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## Identifying the impact of external environment on business angel activity

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### ABSTRACT

We intend to contribute the empirical evidence in regard to identifying the impact of external environment on the activity of business angels in Czechia. Although prior academic studies have argued that e.g. overall economic growth, capital market, legal structures and the protection of property rights, corruption, innovativeness, the tax rate and labour market policy are the main determinants of the decision-making of business angels in the well-developed market, little is known about exogenous factors affecting behaviours of informal venture capitalists in Central and Eastern European countries. To our knowledge, we are the first who attempt to uncover the perception of changing economic conditions on business angel decision-making while using a qualitative survey research approach as primary data on business angels is currently not available. The results indicate that business angels pay little attention to the impact of the general macroeconomic conditions, as well as the role played by the capital market. They refer to ‘critical’ issues related to the difficult predictability of legislative changes. Dissatisfaction has also been expressed with the functioning of the public administration. Business angels also consider the current situation on the labour market and public education policy to be serious barriers to business development in the Czech Republic.

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## Introduction

‘Business angels’ (‘BAs’) have become an important and popular source of capital to new entrepreneurs during recent decades, when many traditional industries have reduced their capacities in Western countries and at the same time new business ideas with low initial investment in industries based on high-tech technology and innovations have come up. Going back to Mason and Harrison (2008), most of these

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technological start-ups have to rely on personal funds, i.e. coming from the family, friends and fools ('3Fs') or venture capitalists ('VCs') and bank loans to cover investment and operating costs (see also Grilli, 2019; White & Dumay, 2017). The lack of resources, lack of history and too high level of risk can however cause financial constraints resulting in an ultimate loss of business ideas (Savitz & Gavrilitea, 2019). In this respect, the position of BAs is between 3Fs on one side and formal and institutionalized venture capitalists' sector and banks on the other side. To capture the essence of the term 'business angels', we use the definition made by Mason and Harrison (2008). According to the authors, the business angel refers to 'a high net worth individual, acting alone or in a formal or informal syndicate, who invests his or her own money directly in an unquoted business in which there is no family connection and who, after making the investment, generally takes an active involvement in the business, for example, as an advisor or member of the board of directors' (cited in White & Dumay, 2017).

Recent empirical research and theoretical discourse have identified many determinants that may have significant effects on BA activity. Prior academic studies on BAs are mostly focused on microeconomic issues, such as BAs' characteristics and the angel market (Harrison & Mason, 2007; Hindle & Lee, 2002; Politis & Landström, 2002; Ramadani, 2009; Sohl & Hill, 2007; Stedler & Peters, 2003), decision making (Lahti, 2011; Maxwell et al., 2011; Mitteness et al., 2012; Smith et al., 2010; Van Osnabrugge, 2000), post-investment relationship and the exit strategy (Mason & Harrison, 2002; Sørheim, 2005) and demand side perspectives (Becker-Blease & Sohl, 2007; Brush et al., 2012; Mason & Harrison, 2004). However, relatively few empirical studies document, how different external factors affect the operations of BAs. White and Dumay (2017), who provide a structured literature review of 84 BA articles published between 2000 and 2013, conclude that in terms of external factors, national policy initiatives designed to 'foster investment activity' have been investigated in particular (Aernoudt et al., 2007; Collewaert et al., 2010; Lindgaard Christensen, 2011; Mason, 2009; Mason & Harrison, 1999). The research of the impact of macroeconomic and financial factors on the BAs' activity and performance is relatively rare and, in contrast to previous studies, related mostly to the venture capital market as a whole. Månsson and Landström (2006) examined the development of the Swedish BAs market in order to determine the significance of the time factor, or to explore the issue 'how changing economic conditions affect BAs' investments'. The focus of this study was on assessing the impact of the business cycle, financial system, monetary policy, tax system, deregulation of various industries, globalization, etc. (see also: Jakimowicz & Rzekzkowski, 2019a, 2019b). Similarly, Füss and Schweizer (2012) focused on understanding the key relationships between venture capital investments and the macroeconomic and financial variables on the performance of risk capital in the US.

For a long time, studies on BAs have been undertaken predominantly in the UK, Western Europe and/or North America. White and Dumay (2017) report that 73% of 84 analysed studies were conducted in the UK, Europe and/or North America and that only five of the research papers investigated BAs outside of this regions. Up to now, very little attention has been paid to the determinants of the BA market in

Central and Eastern Europe (CEE). There has been only sketchy information on the size and structure of the market, its participants and the macroeconomic, financial and institutional factors influencing BA investments. The Czech economy as well as other countries in the region has undergone substantial changes during the past three decades. The country experienced a fundamental economic transformation at the beginning of the 1990s, joined the European Union in 2004 and went through the Great Recession during the late 2000s and early 2010s. The financial system has been transformed completely and recently more and more attention has been devoted to the fact that the primary means of fund raising include inflow of foreign direct capital and loans provided by foreign owned banks (Skare & Porada-Rochoń, 2019a, 2019b).

The degree of dependency on external resources is considered to be critical (Nölke & Vliegenthart, 2009). There are vibrant discussions among academics, practitioners and policy makers how to increase the innovation capability and role of financial alternatives such as initial public offerings and formal and informal venture capital (Karsai, 2018; Meluzín et al., 2018a, 2018b, 2018c; Nölke & Vliegenthart, 2009; Peterle & Berk, 2016; Skalicka et al., 2019; Sudolska & Łapińska, 2020; Zinecker & Bolf, 2015).

This paper is an attempt to contribute to the discussion on the perspectives of BAs operating in the Czech Republic in terms of external factors affecting the development of the BA market. Therefore, in this study we deliver empirical evidence based on a survey we conducted among more than thirty Czech BAs in 2018. To our knowledge, we are the first who attempt to uncover the perception of changing economic conditions on BA decision-making in the Czech informal venture capital market. We believe that the novelty of this study consists in the survey based research approach, as primary data on BAs is currently not available.

The remainder of the paper is as follows. In the first part, a theoretical framework on external factors affecting BAs' willingness to invest is developed. The review is followed by outlining methodological issues and survey findings. Next, we provide a discussion of the contribution of the research and identify a new agenda for the follow-up research.

## Literature review

Many studies document that external environment is very closely related with entrepreneurial activity and has directly a constitutive impact on formal and informal VC market (e.g. Cepel et al., 2018; Füß & Schweizer, 2012; Groh & von Liechtenstein, 2009, Groh & Wallmeroth, 2016; Groh et al., 2010; Kolupaieva et al., 2019; Lewandowska & Stopa, 2019; Pietrzak et al., 2017; Rogalska, 2018; Stimel, 2012).

Gompers and Lerner (1999) were among the first to address the issue how the economic growth affects the BAs' activity. The results of the study indicate that the growth of investment opportunities is closely related to the high GDP growth rate, which positively stimulates business activity and the growth of accumulated capital in the country. This is subsequently allocated among others in the form of VC investments. Van Pottelsberghe de la Potterie and Romain (2004) also conclude that the volume of resources invested is cyclical and dependent on the GDP growth. However,

the beneficial effect of the economic growth on VC investment is reduced in economies characterised by high labour market regulation. Nevertheless, contrary to the previous studies, Jeng and Wells (2000) did not confirm the relationship between the economic growth and the growth in VC investment. Stimel (2012) examined the dynamic effects of changes in macroeconomic variables, including the GDP growth, inflation rate and monetary policy, on BAs' investment activity in time-lagged periods based on quarterly US economy data for the period of 1995–2001. He concludes that whereas the economic growth positively affects BAs' investment activity, the relationship between the inflation rate and the VC investment level is opposite. Bonini and Alkan (2012) concluded that there was a statistically significant negative relationship between the level of interest rates and the volume of VC investments. Rising interest rates reduce the supply of capital as investors move part of their resources to assets with the risk-free interest rate (Janus, 2019; Simionescu et al., 2018). On the other hand, the growth of interest rates can paradoxically contribute to the development of alternative financing sources, including the risk capital market, due to the increase in debt capital costs (Chodnicka-Jaworska & Jaworski, 2017).

Månsson and Landström (2006) took a slightly different approach to research into the impact of the macroeconomic environment. Unlike Stimel (2012), who examined the effects of changes over a short period of time, the authors focused on researching the impact of macroeconomic variables on the informal VC market in Sweden between two distant moments (1992 and 2004) in order to determine the significance of the time factor. The authors of the study conclude that the favourable market development in this period was supported by a more stable economic climate and more favourable tax system. The authors paid considerable attention to the role of the changes in the Swedish financial system. Unlike the 1980s, when it was predominantly 'debt-based', it was transformed closer to 'equity-based'. In this context, it is also necessary to draw attention to the role of the capital market, whose effective functioning has led to the strengthening of the importance of IPOs and hence to the expansion of the portfolio of possible exit strategies, *inter alia* in favour of VCs (Månsson & Landström, 2006; compare also Dvorský et al., 2019; Virglerová, 2018; Blažková & Dvouletý, 2018).

Black and Gilson (1998) examined the link between a well-developed stock market and a strong venture capital market by using the US market-centred economic model on one side and German and Japanese bank-centred economy on the other side. They emphasise the role of initial public offerings as the means by which the investors exit in a stock-market-centred capital market. This way of divestment cannot be easily duplicable in a bank-based financial system resulting in different investment strategies and a less vital venture capital market compared to the U.S. Similarly, Schertler (2003), who examined the determinants of the VC market based on data from 14 European countries over the period 1988–2000, concludes that the developed capital market is one of the important factors behind the accelerating number and volume of VC investments. The positive impact of globalization was noted in the study of Swadzba (2019).

The current financial literature considers BAs as an important stage in the financing of innovative start-ups positioned between the 3Fs and VC investors in a local financial ecosystem; thus, BA market is interconnected with the other segments of the

financial market. Grilli (2019) addressed the issue of whether BAs can fill the gap left by venture capitalists and banks in the financing of innovative start-ups located in regions in Italy, where the local financial ecosystem is rather weak. He delivers empirical evidence that the more developed a regional financial ecosystem is the higher probability to obtain a BA investment for an innovative start-up. Therefore, a lack of institutionalised financial intermediaries in a local financial market also implies insufficient BAs' financing.

Another direction in researching the factors affecting Business Angels and Venture Capitalists activity concerns the impact of the wider economic environment on the investment climate. In addition to the economic growth and the degree of development of the capital market, the focus is on factors such as human capital (Vu & Ngo, 2019), entrepreneurial culture, R&D expenditure and the GDP per capita (Bencsik et al., 2018; Kiselakova et al., 2018; Mačerinskienė & Survilaitė, 2019; Mura & Kajzar, 2019; Rahmatiah et al., 2019; Zygmunt, 2019). These variables may be perceived as a reflection of the fact that the development of the BA and VC investment sectors comes with some degree of economic development, comprehensiveness and specialisation (Acemoglu & Robinson, 2008; Boettke et al., 2008; Mahmood et al., 2018; Schertler, 2003). Research in this sense essentially deals with the role of formal and informal institutions that form the framework for BAs' activities (Balcerzak, 2020; Elgin & Erturk, 2019). Boettke et al. (2008) and later Mahmood et al. (2018) speak of three categories of institutions. The first is referred to as indigenously introduced endogenous (IEN) institutions. This type of institution stimulates the individual demand for entrepreneurship, i.e. the innovation potential of the economy, either positively or negatively. Examples include local (often religious) norms, taboos, traditions, customs, and the perception of humility, patience, curiosity, openness and independent thinking. The institutions in this category are characterised by the fact that they are of spontaneous origin, change very slowly and often cannot be predicted. Hain et al. (2016), for example, deal with the extent to which corruption affects the level of VC investment in the context of the Chinese market. It is interpreted as an IEN institution and although it is perceived as a factor dampening the interest of investors in general together with, for example, exaggerated bureaucracy, the authors conclude that market-driven corruption can, on the other hand, support the development of the VC market in the context of 'emerging markets with rigid and inefficient legal structures' (cited in Groh & Wallmeroth, 2016). The second category of institutions includes indigenously introduced exogenous (IEX) institutions. Their establishment is due to the formal authority of domestic origin (usually the government). Schertler (2003) states that the typical IEX institutions include investment fund structures, capital gains tax rate, regulations of labour markets, existence of liquid stock markets for fast-growing enterprises, shareholder and creditor rights or transaction costs. In this context, it is necessary to mention the well-known papers by La Porta et al. (1997, 2006). The research results confirm that the and bureaucratic efficiency, the legal system and law enforceability are crucial in terms of investment protection (Ghosh & Mandal, 2019). The authors deliver evidence that in general common law countries offer a higher level of investment protection compared to civil law countries, which is supported by the development of the local 'market-centred' financial

market. And finally, the third category of institutions, the so-called foreign-introduced exogenous (FEX) institutions, is represented for example by governmental venture capital (GVC) funds, following the US and UK models, with the aim of supporting the development of the VC industry. The effectiveness of these institutions is usually questionable, as they are implemented by an international institution without the knowledge of local conditions. The country concerned may have a different institutional framework due to, for example, the relatively more significant position of banks compared to the capital market (Colombo et al., 2016), and the establishment of GVC funds may result in failure or results that fall far behind the founders' expectations.

The authors of the above studies agree that the establishment of formal institutions is a necessary but not sufficient condition in terms of the development of the VC market. If formal institutions fail to satisfy the needs corresponding to the degree of the development of the respective economy, then they fail to fulfil their functions and their contribution to the development of the VC market is minimal. Examples include the capital market, where there are no initial public offerings (IPOs), or a market in which a culture of non-transparency and distrust towards the established formal institutions prevails.

On the basis of the aforementioned considerations about the impact of external environment on the BAs' activity, the following research questions have been formulated with respect to the Czech informal venture capital market: *What are the perceptions of Czech BAs in terms of exogenous factors affecting informal VC market? More specifically, what are their perceptions in terms of the economic growth, monetary policy, taxation, law quality, investment protection, capital market, and doing business ecosystem?*

## Methodology

We have surveyed non-institutionalised venture capital investors (business angels) operating predominantly in the Czech Republic. However, there are considerable doubts about the size and structure of the BAs population, due to the fact that there is no official database to define the population of respondents. Therefore, the snowball sampling method was used here. It is a method of non-probabilistic, i.e. deliberate selection applied in situations where individuals are selected from low-density, less available or even classified populations (e.g. Goodman, 1961). The selection takes place by first contacting individuals known to belong to the examined population. They are then asked to nominate other potential respondents (Argerich & Cruz-Cázares, 2017; Goodman, 1961; Krippendorff, 2013). In our survey, we had personal contacts with three BAs who are established investors in the local informal venture capital market. These research participants were asked to assist our research team in identifying other potential respondents, as we know that they maintain informal and very often friendship ties with other investors. Moreover, a local business angel network was also involved and played an important role of a mediator in supporting our credibility and thus the openness of potential respondents to participate in the research. The size of the research sample reached a total of 31 respondents.



Despite the unique access to people whose population is normally hidden, the snowball sampling method is susceptible to misrepresentation, especially when sensitive issues are concerned, as well as in situations where respondents may be confronted with the negative consequences of their communication or interrelationships between the investigated persons are weak (Waters, 2015). In addition, the sample may be affected not only by random but also by systematic sampling errors, the compensation of which may not be provided with an unambiguous solution (Hendl, 2015). In this context, it should be noted that the BAs population in the Czech Republic, targeted in our survey, is most likely significantly smaller than the BAs population in developed countries, especially Anglo-Saxon or Scandinavian countries, where studies work with samples of Business Angels or Venture Capitalists of up to hundreds of individuals (Månsson & Landström, 2006 in Sweden; Mason & Harrison, 2004 in the UK; Reitan & Sorheim, 2000 in Norway; Feeney et al., 1999 in Canada; Sullivan & Miller, 1996 in the USA).

The method of semi-structured interviews as defined by Opdenakker (2006) was applied to collect primary data on this underexplored segment of the Czech venture capital market. There were three reasons for this form of data collection. Firstly, the interviews are a guarantee that BAs keep their anonymity. This aspect might of great importance when the participation in a survey is considered. Furthermore, the interviews provided the BAs with sufficient space to comment on the questions examined without offering them pre-formulated answers. According to Blinder et al. (1991), respondents' answers may be different, unexpected, inconsistent with existing theory and bearing an accompanying insight into their thinking. Hence, interviews allow the researcher to make sure that BAs pay enough attention to their answers and understand the context of the questions asked and, more importantly, interviewees are provided with the possibility to comment on each question.

Stedler and Peters (2003), Groh and Lichtenstein (2009), Groh et al. (2010), Stimmel (2012), Füss and Schweizer (2012) and more recently Groh and Wallmeroth (2016) define exogenous ('socio-economic') key drivers for venture capitalists' activity to assess attractiveness across countries. These 'key drivers' include the economic growth, the activity in the area of initial public offerings (IPOs), legal structures and protection of property rights, bribing and corruption, innovativeness, the tax rate policy, labour market policy, access to viable investments, etc. We used these concepts while defining our original set of survey topics to assess the BAs' perspectives in terms of exogenous factors that might affect their investment activities in the Czech Republic.

All interviews were undertaken on a face-to-face basis in 2018 and 2019. Each of them lasted from 45 to 90 minutes. For the purposes of recording the answers, a structured answer sheet was created with the aim of facilitating the effectiveness of recording the answers. The respondent was assured that they are featured only under a number and that the record would not include any personal data unless provided by them in the record. For the purposes of establishing a confidential atmosphere, all the notes were written down by hand, i.e. without using audio and video devices.

Once the data was collected, it was cleaned up and checked for any errors. In the first stage of data processing, the qualitative content analysis was used, i.e. we were



**Table 1.** Survey results – determinants affecting VC market.

Overall Economic Development and Policies	Capital Market Determinants	Doing Business Determinants
GDP Growth/Business Cycle	Fundraising	Administrative Procedures to Start a Business
Inflation	Capital Market Activity	Time Required to Start-Up a Business
Monetary Policy	Exit Strategies (IPOs, etc.)	Financial Requirements
Tax Policy		Stability of Law/Regulations
Law Quality		Subsidies
Law Enforceability		Sanctions
Labour costs/Productivity		
Availability of Qualified Workforce		
Investment Protection		

Source: Own research based on theoretical framework.

focused on words and phrases in order to reveal and a better understand the knowledge, perceptions, opinions, intentions and targets of the individual investors. Next, words, topics, and concepts were categorized (or ‘coded’) in terms of the overall economic development and policies, capital market and doing business determinants (for details, see Table 1).

An inductive perspective was used to process the qualitative data (see e.g. Drnovšek et al., 2018). Once coding was completed, the categorized data was transferred to an electronic data matrix under the registration number of the respondent without any connection to his or her personal data. Descriptive statistics was applied to analyse records for the frequency of terms and conclusions about the research question were drawn. Finally, the findings were reported to, and discussed with, the respondents in order to verify their accuracy (e.g. Festel & De Cleyn, 2013, recommended this procedure).

### **Sample description**

Table 2 shows personal characteristics of investors interviewed. BAs are usually males, most frequently in the age group of 40 to 60 years, yet the proportion of the respondents over 60 is also strong. Although this structure may be due to the method of addressing the respondents, it can be stated that the gender structure of our sample does not deviate significantly from previous studies (e.g. Sweden, Månsson & Landström, 2006; Germany, Stedler & Peters, 2003). May and Liu (2015), however, draws attention to the growing share of women in BAs in the US.

The average age of the surveyed investors was 51 years, with the age group of 50 to 60 years being the most represented. In terms of age, the profile of Czech BAs is thus close to that of German BAs (see, for example, the study by Stedler and Peters (2003), which confirms the strong representation of the age group of 40 to 55 years). For the purposes of comparison, a study by Maula et al. (2005) reported the average age of a BA investor in Finland eight years lower.

Other characteristics include the professional experience of the respondents, which is usually declared in the form of starting and running their own business or in the form of managing the companies in the position of hired managers, in the number of two to three jobs. In terms of the industry, BAs are most often profiled in IT and telecommunications. The investors have obtained above-average education, while completing postgraduate management MBA courses is also frequent. They perceive

**Table 2.** Survey results – the sample characteristics (in number of respondents).

Age Category/Experience (Position)	Executive	Manager	Ex-Entrepreneur	Investor	In Total
< 30	1	1	0	0	2
30 – 40	1	1	0	1	3
40 – 50	5	0	1	1	7
50 – 60	7	4	1	0	12
> 60	4	0	1	2	7
In total	18	6	3	4	31
Age Category/Experience (Industry)	IT and telecommu-nications	R&D	Production	Services	In Total
< 30	1	1	0	0	2
30 – 40	2	0	1	0	3
40 – 50	5	1	0	1	7
50 – 60	4	4	3	1	12
> 60	5	1	1	0	7
In total	17	7	5	2	31

Source: Own research.

themselves as persons secured in terms of property or at least belonging to a social group with above-average incomes.

## Research findings

In the first part of the interview, the BAs were asked about the perception of the importance of the macroeconomic development. As indicated by the results contained in Table 3, the importance of the macroeconomic development, when deciding on the investment, is very low for almost 2/3 of the respondents. Less than 1/10 of the BAs claim that the macroeconomic development has a positive effect on deciding on the industry where the investment goes. Approximately 1/4 of the BAs tend to assign a secondary importance to the development of the macroeconomic situation. This means that the investors do not decide following the expected values of the macroeconomic indicators; nevertheless, they are aware of the fact that the overall economic situations is, to some extent, reflected in the project parameters which are relevant in their perspective (e.g. payback period, NPV, or IRR).

The BAs were also asked to assess the currency policy of the Czech National Bank (CNB). More than 1/3 of the respondents state that they do pay significant attention to the monetary policy of the central bank; almost 1/5 of them do not perceive it as important from the perspective of their entrepreneurial activity, and another 1/5 of them perceive the monetary policy as more or less favourable. There have been no significant objections raised against the CNB monetary policy in the past years, which is rather surprising to us owing to the fact that the central bank in the period following the Great Recession applied the expansion policy, also including an unconventional tool in the form of foreign exchange interventions. These were aimed at weakening the CZK/EUR exchange rate and were the subject of considerable discussion by academics, business and the wider professional public (e.g. Bruha & Tonner, 2018; Gregor & Melecký, 2018; Kolcunova & Havranek, 2018).

Table 4 also shows that the BAs who expressed the view that the macroeconomic development was not relevant to their business activity also more frequently did not consciously follow the CNB policy. By contrast, the BAs who consider

**Table 3.** Survey results – macroeconomic development and its perception.

Perception of the macroeconomic development	Minor significance	Secondary significance	Extraordinary significance (in some industries)
<i>n</i>	21	8	2
% of <i>n</i>	67.74	25.81	6.45

Source: Own research.

macroeconomic conditions to be important (either in terms of business sector or the overall development of the external economic environment) have described the CNB policy as ‘favourable’ much more often. This may be explained by the fact that, for some investments, the BA’s deposit is accompanied by the use of bank financing. The cost of the foreign capital of such financing is a factor which may be directly affected by the CNB policy, thus not ‘only’ through changes in the economic activity in the industry or in the economy as a whole.

Taxation is an important aspect of the external economic environment (Cepel et al., 2020). The BAs investors were therefore asked about their perception of the tax policy imposed by the Czech state. The results of the interview are shown in Table 5. According to the respondents, the tax policy is not perceived as a significant obstacle to the investment activity. 13% of the BAs identified the current tax policy of the Czech state as favourable. Comments or criticism of the tax policy is not related to the rate of taxation, but to the complexity or the lack of transparency of the tax system, and in particular its high degree of instability (almost 2/3 of the respondents request the government to provide the stability and hence predictability of the tax policy). Thus, it may be stated that the tax policy is not a significant exogenous factor affecting investment decision-making at the current setting. However, the BAs may be largely influenced in their investment activities by the costs associated with a change in the tax system (or the costs resulting from a change in tax rates). The actual form of these costs results from the need for adaptation and the need to follow changes. Changes in the tax policy are explicitly reflected, for example, in the profitability of already funded projects.

BAs’ perception of the tax policy varies according to the importance which the respondents attach to the conditions of the external environment. In the case of the group of the BAs who perceive the conditions of the external economic environment most sensitively, those who consider the tax system too complex are represented over-proportionately (in half of the cases).

The BAs were also asked to comment on how they perceive the legislative environment of the Czech Republic in terms of venture capital investment. The relative frequencies of their responses are shown in Table 6, according to their attitude to tax matters. It is obvious that there is considerable agreement on how the BAs assess the tax and legislative environment. At the same time, those investors who consider the conditions provided by the tax policy to be favourable also positively evaluate the legislative environment. This applies to 75% of the respondents. On the contrary, those BAs who consider the tax conditions too complex also express their dissatisfaction with the level of legislation (their share equals 23%). The investors are likely to perceive tax conditions as part of the conditions set by legislation and thus comment on them.

**Table 4.** Survey results – evaluating monetary policy with regard to macroeconomic development.

Monetary policy evaluation →	I do not follow		Not essential		Favourable		Total	
	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>
Evaluation of macroeconomic development ®								
Not essential	11	35.48	6	19.35	4	12.90	21	67.74
Has an impact on the industry sector	0	0.00	1	3.23	1	3.23	2	6.45
Has an overall impact onto entrepreneurship	1	3.23	2	6.45	5	16.13	8	25.81
Total	12	38.71	9	29.03	10	32.26	31	100.00

Source: Own research.

**Table 5.** Survey results – evaluating the tax policy with regard to the macroeconomic development.

Tax policy →	Favourable		Essential that it remains unchanged		Not essential		Too complicated		Total	
	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>
Evaluation of macroeconomic development ®										
Not essential	3	9.68	13	41.94	4	12.90	1	3.23	21	67.74
Has an impact on the industry	0	0.00	1	3.23	0	0.00	1	3.23	2	6.45
Has an overall impact onto entrepreneurship	1	3.23	6	19.35	1	3.23	0	0.00	8	25.81
Total	4	12.91	20	64.52	5	16.13	2	6.46	31	100.0

Source: Own research.

One of the key aspects of the evaluation of the legal environment consists in the issue of investment protection (La Porta et al., 1997, 2006). Table 7 shows how the surveyed BAs perceive this area. Investment protection conditions in the Czech Republic are rated as good by more than 1/2 of the respondents, while 3% of the respondents rated them poor and another 10% expressed that they have not yet had any negative experience. It may be said that the attitude of the investors to the issue of investment protection differs depending on the assessment of the quality of the legislative environment. The BAs who consider the legislative environment as favourable, also perceive positively the conditions of investment protection. On the contrary, those investors who have serious comments on the quality of the legislative environment are also more often critical of investment protection conditions.

One of the institutions allowing BAs and Venture Capitalists to exit, i.e. the so-called divestment, is a functional capital, or more specifically stock exchange market (Black & Gilson, 1998; Månsson & Landström, 2006). The BAs were therefore asked how strongly they felt the need for a capital (stock exchange) market and whether they were considering exiting through the capital market in the case of their investments. The results of the research showed that the surveyed BAs did not consider the Initial Public Offering (IPO) option when considering the exit method. Furthermore, the responses indicate that a functional local capital market is not perceived by investors as a significant factor influencing their decision-making in relation to the investment activity (for details see Table 8).

Another part of the interview focused on identifying possible barriers to investment development (see Table 9 for the results). Although the respondents did not imply that there were any fatal barriers in the Czech Republic significantly restricting their investment activities, they repeatedly expressed their concern about the current development in the labour market. In particular, they emphasise the lack of certain qualifications or qualified graduates (13%). The second limitation, which naturally

**Table 6.** Survey results – evaluating the law quality with regard to the tax policy.

Law quality →	Favourable		Stable law environment is essential		Insufficient		Total	
Evaluation of the tax policy ®	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>
Favourable	23	74.19	8	25.81	0	0.00	31	100.00
Essential that it doesn't change much	9	29.03	14	45.16	8	25.81	31	100.00
Not essential	12	38.71	19	61.29	0	0.00	31	100.00
Too complex	0	0.00	0	0.00	31	100.00	31	100.00
Total (without distinction)	11	35.48	13	41.94	7	22.58	31	100.00

Source: Own research.

does not only apply to BA investments, is rising labour costs, which, among other things, reflect the current deviation of the labour market equilibrium in favour of supply (23%). Another group of the BAs (23%) mention obstacles arising from the legislative arrangement (see above) and the manner in which the public administration operates. In this context, the respondents were also asked to comment on the difficulty of starting a business project in the Czech Republic. Specifically, we wanted to find out whether the BAs perceived the launch of a project (business) in the Czech Republic as challenging, and if so, in what direction (areas).

More than a half of the BAs do not perceive the process of launching a project (business) in the Czech Republic as complicated. The largest part of those respondents who perceive some obstacles (barriers) to the project's initiation speak of 'excessive time demands'. These include primarily organisational demands in the form of implementing the project in terms of personnel, material, etc. The results of the survey are an expression of the fact that from the idea to the implementation of the project, it is necessary to take a number of steps that precede the actual start of the core activity. These claims may be understood in general terms, not only in relation to entrepreneurship in the Czech Republic. In the same manner, we can perceive the frequently mentioned financial demands in the context of starting a new business project. It is more of a general expression of this difficulty associated with the launch of the project, rather than of its direct link to the conditions for BAs in the Czech Republic. However, the situation is different in the case of the reported administrative intensity of the initiated projects, which is mentioned by 16% of the BAs. This result may be directly related to the situation in the Czech Republic (yet without indicating how favourable the situation in the Czech Republic is in comparison with other countries). This is also reflected in the fact that the BAs who have concerns about the unfavourable or changing legislative environment are more likely to report that they feel the administrative burden of the process of starting a business.

Furthermore, [Table 10](#) shows the research results related to the perception of administrative burden and, in the context of either expressed or unexpressed comments, to the legislative framework.

The BAs were finally invited to mention other barriers to business, not only those related to its start. The response categorization results in four subsets of factors, for details see [Table 11](#). The most frequently mentioned area concerned the change of regulations, rather than their status. The BAs therefore do not substantially oppose the current state of formal institutions. Some respondents who have the possibility of

**Table 7.** Survey results – evaluating investment protection with regard to law quality.

Investment Protection →	Good		Poor		There has been no problems		Total	
	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>
Law Quality ©								
Favourable	20	64.52	3	9.68	8	25.81	31	100.0
Essential that it doesn't change much	17	54.84	14	45.16	0	0.00	31	100.0
Insufficient	13	41.94	18	58.06	0	0.00	31	100.0
Total	27	87.09	1	3.23	3	9.68	31	100.0

Source: Own research.

**Table 8.** Survey results – evaluating the role of capital market with regard to exit strategy.

The importance of the local capital market when considering the exit	Not important	I don't follow that	I have no experience
<i>n</i>	23	2	6
% of <i>n</i>	74.20	6.45	19.35

Source: Own research.

**Table 9.** Survey results – evaluating barriers with regard to expand/start up a business.

Key barriers to investment	Not significant	Labour costs / productivity	Qualified workers / graduates	Legislation/ public administration
<i>n</i>	12	7	4	8
% of <i>n</i>	38.71	22.58	12.90	25.81
Start-up business challenges – key areas	Administrative burden	Time requirements	Financial requirements	No significant barriers
<i>n</i>	5	9	1	16
% of <i>n</i>	16.13	29.03	3.23	51.61

Source: Own research.

**Table 10.** Survey results – legislative regulation of angel investment and entrepreneurship in the Czech Republic in relation to the perceived administrative burden of starting new business projects.

	Administrative burden				Total	
	Mentioned		Not mentioned		<i>n</i>	% of <i>n</i>
	<i>n</i>	% of <i>n</i>	<i>n</i>	% of <i>n</i>		
Comments on the legislation in the CR	3	9.68	4	12.90	7	22.58
No comments on the legislation in the CR	2	6.45	22	70.97	24	77.42
Total	5	16.13	26	83.87	31	100.00

Source: Own research.

comparison consider the domestic environment to be more favourable than the environment in other countries. It can be inferred from the answers that the BAs are willing to accept even less favourable terms, provided that they can consider a certain area of these terms as a constant and pay no further attention to it. On the contrary, the necessity to pay attention to permanent changes in conditions is perceived very negatively. In this context, a smaller portion of the BAs mentioned the amount of possible sanctions in the case of breach (even unintentional) of certain statutory obligations. The area of the subsidy policy is mentioned at a roughly similar level. The criticism of one group of investors targeted the violation of equal conditions of competition (they are investors who do not draw subsidies). The second group of investors are those who consider the setting of the subsidy policy to be too restrictive,

**Table 11.** Survey results – other barriers of business project development.

Areas preventing the project development	Changes in the regulations	Extensive sanctions	Subsidy policy	Taxation
<i>n</i>	19	5	4	3
% of <i>n</i>	61.29	16.13	12.90	9.68

Source: Own research.

insufficient or complicated. To a lesser extent, the role of tax legislation is reiterated, particularly in the context of the possibility of offsetting successful and unsuccessful projects (this concerns in particular the possibility of reporting losses).

## Discussion

Our first main survey result is that the macroeconomic development determined by the actual or expected value of macroeconomic indicators is not significant from the perspective Czech BAs. If the impact of the macroeconomic development is reflected in some manner, then it is at the level of the assessment of the impact of the macroeconomic situation on the expected flows of specific business projects, e.g. in the form of expected sales growth. Hence, this result does not at all undermine the conclusions of the economic theory and a large number of foreign studies on the link between macroeconomic development and the development of BA activities (Aernoudt et al., 2007; Collewaert et al., 2010; White & Dumay, 2017; Lindgaard Christensen, 2011; Mason, 2009; Mason & Harrison, 1999).

Furthermore, we deliver evidence that the current monetary policy of the CNB does not significantly influence the decision-making of the BAs. On the one hand, this finding may reflect the fact that the Czech Republic, unlike some other countries, is perceived as an economy with a stabilised inflation rate within the defined inflation target and a stable exchange rate. On the other hand, this research result is somewhat surprising considering the fact that the CNB complemented its standard tools of monetary policy by foreign exchange interventions from 2013 to 2017. This unconventional monetary tool affected the markups for corporate and SME rates (for details see Gregor & Melecký, 2018). Since the entry of a BA into a project is often accompanied by debt financing, this aspect of monetary policy should be perceived more sensitively than, for example, a much more abstract inflation target as the CNB policy directly affects the cost of debt capital.

Another somewhat surprising result is that the surveyed BAs positively assess the tax policy of Czech governments. Only 10% of the respondents have expressed substantial criticism. Nevertheless, the main demand for the state in the area of taxation in most of its responses consists in ensuring the stability of the system or the transparency of its changes. The BAs have also expressed quite positive views of the legislative environment. Significant dissatisfaction is emphasised only by about 1/4 of the investors. Also in this respect, the largest part of the BAs state that they would probably be satisfied with the legislative framework if there were no sudden and rapid changes, or if these changes were more predictable and slower. The assessment of the quality of legislative terms generally overlaps significantly with the assessment of investment protection (in particular law enforceability) and taxation terms. Here, our



results suggest predominantly investment-friendly nature of the domestic legal system whose role is generally referred to as critical in academic literature (La Porta et al., 1997, 2006).

In terms of the institutional conditions, the Czech BAs do not give weight to the existence of a functional capital market with primary issues. This finding is in direct contradiction with the conclusions of foreign studies conducted in the US and UK identifying the capital market as an essential exit channel (Füss & Schweizer, 2012; Groh et al., 2010; Groh & von Liechtenstein, 2009; Groh & Wallmeroth, 2016; Stedler & Peters, 2003; Stimel, 2012). We also believe that the exit strategy in the form of initial public offerings is not duplicable and if the informal venture capital market should accelerate in the Czech Republic, both the demand side (investors) and supply side (venture capitalists) have to change their attitude towards the role and purpose of the primary capital market. Sweden represents an inspirational example of this desirable change during the 1990s (Månsson & Landström, 2006).

Among other institutional factors affecting BAs' activities, it is necessary to mention the limitations arising from the labour market situation and the profile of the public education. Some respondents also criticise the legislation and the functioning of the public administration. When initiating starting a project, the most important limit seems to be the excessive time demands. The BAs who mention the administrative burden of initiating a project, also often negatively comment on the legislation. The most frequently perceived barriers in terms of project development include the need to monitor changes to the legislative framework, coupled with the need to implement adaptation processes, which, however, 'delay' the focus on project business objectives. There is also dissatisfaction with the level of impending sanctions for violations of certain regulations and the conditions of the subsidy policy.

## Conclusions

In this article, we provide empirical evidence to document the impact of the external environment on the activity of BAs in the Czech Republic. We focused on the heterogeneous response of investors, who are usually males, most frequently in the age group of 40 to 60 years, well-educated and experienced in setting up and running their own business or in the position of hired managers mostly in IT and telecommunications.

The research findings indicate that BAs do not identify the overall macroeconomic conditions and a liquid capital market as factors that deserve a strong attention. On the contrary, the investors express a great deal of concern about the current tax policy and the legislative framework including, inter alia, the investment protection policy. These are generally assessed as 'favourable', however, the legislative changes are described as 'too frequent' and enforcing the implementation of adjustment processes drifting the concentration away from the core business. Furthermore, the BAs express dissatisfaction with the manner in which the public administration service operates. In particular, they agree with the notion that 'too restrictive' sanctions for violations of some regulations pose an important risk. In terms of the rest of exogenous factors,

the BAs also consider the current situation on the labour market and public education policy to be serious barriers to business development in the Czech Republic.

To our knowledge, we are the first who attempt to disclose the perception of external environment on BAs' decision-making in the Czech Republic. This survey-based empirical evidence is important, as no research on this topic has been conducted before. We believe that the research findings have critical implications for investors, investee companies and public institutional framework. The key question is what incentives should be implemented in order to increase the attractiveness of the local non-institutionalized venture capital market? Based on the survey results, we argue that a higher stability of law and regulations, more efficient public administration a more vibrant capital market are essential elements which deserve attention to foster formal and informal venture capital market in the Czech Republic. Such measures significantly increase the supply of both debt and equity finance, as follows from the examples of other countries. We have a lack of knowledge about the informal VC market as there is no database systematically catching data about BAs' activities in the country. Missing data is an issue in particular in terms of the number of deals, their volumes and structuring, investment types, exit forms, industries, locations of BAs and investee companies, etc. If public incentive schemes were introduced without market knowledge, these are very likely to fail. Hence, similar to the World Bank Group Study (2018), we argue that the government authorities should establish a model of data collection based on interviews with stakeholders. The results should be published in the form of annual reports with open access. We believe that the government support for developing business angel networks and business angel groups, which will be in charge of collecting and assessing data from the market, as proposed, for example, by White and Dumay (2017), could represent an alternative manner how to create and manage such a database.

Furthermore, the current failure on the early stage market might be corrected if government-sponsored programs and incentives were introduced in order to promote the development of the BA community (however in the sense of indigenously introduced exogenous institutions). Examples of good practice include targeted tax schemes, establishing of public venture capital funds addressing the lack of seed and start-up capital, and training programmes for prospective investors (for best practices from other countries, see e.g. Bonini et al., 2018; Owen & Mason, 2017). In the Czech Republic, the priority, however, should be given to establishing and developing a private angel market because direct funding is likely to fail without effective informal VC market structures (see also 'Policy Recommendations' in the World Bank Group Study, 2018).

We also believe that the uniqueness of this study also lays in the conclusion that the Czech governments should adopt strategies supporting the transformation of the financial system through a well-functioning equity markets. The local financial system can be characterized as 'bank-based' and the capital market remains immature compared to the well-developed counterparts in the European Union (Peterle & Berk, 2016). This is reflected in the fact that the main way of raising capital include inflow of foreign direct investment and loans provided by foreign owned banks (Skare & Porada-Rochoń, 2019a, 2019b). The share of investment financed by equity or stock

remains below the Eurozone levels as reported by Meluzín et al. (2018a). Stock market capitalization as well as other measures of the market efficiency have lower quality compared to the West European benchmarks (Groh & von Liechtenstein, 2009; Peterle & Berk, 2016). This might be illustrated by the equity market capitalization to GDP or turnover ratio of domestic shares (in terms of the market capitalization, the average value over the period 2004 and 2015 is 21% in the Czech Republic, 34% in Poland, and 55% in the Eurozone; for details, see Meluzín et al., 2018a). The volume and average values of IPOs remain low, which represents a serious impediment in terms of exit strategies of venture capitalists. Thus, the transformation of the financial system closer to 'equity-based' is likely to lead to the strengthening of the importance of IPOs and hence to the expansion of the portfolio of possible exit strategies, inter alia in favour of venture capital (Månsson & Landström, 2006; compare also Dvorský et al., 2019; Virglerová, 2018; Blažková & Dvouletý, 2018).

Although the survey methodology applied here uncovers direct views from the BAs, it is also a source of some limitations. The following limitations should be considered in particular: the interviewed BAs do not represent all entities, and sample bias cannot be ruled out, since there is no publicly available list of the representative population. We interviewed investors operating in favourable macroeconomic conditions, which might have influenced their opinions and perceptions.

In a follow-up survey, we aim to extend the data experiment to other points in time and survey respondents from other non-institutionalized venture capital markets in the CEE region with a significant BA activity.

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