ORIGINAL SCIENTIFIC PAPER

Importance and Role of Fast Growing Companies – Gazelles in Modern Economies

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ABSTRACT – The importance of small and medium enterprises (SMEs) for the development of national economies is undeniable and it is in many works stand out as a generally accepted position. In this paper, attention is focused at a specific segment of SMEs which comprise particularly dynamic companies that are characterized by fast and steady growth, ability quickly to adapt to market conditions and continuously to function at a high level of performance. These firms are now known as gazelles, the name which was in the 80s of last century first coined by British author David Birch. Gazelles represent relatively small part of total and according to number of studies their share in the total number of companies in national economies is accounting from 3% to the most 5%. Interest for this companies, both at macro level by the creators of economic policy, as well as at micro level by businesses, in recent years is exceedingly increased because of their high potentials for resolving the issue of (un)employment and creating multitude of new products and services and added values which they are created for the society as a whole. In the paper the definitions of these companies are elaborated, the basic features and key factors of their business operation are analyzed, as well as their state (level of development) and their future development prospects in the European Union and the Republic of Serbia. The authors of the paper have used research methods in accordance with the specifics and complexity of the subject of the analysis, relying on the current domestic and international literature and internet sources. The research results clearly showed that gazelles can be an important part of the answer to deep and comprehensive economic and social crisis with which modern societies face today in the world.

KEY WORDS: small and medium enterprises, gazelles, business growth, employment, strategy

Introduction

One may say that it is generally accepted that Small and Medium Enterprises (SME) are the foundation of national economic development and the key of growth, dynamics and flexibility, both in the most developed industrialized countries and on emerging markets. They are the dominant form of business organization, accounting for 95% to 99% of total

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businesses in national economies employing between 60% and 70% of total working population in some countries (Erić D., Berdaha I., Đuričin S., Kecman N., Jakšić B., 2012).

Subject of the present paper is a specific group of SMEs attracting plenty of attention in theory and practice, most often denoted as fast growing companies with colorful name – "gazelles". Attention of economic policy creators, as well as theorists, has been attracted as it has been found that they provide significant contribution to social well-being, creation of new businesses and jobs. They are also believed to provide high investment return, promote regional development and contribute to manager and employee satisfaction. Therefore, in recent years, numerous governments structured their economic development incentive policies, especially in the segment related to SMEs, so as to grow more gazelles in the form of one of the basic priorities.

One should also note that in spite of undivided attention and importance given to the subject SME group, their growth and success, theoretic literature focused on the subject topic is relatively deficient and researches are meager and fragmented. Economic support programs are insufficient, limited and lack required focus. In other words, they are usually broadly defined targeting all SMEs, and very rarely exclusively focused on the fast growing segment in this very broad group of firms, especially gazelles.

Definition of fast growing companies - gazelle

In line with the aforementioned statement indicating that no special respective attention was paid to subject firms, one may say that there is still no generally accepted definition of gazelles as the fast growing segment of SMEs, nor there is any special agreement about crucial criteria possible definition would be based on.

Author connected to the first broadly accepted definition of gazelles and the one who was the first to point to their importance is David Birch (Birch at al, 1981). Studying the Silicon Valley boom in USA in 1980's, he concluded that from so many firms only three percent will continue to exist and develop. He called this small group of firms and dynamic companies – gazelles. David Birch used the term gazelles to describe companies continuously generating high growth rates during a given period. He found that most of the subject companies were created as parts of SMEs, especially in the segment of new and highly innovative companies. According to his research, on average, two thirds of all businesses are SME creations. Additionally, relevant studies showed that in comparison to other companies or companies created during the current year, share of subject companies is very small in all economies, ranging between 2% and 5%.

In addition to identifying the phenomenon of fast growing companies and engineering the term gazelle, David Birch also set the principal elements to be used in applying subject definition. According to David Birch, these are: selected growth indicator, measurement method, time period of measurement, as well as other additional criteria. According to him, growth is viewed as relative or absolute growth, or as a combination of two dimensions, and the period of company growth measurement is three years. Subject methodological issues and their balancing are very important to create the base of statistical monitoring for gazelles, as well as to implement relevant comparative analyses of the relevant phenomenon in different countries or researches. Empirical criterion of gazelle definition is mainly attached to the pace and intensity of sales growth.

Indicators commonly used to identify gazelles are the sales tendencies and/or number of employees. The most frequent and the most important respective growth indicators are as follows:

- Type 1: Absolute growth $AG_{t1t2} = abs(x_{t1}-x_{t2})$ measuring the sales growth or employment growth as a difference between the share/size in the first and the share/size in the last year of observation,
- Type 2: Relative growth $RG_{t1t2} = (x_{t2}/x_{t1})-1$ measuring the sales growth or employment growth as a ratio of the share/size in the first and the share/size in the last year of observation,
- Type 3: Birch Index: BIt112= | AGt112 | *RGt112 measuring the sales growth or employment growth as a combination, i.e. the product of absolute and relative growth.

Although there are, apparently, numerous definitions of fast growing small and medium enterprises – gazelles, one may notice that they are also based on very similar indicators, and that they differ, before all, in the limit values of the subject indicators. All subject definitions start from specific growth indicators, measuring methods and include specific measuring period. The most frequent definition of gazelles is OECD's definition, which is based on the following baseline assumptions:

- Average employment growth of 20% in a three year period,
- Minimum of 10 employees in the base year,
- 72.8% growth in the final year three versus the starting base year (Dautzenberg K, Ehrlinspiel M., Gude H., Käser J., Schultz P. T., Tenorth J. at al., 2012)

Research conducted by David Birch from 1980's proved to be the stimulus of numerous researches of fast growing small and medium firms and of a quest for answers to following questions: what are their basic characteristics, who are the owners, what is their growth and how many of them in total SMEs mass generate prominent growth rates. Researches were firstly conducted in USA, while similar significant researches, coverage wise, were conducted in 17 European countries as late as in 1996. As of that year, 500 most dynamic European companies are ranked within the implementation of the Europe's 5002 project. More than 30 countries today implement systematic research of the subject topic.

Between 1994 and 2011, 3 meta-studies and 22 empirical studies were implemented as regards to the subject topic. Aforementioned empirical studies were based on individual company data collected in late 1990's and mid 2000's. Five of 22 studies were carried out in USA, two in Canada, while other were implemented in the European countries, three in Germany and Finland, two in Spain and one in the Great Britain and one in the Netherlands. Additionally, four studies were also about comparative analyses of several EU countries and several American countries.

Aforementioned met-studies indicated that gazelle companies are not numerous, i.e. that their share in total number of companies is small. On the other hand, their contribution to

² Europe's 500 is the European organization and network platform of fast growing companies and their owners/entrepreneurs (see: http://www.europes500.eu/)

creation of new jobs in proportionally bigger and in average terms more important versus other type of companies. Subject studies, baseline of which was the OECD's definition, found that only 2% to maximum 5% of total number of companies may be classified as gazelles. However, 60% - 70% of all newly created jobs may be attributed to the subject companies. Therefore, in spite of their small share in the total number of companies, gazelles generate outstanding employment contribution.

Results of empirical studies of fast growing SMEs indicate several common characteristics of gazelles exceeding the narrow framework of the homogenous indicator, such as multi-year continuous growth, and they introduce additional indicators in the methodological framework. Some of these characteristics of gazelles that are most frequently referred to in the aforementioned studies are as follows:

- *Innovation*: growth is closely linked to company's innovation ability including continuous change of products, processes and organization managerial practices.
- *Cohesion of marketing and technology*: gazelles are distinctively market oriented firms, connecting technology and markets and adapting their products to respond to consumer trends and client needs.
- *Organization and management*: gazelles have decentralized, participatory organizations ready to adapt.
- *Team work*: subject firms stimulate team work among all employees through daily communications introducing modern decision making techniques, developing skills and alike.
- *Networking*: gazelles are integrated in the respective communication business networks with firms business partners, as well as various private and social institutions.

Considering aforementioned, gazelle phenomena proved to be more complex than initially implicated in the first studies. Some of the researches show that the sectors, such as education, hygiene services, as well as the high-tech sector, generate outstanding number of gazelles. Other researchers showed that subject companies are not representative in high technology branches, but anyway, in highly industrialized countries, gazelles are de facto characterized as tending to be high-tech, research and innovation oriented. Many gazelles are not necessarily high-tech companies, but copiers of existing technological and business models or their respective mix generating success from appropriate timing or in the market niche to reach required profitability.

Characteristics of gazelles as economic development drivers

Comparative strengths and economic performance of gazelles come from their specific features, such as: flexibility in adapting to changes, ability to create high performance products, ability to ensure fast delivery of products, etc. Subject characteristics providing for efficient use of knowledge and technology are those that ensure fast growth typical for gazelles. Generally, are fast in research and discovery of new market opportunities, thus, improving their productivity and efficiency in continuous manner. Successful gazelles are capable of finding development opportunities in places of market discontinuity or there were they can produce goods different from existing ones. Using the subject opportunities

provides for generating impact on both supply and demand, thus, playing unique role in the growth of economic activities, as well as creating new additional values.

Gazelles and growth

Fast growth and high performance abilities of the company are dependent on numerous factors, such as (Figure 1): business strategy, internal resources and *know-how*, leadership and management practices, as well as on macro-economic factors, such as availability of workforce, market efficiency, capital market presence and efficiency, tax system stimulations, intellectual property and innovation safeguards, etc. (Moreno A. M., J. C. Casillas, 2000).

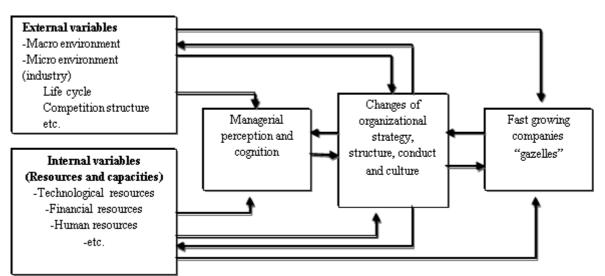


Figure 1. Company growth determinants

Source: Moreno A. M., Casillas J. C. (2000) High-growth enterprises (Gazelles): A conceptual framework

Fast growth is possible in two situations: formation of the new company created to use innovations of technological-marketing nature in ceasing market opportunities not identified by competition and/or existing company is introducing new strategies, procedures, conduct and similar. Subject changes, if radical, may contribute to strong company growth. However, one must be aware that fast growth, in addition to a series of positive effects, involves certain risk caused by dramatic changes on all levels of company business. Potential problems may occur when the sudden company growth creates urgent need for outstanding resources to align capacities and predefined goals of fast growth. Subject issues may be very sensitive in case of discrepancy between the existing and new skills and knowledge among employees required for the company to operate in newly created environment.

Growth of gazelles is by default very fast and strong. Usually, as a consequence of strategic change and restructuring on all levels of organization and strategic links between the companies and their environment. There are key strategies that, seemingly, help companies to become gazelles and survive on the market as such. Important element of strategy implementation is the ability of the company to learn from the growth in a certain period and then to apply the lessons learned in the next period. On the other hand, the biggest limitation or barrier to growth, in most cases, is the use of inadequate strategy mix.

48

One German study from 2012 (Dautzenberg et al, 2012), focused on studying conduct of the gazelle firms, surveyed entrepreneurs indicated that the growth strategy was planned as early as in the first steps of company establishment. As regards to the growth motives, all surveyed indicated that it was planned strategically or closely attached to their business model involving *"company growth or disappearance"*, since the market conditions required certain company size for it to be successful.

Analyses of the company growth nature, however, showed that it was not always continuous and that companies may be subject to non-linear forms of growth, with frequent booms and plunges, and that in spite of all of that they continue to grow in long term. Anyhow, regardless of all differences in approaches to defining gazelle firms, understanding what is the driver of fast SME growth is crucial both for managers striving to become or remain competitive, and for the governments responsible for national economies and creation of new jobs.

Gazelles and innovation

One of gazelles' fast growth factors and source of their diversity is connected with innovations. Members of *PRO INNO Europe*³ research team highlighted that the growth is linked to the company ability to innovate not only products but processes, too. Lately, focus in given to process management domain, such as organizational structure, human resources management and accounting systems.

Gazelles are characterized by the fact that innovations are not only introduced in production domain, but practically in all domains of operations, including managerial, organizational and technical innovations within the company. There are opinions that innovations in gazelles are oriented more on changes in resource management approach and introduction of new organizational structures, than on creation of creating new technologies or products in general sense. Fast growing companies succeeding with the help of innovative approach in marketing, organization and/or distribution may be found in all spheres of business.

Gazelle analysis in Germany concluded that 76% of the subject companies have created innovations and that their innovativeness is above the average of the subject economy (Dautzenberg et al, 2012). Among surveyed companies, around 80% introduced production or service innovations, while around 37% introduced innovated business methods and processes.

Size and young age of gazelles

Almost all studies focused on gazelles indicate that the majority of gazelles are small enterprises. Almost 70% of gazelles start as small firms (less than 20 employees in the first reporting year). For example, in Spain, ¼ of all fast growing start-up firms and 20% of newly established businesses surviving first four years of operation grow so fast that they pretend to be gazelles (López-Garcia, P. & Puente S., 2009). It is estimated that around 70% of all

³ *Innovation Cooperation (PRO INNO Europe* ®) is the new initiative for analysis and development of incentive innovation policies pretending to become the central point of analysis of innovation policies and development Europe wide (http://cordis.europa.eu/innovation/en/policy/pro-inno.htm).

gazelles in EU are small enterprises, while medium enterprises make for 30%. However, starting from Birch and Medoff (Birch & Medoff, 1994) gazelle definition saying that gazelles are companies with the annual sales growth of at least 20% continuously in a 4 year period and that they exceed 100,000 \$ of revenues in base year, Acs research team (Acs et al. 2008) concluded in the study that companies creating new jobs are not either small nor large, but that they are gazelle firms of medium size.

Age of gazelles is an interesting issue. Baseline assumption of David Birch, exceedingly long presumed in gazelle analyses, is that fast growing firms are predominantly young newly established firms and, thus, gazelles are by default young companies. Research conducted in USA in 2008 found that, however, average age of fast growing companies is as much as 25 years (Acs Z. J., et al. 2008).

Researchers showed that employees of gazelles are significantly better educated versus employees of other companies. On average, majority of gazelle founders possess important long term professional experience and, thus, it is believed that one of the most important factors of company growth in this professional experience of founders and employees.

Aforementioned study of gazelles conducted in Germany (Dautzenberg et al, 2012) presented data on the age group of founders: one half founded their companies between 30 and 39, 28% between 40 and 49 while 20-29 and 50-59 age groups of founders each take 12%. Gazelles are usually formed by teams of three members. Among surveyed CEOs, 41% worked in leading management positions. As far as the education is concerned, 54% of founders indicated completed trainings in techniques and sales, 38% with economic degrees and degrees in social sciences; one of 10 founders holds PhD and more than 60% of surveyed have more than ten years of doing business.

Strategic aspects of gazelle operations

Clear vision of future provides necessary orientation for decision making within the entire company and, thus, provides significant contribution to reaching competitive strengths. Successful gazelles are characterized by application of clear differentiation strategies, customer care and smart use of available resources in the environment, so as to reduce risks and uncertainties with parallel provision of new knowledge and innovations. Subject companies are successful due to their close contact with the customers, listening to identify customer needs and requirements, constant product improvement and, thus, ensuring superior position versus relevant competition. Developing strong link with customers facilitates gazelle's better response to customer needs and better preparation for adaptation to necessary changes in the environment. Focus on quality, clients and distribution are by far the most important growth drivers and in that context of marketing it plays key role.

Dynamic organizational capacities of the company are based on its ability to connect internal forces with external needs. Subject perspective dictates that creating key competences and skills is required for company success in dynamic environment. Crucial factor safeguarding survival of SMEs, and especially gazelles, on the highly competitive market is human resources management, including style, personnel, skills and common values. Style is related to grouping staff by similarities in thinking and conduct, strengthening organizational culture and involving employees in decision making processes; staff is related to special individuals, engaged and specially trained by the company for specific task in line with their abilities. Skills are related to the fact that employees possess special skills required for company strategy implementation. Common values, related to clear vision and organizational culture, indicate that all employees strive to the same guiding values.

Gazelle firms in the European Union

Quantitatively speaking (in terms of total number of companies, number of employees, turnover and similar), gazelles bear relatively low importance for total economies of the European Union countries. On the other hand, researches proved that most important trends of European economy are connected with fast growing companies, particularly gazelles. For example, comparing to the average, gazelles provide more significant contribution to sales growth than to the employment growth in the total economy; then, young production firm generate more contribution to sales growth and less to employment growth, while service companies generate more significant contribution in both domains, sales growth and employment growth.

Importance of gazelles for economies of EU countries

Table 1 shows data of official statistics on total number of small and medium enterprises, number of gazelles and number of fast growing firms in individual EU countries. Column "all companies" presents the number of companies in existence as far back as of 2004 that are still active in 2010. Column "gazelles" present the number of all companies of not more than 5 years in existence with the average annual growth rate above 20% in the last three years. Column "fast growing companies" presents all companies with the average annual growth rate of 20% in a three year period.

According to subject data, the highest number of gazelle firms in 2010 was active in France (1,432), Italy (1,388), Bulgaria (1,368), and the Great Britain (1,214), etc. Note that countries such as Luxembourg and Malta have no gazelles and that rather low number of gazelles was active in Cyprus (78), Slovakia (56) and Greece (32).

Type of	All companies		Gazelles		Fast growing companies		Other companies		
company/ Year	2007	2010	2007	2010	2007	2010	2007	2010	
Belgium	24.996	24.996	208	212	924	922	23.864	23.862	
Bulgaria	25.362	25.362	1.368	1.368	3.570	3.570	20.424	20.424	
Czech Republic	2.230	2.230	78	78	222	218	1.930	1.934	
Germany	181.988	181.988	100	400	9.206	9.206	172.382	172.382	
Denmark	27.980	27.980	286	286	3.274	3.274	24.420	24.420	
Greece	1.484	1.504	32	32	240	252	1.212	1.220	
Estonia	153.3724	153.325	1.175	1.174	5.840	5.838	146.310	146.311	
Finland	18.336	18.336	156	156	806	806	17.374	17.374	
France	157.807	157.810	1.433	1.432	6.802	6.801	149.563	149.564	
Ireland	23.772	23.772	315	315	890	890	22.568	22.568	

Table 1. Number of SMEs with 10 to 249 employees in individual EU countries, 2007 and 2010

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Type of	All com	panies	Gazelles		Fast gro compa		Other companies		
company/ Year	2007	2010	2007	2010	2007	2010	2007	2010	
Italy	213.974	213.975	1.388	1.388	6.996	6.996	205.591	205.591	
Lithuania	10.820	10.820	432	432	112	112	10.276	10.276	
Luxembourg	2.794	2.794	0	0	4	4	2.790	2.790	
Latvia	9.154	9.154	136	136	906	906	8.112	8,112	
Malta	380	380	0	0	28	28	352	352	
Netherlands	64.041	64.041	666	666	3.257	3.258	60.121	60.120	
Poland	78.584	78.584	571	571	6.008	6.008	72.005	72.004	
Sweden	13.074	13.073	178	178	732	732	12.163	12.163	
Slovakia	8.404	8.404	56	56	760	760	7.588	7.588	
Great Britain	154.103	154.103	1.214	1.214	10.585	10.586	142.304	142.306	

Source: http://epp.eurostat.ec.europa.eu/

As far as the fast growing companies are generally concerned, the Great Britain is leading with 10,568, then Germany with 9,206, Italy with 6,996 and France with 6,802 of these companies.

Gazelles and fast growing companies in EU countries

Share of gazelle firms by countries is shown in the study conducted by the European consortium *INNOVA Sectorial Innovation Watch*, in January 2011 (Mitusch & Schimke 2011). Research included analysis of gazelle firms share by countries within two specific samples: one making 10% of fast growing companies and the other making 5% of these firms. Research was based on the database of *CIS IV*⁴. Table 2 shows that countries with the highest number of gazelles in the sample making 10% of all growing firms is Bulgaria with 2,197, Italy with 1,268, Romania with 1,148 and Spain with 805. Simultaneously, gazelle firms in aforementioned countries have the highest relative share in the group of fast growing firms: 27.4% in Bulgaria, Italy – 15.8%, Romania – 14.3% and Spain – 10.1% (*Mitusch & Schimke* 2011).

	10% growi	ng firms	5% growing firms				
Country	Number of	Share of the	Number of	Share of the			
	gazelles	sample %	gazelles	sample %			
Belgium	115	1,4%	46	1,2%			
Bulgaria	2.197	27,4%	1.206	30,1%			
Czech Republic	214	2,7%	101	2,5%			

Table 2. Share of gazelle firms in total number of firms by individual EU countries

⁴ *CIS* (*Community Innovation Surveys*) are statistical researches of innovations in companies in the science and technology segment of EU. Producing CIS data is on voluntary basis for all member countries. *CIS IV* was implemented on the basis of 2002-2004 reference period in the following countries: Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Greece, Spain, Finland, France, Hungary, Italy, Lithuania, Latvia, Portugal, Romania, Slovenia, Sweden, Slovakia, Norway and Island.

	10% growi	ng firms	5% growing firms			
Country	Number of	Share of the	Number of	Share of the		
	gazelles	sample %	gazelles	sample %		
Germany	108	1,4%	49	1,2%		
Estonia	228	2,9%	113	2,8%		
Spain	805	10,1%	349	8,7%		
Greece	15	0,2%	4	0,1%		
Hungary	245	3,1%	113	2,8%		
Italy	1.268	15,8%	559	13,9%		
Lithuania	290	3,6%	165	4,1%		
Latvia	477	6,0%	242	6,0%		
Norway	191	2,4%	92	2,3%		
Portugal	240	3,0%	108	2,7%		
Romania	1.148	14,3%	639	15,9%		
Slovenia	241	3,0%	104	2,6%		
Slovakia	236	2,9%	119	3,0%		

Source: Mitusch K. & Schimke A.(2011), Gazelles – High-Growth Companies, Consortium Europa INNOVA Sectorial Innovation Watch

If we analyze the number of gazelles within the sample made of 5% of all fast growing firms in EU, situation is very much similar to previously described: highest number and the highest relative share is again attached with Bulgaria with 1,206 gazelles (30.1% of the total number of firms); than Romania with 639 gazelles (15.9% share); third is Italy with 559 gazelles (13.9% share); and then Spain with 349 gazelles (8.7% share); etc.

Gazelles by individual sectors in EU countries

Aforementioned study (Mitusch & Schimke 2011) showed representation of gazelles by industries and sectors in EU. Research identified gazelle shares by sectors and industries within 5% and 10% groups of all growing companies in EU within NACE⁵ double digit classification of industries.

Industry/sector	Gazelles in 10% growing firr		Gazelles in 5% fast growing firms		
	No. of firms	%	No. of firms	%	
Mines and quarries	141	1,8%	73	1,8%	
Food, drinks and tobacco production	549	6,9%	250	7,0%	
Textile production and textile products	505	6,3%	267	6,7%	
Leather and leather items production	89	1,1%	47	1,2%	
Wood production and wood and cork					
products; Celluloses production, paper	286	6,6%	146	3,6%	
production and paper products					
Publishing, printing and reproduction of	113	1,4%	59	1,5%	

Table 3. Gazelle shares in total number of companies by sectors in EU, 2011

⁵ NACE (European Classification of Economic Activities) is a statistical classification of economic activities in the European Community and a subject of EU legislation.

Economic	Analysis	(2015)	Vol	48 N	Jo	1_2	44-61)	
LCONOMIC	лпигуыз	(2013,	V01.	±0 , 1	NU. 1	L- <i>Z</i> ,	44-01)	

CONSISTENT AT HIGHN	Gazelles in 10	% fast	Gazelles in 5% fast			
Industry/sector	growing fi		growing firms			
y	No. of firms	%	No. of firms	%		
recorded materials						
Production of coke, oil derivates and						
nuclear fuels; Production of chemicals and	124	1,6%	53	1,3%		
chemical products						
Production of rubber and plastic products	181	2,3%	89	2,2%		
Production of other metalloid mineral	219	2,7%	113	2,8%		
products	217	2,7 /0	115	2,070		
Production of base metals	74	0,9%	32	0,8%		
Production of metal products excluding	369	4,6%	149	3,7%		
machinery and equipment						
Production of machinery and equipment	278	3,5%	132	3,3%		
Production of electrical and optical	332	4,1%	164	4,1%		
equipment						
Production of means of transportation	172	2,2%	94	2,3%		
Furniture production; n.e.c. production	341	4,3%	181	4,5%		
Recycling	<		21			
Electric power, gas, steam and hot water	65	0,8%	31	0,8%		
Civil engineering	971	12,11%	465	11,6%		
Sale, maintenance and repair of motor	100	1,3%	48	1,2%		
vehicles and motorbikes; fuel retail						
Wholesale and sale brokerage, excluding motor vehicle and motorbikes sale	1,127	14,1%	589	14,7%		
Retail sale and sale brokerage, excluding						
motor vehicle and motorbikes sale; Repair	121	1,5%	57	1,4%		
of personal goods and household goods	121	1,5 /0	57	1,4 /0		
Hotels and restaurants	71	0,9%	39	1,0%		
Road transport; pipeline transport; Water			07	1,070		
transport, Air traffic	431	5,4%	232	5,8%		
Financial brokers, excluding insurance and						
pension funds; Insurance and pension						
funds, excluding compulsory social	190	2,4%	99	2,5%		
insurance; Support activities in financial				,		
brokerage						
Real estate	44	0,6%	20	0,6%		
Leasing machinery and equipment	14	0,2%	8	0,2%		
Computer and related activities	237	3,0%	1174	2,8%		
Research and development and other	547	6 00/	262	6 50/		
business activities	547	6,8%	202	6,5%		

Source: Mitusch K. & Schimke A.(2011), Gazelles – High-Growth Companies, Consortium Europa INNOVA Sectorial Innovation Watch

Table 3 shows that most gazelles within the 10% fast growing companies in EU was in the sector of *Wholesale and sale brokerage* with 1,127 recorded gazelle firms (14.1% of total); sector of *Civil Engineering* included 971 gazelles (12.1% of total); to be followed by the sectors of *Food, drinks and tobacco production* with 549 gazelles (6.9% of total), *Textile production and textile*

products with 505 gazelles (6.3% of total) and *Research and development* with 547 gazelles (6.9% of total). Sectors with the lowest number of gazelles in this segment of fast growing firms *Real estate* with 44 gazelles (0.6% of total) and *Leasing machinery and equipment* with 14 gazelles (0.2% of total).

Relative ratios are almost identical when subject data are analyzed for the segment of 5% fast growing firms: sector of *Wholesale and sale brokerage* in this segment also recorded the highest number of gazelles with 589 gazelle firms, i.e. 14.7% of the total number of fast growing firms in the sector; sector of *Civil Engineering* had 465 gazelles (11.6% of the total number of firms); to be followed by the sector of *Food, drinks and tobacco production* with 250 gazelles (7.0% of the total number); sector of *Textile production and textile products* with 267 gazelles (6.7% of the total number) and *Research and development* with 262 gazelles (6.5% of the total number). Sectors of *Real estate* and *Leasing machinery and equipment* are with the lowest number of gazelles in this segment: 20 and 8, i.e. 0.6% and 0.2%, respectively.

Gazelles in the Republic of Serbia

The Republic of Serbia's ranking is relatively low compared to EU countries in terms of entrepreneurship and innovations. Measured by the global entrepreneurship development index - or GEDI⁶, which is used as an indicator of the quality of entrepreneurship and innovations, which have been influenced by individual and institutional factors, in 2014 Serbia ranked 68 out of 130 countries, which is below most of the countries in the region.

Although, judging strictly from the standpoint of European standards of innovations, economic power and competitiveness, it is still early to talk about dynamic entrepreneurship in Serbia – in its research the Republic institute for Development for the period 2003-2007 identified 532 dynamic enterprises out of which 53 firms can be classified as the most dynamic ones– gazelles (The Ministry of Economy and Regional Development, the Republic Institute for Development, the National Agency for Regional Development, 2008). In this research, gazelles were identified as small and medium-sized enterprises that were employing in 2003 up to 20 people and not more than 250 respectively; that their number of employees and their total revenues in 2007 increased by 30% compared to 2003; that their business was continuously solid and that they weren't part of a larger systems, that is, a holding.

In 2007, gazelles in Serbia made up 0.1% of the total number of enterprises and 1.0% of the total number of employees; they managed 0.3% of the equity, generated 1.0% in total revenues and 1.3% in total gain.

It is argued that Serbian gazelles recorded a dynamic growth of employment and total revenues, primarily, thanks to their investments in technical and technological resources and applying the cutting edge methods and standards taken from successful countries; but also thanks to continuous professional education of employees, continuing improvements of customer relations, product and/or service quality and aspiration towards winning over new positions in the market.

⁶ Global Entrepreneurship Development Index (http://thegedi.org/research/gedi-index/)

The advantage of these enterprises is primarily in what is considered a fast revenue growth and market share usually accompanied by an increase in company value. Their greatest weaknesses, on the other hand, are mainly associated with the fact that they have not achieved the necessary economies of scale and therefore occasionally enter the zone where they generate losses. In addition, they are usually faced with constraints related to financing of their business activities, and have difficulty to reconcile growth and profitability. The biggest obstacle in obtaining funds for these enterprises is a brief period of existence, which is why they do not have sufficient credibility among investors, and often record a high level of indebtedness, which prevents further borrowing.

The aforementioned research of dynamic entrepreneurship in Serbia was related to the dynamic (fast-growing) and most dynamic small and medium-sized enterprises - gazelles.

Key findings in this study are the following:

- In 2007, in Serbia there were 532 dynamic enterprises, out of which 53 were gazelles with 43,311 employees.
- Dynamic enterprises accounted for only 0.6% of the total number of enterprises, but in the analyzed period (2003 to 2007) they doubled the number of employees to 22,000.
- These companies have generated 4.5% of the total profits of the economy as a whole in 2007, which is as high as 1.3% more than in the base year, 2003.
- All business indicators have doubled in the analyzed period, in addition to profits, which tripled.
- Total revenue of these companies, in the reporting period increased by 116.8%, and the number of employees increased by 104.8%.

As regards the size of gazelles in the Serbian economy, in 2003, most of them were small (37), while in 2007 those were medium-sized enterprises (32). In this four-year period, six companies-gazelles grew into large enterprises and created 8,020 new jobs. Nine of the ten most important gazelles from the analyzed group of companies were operating in the manufacturing industry and trade.

Sector	No of enterprise s		No of employees		Total profits, in mil RSD		Equity, in mil RSD-		Gain, in mil RSD	
GAZELLES TOTAL	53	100,0	10.630	100,0	58.289	100,0	11.285	100,0	4.147	100,0
Agriculture, hunting and forestry	4	7,5	455	4,3	2.460	4,2	843	7,5	219	5,3
Manufacturing industry	18	34,0	4.109	38,7	21.330	36,6	3.583	31,8	1.336	32,2
Construction industry	10	18,9	2.028	19,1	5.874	10,1	1.029	9,1	514	12,4
Trade	14	26,4	2.771	26,1	22.820	39,1	4.567	40,5	1.778	42,9
Traffic, storage and communications	3	5,7	678	6,4	3.542	6,1	1.013	9,0	199	4,8
Real estate business	4	7,5	589	5,5	2.263	3,9	250	2,2	102	2,5

Table 4. 2007 Business indicators attributable to gazelles by sectors in Serbia

Source: Ministarstvo ekomomije i regionalnog razvoja, Republički zavod za razvoj, Nacionalna agencija za regionalni razvoj, *Izveštaj o malim i srednjim preduzećima i preduzetništvu za 2008. godinu*

Table 4 shows the distribution of gazelles by sectors. The largest number of new companies is doing business in *Manufacturing industry* (18), and they employ the largest number of employees (4,109); followed by *Trade* (14) in which these companies achieved the highest total profits, and own the largest capital and benefit most. It may also be noted that gazelles are scars in the *Transport, Storage and Communications* (3); the fewest number of employees is recorded in the sector of *Agriculture, Hunting and Forestry*, and the lowest total profits, equity and gains are recorded by gazelles in the *Real Estate Business*.

The subsequent research that was conducted in 2009, showed the vitality of dynamic companies and gazelles. Despite the transition problems they managed to create 965 new jobs (846 in the gazelles), while the total number of employees in the business sector in the period from 2007 to 2009 decreased by about 51,000.

The results of research of fast-growing enterprises in Serbia for the period 2009 - 2013 were published in a 2015 study (Jakopin, E., 2015). In it fast-growing companies were defined as companies that met the following multiple criteria in the reporting period: (i) continuous operation for a period of 5 years from 2009 to 2013; (Ii) the average profits above average in the business sector, ie. greater than 63,000 EUR in 2013 (iii) the positive value of GDP per employee in 2009 and 2013, which is not below average in the business sector in the last reporting year, ie. it was not below $\in 12,400$ per employee, (iv) at least the same number of employees in 2013 compared to 2009. (c) at least two times faster growth in business profits than the growth of business profits of the rest of the business sector in the period 2009 to 2013 .; (Vi) the cumulative gains generated in the period 2009 to 2013; (Vii) all socially-owned, state-owned and public companies were excluded, as well as companies from the sector *Real Estate Business Sector, Public Administration and Mandatory Social Insurance, Other Services, Households as Employers and Activities of Exterritorial Organizations and Bodies;* (Viii) subsidiaries that are part of larger economic units were excluded.

Subject criteria were met by 1.103 enterprises in 2013, 1.2% of the total number of enterprises in Serbia. This group of companies was then subjected to application of the methodological indicator for identification of gazelle firms developed the father of this concept, David Birch, which is based on the analysis of change in the number of employees and the change in the newly created value. This was the method used to arrive to the estimation that Serbia had 156 gazelle firms operating during the observation period, which was around 14% of fast growing companies.

Analysis of results achieved by dynamic companies defined as previously described, and gazelles within them, during the observation period (2009-2013), which was characterized by a global financial crisis and generally very difficult business environment, indicated that they demonstrated resilience to crisis blows and that they managed to overcome the crisis fast and achieved outstanding performance. The following research results are the best description of the importance of dynamic entrepreneurship and gazelles:

- *Employment growth*: dynamic companies increased employment by 120.7%, and by 203.5% in case of gazelles (the entire economy registered an employment reduction by 7.3% during the same period)
- *Growth of business activities*: business activities of dynamic companies presented through business revenue tendencies grew by 251.1%, and 257.6% in case of

gazelles (the entire economy registered growth of only 2.9% during the same period),

- *Growth of gross value added*: dynamic companies increased GAV by 251.1%, and 224.7% in case of gazelles, while the entire economy registered 3.7% reduction,
- *Profit growth:* profit generated by dynamic companies increased by 249.1%, and 228.6% in case of gazelles, and 15.1% in case of the entire economy;
- *Trade growth*: trade results of dynamic companies increased 2.3 times, export 2.9 times, and deficit by 2.2% (non-financial sector registered unchanged trade values, export increased 1.2 times, export dropped by 13%, and the trade deficit was as much as 2.5 lower than previously).

Considering aforementioned, one may conclude that gazelle firms in Serbia have very much the same general characteristics as the one identified in case the subject firms in other world economies, including the most developed. There are few of them (not more than few percentages of the total number of companies), but they generate outstanding contribution in terms of employment, growth and total business results of the national economies.

Conclusion

Within the total SME corpus, so-called gazelles, dynamic small and medium size companies, play special role, and many authors believe that they are the biggest development potential of the national economies. Present paper elaborated the issue of the definition of this specific group of companies; gazelle phenomenon was explained, as well as their specific features and characteristics making them so unique. The most important results of gazelle related researches conducted in USA, European Union and, in the final part in Serbia, were presented.

Results of the subject research clearly indicate that gazelles may be an answer to numerous problems faced by economies today characterized by deep, prolonged and comprehensive economic and social crisis. These companies have clearly demonstrated superior potentials for job creation, export growth and innovative processes and activities. They contribute to social well-being by creating new jobs, promoting regional development and, also, generate high capital return to investors.

Principal characteristics of gazelles are innovativeness, both in production and process domains, as well as management practices. Their management and organizational flexibility facilitates faster and streamlined adaptation to changes, providing for strong market orientation, focus on quality, clients and distribution. Strong links with consumers and maximum utilization of employees indicate that successful strategic management of the company leads to constant and stable growth, both large and small and medium enterprises, including gazelles.

Characteristics and performance described, generated by dynamic companies and particularly gazelle firms in the previous period, are another confirmation that subject companies should be given special attention of economic policy creators and that, thereto, their creation and then supported development should be identified as strategic goal of the national economic development. Set of measures to achieve this should range between those impacting creation of business development friendly environment in general, especially

environment characterized by innovativeness and entrepreneurship, and those specifically supporting establishment and sustainable development of dynamic and gazelle firms.

Some of incentives to be definitely included are as follows:

- *Stimulating financing models* this should include measures such as capital market development and introduction of versatile development project financing forms adequate for dynamic and particularly gazelle companies. This is about introducing the forms of financing such as the risk-capital and venture capital, investment securities and other.
- *Provision of non-financial incentives* as subject companies are mainly small and medium enterprises, they by default lack business system improvement resources, such as strategic planning and management systems, contemporary information technology systems, human resources management systems and similar, and thus, relevant support should be definitely provided in this sense.
- *Support for international operations* dynamic and gazelle companies have international market potentials, but in that sense (at least in initial growth stages) they, by default, nee support in learning about foreign markets, business networking on international markets, adopting required standards and entering relevant distribution channels.
- Supporting development and especially implementation of development projects SMEs, by definition, and especially dynamic and gazelle companies tend to be innovative and entrepreneurial. This implies readiness to invest in projects long lasting in character sustainability of which has to be observed through long-term perspective. Considering limited resources of subject companies, starting implementation of such projects and then successful implementation would require relevant support in terms of innovation policy, intellectual property protection, tax and other financial incentives and similar.

Formulating and consistently implementing aforementioned measures of development and support to dynamic and especially gazelle companies would generate significant contribution to more dynamic national economy as a whole and better performance, thus, creating conditions required to find solutions for numerous social problems.

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Značaj uloga brzog rasta kompanija - Gazele u savremenoj ekonomiji

REZIME – Značaj malih i srednjih preduzeća (MSP) za razvoj nacionalnih ekonomija je nesporan i on se u brojnim radovima ističe kao opšteprihvaćeno mesto. U ovom radu pažnja je usmerena na jedan od vrlo specifičnih segmenata MSP koje čine posebno dinamične firme koje se karakterišu brzim i stabilnim rastom, sposobnošću brzog prilagođavanja tržišnim uslovima i funkcionisanju na kontinurano visokom nivou performansi. Ove firme su danas poznate pod već široko prihvaćenim nazivom – gazele, koji je 80-tih godina prošlog veka prvi skovao britanski autor David Birch. Gazele su relativno malobrojne i prema istraživanjima njihovo učešće u ukupnom broju firmi u privredama pojedinih zemalja kreće se na nivou od 3% do najviše oko 5%. Interesovanje za ove firme poslednjih godina izuzetno je poraslo i to kako na makro nivou na strani kreatora ekonomske politike, tako i na mikro nivou na strane biznisa, zbog njihovog potencijalno izuzetno velikog značaja za rešavanje pitanja (ne)zaposlenosti, kreiranja novih proizvoda i usluga i dodatne vrednosti u savremenim društvima u celini. U radu su obrađena pitanja načina definisanja ovih firmi, analizirane su osnovne karakterstike i ključni faktori njihovog poslovanja, kao i stanje i perspektive ovih preduzeća u zemljama EU i u Srbiji. Autori su u radu korisitli istraživačke metode u skladu sa specifičnošću i složenošću predmeta analize, oslanjajući se na aktuelnu domaću i međunarodnu literaturu i internet izvore. Rezultati istraživanja su jasno pokazali da gazele mogu da budu važan deo odgovora na duboku i sveobuhvatnu ekonomsku i socijalnu krizu sa kojima se danas suočavaju savremena društva u svetu.

KLJUČNE REČI: mala i srednja preduzeća, gazele, rast poslovanja, zapošljavanje, strategije

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