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CHARACTERISTICS OF FIRMS WITH DIFFERENT TYPES OF GROWTH: THE CASE OF SLOVENIA

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ABSTRACT: *The authors of this paper develop a new typology of growing and fast-growing firms, based on consistent application of the microeconomic theory of the firm, and thereby addressing some limitations of existing studies that investigate growing and fast-growing firms. A rich database available for the entire population of business entities in Slovenia enables the authors to use the proposed*

typology and investigate key demographic and other characteristics of firms with different types of growth in the 2007-12 period. The authors conclude that the case of Slovenia and the analysis of firm characteristics confirm the adequacy of the proposed typology.

KEY WORDS: *firm growth, types of growth, fast growing firms, Slovenia*

JEL CLASSIFICATION: L26, D22

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1. INTRODUCTION

In this paper the authors develop a unique and original typology of growing and especially fast-growing companies that is based on the microeconomic theory of a company's short- and long-term equilibrium. The authors believe that most of the existing definitions of growing and fast-growing firms depend on available data indicating various dimensions of firm growth and are not built on theoretical foundations, specifically the economic theory that explains a firm's equilibrium. In microeconomic theory, the growth of a firm is defined as the result of establishing its short-run or long-run equilibrium. Accordingly, various groups of growing and fast-growing firms can be identified based on microeconomic theory. Further, such a typology of growing firms that is based on economic theory allows us to study the relationship between firm growth and economic growth in general.

Based on the proposed typology, we define the set of characteristics of growing and fast-growing companies that have been analysed for individual types of companies with the available data. They focus on those characteristics that differ significantly between the studied types of growing companies. The data used apply to Slovenia for the 2007–12 period.

By researching the characteristics of individual types of growing and fast-growing companies, we wish to test the proposed typology of such companies. We believe it is also possible to confirm the adequacy of our typology by testing the assumption that individual types of growing and fast-growing companies not only differ in terms of their growth and growth characteristics but also in terms of other characteristics. Accordingly, we attempt to confirm the hypothesis that firms of the same growth type share other common characteristics.

2. OVERVIEW OF DEFINITIONS OF GROWING AND FAST-GROWING COMPANIES

An important systematization of the literature on rapid growth of firms was made by Delmar and Davidsson (1998) and Delmar et al. (2003). They draw attention to four crucial issues that appear in the relevant articles: growth indicator, growth measurement, analysed time period, and growth process.

In his review of 55 studies dealing with small businesses and entrepreneurship, Delmar (2006) identified five different growth indicators: turnover/sales,

employment, performance, market share, and assets. This is in line with the definition of growth as the phase when the firm seeks additional resources, builds the management team, and expands into new markets (Gartner and Brush 2006). Delmar (2006) shows that employment and turnover/sales are the most-used growth indicators. He argues that subjective measures such as perceived market share and performance satisfaction are not appropriate measures, as they are based on entrepreneurs' knowledge and expectations. He also notes that change in assets is only appropriate for the manufacturing sector because it depends on the capital structure.

A review of studies by Ericson (2007, pp. 12-30) shows that a rich body of literature focuses on growth as reflected by increases in sales, technological innovation, and size, with growth variables measured by increases in sales volume, assets, market share, and number of employees.

In their update of the Henrekson and Johansson (2010) survey, Daunfeldt, Elert and Johansson (2014) identify 30 studies examining the contribution of high-growth firms. All the surveyed studies use employment and sales as growth indicators, with employment being the most studied variable. As noted by Coad and Hölzl (2012, p. 324), sales growth is the most common indicator of growth used by managers and entrepreneurs, but employment has advantages as an indicator of firm growth. Sales alone do not always reflect the value added and thus overstate the size of the firm. Using changes in employment to measure growth reduces measurement problems and may be more robust for small firms, although for such firms there are substantial indivisibilities of employment growth. Daunfeldt, Elert, and Johansson (2014) show that in addition to sales and employment, wages, productivity, and revenue are also used as variables through which growth is observed (for example, Moreno and Casillas 2007; Hölzl 2009; López-García and Puente 2012; Bjuggren et al. 2013; Hölzl and Frisenbichler 2010). However, Daunfeldt, Elert, and Johansson (2014) highlight the lack of studies where growth in productivity or value added have been taken into account as indicators of fast growth. Productivity has been researched by, for example, Littunen and Tohmo (2003), Fritsch and Mueller (2004), Acs, Parsons, and Tracy (2008), and Bravo-Biosca (2010). More recent studies by Bravo-Biosca, Criscuolo, and Menon (2013) and Daunfeldt, Elert and Johansson (2014) use the average multifactor productivity over a three-year period and growth in value-added-based labour productivity as a growth indicator. Du and Temouri (2015) also investigate the empirical link between total factor productivity growth and high-growth firms.

Surveys of the literature by Delmar (2006), Coad and Hölzl (2012), and Daunfeldt, Elert, and Johansson (2014) show that growth is measured in both absolute and/or relative terms. The approaches selected to measure growth can lead to different results (Almus 2002). When employment is used as a growth indicator the Birch index (Birch 1987) is also employed, combining the relative and absolute measurement of company growth thereby reducing bias towards any particular firm size. As shown by Delmar (2006) and Coad and Hölzl (2012), many studies have logarithmized the dependent variable in order to correct a skewed distribution.

Investigating firm growth requires not only the selection of the appropriate growth indicators but also the distinction between fast-growing firms and firms growing at a slower pace. According to Birch and Medoff's 1994 definition, 'gazelles' are firms whose sales have increased by at least 20% per year over the interval with base-year revenues exceeding \$100,000. Henrekson and Johansson (2010), in their review of 20 studies, show that an alternative and very common approach is to define high-growth firms as a subset of growing firms, i.e., the upper 5% or 10% of the respective distribution of firms. Some reviewed studies define a firm as fast growing if it belongs to the upper 5% or 10% of the Birch Index distribution. Brüderl and Preisendörfer (2000) define a firm as fast growing if it doubles its employment and creates at least five additional jobs within five years. Almus (2002) uses a similar definition. Acs, Parsons, and Tracy (2008) and Acts (2011) investigate what they refer to as "high-impact firms", i.e., firms that have at least doubled their sales over a four-year period and which have an employment growth quantifier (the relationship between absolute and percentage change) of 2 or more over the studied period. According to Eurostat and OECD recommendations, high-growth firms should be defined as firms with at least ten employees in the start-year and annualized employment (or sales) growth exceeding 20% during a 3-year period. Daunfeldt, Elert, and Johansson (2014) note that a very large number of firms are excluded from analysis of the economic contribution of high-growth firms if the Eurostat-OECD definition is used. Furthermore, high-growth firms are significantly larger and older when this definition is employed. This is why they define fast-growing firms as the 1% of firms with the highest growth over three different periods: three, five, and seven years. The growth rate at different percentiles of growth distributions can also be used to distinguish fastest-growing firms from other firms (Bravo-Biosca, Criscuolo, and Menon 2013).

3. THE ESTABLISHED CHARACTERISTICS OF GROWING AND FAST-GROWING COMPANIES

In the empirical work on company growth, the characteristics of high-growth firms and determinants of their growth have received much attention (Coad and Hölzl 2012). In their overview, Henrekson and Johansson (2010) show that fast-growing companies are on average younger and smaller than other firms. They show that ‘gazelles’ can be of all sizes, but larger gazelle firms are important job contributors in absolute terms. Gazelles exist in all industries but there is some evidence that they are overrepresented in service industries (for example, Du and Temouri 2015). Young age is more associated with rapid growth than small size. Daunfeldt, Elert, and Johansson (2014) confirm this when they show that younger firms are more likely to experience rapid growth irrespective of the adopted definition of high-growth firms. However, Hart and Oulton (1996) point out that this dependency may not necessarily be unequivocal.

In addition to demographic characteristics, the studied features of fast-growing companies include entrepreneurs’ education and gender and managerial growth aspirations. Higher growth rates have also been associated with multiplant, limited-liability, and exporting firms (see Coad and Hölzl 2012 for an overview). There is evidence that government-owned companies grow slower (for example, Beck, Demirgüç-Kunt, and Maksimovic 2005). In their survey of the literature, Barringer, Jones, and Neubaum (2005) discuss four groups of attributes of rapid-growth firms: founder characteristics, firm attributes, business practices, and human resource management practices. In his study of what characterises a fast-growing firm, Almus (2002) investigated start-up size and time, the firm’s legal form and industry, networking and financial and knowledge support, features of the founding team, human capital endowment, and population density. In addition to age and size, Du and Temouri (2015) use cash holdings, intangible assets, average wage, and international activity as a set of control variables in explaining high growth incidence. Moen, Heggeseth, and Lome (2015) find that a firm’s international orientation that is closely interrelated with growth motivation is a consistent predictor of growth in revenue and exports. A recent paper by Brenner and Schimke (2015) examines whether firm characteristics that are related to firm growth (firm size, innovation effort, and export share) are also related to the development path of firms. They show that the determinants of growth paths are not the same as the determinants of firm growth at one point in time.

Despite extensive empirical research, many key characteristics of high-growth firms remain unknown (Coad et al. 2014, p. 106). According to Mason et al. (2015), this is the consequence of a methodological bias towards quantitative studies and the aggregate analysis of business databases.

4. METHODOLOGICAL PREMISES

4.1 The Typology of Growing and Fast-Growing Companies

The authors believe that the definition of firm growth – measured by employment, sales, value added, or similar – is an oversimplification because it fails to distinguish between changes in the volume of a company's business activity that are the result of adjusting the volume of activity to capacity, and establishment of long-term equilibrium where the company changes the volume of its activity along with the change in its size. According to the authors, growth, in the true meaning of the word, is only a change in company size.

When defining growing and fast-growing companies, the authors rely on microeconomic theory and the distinction between so-called short- and long-term equilibrium in a company (for example, Pindyck and Rubinfeld 2013, pp. 201-228, 243-261). The short term is defined as a situation in a company characterised by fixed factors and where the volume of the company's activity varies either due to different use of fixed and variable factors or a change in the volume of the variable factors used. Firm growth is thus the consequence of a firm's attempt to move closer to its short-run equilibrium, with either increasing revenues and utilization of production factors or increasing revenues and the additional employment of variable production factors. A long-term analysis of the company is underpinned by the assumption that there are no fixed production factors in the company and all production factors vary in terms of volume, and therefore, by changing the quantity of production factors, the volume of the company's activity changes through the altered size of the company. Firm growth is in this case the consequence of a firm's effort to move closer to its long-run equilibrium, which changes the firm size.

Such an approach to the definition of company growth enables the definition and typification of different situations in a growing company (G) and thus also a specific classification of fast-growing companies (FG). Growing companies can be divided into 6 different groups and fast-growing companies into 5. One group of firms – companies with unsuccessful growth – is not relevant to 'fast-growing

companies'. Companies are allocated to different groups based on the growth of labour (L), capital (K), the volume of their activity (R), and growth of their profitability (Π), in the following way:

1. The first group (G1, FG1) includes those companies where the volumes of employed labour and capital do not change, but the volume of activity in the form of sales revenue does, due to better use of the workforce and capital. Companies in this group are termed "*companies with short-term growth based on improved capacity utilisation*".
2. The second group (G2, FG2) includes those companies where capital is a fixed factor and the workforce is a variable factor, whereby a changed volume of employed labour influences the use of the fixed factor and consequently increases the volume of activity. Companies in this group are termed "*companies with short-term growth based on labour*".
3. Companies in the third group (G3, FG3) are termed "*companies with short-term growth based on capital*". Their definition is the same as for the companies in the second group, except that the workforce is a fixed factor and capital is a variable factor.
4. The fourth group (G4, FG4) of companies represents the textbook type of growth in accordance with microeconomic theory. In this case, the volume of activity grows due to an increase in the employment of capital and the workforce. The larger volume of activity thus arises from the larger size of the company. Companies in this group are termed "*companies with long-term growth*".
5. The fifth group (G5, FG5) is a sub-group of the fourth group. For this group we also assume that the size of the company changes due to changes in the volume of employed labour and capital, although the volume of activity decreases. Companies in this group are termed "*companies with unsuccessful growth*".
6. It is characteristic of the sixth group of companies (G6) that the size of the company and the volume of activity both decrease along with an increase in the value of the company for the owner, in our case measured by profitability (Π). Companies in this group are termed "*downsizing companies*". As previously mentioned, fast-growing companies are never allocated to this group of firms.
7. All other companies that do not satisfy the criteria for the above-outlined groups of firms comprise the seventh group of companies.

4.2 Quantitative Definition of Growth and Fast Growth of Companies

The authors believe that the most commonly used methods for measuring a company's growth and identifying the subset of fastest-growing companies

shown in Section 1 - for example, 5% of the fastest-growing companies - are tautological. In such definitions a country's economy always has both growing and fast-growing companies in the same percentage of the total population of companies. We believe that the growth of companies should be measured using a measure that is independent of cyclical trends in the economy.

In empirical investigations of company growth, only the identification of the total population of growing companies (G) is undisputable. Growing companies are all companies that record positive growth rates regardless of the selected measurement method. In such a case, zero growth is the boundary between growing and other companies. Since only growing companies can contribute to positive economic growth, the distinction between growing and other firms, and especially research into the characteristics of both groups and their economic contribution, is important for understanding the true drivers of economic growth.

Given the previously defined groups of growing companies, companies are classified and allocated to different groups based on the growth of labour (L), capital (K), and volume of activity (R), and changes in their profitability (Π). Formally, the following criteria define the groups of companies:

1. $L \leq 0$ and $K \leq 0$ and $R > 0$ apply to firms with short-term growth based on improved capacity utilisation.
2. $L > 0$ and $K \leq 0$ and $R > 0$ apply to firms with short-term growth based on labour.
3. $L \leq 0$ and $K > 0$ and $R > 0$ apply to firms with short-term growth based on capital.
4. $L > 0$ and $K > 0$ and $R > 0$ apply to firms with long-term growth.
5. $L > 0$ and $K > 0$ and $R \leq 0$ are the criteria for firms with unsuccessful growth.
6. $L \leq 0$ and $K \leq 0$ and $\Pi > 0$ are formal criteria for downsizing firms.

A change in the number of employees was observed to reflect growth of labour. To measure change in the value of capital, the change in value of fixed assets, that is, property, plants, and equipment, were observed. Two additional indicators used in this paper to allocate the studied companies into seven distinct groups are growth of sales revenue to reflect the volume of the firm's activity and growth of earnings before tax; that is, the sum of profits before tax and interest. The nominal categories were not deflated.

In this paper, fast-growing companies (FG) are not defined as a specific percentage of the total population of companies but by a specific absolute value of growth rate. This rate cannot be defined without considering the economic conditions

in which fast-growing companies are observed. The criterion for fast growth was set at the 95th centile in the distribution of the average annual growth rate of employment, fixed assets, and sales revenue for the entire period under scrutiny; that is, from 2007 to 2012. The analysed growing companies were allocated to the five subgroups of fast-growing firms mentioned in Section 3.1. With the exception of the sixth group, which is not relevant to ‘fast-growing’ firms, the formal criteria shown above for all growing companies also apply to fast-growing companies, but the threshold value of 0 has to be replaced with 100% for employment growth, 269% for growth of fixed assets, and 137% for the growth of sales revenue.

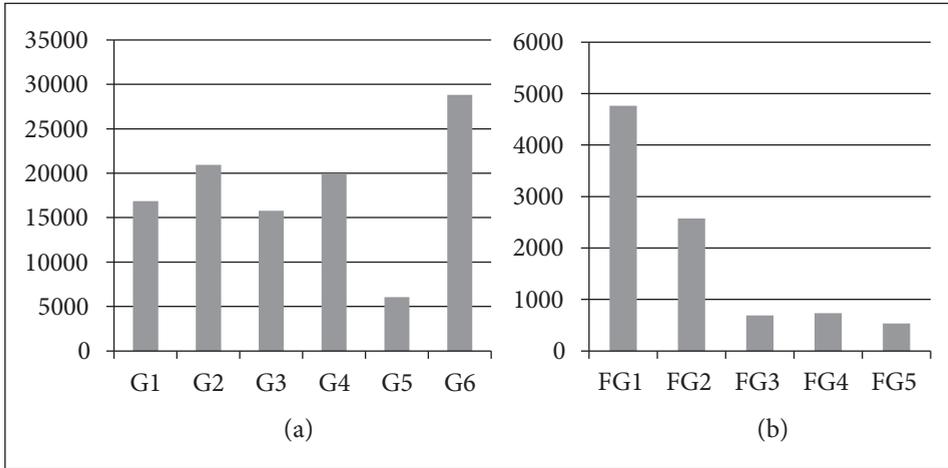
The analysis of Slovenian company growth is based on data collected by the Agency of the Republic of Slovenia for Public Legal Records and Related Services (AJPES) for the 2006–12 period. The term ‘company’ encompasses all business legal statuses except sole proprietors. Although the analysis employs data from 2006, the starting year is 2007 because 2006 was used as the base year for the calculation of growth rates. The analysis only covers the activities in Divisions 10-82 of the International Standard Industrial Classification of All Economic Activities. Only companies were included where there were no missing data on the growth rates of employment, fixed assets, sales revenue, and the sum of profit and interest expenses. Just over 29,000 companies were included in the analysis on the annual level, of which 18,000 could be classified into the six different groups of growing companies. Around 11,000 companies were thus allocated to the seventh group. Around 1,500 companies were included in the five groups of fast-growing companies.

5. RESULTS

5.1 The Structure of Growing and Fast-Growing Companies by the Proposed Types of Companies

The share of companies that can be identified as growing companies according to the definitions used in this paper equals 61.9% of all companies included in the analysis (Figure 1). In the 2007–12 period under study, 16.5% of all companies included in the analysis comprise the group of downsizing companies and the smallest number were companies with unsuccessful growth (3.5% of the total). Overall, 30.6% of all studied companies recorded short-term growth and 11.4% long-term growth, while 38.1% of all companies did not grow.

Figure 1. Number of Growing Companies by Group (a) and Number of Fast-Growing Companies by Group (b) in 2007–2012



Source: Authors' calculation

Given the criterion used in this paper to separate fast-growing firms from other growing firms, about 5.3% of all studied companies grew fast on average. Further, 4.6% of them grew fast with short-term and only 0.4% with long-term types of growth. As shown in Figure 1, the largest share by far is of fast-growing companies with short-term growth based on increased capacity utilisation. This is followed by fast-growing companies with short-term growth based on labour.

It is evident that different types of growth prevail in the group of fast-growing companies compared to those in growing companies in general. Fast growth was largely based on the better use of capacity and did not contribute to the emergence of new production capacity. Growth in companies in general was also based on the creation of capacity, and often also on the adjustment of the volume of available capacity to market conditions, which is especially confirmed by the downsizing companies.

5.2 Growing and Fast-Growing Companies in Terms of Employment, Revenue, and Investments

Throughout the analysed period, the number of employees of the analysed companies decreased for 34,773 whereas the growing companies from all six groups created 66,398 jobs. Of the latter, 43% were created by fast-growing companies. In the analysed period these companies employed 28,878 additional

employees. Most of the employees left the companies that did not grow, yet in the analysed period the number of employees also decreased in those growing companies that comprise downsizing companies, companies with short-term growth based on better use of capacity, and companies with short-term growth based on capital. Among the growing companies, the bulk of new jobs was created by the group with long-term growth, followed by the group with unsuccessful growth that failed to generate more revenue despite increased production capacity. The fast-growing companies reveal a different picture. In them the bulk of new jobs (more than half) was created by the group with short-term growth based on labour, followed by the group with long-term growth, which accounts for around one-third.

The growing and fast-growing companies are more important for generating revenue than for generating employment. The six groups of growing companies generated around 369% more total sales revenue in the analysed period than the entire population of studied companies. The fast-growing companies played a smaller role here than in employment and generated 21% of the total growth in revenue of the growing companies in the period.

The importance of growing and fast-growing companies in increasing fixed assets and thus investment is substantially lower than the importance of such companies in terms of revenue. Companies from all six groups of growing companies increased the nominal value of their fixed assets in the analysed period by 111% more than the entire population of analysed companies. In the analysed period, fast-growing companies invested negligible amounts. They only generated 8.4% of the total growth in the growing companies' nominal value of fixed assets in the period.

5.3 Demographic Characteristics of Growing and Fast-Growing Companies

If we look at the entire analysed period in terms of the regional distribution of growing companies, we see that such companies are concentrated around the capital city. 42.9% of all growing companies are located in the so-called central Slovenian region that includes the capital of Ljubljana. Other important concentrations of fast-growing companies are also close to large Slovenian towns. However, regional concentration is characteristic of all the companies included in the analysis, not only of the growing companies. The data show that the share of growing companies in the central Slovenian region is smaller than the share of all companies located in the region. It is also characteristic of the central Slovenian region that companies with short-term forms of growth

and downsizing companies prevail in the structure of growing companies, whereas there is a deficit of companies with long-term growth. Companies with unsuccessful growth are also underrepresented in the central Slovenian region. These conclusions about the regional distribution of growing companies apply almost consistently to the regional distribution of fast-growing companies, whereby the regional concentration of fast-growing companies is substantially higher than that of growing companies.

Most of the studied companies in Slovenia are classified into wholesale and retail trade (26.6%), professional, scientific, and technical activities (20.2%), and manufacturing (17%). It is characteristic of both service sectors that the share of growing companies is smaller than that of companies in general, whereas in the manufacturing sector it is higher than the share of companies in general. The share of companies with long-term growth in the service sectors is low and the share of such companies in manufacturing is high. In manufacturing, many growing companies are classified in the group of companies with unsuccessful growth and downsizing companies. However, the data lead us to conclude that it is easier to carry out downsizing in service companies than in production companies. A slightly different picture is revealed by the data on the sectoral distribution of fast-growing companies. In this case, the largest share of fast-growing companies is in two service sectors, trade (23.4%) and professional, scientific, and technical activities (22.1%), followed by construction (14.1%). It is still true that companies with long-term growth do not predominate in both leading service sectors. It is interesting that companies with unsuccessful growth also dominate in the biggest sector: trade. This also applies to the construction sector, where the group of companies with long-term growth occupies an important place. This group is also the most important among fast-growing manufacturing companies.

The studied growing and fast-growing companies are divided into four groups in terms of size, namely micro, small, medium-sized, and large companies. More than 87% of all growing companies are micro, followed by small with 7.5%, medium-sized with 2.4%, and large companies with 2.03%. However, the share of growing micro companies (87.2%) is smaller than that of micro companies in general (88.1%), whereas the shares of medium-sized, large, and small growing companies are larger than all companies included in the analysis. Long-term growth was least characteristic of micro companies and most characteristic of medium-sized companies. A record share of downsizing companies is undoubtedly characteristic of micro companies and is important in all four size classes, but much less pronounced in small and medium-sized companies. The size structure of fast-growing companies is very different from that of growing

companies. Micro companies dominate, accounting for 96.4% of all companies, which is a considerably larger share than that of growing companies. As with growing companies, the group of micro companies is followed by the group of small companies, and then the order of precedence of medium-sized and large companies switches, as the share of large companies in the growing companies exceeds that of medium-sized companies.

Growing and fast-growing companies can also be studied in terms of their legal status. Companies are classified into public limited companies, unlimited liability companies, limited liability companies, economic interest associations, limited partnerships, and subsidiaries of a foreign company. Limited liability companies account for 95.5% of all growing companies. 2% of growing companies are public limited companies and 1.5 % unlimited liability companies. Companies with long-term growth dominate in the group of public limited companies; companies with short-term growth based on the use of capacity dominate in the group of unlimited companies; companies with short-term growth based on labour dominate in the group of limited liability companies; companies with short-term growth based on the use of capacity dominate in the group of economic interest associations, and companies with short-term growth based on the use of capacity dominate in the group of limited partnerships. The prevalence of limited liability companies is even more evident in the group of fast-growing companies, as 96.9% of all fast-growing companies in the analysed period had this legal status. All other legal statuses are negligible among fast-growing companies. Moreover, fast-growing companies with long-term growth are predominantly limited liability companies. Fast-growing companies with short-term growth based on capital are mostly public limited companies.

5.4 Distinctive Characteristics of Companies by Individual Groups of Growing and Fast-Growing Companies

Data available for the companies studied in this paper not only provide an insight into the demographic characteristics of the growing and fast-growing companies comprising the proposed types of companies but also enable the identification of specific performance indicators and other distinctive features of the companies allocated to the different groupings. Tables 1 and 2 show those characteristics that differ notably between types of companies. High values of the selected indicators are shown in bold print and indicators with noticeably low values in italic print. Observing such indicator values enables the identification of the distinctive features of the groups of growing and fast-growing companies. Only those indicators were selected whose values statistically significantly (p equalling

0.05 or less) differed between the investigated groups of companies. More detailed data for subgroups of firms allocated to individual groups of companies (for example, according to size or age) is available from the authors.

Among the growing companies, the largest group in terms of share was that of *downsizing companies* (group 6 in Table 1). It is typical of this group that the companies are the oldest and many of them have failed and have ceased to operate. As these are also among the most indebted companies, slightly higher short-term liquidity does not help them survive. Apart from indebtedness, they are also threatened by the lowest profitability among the growing companies. Only those companies that did not grow and comprise the seventh group of observed companies recorded lower profitability. However, downsizing companies are private companies with record high labour intensity. Evidently, it is easier to implement downsizing in labour-intensive companies. This group is not in the group of fast-growing companies.

Among growing and fast-growing companies, the group of *companies with short-term growth based on labour* (group 2 in Tables 1 and 2) is important (see Figure 1). The growing companies from this group are not sharply defined, but successful. They have a record high export orientation, a record high share of foreign companies, and record high short-term liquidity. They are among the most profitable companies observed for the purpose of this paper. Foreign markets require high flexibility, and their relatively low capital intensity enables them to be flexible. This last-mentioned characteristic probably enables these companies to be among the most important in the group of fast-growing companies. Detailed data for subgroups of firms allocated to the group of companies with short-term growth based on labour, not shown in this paper but available from the authors, demonstrate that younger private companies from this group can grow very fast, which is also confirmed by their relatively low indebtedness, although most of them are focused on the domestic market. However, on average their growth does not generate higher profitability. On the contrary, such companies may grow fast but often operate at a loss for the owner, which is why many fail. In this group there are very large differences between the growing and fast-growing companies. The growing companies are mostly successful and slightly older companies, operating in foreign markets. The fast-growing companies are primarily younger, high-risk companies incurring losses and recording growth in domestic markets.

CHARACTERISTICS OF FIRMS WITH DIFFERENT TYPES OF GROWTH

Table 1. Average Value of Selected Indicators for Companies Allocated to Proposed Groups of Growing Companies in the 2007–12 Period

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7
Size (number of employees)	11.1	14.1	15.4	26.9	20.3	10.5	12.3
Age (years)	16.0	14.1	15.5	13.5	15.1	16.3	15.8
% of failed companies	0.94	0.69	0.32	0.33	0.37	1.55	1.93
Capital intensity (C/L) in €	73,852	67,355	116,586	92,742	81,867	52,692	71,262
Export orientation in %	34.6	35.0	26.6	34.8	28.6	32.9	29.7
Short-term liquidity	1.19	1.22	1.10	1.16	1.11	1.19	1.04
% of foreign companies	6.6	10.4	5.8	10.1	8.1	6.4	6.6
% of public companies	0.8	1.3	1.1	1.5	1.9	0.7	0.8
Profit before tax + interest on assets in %	3.59	5.34	5.20	5.55	4.44	3.04	1.16
Indebtedness in %	57.37	55.78	56.59	60.34	54.88	58.97	59.82

Source: Authors' calculation

An important group among growing companies and the most numerous among fast-growing companies are *companies with short-term growth based on increased capacity utilisation* (group 1 in Tables 1 and 2). These companies do not have any record values in the group of growing companies. They are mostly small, private, domestically owned, and slightly older companies, with an above-average share of them focusing on foreign markets. They are quite indebted due to their age and have low profitability but are not too exposed to the risk of failure. If they grow very fast, their rate of failure is record-high among all companies. These are predominantly small, record-old companies. Compared to other studied firms, more of them are foreign-owned with strong exports to foreign markets. It could be concluded that foreign markets require greater operational flexibility, requiring adjustable capacity utilisation. If they experience exaggerated growth it may trigger a business failure.

The group of companies with *short-term growth based on capital* is very specific (group 3 in Tables 1 and 2). Regardless of the speed of growth, these are always companies with record high capital intensity, which also explains why they change their volume of production over a short period by changing the volume of employed capital. When they are domestically owned and focused on the domestic market, these are very safe companies with high profitability. If they

are small and state- or foreign-owned, slightly older, and with record high debt, they can also grow fast and very safely, but with low profitability.

Table 2. Average Value of Selected Indicators for Companies Allocated to Proposed Groups of Fast-Growing Companies in the 2007–12 Period

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 7
Size (number of employees)	3.9	8.6	3.7	13.9	6.6	15.3
Age (years)	11.7	7.6	10.2	7.5	8.9	15.7
% of failed companies	1.60	0.94	0.33	0.16	0.22	1.25
Capital intensity (C/L) in €	75,315	55,291	111,414	53,561	39,468	79,484
Export orientation in %	38.30	29.76	22.57	33.53	40.79	31.97
Short-term liquidity	1.10	1.12	1.09	1.15	1.01	1.12
% of foreign companies	30.60	14.08	28.33	12.86	9.68	7.21
% of public companies	0.80	0.54	3.80	0.55	0.37	1.01
Profit before tax + interest on assets in %	3.40	-0.54	0.19	11.35	5.40	3.44
Indebtedness in %	67.00	64.33	75.98	62.69	72.82	58.38

Source: Authors' calculation

As we have established, the group of *companies with long-term growth* (group 4 in Tables 1 and 2) corresponds the most to the definition of company growth. Of the growing companies, these companies have the characteristics we might expect. These are the largest companies compared to the other groups of growing companies and are among the youngest growing companies. The share of growing companies from this group that is foreign- or state-owned is among the highest in the studied groups of growing companies. A similar conclusion can also be made for their export orientation, but they have a record high level of indebtedness, which is facilitated by their high profitability. Growth is very safe, and remains so if it becomes very fast. In such a case, safety even improves, relative to other companies. This mostly stems from the fact that these companies are not indebted, compared to other fast-growing companies, and have record-high profitability and liquidity. However, compared to growing companies, the share of state-owned fast-growing companies is notably lower. On the other hand, fast-growing companies from this group are on average the largest companies in comparison with the other fast-growing company groups.

There is the same percentage of *companies with unsuccessful growth* (group 5 in Tables 1 and 2) in the growing and fast-growing companies, although one would expect to see more of them in the group of fast-growing companies. In the group of growing companies there are more public companies with a large number of employees. Among the growing companies, these also have the lowest level of indebtedness. It could be concluded that their low indebtedness encouraged them to invest without knowing whether the investment would lead to a higher volume of activity. The companies with unsuccessful fast growth are quite different. Given that most export-oriented companies in the entire population of companies belong to this group, their unsuccessful growth probably stems from an incorrect assessment of foreign markets. These companies are mainly domestically and privately owned, which could mean that the owners had incorrect information about foreign markets. Investments were not large, as these companies have the lowest capital intensity among the fast-growing companies. This also explains why they did not fail, despite their high indebtedness.

6. CONCLUSIONS

1. Fast growth was largely based on the better use of existing capacity and did not contribute to the emergence of new production capacity. Company growth in general was based on the creation of capacity and often also on the adjustment of the volume of available capacity to market conditions, which is especially true of the downsizing companies.
2. In all companies included in the analysis the number of employees declined by 34,773 in the analysed period, whereas growing companies from all six groups created 66,398 jobs. From the perspective of both employment and revenue, the bulk was contributed by the companies that had successfully invested in new material and human capacity and had achieved a long-term equilibrium through growth.
3. As many as 43 % of new jobs created by growing companies were generated by fast-growing companies. However, fast-growing companies grow mainly by establishing a new short-term equilibrium. Such growth can only last in the short term, which means that in different years different companies emerge as generators of fast growth.
4. Most growing and fast-growing companies are in manufacturing. The most developed regions have the most companies with growth and fast growth.
5. Medium-sized companies are the most important for growth. The behaviour of micro and large companies does not differ much in terms of fast growth, yet this does not apply when growth in companies in general is observed.

6. As regards the life cycle, it could be said that younger companies start growing by investing in production capacity and employing workers, which is reflected in increasing company revenue, whereas older companies invest less in production capacity and try to better utilise existing capacity. In many cases, older companies successfully downsized, increasing their profitability. In general, fast-growing companies are about 40% younger than growing companies.
7. Compared to growing companies, the share of export-oriented companies is higher among fast-growing companies that most often grow by adjusting capacity utilisation already available to them and by adjusting to market conditions. Growing by employing additional workers or additional capital is less specific to fast-growing companies. Foreign markets often send wrong signals about the rationale of growth by investing in new capacity.
8. Fast-growing companies are on average more indebted and less profitable than growing companies. Very fast growth decreases companies' liquidity and mainly threatens those companies that employ additional capital, or where investment in human and material capacity is not reflected in increased production. Critical indebtedness is thus associated with companies that have invested in human and material capacity but failed to achieve revenue growth on this basis. This situation is more often found in younger companies.
9. An analysis of company characteristics in the individual groups confirms the hypothesis that the proposed types of growing and fast-growing companies do indeed differ in terms of the characteristics that explain firm growth. The following firm typology provides further insight into their growth and main characteristics:

Companies with short-term growth based on the use of capacity are predominantly older private companies that were highly indebted after the investment cycle and thus were forced to use the newly created capacity as much as possible. Small foreign-owned companies export more and can thus grow very quickly, but often this does not save them from bankruptcy.

Companies with short-term growth based on labour tend to be export-oriented and foreign-owned. Due to their comparatively low capital intensity they are flexible and more profitable. If they are young and focused on the domestic market they grow very fast, but with critically low profitability.

The basic characteristic of companies with short-term growth based on capital is their high capital intensity. Consequently, the workforce becomes a fixed factor. If they are domestically owned and focused on the domestic market, their

operations are safe and profitable. If they are small and foreign- or state-owned, they no longer generate high profits.

Companies with long-term growth are larger and younger companies that can invest and generate growth safely through borrowing and high profitability. If they are less indebted and private, they achieve very fast growth.

Downsizing companies are older private companies with a large workforce. They are comparatively more indebted and have low profitability. Many of them cannot maintain their business activity, despite downsizing.

Companies with unsuccessful growth are larger state-owned companies that have not borrowed for investment and employment and this has resulted in incorrect market planning. Their existence is not jeopardised much because of the specific financing of growth. Fast-growing companies from this group are more export-oriented, which means they had incorrect information about foreign markets. They are more labour-intensive and have not put themselves at risk by investing in capacity.

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Received: December 08, 2015

Accepted: February 29, 2016

