FAST-GROWING COMPANIES FROM TIMIS COUNTRY: DOES THE AGE MATTER?

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Abstract

This paper examines the relation between the company’s age and its growth and analyses the influence of age on growth by studying a specific group of companies, namely fast-growing companies from the Timis County, Romania. We have studied the performance of the fast-growing companies in the period of 2010-2013 using the STATA IC 12 software application. A linear regression analysis model with two variables was used. The dependent variable used was the rapid growth of the company, measured by the growth rate of the turnover and the independent variable used was the age of the company, measured by the number of years. The model was tested using the number of employees as a control variable. This paper’s conclusion is in agreement with many other findings from the literature in this subject. The presented results show that the turnover growth rates in the Romanian fast-growing companies tend to drop from one year to another, as the companies grow older.

Key words: fast-growing companies, age, management, entrepreneurship,

JEL classification codes: M10, L21, L26

1. Introduction

The rapid growth of a company is an interesting issue. Recent papers on this subject prove the authors’ interest towards it. The rapid growth raised several questions which the researchers still try to answer. Among them there is the definition of a fast-growing company and other quality related issues specific to this kind of companies.

This paper aims to establish whether age influences the growing of a company and if so, how does this happen. For this purpose, we considered a certain group of companies, namely fast-growing companies operating in the Timis County.

The subject of the company’s age as a factor of the rapid growth was discussed in the literature. It is considered that the age influences the rapid growth. Several studies reported that young companies grow faster than older ones or that the growth rates decrease as the companies grow older. (Coad et al. 2014; Kok et al., 2012; Delmar et al., 2003). [11] - [12] - [13].

The entrepreneurship theory provide enough information on the young businesses. Taking into account the complexity of the fast-growing companies Skrt and Antoncic (2004) considered the growth as an important component of the performance and a measure of the business success. [24] The involvement of the entrepreneur is regarded as important in the growing of the business. Empirical evidence show however that some companies grow rapidly independent on their age. The examples provided by the literature show that the growth rates tend to drop in time.

In our opinion it would be relevant to establish whether these considerations are true for fast-growing companies in the Romanian economy. We are concerned with the relation between the company’s growth, measured by its turnover and the company’s age, in the fast-growing period. Does it tend to raise or fall down? In order to find the answer for this question, information is needed on the number of fast-growing companies in the Timis County and their age in the period of the rapid growth. We have chosen this particular subject as only a small number of papers on the Romanian fast-growing companies were identified, among which those of Bibu and Sala (2014). However, the aforementioned studies do not make any reference to the relation between the age of the company and its rapid growth.

[6]

We therefore hope this paper will fill in the identified gaps and provide answers to the following questions: (1) How old are the fast-growing companies in the Romanian economy? and (2) Does age influence whatsoever the rapid growth of the companies in the Romanian economy and if so, how does this happen?

Identifying the fast-growing companies was challenging since there are not many such companies in the Timis County. [2]. One method was to apply the OECD definition criteria, namely the turnover and the number of employees [14] for the companies registered in the referred area. Collecting the data for the referred period 2008-2013 was difficult since the number of fast-growing companies is reduced.
2. Literature review

There are various approaches of the rapid growth. There are studies examining the rapid growth depending on the age and size of the company. The age of the company shows whether this is the case of a young or old company and whether the growth persists in time and for how long, while the company’s size refers to the number of employees.

The Storey model, presented by Brüderl and Preisendörfer (2000) identifies three main categories of influencing element: the entrepreneur’s initial resources, the strategy and decisions and the company’s specific features. [10]. The age is one of the elements considered to influence the growth. Other authors, such as Nichter and Goldmark (2009) also refer to the age as a variable belonging to the company’s features. [21]

Moreno and Casillas (2000) have presented more arguments in support of the fact that the age could be a measurement for experience, which at its turn makes an approximate indication on the specific knowledge capital related to the business’s resources and its capacity to use these resources effectively. The authors have the opinion that the study of the rapid growth (gazelle growth) lies at the intersection of three major fields: the company growing theories, the strategic renovation literature, namely the strategic change, and entrepreneurship theories. [19]

Many authors have shown a rising interest in the study of the sustained high growth since there are a few businesses that manage to grow rapidly in the long run. Barringer et al. (2005), for instance, have shown that no consensus has been reached in the literature concerning the reasons for which the companies find difficult to maintain a high growth rate. [5].

Various opinions on the relation between the company’s age, respectively its size and its growth are encountered in the literature of the field. Coad et al. (2014) have presented several stylized facts on the fast-growing businesses. The high growing companies are reported to be younger, but not necessarily smaller and the growth cannot be maintained in the long run. [11] Other studies emphasize the fact that the rapid growth occur in younger and smaller companies. Acs et al. (2008) have shown that, on average, the high-growing companies are generally smaller and younger. [1]

Kok et al. (2012) have considered that the size of the business is positively related to its surviving chances. The authors have argued that the positive relation is based on the noise selection model, presented in literature. [12] Acs et al. (2008) have shown that the noise selection model made difficult to distinguish winners from losers with anticipation. [1]

The relation between the company’s age and its growing has been examined by several authors who showed that the negative effect of the age on the growing appears to be consistently validated in studies from various countries and industries, (Kok et al., 2012); [12] respectively that the growth rates tend to decrease while the business grows older. (Delmar et al., 2003). [13]

Kok et al. (2012) have noticed that the growth rates drop surprisingly in many cases. In agreement with Sutton (1997) the authors have explained the consistent decrease of the growth rate with age as a consequence of the fact that the company has reached its optimal production efficiency (related to the MES), allowing it to survive. Once this level is reached, the companies succeed in their growing target, but in absence of a strategic approach, the growth rates follow a descending trend. The size is negatively related with the company’s growth, because, in order to survive, small companies have to grow relatively fast to reach their minimum efficient size, MES. (Kok et al., 2012 on Audretsch et al., 2004; Yasuda, 2005). [12].

2.1. The definition of the fast-growing company

The literature shows that a single definition of the fast-growing company has not been found yet. (Coad et al., 2014). [11].

Considering the OECD statements (2007), the main conditions that a high-growing business has to fulfill are related to (1) the rapid growth period and (2) the indicators measuring the growth. For example, the rapid 5 year growth is usually associated with the gazelle firms, considered to be high-growing firms while a rapid growth on a 3 year
period of time represents the minimum period of time necessary for a firm to get into the category of rapid growth companies. [14]

Generally, the fast-growing company concept is encountered in literature under several accepted terms. Hoxha și Capelleras (2010) are such authors who noticed the use of different terms. [17] Some researchers use the term gazelles to express the rapid growth of companies on 5 years (Birch, 1981; OECD, 2007). [8]-[14] Others use terms such fast-growing firms (Perlick & Weatherford, 1991; Almus, 2002) [3]-[23], rapid growth firms (Barringer et al., 1997; Fischer & Reuber, 2003) [4]-[15], high-growth firms (Delmar et al., 2003; Moreno & Casillas, 2007) [13]-[20] or high-impact firms (Acs et al., 2008). [1]

The language barrier hinders the exact rendering of the English language literature terms into Romanian. We therefore clarify herewith our understanding of the terminology and specify which terms will be used from now on in this paper in order to describe the concept of a rapid growth of a company as opposed to other types of growth. The rapid growth company and fast-growing company terms will be used in this respect.

As the period of growth is concerned, the minimum criterion that a business should fulfill in order to be considered a fast-growing company is to grow fast for 4 years in a row, so that the growth rate should sum up to 3 years. The longer and the more profitable the rapid growth period is, the better is the company’s performance in managing its rapid growth.

OECD (2012, pg. 64) refers to the duration of the rapid growth showing that there are few businesses that grow steadily on a period of 7 years or longer. It appears that only one fifth of the fast-growing companies manage to keep their growth rates over 7, 8 or 9 years. For more than half of the businesses the steady grow does not exceed 6 years and in third of the cases, the companies switch to an irregular pattern after 2 or 3 years of steady growth. Most of the fast-growing companies do not grow consistently. [22]

The literature indicates several indicators to be considered when dealing with fast-growing companies. Some authors claim that the number of employees is an indicator of the rapid growth, while others take into consideration the company’s turnover or the amount of sales. As Delmar et al. (2003) have showed, the fast-growing companies depend conceptually and operationally on the instrument that measures their growing [13]. In our opinion, the fast-growing companies group depends as well on the growth measuring indicators.

Delmar et al. (2003) have highlighted that previous studies presented a variety of growth measuring instruments making a comparison of the studies difficult, since the indicators and the formulas were different. Delmar et al. (2003) have considered that a strategy for the harmonization of the indicators would be to focus on a narrow aspect of the company’s growth, using a single measurement of growth or a population of fast-growing companies selected in accordance to a single criterion. In this case, the generalisation and the implications would be restricted to one field in which the concept is referred to. Even so, the authors have warned that there is always a risk that other aspects related to the growth and not taken into considerations could cast a shadow over the results of the studies. [13]

The conclusions of Holzl (2013), on the other hand, express some doubts regarding the use of a simple indicator of the rapid growth to measure the dynamic sustainability of the company. [16] Considering these aspects, Coad et al. (2014) have suggested using multiple partial indicators, allowing the authors to use more than one measurement. As the indicators calculation method is concerned, the situation is complex, due to various approaches. Some calculation methods are in favour of small companies and less favourable for large companies while other methods do the opposite. [11]

When selecting fast-growing companies, Bruderl and Prisendorfer (2000) set a limit of at least 5 new employees hired in 4 years, which makes a 500% growth rate for a single employee company and at least a 100% growth rate for a company with 5 employees. The authors have calculated the increase in the number of employees in relative or absolute terms. [10]

Lopez-garcia and Puente (2012) have considered as rapid growth companies those businesses that make to the 10% top and have taken into account an indicator combining the absolute and relative employment growth during a 3 year period of time. [18]

Birch and Medoff (1994) have showed that a fast-growing company is one that recorded an annual increase in the sales figure of at least 20%, during a 3 year period of time, and starting from a base income of at least 100.000$. [9]

Barringer et al. (2005) have considered fast-growing companies those with an sales compound annual growth rate of 80% or more, while slow-growing companies have an annual sales increasing rate of 35% or less. The authors have also reported that, in accordance with the National Commission on Entrepreneurship (2001), a fast-growing company has an increase in the employment occupational rate with at least 15% per annum. [5]

Acs et al. (2008) have considered fast-growing companies those companies that manage at least to double their sales on a 4 year period of time and an increase indicator in the employees number of 2 or higher. [1]

Coad et al. (2014) have presented a synthesis of the definitions of the rapid growth companies. Often the definition is made by selecting a segment from a population of companies that reached the highest raise during a specific period of time, for example 1%, 5% or 10% from the companies reaching the highest growth rates. This method has the disadvantage of preventing the authors from comparing the number of fast-growing companies from various periods of time or different countries. Another method is to select the companies reaching or exceeding a certain pace from a starting and an ending period or as annual growth for a certain period of time. [11]
Avoiding the contradictions between the definition and the measurement of the rapid growth, but turning the scales for Eurostat-OECD (2007, pg. 61) specifying that the fast-growing companies can be defined according with two criteria: the number of employees and the turnover, the authors embrace the definition as follows “All enterprises with average annualised growth greater than 20% per annum, over a three year period should be considered as high-growth enterprises. Growth can be measured by the number of employees or by turnover. (...) the provisional size threshold of 10 or more employees holds for both the turnover and employment measures.” [14]

3. Research methodology

3.1. Selecting the participating companies

The data from the National Institute for Statistics indicate that there were 24,162 active companies at the end of 2009 in the Timis County. Among them there were companies with rapid growth in various periods of time. Our task was to identify those companies fulfilling the OECD definition criteria from the reference period of 2008-2013.

In order to set up a group of companies we applied two criteria, in accordance with the OECD definition of a fast-growing company: the turnover and the number of employees.

A turnover increase rate higher than 20% from year to another for at least 3 years in a row revealed 153 companies fulfilling this criterion. These may be considered fast-growing businesses only having in view the increase in the turnover. Only a part out of these 153 companies meet the second criterion, at least 10 employees hired from the beginning of the growing period. Our study revealed 27 fast-growing companies [7] and in addition 6 other companies fulfilling the growing criteria but with 10 employees for only 3 years in a row instead of 4. Taking into account that a single defining method for the fast-growing company has not been established yet, as well as the small numbers of such companies, the authors found suitable to consider the group of 33 companies in this paper. [2]

The group of fast-growing companies feature two periods of rapid growth: 2009-2013 and 2010-2013. We decided to take into consideration from now on the intersection period of 2010-2013, given the small number of such companies.

The data on the 153 growing companies from the Timis County were collected between June-July 2014, from the Ministry of Finance website (http://www.mfinante.ro). We were mainly interested in data regarding the legal status and form of organization, the year of registration in the Registrary of Companies, the field of activity of the company, the town or city where activity takes place, turnover, average number of employees, total revenue, total expenses, gross profit/loss and net profit/loss for each of the 6 years from 2008-2013.

3.2. Data description and data panel analysis

The variables on which the regression model was based are the growth and the age. The model used in this paper is based on the following formula:

\[ \text{Growth} = c + \beta \text{Age} \]  

(1)

We tested the following hypothesis:

Null hypothesis – H0: The growth rates decrease as the companies grow older.
Alternative hypothesis – H1: The growth rates raise as the companies grow older.

If the test result shows that the null hypothesis is true so we accept this hypothesis, and otherwise we will reject it and therefore we accept the alternative hypothesis.

In order to measure the rapid growth we applied the following condition: the turnover growth rate is of at least 20% from one year to another during 2010-2013. A calculation method of the growth rate of a certain indicator, for instance the turnover, often encountered in the literature is the ratio between the absolute increase in the year \(n\) (difference between the year \(n\) and the year \(n-1\)) and the turnover of the year \(n-1\). The figures are in percentages.

In order to establish the company’s age we deducted the establishment year from the years corresponding to the growth period, obtaining the company’s age in every year of the 2010-2013 period.

For the companies considered, their structure after start-up is as follows: 1 start-up in 2009, 4 start-ups in 2008, 6 start-ups in 2007, 3 start-ups in 2006, 3 start-ups in 2005, 4 start-ups in 2004, 1 startup in 2003, 4 start-ups in 2002, 2 start-ups in 2000, 1 startup in 1999, 2 start-ups in 1994 and 2 start-ups in 1992. We noticed that in the fast-growing companies group, the number of relatively young companies is very small. Consequently, the rapid growth companies from the Timis County are rather relatively young companies and quite mature.

In order to test the model we used the number of employees as control variable. The control variable’s role was to establish whether the results of the model suffer any alterations or not, and which are the implications if the results change.

The characteristics of the variables used in the regression analysis are given in the following table (Table no.1).
Table no. 1. Characteristics of the variables used in the regression analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>overall</td>
<td>100.2489</td>
<td>365.2525</td>
<td>20.31</td>
<td>4140.15</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>178.6642</td>
<td>23.71</td>
<td>1063.605</td>
<td>n = 33</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>319.7179</td>
<td>-939.5161</td>
<td>3176.794</td>
<td>T = 4</td>
</tr>
<tr>
<td>Age</td>
<td>overall</td>
<td>8.045455</td>
<td>4.79004</td>
<td>21</td>
<td>N = 132</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>4.710964</td>
<td>2.5</td>
<td>19.5</td>
<td>n = 33</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>1.122293</td>
<td>6.54555</td>
<td>9.54555</td>
<td>T = 4</td>
</tr>
<tr>
<td>Employees</td>
<td>overall</td>
<td>40.46212</td>
<td>48.84207</td>
<td>2</td>
<td>N = 132</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>46.84741</td>
<td>11.5</td>
<td>207.75</td>
<td>n = 33</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>15.52829</td>
<td>-47.28788</td>
<td>96.71212</td>
<td>T = 4</td>
</tr>
</tbody>
</table>

Source: Authors’ own processing of data provided by STATA software

4. Results and discussions

The STATA IC 12 software application was used in order to examine the relation between the company’s growth and age. A linear regression model was used for the data panel analysis.

The influence of the age on the rapid growth was analyzed for the period 2010-2013, in which it was established that most of the companies met the criterion of having at least 10 employees. Only 6 companies failed to meet this criterion of reference, having less than 10 employees in 2010 but that had more than 10 employees for the following 3 years and consequently were added to the 27 fast-growing companies.

The results obtained after performing the STATA analysis indicated a 0.0428 LR associated probability, which means the model is statistically significant (Table no. 2).

The results show a negative coefficient suggesting an inverse relation between age and growth. The P-value associated to the regression coefficient indicate the value of 0.041 meaning that the age variable is statistically significant for the model. When the age increases by one unit, a decrease of approximately 33% occur in the growth rate of the turnover. This means that the turnover growth rates tend to drop in time.

Table no. 2. Results of the age-growth relation analysis

<table>
<thead>
<tr>
<th>LR chi2(1) = 4.10. Prob &gt; chi2 = 0.0428. Log likelihood = -963.62505.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover growth rate</td>
</tr>
<tr>
<td>----------------------</td>
</tr>
<tr>
<td>age</td>
</tr>
<tr>
<td>_cons</td>
</tr>
<tr>
<td>/sigma_u</td>
</tr>
<tr>
<td>/sigma_e</td>
</tr>
<tr>
<td>rho</td>
</tr>
</tbody>
</table>

*Likelihood-ratio test of sigma_u=0: chibar2(01)= 0.00 Prob>=chibar2 = 1.000

Source: Authors’ own processing of data provided by STATA software

Another control variable, the employees, was introduced further, so as to see whether the impact of age on the company’s growth changes. The model per se is a correct mathematical relation, but statistically invalid or statistically insignificant due to the level of significance 0.05 used by default. The introduction of the employees variable makes that within the new model the age variable coefficient no longer valid (0.055>0.05) fact issued also by the different signs of the interval of variation of this coefficient. The results of the performed analysis are given, as follows (Table no. 3).

Table no. 3. Results of the age-growth variation analysis with control variable

Source: Authors’ own processing of data provided by STATA software

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5. Conclusions

Our intention was to analyse the fast-growing companies in the Romanian context in relation with their age. A group of fast-growing companies identified in the Timis County was analysed considering the turnover in relation with their age. We tested the null hypothesis which is the growth rates decrease as the companies grow older. The test result shows that the null hypothesis is true so we accept this hypothesis, and we reject the alternative hypothesis.

The study showed what happens with the growth rates of the turnover during the rapid growth, depending on the company’s age. Gathering all analysis results we are able to draw the following conclusions:

Regarding the first investigated issue we may conclude that the Romanian fast-growing companies are not necessarily young. Most companies from the investigated group may be considered at most, relatively young. A significant percentage of the analysed companies have from 5 to 10 years, respectively over 10 years of experience on the market.

As the second investigated issue is concerned, we may conclude that the age impacts adversely on the rapid growth. The growth rates tend to drop as the companies grow old. The fact the companies with different ages do grow rapidly over the same period of time shows that the growth process is a cyclic one, as the companies go through various phases in time. The fact that, out of the analysed companies, the older ones had a rapid growth during 2010-2013 does not imply that they had no other rapid growth periods. Unfortunately, the lack of data before 2008 on this companies, makes impossible for us to provide additional findings.

The obtained results support the findings encountered in the literature of the field, indicating that the younger companies grow faster. In agreement with the findings of other authors and researchers we may also conclude that the growth rates of the companies analysed in this paper tend to drop as the companies grow old. This assumption was checked for the rapid growth period which is known to be unstable and complex. The conclusion of this analysis is that the growth rates decrease as the companies grow older.

We mention as limitations of this paper the lack of data on turnover and number of employees for the companies activating in the Timis County before 2008. A suggested future direction of investigation could be the extension of this study such to comprise the analysis of the specific management aspects of the identified companies in the Timis County.

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