments is one of the reasons for the low level of investors in capital, because the owners are not ready to give up part of the ownership and interfering with the process of decision-making. However, Serbia is putting a lot of efforts in to in attracting the investors. Recently, the New Law on alternative investment funds was introduced, that will start to apply in April 2020.

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