HGES ACCESS TO FINANCE AND THEIR FINANCIAL PERFORMANCE FROM THE ACHIEVED HIGH-GROWTH FREQUENCY PERSPECTIVE

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Abstract: *Even though past theory has highlighted high-growth enterprises (HGEs) as important determinant enhancing national economy development, research of enterprise growth remains heterogeneous and deficient in its nature. The most recognizable feature of HGEs is for sure their outstanding growth rate encouraged with different growth factors, one of them being financial resources, as one of the most important elements of development and growth process of all enterprises. Achieving outstanding growth rates can largely increase enterprise risk, as uncontrolled growth can drastically change financial structure of a particular enterprise. Past theory suggests that events enabling high-growth rates are very likely a consequence of short-term changes. Nevertheless, significant proportion of enterprises is listed among HGEs in several time periods. Thus, the main objective of our research is to find out if companies listed as HGEs several times during the analyzed six-years period, statistically significantly differs from HGEs, that were listed among HGEs only once; we were analyzing differences regarding the perceived accessibility to different financial resources, and differences regarding their financial performance. Research is based on the random sample of N = 150 HGEs from Slovenia, which have been at least once, among 2011 and 2016, listed as HGE in the population of HGEs, defined by Agency of the Republic of Slovenia for Public Legal Records and Related Services (AJPES). CATI (Computer-assisted telephone) and CAWI (Computer-assisted web) interviewing was used to obtain the sample data. The survey was conducted in spring 2018. Our results suggest that enterprises that were listed as HGEs several times during analyzed time period, statistically significantly perceive better accessibility to different financial resources (i.e. financial resources from venture capitalists; financial resources from banks; government subsidies; and financial resources from EU funds). From the financial performance view-point these HGEs are also more profitable and have higher added value per employee. Our results are supporting past theory emphasizing that the definition of HGE is broad and that it is group of HGEs which is not homogenous. Results indicate that enterprises that were listed several times as HGEs are on average financially more successful as compared to companies that were among HGEs only once. Policy measures should be aimed at supporting HGEs tendencies to overcome their financial constraints and we also present some suggestions for policy makers.*

Keywords: *High-growth enterprises, financial resources, financial performance, growth frequency*

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1. INTRODUCTION AND LITERATURE REVIEW

HGEs research dates back to the late 1970s in which Birch presented for that time quite controversial lessons about importance of small, HGEs, for economy and job creation process [15]. Although his work was encountered with numerous criticisms, he has sparked small business research, which is now a vigorous research field with a wide coverage, encompassing issues such as the importance of entrepreneurship and firm dynamics for job creation and economic growth [12]. This viewpoint of HGEs is strongly argued by various research experts and scientists. Thus, Shane [20] strongly defends an opinion that more attention should be focused to HGEs since thinking that many small, non-growing enterprises will improve economic conditions, innovativeness and job creation, is wrong. Our paper is based on this idea, although we are aware that criticism of other scientists [9], [10] that argue more in favor of small or non-growing enterprises, exists.

The most recognizable feature of HGEs is for sure their outstanding growth rate encouraged with different growth factors. The main focus is especially on enterprises' financial resources. For HGEs previous research findings have shown that these enterprises are usually younger [10], more prone to risk [9] and to higher innovation levels [20]. Therefore, financing of HGEs will considerably differ from financing of non-growing enterprises, not only in terms of different types of financial resources needed, but also in terms of their amount [21]. Financial resources and their access are for sure one of the most important elements of development and growth process of small and medium sized enterprises (SMEs) [13], as insufficient or inadequate financial resources can lead to the inability of proper functioning and could reduce the enterprises ability to grow [2]. Adequate financial resources are thus one of the most important factors that enable HGEs to achieve outstanding growth rates.

Past theory suggest that events enabling high-growth rates aren't present for longer time periods [6], and are more likely a consequence of short-term changes. Nevertheless, significant proportion of enterprises is listed between HGEs several times[156]. High-growth rates are usually associated with higher risk levels [9] and with higher enterprise level of innovativeness [20]. Due to this, enterprise growth-rate could drastically affect their access to different financial resources. Past theory has connected risk-taking with decisions made by different financial resources providers, like banks, venture capitalist and business angles, where banks are usually more risk-averse [7]. In contrast, investors like venture capitalists and business angels are more prone to risk taking, as higher risk levels can create opportunities for greater returns/profits [17]. Similar can be said for enterprise level of innovativeness, as past theory indicate on the possibility that more innovative enterprises will be faced with greater financial constraints [19]. There is also no debut about the importance of growth in several time periods, for enterprises, as when viewed longer time periods, enterprises display puzzling arrays of new businesses and innovations in their entrepreneurial attempts to achieve lasting growth [3]. HGEs thus can tend to create high-growth rates in longer time periods, nevertheless the main question that remains, is if created growth in several time periods can enable better access to different financial resources. As growth can be perceived as primary measure of success [18], different financial resources investors could be prone to invest into HGEs which have achieved high-growth rate several times.

Based on the above presented theory, we have formed following hypotheses:

[156] For additional information about HGEs population in Slovenia see Table 1.

H1a: HGEs which have achieved high-growth rate several times, statistically significantly perceive better access to different providers of financial resources, than HGEs which have achieved high-growth rate only once.

H1b: There is a positive, statistically significant, correlation between achieved enterprise high-growth frequency and total perceived financial resources accessibility.

But are HGEs which have archived high-growth rate several times, really more successful as HGEs which high-growth rate was present only once? Taken into account that growth can be perceived as primary measure of success [18], this should be the case. Cronin [8] argues in favor of these theses, as different growth strategies could be connected with enterprise financial performance.

Based on the above presented view-points, we have formed following hypothesis:
H2: HGEs which have achieved high-growth rate several times are statistically significantly more financially successful, than HGEs which have achieved high-growth rate only once.

2. SAMPLE, METHODOLOGY AND VARIABLES

Research is based on the population of HGEs, defined by defined by Agency of the Republic of Slovenia for Public Legal Records and Related Services (AJPES). From the total population of 13,287 HGEs that have been at least once, among 2011 and 2016, listed as HGE[157], thus fulfilling several predetermined criteria; 8,194 had available contact information. Next, 2,788 HGEs were randomly selected for CATI (Computer-assisted telephone) and CAWI (Computer-assisted web) interviewing, resulting in the random sample of n = 150 Slovenian HGEs (CATI n=110; CAWI n = 40).The research was conducted in spring 2018. Key respondents were enterprises top managers.

Table 1: Duration (frequency) of high-growth rate

Times (years) listed as HGE	*Sample (number)*	*(%)*	*Slovenian HGEs population (%)*
1	55	36.7	44.4
2	47	31.3	24.8
3	22	14.7	15.1
4	10	6.7	8.1
5	9	6.0	4.6
6	7	4.7	2.9

(Source: [1] and own calculations)

In Table 1 duration (frequency) of high-growth rate is presented. Analyzed time period is between years 2011 and 2016, representing six (6) possible years in which companies could have been listed as HGEs. Second column presents data from final sample (n = 150). In the third column the structure of the population of Slovenian HGEs, regarding the number of years in which they were listed as HGEs, is presented.

To test research hypotheses H1a, we have divided HGEs into two groups:

[157]List of HGEs is prepared by AJPES, separately for each year.

- HGEs which have achieved high-growth rate several times, are defined as HGEs which have been listed as HGE two or more times (meaning they were listed as HGE according to methodology used by AJPES, at least in two different years) (sample: 95 HGEs, representing 55.6 %), and
- HGEs which have achieved high-growth rate only once, are defined as HGEs which have been listed as HGE only once in analyzed time period (years between 2011 and 2016) (sample: 55 HGEs, representing 36.7 %).

Hypotheses were then tested using IBM SPSS statistic 24 analytical software and Mann-Whitney U test[158], whereby we have examined whether statistically significant differences between two independent groups of HGEs, exist.

To measure perceived accessibility of financial resources from different providers (dependent variables, H1a), we have adopted Brown's [4] measurement scale, asking HGEs top managers if they believe their enterprise could obtain financial resources from different financial resources providers (7-point Likert scale, separate for each provider). Analyzed financial resources providers were: financial resources from Business angel's investors (fr1),Venture capitalists (fr2), Banks (fr3), Government findings' subsidies (fr4) and European Union funds (fr5); covering most common formal types of financial resources.

To measure total perceived accessibility to financial resources (H1b) new variable was created (sum of: fr1, fr2…, fr5).

To measure financial performance (dependent variable, H2) real data[159] were used. Selected indicators to measure financial performance were HGEs profits and added value. In order to prevent the influence of enterprise size, we have divided HGEs profits and added value, with the number of employees. Independent variable in both cases was HGE, divided into two groups (dichotomous variable with value 0 – enterprises which have achieved high growth rate only once in analyzed time period, and value 1 – enterprises which have achieved high-growth rate several times in analyzed time period).

3. RESULTS

Results in Table 2 showed that statistically significant differences between HGEs which have achieved high-growth rates several times, and those which have achieved high-growth rate only once, exist, when analyzing financial resources from Venture capitalist (fr2), financial resources from Banks (fr3), financial resources from government subsidies (fr4) and financial resources from EU fund (fr5) ($p < 0.05$).

[158]Based on Kolmogorov-Smirnov and Shapiro-Wilk Tests of Normality, analysed variables aren't normally distributed ($p < 0.05$).
[159]Provided from AJPES, for the last year in which particular enterprise was listed as HGE.

Table 2: Results of Mann-Whitney U test (hypothesis H1a) (Source: own).

Dependent variable: financial resources	*HGEs group*[160]	*Mean Rank*	*Average perceived accessibility*	*Asymp. Sig (2-tailed)*
Fr1: business angels	0 1	69.26 79.11	2.18 2.52	0.153
Fr2: venture capitalist	0 1	62.23 83.18	1.60 2.41	0.002
Fr3: banks	0 1	57.22 86.08	3.62 4.99	0.000
Fr4: government subsidies	0 1	65.95 81.03	2.76 3.51	0.036
Fr5: EU funds	0 1	65.15 81.49	2.27 3.01	0.020

The third column of Table 2 presents the mean rank, which in our case indicates that HGEs which have achieved high-growth rate several times are more likely to perceive better access to financial resources. More ever, only for financial resources from Business angles (fr1) difference, between HGEs which have achieved high-growth rate several times and those which have achieved high-growth rate only once, isn't large enough to be statistically significant. For additional insights, in the fourth column of Table 2, we have added results for average perceived accessibility to particular financial resources (based on 7-point Likert scale).

Based on the above presented results, hypothesis H1a: HGEs which have achieved high-growth rate several times, statistically significantly perceive better access to different providers of financial resources, than HGEs which have achieved high-growth rate only once; *can be partly accepted*.

A Pearson's correlation coefficient was additionally computed to assess the relationship between achieved HGEs high-growth frequency, and total perceived financial resources accessibility (sum of fr1, fr2…, fr5). There was a positive, statistically significant, correlation between the two variables ($r = 0.163$, $p = 0.047$). However, correlation between two variables is relatively weak.

Based on the above presented results, hypothesis H1b: There is a positive, statistically significant, correlation between achieved enterprise high-growth frequency and total perceived financial resources accessibility; *can be accepted*.

Table 3: Results of Mann-Whitney U test (hypothesis H2) (Source: own).

Dependent variable: financial performance	*HGEs group*	*Mean Rank*	*Average (real data, in EUR)*	*Asymp. Sig (2-tailed)*
Profit per employee	0 1	59.69 84.65	10,677.52 10,848.92	0.001
Added value per employee	0 1	61.51 83.60	43,526.33 47,969.46	0.003

[160] 0 stands for HGEs which have achieved high-growth rate only once, and 1 for HGEs which have achieved high-growth rate several times.

Results in Table 3 showed, that significant differences among companies that were listed as HGEs only once and those listed several times, exist, regarding both analyzed financial performance indicators, i.e. when analyzing created year profit per employee and added value per employee ($p < 0.05$). Mean rank indicates that HGEs which have achieved high-growth rate several times, are financially more successful, as HGEs which have achieved high-growth rate only once. Averages based on real data are additionally presented.

Based on the above presented results hypothesis H2: HGEs which have achieved high-growth rate several times, are statistically significantly more financially successful, than HGEs which have achieved high-growth rate only once; *can be accepted*.

4. DISCUSSION AND CONCLUDING REMARKS

Results indicate that HGEs which have achieved high-growth rate several times perceive higher accessibility to almost all financial resources (except financial resources from business angels). Positive (statistically significant) correlation between achieved high-growth frequency and perceived overall financial resources availability, also exists, even though the strength of correlation between two variables is weak ($r = 0.163$). Presented results are important, as venture capital and business angels investments are becoming more and more important for enterprises - between years 2007 and 2016 the share of venture capital investments in enterprises employing less than 20 employees[161] have increased from 30% to 40 % in Europe[16]. Additionally, financial resources from banks are still the most relevant source of financial resources for all enterprises [11]. As it seems, achieving high-growth rate several times, could be seen as an important indicator of success [18] in investors' eyes, enabling companies a better access to financial resources. This could be important indicator for policy makers aimed to support HGEs, as achieving high-growth rate in several time periods could reduce financial constraints faced by many HGEs. But as results also show, HGEs which have achieved high-growth rate several times are also financially more successful than companies listed as HGE only once: it means that perceived accessibility to financial resources and the financial performance are associated.

Although the results unambiguously show, that significant differences among companies that were listed as HGEs only once and those listed several times, regarding their perceived accessibility to financial resources and their financial performance, exist, reasons for these differences are unclear, and thus represent possibility for future research. Additionally, important insights for policy makers are shown in fourth column of Table 2. As shown, in Slovenia, HGEs perceive financial resources from Business angels, Venture capitalists and EU funds, as slightly inaccessible, indicating, that improving the accessibility to these financial resources could be an important area for the future policy design.
There are also some significant limitations that apply to our research. The first limitation that needs to be highlighted, is the limited time aspect of the selected research time period (years 2011 to 2016); by changing the time horizon of the research, results may change as well. Second important limitation is associated with the identification of the companies that have been listed among HGEs several years; in case of our research, this is not necessary in consequent years. If the continuous growth in consequent years is considered, the groups may be formed differently, leading to different results.

[161] In our case, 87.3 % of HGEs included into research, employ twenty or fewer employees.

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